United States
Department of
Agriculture

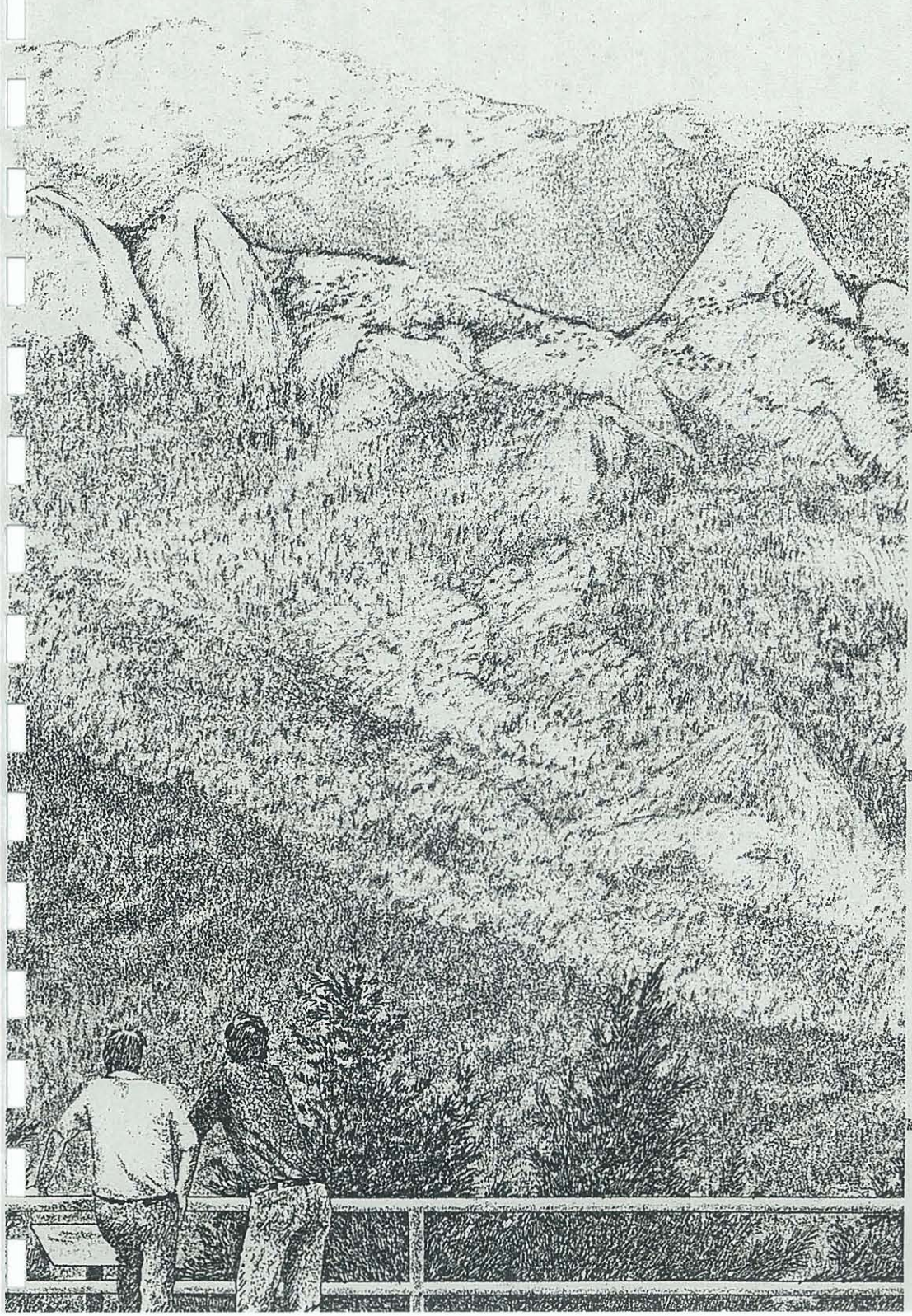
Forest Service

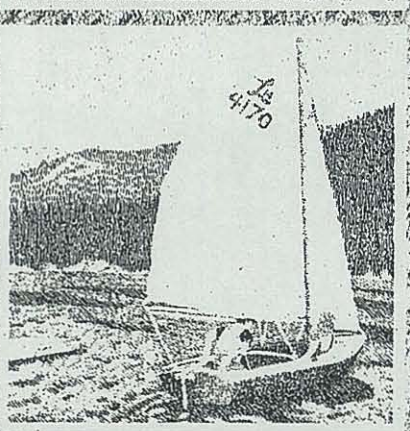
Pacific
Southwest
Region

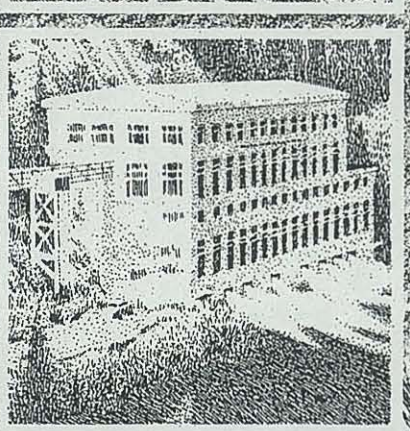
1991

FOREST LAND AND RESOURCE MANAGEMENT PLAN

Sierra National Forest







Chapter 4.0 – Management Direction

4.0
MANAGEMENT DIRECTION

4.1
INTRODUCTION

This chapter describes management direction that will guide administration and use of Sierra National Forest until the Forest Plan is amended or revised. Direction is used by Forest personnel to achieve desired results. Direction also informs the public and other agencies of future programs.

The Forest is guided by direction from numerous sources. Laws passed by Congress, such as the National Environmental Policy Act, Threatened and Endangered Species Act, and others provide direction for certain aspects of management.

Additionally, the Forest Service has developed regulations and policies for management of resources in response to legislation or management needs. This direction is contained in the Code of Federal Regulation and Forest Service Manuals and Handbooks. They cover a wide range of direction for managing Forest resources.

At the National level, the Resources Planning Act gives broad direction. At the Regional level, the Regional Guide gives direction for management as well as target levels of output for various resources in each National Forest.

The Forest continues to be guided by laws, regulations, policies, and guidelines mentioned. This Forest Plan supplements, but does not replace direction from these sources. The Plan generally does not restate this direction, except where it was felt necessary to clarify treatment of an issue or concern.

The first level of direction in the Plan are Forest Goals and Objectives (Section 4.2). Goals and objectives provide broad, overall direction for type and amount of goods and services the Forest will provide in the future. This is followed by a discussion of Future Condition of the Forest (Section 4.3). Next are general Management Prescriptions (Section 4.4) and Management Standards and Guidelines. (Section 4.5)

Management Standards and Guidelines more specifically describe how Forest Goals and Objectives will be achieved and set minimum conditions that must be maintained while achieving the Goals and Objectives and adhering to policies.

Finally, Management Area prescriptions, practices, outputs and activities are described in Section 4.8. These descriptions are preceded by tables summarizing forestwide outputs and activities and prescription acres by Management Areas.

Resource outputs, activities and environmental changes described in the Plan represent anticipated results of Plan implementation. Differences can be expected to occur between what is planned and the results. The most important differences that may occur are included as monitoring items in Chapter 5. That chapter explains the way monitoring is used to make adjustments in the Plan to achieve desired results.

Through annual budgeting and work planning processes, management direction will be turned into visible results. These processes allow for annual adjustments to be made within the overall Plan direction to reflect current priorities. The degree to which the Plan can be implemented will depend to a large extent on appropriation of funds by Congress and distribution to the Forest through budget procedures.

Project environmental analyses will be tiered to the Plan Environmental Statement (40 CFR 1508.21).

4.2
FORESTWIDE GOALS AND OBJECTIVES

1. Provide a broad spectrum of dispersed and developed recreational opportunities in accord with identified needs and demands and meet ROS class objectives shown on ROS element maps.

2. Manage wilderness to meet recreational, scenic, educational, conservational and historic uses, as well as preserving wilderness character.

3. Manage the most visually sensitive areas in the Forest by placing major roads, trails, streams and areas of concentrated visitor use in scenic corridors and managed viewsheds.

4. Identify and enhance low to moderate quality fish habitat that has potential to improve from structural or nonstructural improvement.

5. Coordinate habitat management with other resource activities and programs to maintain or improve fish and wildlife habitats.

6. Manage fish, wildlife and plant habitats to maintain viable populations of all resident or indigenous fish, wildlife and plant species.

7. Manage habitat for State and Federally listed threatened and endangered fish, wildlife and plant species to meet objectives of species recovery plans.

8. Emphasize habitat improvements for sensitive, threatened, endangered and harvest species.

9. Manage habitat for Forest Service sensitive fish, wildlife and plant species in a manner that prevents any species from becoming a candidate for

threatened or endangered status. Manage botanical resources to maintain present diversity of species.

10. Identify a goshawk network with at least one nest territory per 18 square miles of suitable habitat.

11. Manage livestock to utilize available forage, while minimizing adverse impacts on soil, vegetation, water quality, wildlife habitat, fisheries and riparian zones.

12. Manage chaparral vegetation to provide increased forage, water, wildlife habitat and vegetation diversity, when practical.

13. Produce high yields of timber and forage, while minimizing adverse environmental impacts and providing for other resource values.

14. Annually market the allowable sale quantity as needed to meet local, regional and national demand for wood products.

15. Harvest timber from future timber stands in a manner that will permit continued non-declining harvest.

16. Conduct timber harvest program in a manner that will maximize net public benefit.

17. Manage plant communities so as to maximize diversity for plants and animals.

18. Provide an integrated pest management program to minimize adverse effects of insects, diseases, weeds and other pests.

19. Maintain or improve soil productivity.

20. Produce water of sufficiently high quality to meet or exceed user requirements.

21. Encourage mineral exploration and development, while minimizing adverse environmental impacts of such activities.

22. Identify Federal land suitable for land exchange to improve management of Forest land.

23. Inventory and manage cultural resources to prevent loss or damage.

24. Develop an efficient and environmentally sound transportation system, which provides access to Forest land and permits appropriate access to private land.

25. Manage existing transportation facilities to facilitate resource management, protect wildlife, meet water quality objectives and provide recreational access.

26. Manage Forest activities so air quality is compatible with federal, state and local laws, including a program that achieves the Clean Air Act responsibilities.

27. Provide a cost-effective fire management program to protect forest resources, life and property, utilizing prescribed fire and suppression strategies of confinement, containment or control.

28. Coordinate land and resource planning efforts with other federal, state, county, and local governments and adjacent private landowners.

29. Encourage use of the Forest by disadvantaged, handicapped and minority persons.

30. Follow and pursue intent of the Civil Rights Act to provide equal employment opportunities for all employees on the Sierra National Forest while increasing average grade of women employees and percentage of minority group representation; and ensure that no person is denied participation or benefits of any program or activity of the Forest Service. Strengthen rural economies by implementing 1990 RPA rural development policies.

31. Maintain, on a continuous basis, Watershed Improvement Needs (Conditions) Inventory (WIN).

32. Inventory and map riparian areas. This effort will allow for identification of areas to be protected and will identify watershed restoration needs.

4.3 FUTURE CONDITION

4.3.1 Forest Theme

The Forest Plan represents a balanced management program with a slight decrease in some market resources over present levels. Dispersed recreation and wilderness use are stressed, with opportunities for quality wilderness experiences enhanced. Timber benefits will be commensurate with costs, while recognizing essential balance with other uses and resource capabilities. Fish habitat will be maintained at about current levels while considerable amounts of late seral stage wildlife habitat will be replaced by regenerated stands.

4.3.2 Social Condition

The ASQ may not be sufficient to ensure continued operation of all existing local sawmills. If one of the existing sawmills closes, there will be a loss of opportunity for local employment.

Current trends in population growth will probably continue at present rate. This will increase Forest related recreational activities. Additional service jobs will be generated within local communities. Since a good portion of recreationists come from outside areas, local communities will benefit from increased revenue.

Signs and brochures will be translated into other languages, where necessary. International symbols will be used to reduce multilingual signing. Field employees with bilingual skills will continue to be a necessary component for good management.

4.3.3
Economics

The total annual budget needed to implement the Forest Plan is $23.1 million. This will result in reduced returns to the U.S. Treasury and lower 25% receipt shares to the three-county area. There will be fewer jobs and income in the local community. Present net value and benefit/cost ratio will be lower than current level.

4.3.4
Recreation

There will be a moderate increase in the number of developed sites to accommodate increased use. Some new development will be done by existing commercial permittees and/or licensees and through appropriated dollars as a requirement for new or relicensed water projects. Development emphasis will be in high use areas and in the Rural and Roaded Natural Recreational Opportunity Class zones. Full service management will be provided in most developed sites. Existing sites will be rehabilitated. Some additional OHV routes and areas will be designated where cross-country travel was previously allowed. Forest Plan implementation will also include development of a new Forest OHV Plan which will designate an OHV route system and contain management direction from the Forest Plan. The OHV Plan will be completed eighteen months after the Regional Forester signs the LMP Record of Decision. This new plan replaces the 1977 OHV Plan. Developments such as parking lots, sanitation facilities, marked trails and on-site supervision will be added to facilitate snow activities.

Outdoor recreation emphasis will provide a wide spectrum of recreational opportunities. The ROS class objectives element map provides a picture of the mix of opportunity classes the Forest will strive to maintain or reach under this Plan.

The Forest trail system will expand moderately, using new construction and reconstruction, with more intensive maintenance and management practices of the system provided to contribute toward meeting outdoor recreation demand. The historic French Trail from near Millerton Lake to the Pacific Crest Trail is in the process of being reconstructed. Also, small undeveloped sites used for camping will receive more intensive management and maintenance to assure a quality dispersed recreation experience.

Visitor information and interpretative facilities will expand. A full range of services will be provided at major recreational use centers, with emphasis on dispersed recreation opportunities.

4.3.5
Visual Resources

The visual resources will be managed for the highest quality in areas significant to recreation. In high resource production areas, visual quality will be reduced. The landscapes will appear altered as the effect of management activities accumulate. In many areas other management activities will provide opportunities to enhance visual variety.

4.3.6
Wilderness

There are 527,938 acres dedicated to wilderness. Trail rehabilitation will continue, being completed before 2010, with emphasis on high-use trails and those that disperse use. Two types of trails are planned: trails and paths.

Some Wilderness River segments of the San Joaquin River have been recommended for inclusion in the National Wild and Scenic River System. Monarch Wilderness River segments of Middle Fork Kings River have already been designated WSR. Vegetation will be returned to a more natural condition, through use of prescribed or natural fire, reducing fuel levels accumulated during the period of fire exclusion.

4.3.7
Wild & Scenic Rivers

River segments totaling 82.5 miles will be managed as part of the National Wild and Scenic River System. This includes 70.0 miles classified as Wild, 2.0 miles as Scenic, and 10.5 miles as Recreational. Nearly 26,400 acres will be included in these river corridor management classifications.

Studying metasedimentary rocks, photographing the local flora in riparian zones within the corridor, whitewater rafting, picnicking, swimming, fishing, walking/hiking, viewing natural scenery, camping and studying several historic sites is expected to increase.

Some current and potential uses like mining, hydroelectric development and major facility development will be foreclosed or curtailed for some river segments. The segments affected will depend on location and extent of a future activity. Operations on valid, existing mining claims will continue. Mining on Recreational or Scenic segments may be restricted from designated segments. Major hydroelectric development

will be forgone on rivers designated as Wild/Scenic where no previous developments exist. Facility construction will be implemented within Scenic/Recreational river segment designations commensurate with existing uses and conditions.

4.3.8
Fish, Wildlife, and Sensitive Plants

The Forest program of direct habitat improvement will annually treat 2,000 acres of wildlife habitat and 100 acres or structures of fish habitat. Habitat improvements for threatened and endangered species will continue near present annual rate of 20 acres. A forestwide program will be implemented to identify target fish and wildlife species and long-term habitat objectives for each Class 1 watershed and individual planning compartment.

Activities designed to enhance habitat for stream dwelling resident trout will involve structural and nonstructural treatments. Structural improvements may include watershed stabilization through streamside fencing, instream cover improvements, fishways and fish screens, construction of migration barriers, removal or relocation of roads, stream bank stabilization, control of water level fluctuation, and construction of water bars and culverts to retard or direct water runoff.

Nonstructural improvements may include improving quality of spawning gravels, removal of stream barriers, control of fish or aquatic plant populations, control of human access and fishing pressure and enhancement of riparian vegetation.

Activities designed to enhance warm and cold water lake fisheries will also involve structural and nonstructural treatments. Structural improvements may include fish cover developments, shoreline stabilization, migration barriers and structures to control water levels in lakes. Nonstructural improvements may include fish population control, aquatic plant control, enhancement of riparian vegetation and lake fertilization.

The Forest will strive to establish and maintain three breeding pairs of peregrine falcons. Habitat will be maintained for the current population of 5-10 wintering bald eagles. Twenty-nine California spotted owl habitat areas with no scheduled timber harvest will be maintained in the Forest. A goshawk survey will identify a network with an average of one nest territory per 18 square miles of suitable habitat. Timber harvest strategies will be modified to improve deer habitat in 75% of identified population centers and holding areas within the commercial forest. All federally-listed threatened and endangered species will be managed in accordance with their recovery plans. The Forest will develop and implement management practices to ensure sensitive species do not become threatened or endangered because of Forest Service actions.

More field surveys will be conducted to improve our knowledge of sensitive plants. A monitoring program, consisting of baseline data collection and regular surveys, will evaluate effects of Forest management on species and habitats of concern.

Management of all perennial and many intermittent streams will emphasize maintainance of water quality as well as preservation of riparian habitat values for fish, wildlife and other dependant resources. The goal of managing riparian areas will be to maintain and improve existing forestwide conditions over time. When new hydroelectric developments are proposed or relicensing occurs on existing developments, the Forest will coordinate with project proponents and CDFG to insure associated fish and wildlife habitats and sensitive plant resources are maintained near current levels on new proposals and improved where needed on relicense proposals.

4.3.9
Riparian Areas

Riparian zones will extend 100 feet on both sides of rivers and perennial streams and from shorelines of lakes and ponds. Of an estimated 155,000 acres of riparian land, about 33,000 will be managed for multiple use. Harvesting timber in riparian areas will be limited to road rights-of-way, skyline corridors, public safety and fish and wildlife enhancement projects. Most of the Forest's riparian land is located in Wilderness, thereby giving a high level of protection, preservation, and enhancement of fish and wildlife, soil and water, and riparian plant communities now and in the future.

Since riparian zones receive proportionately more use from wildlife, road and foot traffic, and grazing cattle, various projects to protect and enhance affected riparian areas are part of this Plan. Travelways are not considered riparian dependent, though they will be permitted to occur when compatible with riparian dependent resources. Potential impacts will be moderate to low and future overall conditions expected to be very similar to present conditions because of protective measures proposed for various management activities. Protection under Federal laws will be accomplished through Best Management Practices (BMP) (including SMZs that control commodity production and associated constructed facilities, such as roads) and Standard and Guidelines.

4.3.10
Range

Permitted livestock use will increase to about 40,600 AUMs annually. Most of the increase will be accomplished by taking advantage of intensified grazing on annual grassland, treatment of chaparral, transitory range, construction of water developments and additional drift fences. Limited areas of primary range, presently in poor condition, will be managed to improve range

condition. Increased production will be partially offset by reducing or discontinuing use of poor condition range at higher elevations and by grazing adjustments on some ranges to maintain amenity values, such as dispersed recreation and wildlife resources.

Site specific management decisions will be made in individual Allotment Management Plans (AMPs) through an interdisciplinary planning process. Continued utilization of positive measures, such as salting, herding, water developments, fencing and riding will be used whenever the opportunities exist, to improve livestock distribution and minimize impacts to riparian areas. If mitigation is unsuccessful in preventing unacceptable resource damage to riparian habitat, measures will be taken to reduce or eliminate livestock use in affected areas.

4.3.11
Timber

Timber production targets are less under this Plan than in the preceding timber management plan. This reduction reflects changes in management direction that provide greater emphasis on other resources and a shift of productive timberland into Wilderness designation. Uneven-aged management (Group Selection harvest) will be tested on some high volume per acre tractor loggable Regulation Class I land. Additional uneven-aged management (Group Selection harvest) will occur on tractor loggable Regulation Class II land. Uneven-aged management (Individual Tree Selection) will be used on all Regulation Class III land. In addition, harvest on low site land will only be conducted to maintain health and vigor of existing stands. Timber management will be conducted on 328,900 acres of the Forest's 393,700 acres identified as the tentative CAS land base.

Silvicultural treatments will be selected to meet site-specific objectives of a particular, emphasized resource. Management options will include prescribed burning for wildlife, replanting to replace fallen trees on recreational sites, and selective harvesting in SMZs and visual retention areas. Although these activities will not result in appreciable change to the existing Forest condition in the first decade, the amount of late seral stage vegetation will decline over the planning horizon.

The goal on the full- and modified-yield CAS land will be timber production. Forest stands will be managed to fully utilize site productivity. New timber stands in areas of sufficient size and location to facilitate stand tending, protection, and future harvest will be created. Treatments to concentrate growth on the most vigorous and healthy trees will be made during the first 30-40 years of stand life. Final harvest of regenerated even-aged stands is scheduled to begin as stands reach culmination of mean annual increment (CMAI) measured in cubic feet. Intermediate harvest in these stands may extend culmination period. Assumptions used for rotation age are given in Region 5 Land Management Planning Direction.

Given the projected harvest schedule of the Plan, saplings, poles, and small sawtimber will replace existing late seral stage tree stands. The majority of these stands will be even-aged of relative uniform density. Increased tree growth and site adaptablility is expected from continuation of the Regional Genetic Improvement Program.

Size, spacing and sequence of regeneration harvest will be designed to provide diversity of age classes between timber stands, maintain or improve wildlife habitat, and provide an acceptable level of visual quality.

Measures to protect soil, water and cultural resources will be an integral part of all harvest activities. In stands where hardwoods occur naturally, they will be managed to maintain and enhance biological, wildlife, cultural and commodity values.

Cull logs and slash will be available to the public for firewood and, after providing for wildlife habitat needs, use of large amounts of woody biomass materials for energy production will be encouraged.

The overall effect of management activity on full-, modified- and limited-timber yield CAS land is to increase age class diversity in these areas. These stands, of varying ages and sizes, intermingled with upwards of 250,000 acres of noncommercial land, are part of timber emphasis areas.

4.3.12
Integrated Pest Management

Pest management activities will be moderate to high, particularly in developed recreational areas and on land managed for timber production.

4.3.13
Diversity

This Plan will provide for a wide variety of plants and animals by retaining at least five percent of each seral stage in each major vegetation type by the end of the fifth decade. This Plan also will provide for a pattern of early and late seral stage habitats produced by the interspersion of less intensively managed timber stands with more intensively managed stands. This mosaic will reduce the possibility of intensive timber management in large contiguous homogenous timber stands and will help provide wildlife travel corridors and islands of habitat within and between larger stands of vegetation. Riparian areas and sensitive furbearer corridors will also create mosaic patterns and provide movement corridors.

Timber management intensity will have a major effect on diversity. This Plan will include a distribution of management intensity prescriptions that slightly favors

late successional stage habitat on capable and suitable (CAS) timber land (56 percent extensive management and 44 percent intensive management). If intensively managed areas are compared to total forested land base instead of CAS, 69 percent will be extensively managed and 31 percent intensively managed. By the end of the fifth decade, this distribution of timber management intensities will result in 10 percent of the forested areas being in early successional stage, 14 percent mid-successional stage and 76 percent late successional stage. Typical late seral stage stands with multi-layered large trees, with obvious signs of decadence and a tree canopy cover of over 70 percent, will total about 119,000 acres (21 percent of the forested land base) by the end of the fifth decade.

This Plan will include treatment of 2,000 acres of chaparral habitat per year by crushing and prescribed burning. This treatment, in conjunction with wildfires will produce a mosaic of brush including 30,000 acres of early successional stage, and 50,000 acres of late successional stage.

None of the 5,000 acres of black oak stands on CAS land will be harvested for conversion to conifers. However, mature hardwood trees within conifer stands, above the required crown closure standard, will be removed reducing hardwoods in some harvested stands.

Snags and down logs will be managed at densities intended to preserve primary cavity nesting birds near current densities. In areas where Full-Timber Yield prescription is to be used, snags will be created by the second decade because snags left in regeneration cuts in the first decade are only expected to last for ten years. Down logs will be managed at levels that are believed to be between the existing and naturally occurring condition. Other special habitat elements such as cliffs, talus, rock outcrops, caves, ponds, marshes, etc. will remain unchanged within the Forest.

4.3.14
Soil and Water

There will be a moderate potential of reducing water quality and soil productivity. However, mitigation measures described in BMP and coordinated specialist input will be used in project planning to maintain present levels of water quality and soil productivity. Water quality will remain at its existing high level and meet or exceed State and Federal objectives.

Water yield increases will result from timber harvesting activities, but especially from clearcut and shelterwood techniques. Other resource projects, such as fuelbreaks and wildlife burns will also increase yield but be limited to on-site uses. Instream yields in any one drainage will be small due to the dispersed nature of timber harvesting. Based on historical averages, annual water yield at end of first decade will be increased by 60,000 acre/feet.

Implementation of a soil and water enhancement program, to be initiated during the first five years of the Plan, will include provisions to correct identified water quality problems on 452 acres. Approximately 226 acres will be treated in the first decade. Soil productivity will be improved on sites that have been degraded by past management practices.

4.3.15
Minerals

Opportunities for mineral exploration and development will improve as some nonroaded land is entered for resource management purposes. With emphasis being placed by the current administration on decreasing U.S. dependence upon foreign sources for strategic and critical minerals, it is likely that exploration, development and extraction of minerals will increase. As a result of this increased minerals activity, cost of administering the minerals management program is expected to increase.

Stricter compliance with operating plans for surface protection and reclamation will occur. Assistance in planning for mineral extraction will take place to facilitate reclamation. Efforts to return disturbed areas to planned production will increase.

Rejustification, by 1991, of mineral withdrawals will result in some withdrawals being retained to protect key resource areas, such as administrative sites and recreational developments.

4.3.16
Lands

The Real Estate Management Program will be accelerated moderately. General priorities are:

Priority 1.

(a) Acquire, through land adjustment, key tracts of non-Federal land (1,000 acres) to enchance management efficiency;

(b) Acquire "inholding land" to reduce costs related to right-of-way acquisition and landline survey;

(c) Perform special use permit administration, to extent necessary to protect public health and safety;

(d) Property lines will be surveyed, marked and posted to standard with emphasis on those areas of potential occupying trespass and production of resource commodities; and

(e) Resolve unauthorized occupancies through sale or interchange of Federal land in conformance with Small Tracts Act, when appropriate.

Priority 2.

Acquire remaining land classified as desirable for National Forest status.

Priority 3.

(a) Acquire tracts, which because of location or character, will become key tracts in the foreseeable future, but for which immediate action is not urgent, and

(b) Acquire land intermingled with or adjacent to National Forest land primarily valuable for watershed purposes, timber production, or public recreation and needed to adequately block in or consolidate National Forest land.

Increased efforts will be expended to respond to requests from private interests for use of National Forest land. Most of these externally imposed needs will be associated with accelerated hydroelectric generation developments and community expansion. As more private land within the Forest is developed, more demand will be placed on public land for community uses. Recent requests for community water systems and sewer plant effluent spray fields on Forest land are examples of this trend. Permits related to urban uses will not normally be provided in areas where county zoning calls for limited urban development.

4.3.17
Hydroelectric Development

There will be continued high interest in maintaining or improving existing projects that store water from spring runoff and free flowing streams behind dams to create hydroelectric power and/or to make water available for delayed release to downstream users. Other projects will be proposed that divert water from streams into penstock, then return to streams.

Major potential hydroelectric projects which are located all or in part in the Forest are shown in Figure 3.06 of FEIS. Additionally, numerous minor projects will continue to be proposed. Some of these projects will prove economically feasible and environmentally sound, resulting in eventual development. Others, due to high costs, low outputs or adverse environmental impacts, will be dropped from further consideration.

Conflicts between a proposed hydroelectric development and the need for free-flowing streams will continue to occur. Increasing number of streams being proposed for hydroelectric development will result in need for cumulative impact studies that address combined effects of several projects on entire watersheds. Also, wild and scenic river studies have been made to determine if certain streams should be recommended for designation within the National Wild and Scenic River System. If designation by Congress occurs, hydroelectric development will be foreclosed or curtailed on some river segments. As water developments increase up and down the State, some white water rafting areas will be eliminated. This will result in increased pressure on remaining white water rafting areas, such as Merced River and Kings River. Continued efforts will take place to reduce acreage withdrawn for power purposes that appear to be in excess of power needs.

4.3.18
Cultural Resources

Cultural resource management will emphasize site identification, evaluation and management. A data recovery program will be initiated on significant areas affected by land-disturbing activities. Significant sites, including areas of extreme importance to local Native American groups, for which adequate mitigation of impacts is unlikely, will be protected in place. The procedures of 36 CFR 800 will be followed.

4.3.19
Special Areas

Existing and potential special areas in the Forest are described in this section. In most cases special areas are administratively designated (in contrast to legislative designations such as Wilderness or Wild and Scenic Rivers) to be set aside or protected for a specific reason.

Special Interest Areas - A SIA is designated because of unusual or outstanding scenic, cultural, scientific, natural, or other unique characteristics, which merit special attention and management. They are managed to protect the resources and, where appropriate, foster public use and enjoyment of their significant values.

Research Natural Areas - The establishment of RNA recognizes need to promote and protect natural diversity. They typify important forest, shrubland, grassland, alpine, aquatic, and geologic types and other natural conditions that have special or unique characteristics of scientific interest and importance. These areas are for non-manipulative research and education.

Experimental Forests - Experimental forests exist throughout the NFS for field studies and to demonstrate forest management practices.

Experimental Ranges - Experimental ranges exist throughout the NFS for field studies and demonstrating range management practices.

Special Management Areas - This program provides protection for areas containing outstanding examples of plant and animal communities, geological features, scenic grandeur, or other special attributes that merit special management. Areas so designated are managed to emphasize recreational and other specified related values. The law or order designating each area provides

specific objectives and guidelines for management of the area.

National Natural Landmarks - This program provides a mechanism for identifying, protecting, and maintaining sites which have unique scenic, geological or botanical features.

The following are established or recommended special areas:

	Established Acres	Recommended Acres
Special Interest Areas		
Kings Cavern Geological Area	388	
Courtright Intrusive Contact Zone Geological Area	11	
Dinkey Creek Roof Pendant Geological Area		640
Carpenteria Botanical Area	500	
Devils Peak Botanical Area		1,600
McKinley Grove Botanical Area		520
Nelder Grove Historical Area		1,434
Research Natural Areas		
Backbone Creek	430	
San Joaquin Experimental Range (Blue Oak-Digger Pine)	80	
Bishop Creek Pacific Ponderosa Pine	1,140	
Home Camp Creek (Red Fir - White Fir)		1,200
Experimental Forest		
Teakettle	3,200	
Experimental Range		
San Joaquin	4,580	
Special Management Areas		
Kings River	48,668	

4.3.20
Transportation and Facilities

The present arterial system is adequate in terms of current location. However, some upgrading of road standards, such as paving or safety improvements, are required.

The collector road system will increase into areas which do not currently have adequate access. This increase will include relatively few miles, but these miles are more expensive than those of the local road system.

Total miles of roads maintained annually will vary according to assigned maintenance levels and frequency of activities scheduled in various areas. Maintenance activities result from volume of timber harvest, recreation traffic, fire management, administrative traffic, protection of adjacent resources and capitol investment.

Because 75% of existing buildings are presently over 36 years old, many will be eliminated or replaced by 2020.

Construction of three major work centers/fire stations will be needed. This includes two new work centers, Kokanee at Huntington Lake and Batterson near Bass Lake, as well as a combined Ranger Station serving Kings River and Pineridge Ranger Districts. In addition to these facilities, the Forest Service may choose to accept facilities that will be constructed at hydroelectric projects. Acquisition of the Tule Meadow facilities and consolidation of the other existing facilities may be essential.

4.3.21
Protection

Protection priority will increase moderately, with emphasis on areas of high value urban interface, critical watersheds and commercial forest land. The major functional activities for the Fire Management Program is 68% for initial attack, 20% for prevention, 1% for detection, and 11% for fuel management. The accelerated fuel reduction program, which includes fuelbreak construction and maintenance and periodic burning of natural fuel, will substantially increase costs before 2015, until backlog fuel treatment is completed.

Before 2015, potential for losses from wildfire on commercial forest land will have increased as total plantation area under 40 years old reaches approximately

129,000 acres. There will be a gradual budgeting shift from fuel reduction programs to increased protection on commercial forest land. Where 50% of the budget increase is initally targeted for fuel reduction programs, before 2015 this activity will account for less than 20%. After 2015, suppression costs in front country will decline below 1982 levels. Prescribed burning will continue to be used to maintain reduced fuel levels.

Upon approval of this Plan, a fire management action plan will be prepared. This Plan will describe the appropriate wildfire suppression responses.

4.4
MANAGEMENT PRESCRIPTIONS

Management prescriptions are sets of overall direction for managing individual land units. Collectively, they represent the range of management options available to the Forest. Each prescription describes a management theme, including emphasized resources and general direction for its management.

For planning purposes, the Forest was divided into geographical subdivisions called management areas. To develop planning alternatives, the interdisciplinary team assigned management prescriptions to individual management areas in a manner that best met the theme of each alternative. The range of alternatives was set to display a broad spectrum of management intensities and resource emphasis.

All management prescriptions are subject to additional more site-specific direction and/or constraints shown on Resource Element Maps. These element maps and applicable direction are considered part of the prescription for each management area. The management prescriptions for Sierra National Forest are summarized below. Additional information regarding these prescriptions can be found in the accompanying EIS and the planning files.

4.4.1
Wilderness

This prescription maintains and protects wilderness values. All National Forest land within designated wilderness is managed in accordance with the Wilderness Act of 1964 (16 USC 1131-1136) and/or terms established in the legislative act. The areas are free of roads. Motorized trail use is prohibited. Pest management activities are used to protect adjacent land from unacceptable pest-caused damages and prevent unnatural loss of the wilderness resource from exotic pests. Opportunities are abundant for primitive and semiprimitive dispersed recreation, such as hiking, horseback riding, camping, fishing, hunting, sightseeing and photography. No regulated or unregulated timber yields are planned. Fire protection activities are conducted to minimize suppression impacts and permit reintroduction of prescribed and natural occurring fire. Livestock grazing continues with approved Allotment Management Plans. In most wildlife populations, species composition and habitat are allowed to change as part of natural processes. Wildlife objectives focus on stands favoring late successional stage vegetation and species that prefer these habitats.

4.4.2
Wild, Scenic, and Recreational Rivers

This prescription emphasizes preservation of the free flowing condition of selected rivers having various outstandingly remarkable features and notable values for eventual inclusion in the National Wild and Scenic River System. This prescription calls for management of recommended segments in accordance with the Wild and Scenic Rivers Act of 1968.

Wild segments are managed to protect natural values, while providing river-related outdoor recreational opportunities in a primitive setting that is generally inaccessible, except by trail. Construction of dams or diversions are prohibited. Wildlife objectives focus on stands favoring late successional stage vegetation and species that prefer these habitats.

Scenic segments allow motorized access in special locations. Nonintensive timber management to correct safety problems and control insect and disease outbreaks, inconspicuous fish and wildlife habitat improvement, and water management practices to correct resource problems are allowed, as well as recreational pursuits along the river.

Recreational segments allow recreational development along the river to provide opportunity to engage in activities enhanced by the river, as well as all activities listed for scenic segments. Recreational designations do not preclude consideration of dams and/or diversions in certain situations. Fish and wildlife projects are permitted. Designated rivers within designated wilderness or special management areas are governed by the more restrictive act.

4.4.3
Minimum-Level Management (Class IV)

This prescription provides custodial protection to existing Forest resources. Management activities are limited to monitoring for conditions that might adversely affect resources on such sites. Appropriate actions are initiated when and where necessary to reduce threat to adjacent resources. Wildlife objectives focus on stands favoring late successional stage vegetation and species that prefer these habitats. Timber harvest can occur incidental to other permitted activities. Dead and dying timber may also be harvested after analyzing and providing for other wildlife habitat needs. All timber harvest is unregulated. This prescription applies to Mt. Raymond, Ferguson Ridge, Devils Gulch, Dinkey Lakes, Kings River Special Management Area, SOHAs, (unless another prescription

is authorized in the SOHA management plan), portions of the Developed Recreation Area visible from Courtright and Wishon Reservoirs, the area between the Ansel Adams and Dinkey Lakes Wilderness leading to Edison and Florence Lakes, and riparian areas.

4.4.4
Limited-Timber Yield (Class III)

This prescription protects sensitive soils and maintains visual quality in a nearly natural state. The prescription permits limited-timber harvest commensurate with other resource protection goals. Other commodity resources are managed for a limited range of multiple use objectives. Mineral exploration and development, OHV use, livestock grazing, fire suppression and recreational development are permitted when emphasized resource values such as visual, soils and wildlife can be protected. This prescription applies to areas which have retention as the visual quality objective, such as the viewshed along major roads and highways and within and adjacent to major recreation areas. It also applies to otherwise unencumbered (No other restrictions) sensitive furbearer habitat outside of SOHAs.

4.4.5
Modified-Timber Yield (Class II)

This prescription provides moderate levels of timber outputs, while allowing significant considerations for wildlife habitat and visual quality. Where viewshed protection is planned, vegetation management can be evident, but is subordinate. Wildlife objectives focus on balanced stands favoring early and mature successional stage vegetation and species that prefer these habitats.

Forest resources are managed to provide a moderate range of multiple use objectives and outputs. Timber harvesting is modified to improve or maintain wildlife habitat and visual quality. Forage is managed for grazing of domestic livestock and wildlife use. Recreation opportunities are primarily for dispersed activities in a roaded natural setting; OHV use is permitted on designated routes or areas. Mineral exploration and/or development is permitted where emphasized resource values can be protected. This prescription applies to Shuteye, the areas adjacent to Mammoth Pool, areas which have partial retention as the visual quality objective and deer population centers and holding areas.

4.4.6
Full-Timber Yield (Class I)

This prescription provides intensive management of selected forest resources, including timber, range, water and wildlife habitat. The greatest production of goods comes from these areas. A full range of intensive pest management practices is available to minimize pest damages. An efficient and economical transportation system is developed for resource management. Dispersed recreational opportunities exist in a roaded natural setting. OHV use is permitted on designated routes or areas.

Forest resources are managed to achieve a broad range of multiple use objectives and outputs. Timber is managed intensively using a full range of silvicultural methods. Forage is managed for domestic livestock grazing. Vegetation modifications can visually dominate the landscape and mineral exploration and/or development is permitted. Fire protection is carried out at a level necessary to protect the Forest's ability to produce scheduled resource outputs. Wildlife objectives focus on stands favoring early successional stage vegetation and species that prefer these habitats. This prescription applies to all areas not described in Minimum-Level Management, Limited- and Modified-Timber Yield Prescriptions.

4.4.7
Developed Recreation

This prescription emphasizes developed recreational opportunities at levels of development and intensities expressed by management direction and standards and guidelines. These opportunities include public campgrounds, picnic areas, visitor information centers, vistas, resorts, organization camps and recreation residences. Rural and roaded natural recreational opportunities are stressed.

Regulated timber harvest is prohibited within the actual developed site, but is permissible outside the site when it is compatible with primary goals for the area. Diseased and hazardous trees are removed from the developed site. OHV use is prohibited, except for ingress and egress. Threatened / endangered and sensitive wildlife habitat and species are protected.

Other important considerations include water quality and intensive fire protection measures to protect the public, improvements and Forest resources.

4.4.8
Administrative Sites

This prescription provides sites necessary for administration of the Forest. These areas are generally small (1/4 to 40 acres) and include facilities such as lookouts, work centers and ranger stations. These areas presently exist or are needed to provide planned management.

Forest resources are managed to meet administrative objectives. OHVs are restricted to roads. Vegetation and soil are modified to accommodate facilities, but disturbance minimized. Timber is harvested to salvage dead, diseased or hazardous trees. No regulated timber yield is planned. Grazing is prohibited at most administrative sites. Mineral exploration and/or development is not permitted. Fire protection measures are planned to protect improvements.

4.4.9
Special Interest Areas

This prescription protects and manages unique geological, historical, archaeological, botanical, and memorial features, and makes educational opportunities available. A wide range of resource activities is permitted on areas where features can be protected. Mineral exploration and /or development are not permitted. Regulated timber yields are not planned. Specific fire protection objectives are established to protect special values. Wildlife objectives for species favoring late successional stage vegetation are met.

4.4.10
Special Management Area (Kings River)

This prescription emphasizes dispersed recreation; protection of the area's natural archaeological and scenic resources; and management for fish and wildlife. Existing grazing and off-road vehicle use are permitted to the same extent as was before the enactment. OHV use is restricted to designated roads and trails.

Timber harvesting is permitted only as required to control insect and disease attacks, salvage fire damaged timber, and conserve scenery or historical values. Hunting and fishing is permitted where applicable State and Federal laws, fish and wildlife values, and public safety are not jeopardized. Land within the area continues to be withdrawn from mineral entry. Outdoor recreation use and hiking trails are permitted.

4.4.11
Experimental Forest

This prescription provides research and development of silvicultural, wildlife, watershed and other applied forest management practices. Management activities permitted in experimental forests do not conflict with objectives of ongoing research. A limited transportation system is developed. Recreation opportunities are limited and occur in nonroaded natural settings while OHV use is prohibited. Mineral exploration and/or development are not permitted. Livestock grazing is permitted. Timber is managed with appropriate silvicultural methods to achieve research goals, but no regulated timber yields are planned. Fire protection is carried out to protect research values and minimize acreage burned.

4.4.12
Experimental Range

This prescription provides for range and wildlife research in nonforested areas. Management activities on experimental ranges do not conflict with research objectives. The range of permitted management activities are the same as those described for experimental forests. Recreational opportunities are limited.

4.4.13
Research Natural Areas

This prescription protects and manages natural areas as potential components of the Forest Service RNA System. Dispersed nonmotorized recreation is limited. Livestock grazing is restricted or prohibited. Mineral exploration and/or development is prohibited. No timber yields are planned. Specific fire protection objectives are set for each area to protect natural values. Pest management activities are directed toward non-native pests. Most wildlife objectives for species favoring late successional stage vegetation are met.

4.4.14
Land Exchange

This prescription improves National Forest land ownership patterns through land exchange. Emphasis is directed toward cost-effective cases, which will reduce management costs, facilitate protection and increase production of resource commodities.

Those isolated/scattered parcels of Federal land identified for disposal through exchange are managed for a range of multiple use objectives and outputs, but investments are limited. The objective is to exchange these parcels for non-Federal land within National Forest boundaries, which enhance public benefits and reduce administrative costs, such as boundary line establishment and maintenance, right-of-way acquisition, fire protection, and trespass. Land that provides critical habitat for threatened and endangered species is not identified for disposal.

Encumbrances, such as special use permits, and investments, such as roads, fences, cattle guards, fuelbreaks, wildlife habitat improvement projects and developed recreational sites, are limited. Dispersed recreation in a roaded natural setting is permitted, but not encouraged. Mineral exploration and/or development is permitted. Mineralized land is exchanged only if the government can reserve the minerals. Limited fish and wildlife habitat improvements are provided during other resource activities, but are not emphasized. A full range of pest management practices are used. Vegetation and soil stability is most likely modified due to the predominance of privately owned land surrounding Forest parcels. Fire protection seeks to minimize acreage burned and are usually implemented by cooperating agencies.

4.4.15
Dispersed Recreation

This prescription emphasizes dispersed recreational opportunities, primarily in semiprimitive, roaded natural and rural recreational opportunity-class settings. Emphasis is also placed on wildlife management. Visual condition is normally Type III or better. Levels of

development and management are expressed by management direction and standards and guidelines.

Although most areas given this prescription have limited suitability for timber, range, wildlife, and developed recreation due to topography, soils and/or climate, these projects and/or activities are allowed on suitable land. Road construction is held to a minimum with most roads closed, to retain dispersed recreational opportunities in a semiprimitive nonmotorized or motorized setting, after completion of management activities. OHV use of access routes into most of these areas is generally allowed to continue. Semiprimitive non-motorized areas are closed to OHV use.

4.4.16
Front Country

This prescription emphasizes wildlife and range management activities, with adequate protection of watershed values. Forage and range improvements are provided as needed. Vegetative manipulation, such as prescribed burns and fuelbreaks, are used to promote early successional stage browse species and grasses for wildlife habitat improvement, increased livestock forage, natural fuels reduction and watershed protection. Fire protection and natural fuels reduction are very important. Multi-resource benefitting projects (wildlife, range, fuel management) are the management objective.

4.5
MANAGEMENT STANDARDS AND GUIDELINES

4.5.1
Orientation

These management standards and guidelines supplement National and Regional standards, guidelines, and direction and also complete the management prescriptions for the management areas. Standards and guidelines apply to all management areas and analysis areas or aggregates of analysis areas. The numbered areas are shown on the Forest Plan Map. Their use depends on the prescribed prescription. They start with large groupings of analysis areas and progress downward through subgroups to individual analysis areas. Thus, to ascertain the sum total of standards and guidelines applicable to a specific area, the reader must work progressively through them.

For example, the first grouping of standards and guidelines is forestwide, affecting all applicable management areas. The second grouping is based on individual management areas with standards and guidelines applicable to all analysis areas within the management area. The third group has standards and guidelines that apply within a single analysis area or grouping of analysis areas within the management area. The concept is initially of a very broad focus, progressively narrowing through subgroupings to specific locations as necessary to deal with issues and concerns, opportunities, and needs identified in the planning process. Site specific areas are also located through use of the Element Maps accompanying this document.

4.5.2
Forestwide Standard and Guidelines

4.5.2.1
Recreation

1. Provide moderate increases in intensively used recreational developments.

2. Rehabilitate trails for user convenience and resource protection by 2010.

3. Encourage use of Forest by disadvantaged, disabled, and minority persons. Provide for their needs when designing facilities.

4. Continue emphasizing opportunities for equestrian uses.

5. Provide substantial increases in interpretive services about Forest environments and Forest management programs.

6. Increase capacity of developed sites about 7% by 2000. Use the FERC hydroelectric licensing/relicensing process to develop recreational facilities necessary to accommodate project-induced recreational needs.

7. Provide for upgrading commercial recreational services and facilities such as stores, outfitters guide services, resorts, etc. Existing permittees will be allowed to expand in response to public demands within existing recreation development and experience level. The following are examples of recreation development level:

   Level 1 Ansel Adams - Primitive
   Level 2 Florence/Edison - Semiprimitive motorized
   Level 3 Redinger - Motorized
   Level 4 Huntington/Dinkey - Rural
   Level 5 Bass Lake - Urban

8. Provide for expansion of Sierra Summit ski area to capacity before authorizing additional ski area development.

9. Develop a group day use and trailhead facility on Trails End site.

10. Prohibit expansion of Camp Fresno and regain portions of the camp's facilities which conflict with unrestricted public access and use of Dinkey Creek.

11. Prohibit expansion of Camp El-O-Win onto the Forest's land.

12. Allow no new recreation lots or tracts to be established.

13. Establish visitor information stations at locations accessible to and frequented by large numbers of people. Encourage joint agency information centers.

14. Provide increases in road and trail construction to facilitate opportunities for dispersed use.

15. Provide opportunities for increasing dispersed recreation about 15% by 2000.

16. Rehabilitate facilities in dispersed recreational areas to provide for visitor comfort and site protection by 2005.

17. Except for over-snow vehicles, allow no cross-country OHV travel. Designate additional OHV routes in areas where cross-country travel was previously allowed. Open all Maintenance Level 1 and 2 roads for OHV use unless designated closed. Maintenance Level 3, 4 and 5 roads are closed to unlicensed OHV use unless designated as a confirmed use road. Designate those trails where motor bike use will be allowed. Restrict snowmobile use to designated routes in snowplay areas, along major highways, within major developed recreation areas, and in popular cross-country ski areas.

18. Provide protection and retainment of trails and OHV routes when land-disturbing activities are planned.

19. Provide parking and sanitation facilities for snowplay, snowmobiling and cross-country ski areas.

20. Limit recreational events involving motorized vehicles to established or approved routes. Approve other types of events on a case-by-case basis, all to be authorized by special use permit.

21. Follow Sierra National Forest Manual direction, providing Forest policy on recreational residence tract administration.

22. Maintain acreages in each ROS class to meet objectives shown on ROS Element map.

23. A plan will be developed, as needed, to manage bicycle use in mountainous areas outside of wilderness.

24. Cooperate with State, other agencies, and user groups to identify and, where compatible with Forest plan management objectives, develop segments of trail that support the concept of a statewide trail system connecting use areas and providing opportunity for long distance trail touring.

4.5.2.2
Visual Resources

25. Meet visual quality objectives for all Forest land, managing for Visual Condition Types II and III along designated recreational travel routes and around destination recreational areas. (See Visual Quality Element Map.)

26. Where visual quality objectives are Type II Visual Conditions:

    a. Manage activities affecting vegetative cover type or structure to be visually buffered after completion.

    b. Manage CAS timber stands for diverse size classes
    and distribute according to the following guide:

Size Class	% crown closure
30+ inches	28-38
21 - 30	23-31
11 - 21	14-18
5 - 11	12-16
< 5	8-12

    c. Timber removals will generally be limited to sanitation and salvage, with complete slash treatment.

    d. Design and install structures to be compatible with
    and subordinate to the landscape's natural characteristics.

    e. Roads are to be designed and constructed to be subordinate to the landscape's natural characteristics, after completion, as viewed from off-site.

27. Where visual quality objectives are Type III Visual Conditions:

    a. Activities affecting vegetative cover type or structure may be visually evident, but will appear subordinate to the landscape's natural characteristics after completion.

    b. Manage CAS timber stands to maintain size class distribution as follows:

Size Class	% crown closure
30+ inches	0
21 - 30	25-32
11 - 21	25-32
5 - 11	22-28
< 5	15-21

c. Timber removals in the foreground will be limited to group selection and shelterwood, with total slash treatment. Clearcutting may be used if site condition precludes assurance of a healthy stand using shelterwood.

d. Emphasize shelterwood over clearcutting in the middleground, limiting harvest units generally to 20 acres or less.

e. Design and install structures to be compatible with and subordinate to the landscape's natural characteristics.

f. Roads are to be designed and constructed to be subordinate, after completion, to the landscape's natural characteristics, as viewed from off-site.

g. The visual quality objective is Type III Visual Conditions in the immediate foreground at all developed recreational sites of 25 PAOT capacity, or greater, unless another objective is specified on Visual Quality Element Map. Similar consideration will be given to smaller sites, based on their significance in project planning.

h. Seldomly-seen areas within Type III Visual Condition zones, where regulated timber harvest is practiced, may be managed for Type IV Visual Conditions.

28. Where visual quality objectives are Type IV Visual Conditions:

    a. Plan management activities in the foreground that may appear dominant, suggesting the features of the natural landscape.

    b. Plan activities in the middleground that may appear dominant, but have features similar to those occurring naturally.

    c. Plan activities in the background that may be evident, but subordinate to the natural landscape.

29. Where visual quality objectives are Type V Visual Conditions:

    a. Plan management activities in the foreground or middleground that may be dominant and unnatural, only suggesting features natural to the landscape.

    b. Plan activities in the background that may appear dominant, with features similar to those occurring naturally.

4.5.2.3
Wilderness

30. Provide opportunities for public use, enjoyment and understanding of wilderness.

4.5.2.4
Wild and Scenic Rivers

31. Manage designated river corridors according to classification and direction established in the Wild and Scenic River management plans.

32. Study and inventory rivers for possible inclusion into the Wild and Scenic River System and protect until future status is determined.

4.5.2.5
Fish, Wildlife, and Sensitive Plants

33. Generally, riparian management areas will extend 100 feet horizontally from the edge of perennial streams, lakes and reservoirs, except along those streams designated as essential habitat in the Interagency Agreement for Collomia rawsoniana, where the zone will be 150 feet.

34. Maintain or increase current forestwide program of direct habitat improvement.

35. Annually submit requests for habitat improvement funds to: (1) appropriate county commissions that disperse fish and game fine money, and (2) State agencies that disperse Senate bill/State proposition money.

36. Annually update 3-year habitat improvement plans for each Ranger District in cooperation with California Department of Fish and Game.

37. For fish and wildlife habitat projects funded through timber sales, give highest priority to meadows and riparian areas in sales areas.

38. For habitat improvement projects funded from sources other than timber sales, focus on habitats outside the timber planning compartment.

39. Establish a 200-foot zone on each side of all reaches of the tributaries to Portuguese Creek and Cow Creek where Lahontan cutthroat trout currently occur on all Class I, II, and III tributaries above those reaches. Apply the following standards within this zone:

    a. Recommendations of a fisheries biologist must be considered prior to removal of any vegetation;

    b. Trees must be felled and yarded away from the stream course;

c. No motorized vehicles will be allowed off permanent roads except as authorized by permit or contract;

d. Slash and other debris will be kept out of stream courses except for the purpose of fish habitat improvement. Woody debris removed from stream courses will be disposed of by methods other than machine piling or broadcast burning.

e. Dust abatement within 200 feet of stream courses will be made with materials other than petroleum products and will be recommended by a fisheries biologist;

f. Ephemeral channels may only be crossed with equipment after consultation with a fisheries biologist; and

g. Permit no water drafting from stream reaches described in #6 that could jeopardize the current status of pure Lahontan cutthroat trout populations.

40. For each Class 1 watershed, timber sale planning compartment and other appropriate land management areas, select fish and wildlife species or guilds that will become the area's target animals for management. Establish habitat objectives for all target species during the next planning cycle.

41. Seek flows and habitat conditions below new hydroelectric projects that maintain fishery and wildlife resources near naturally occurring (pre-project) conditions.

42. During relicensing of hydroelectric projects, seek flows and habitat more favorable to fish and wildlife on projects where they have obviously been degraded by the project. Adequate flow and habitat conditions will be defined in our 4e letter to the FERC, or during our effort to set Fish and Wildlife objectives for Class I watersheds, (whichever happens first).

43. When watering roads for dust abatement, protect fishery streams by:

    a. Allowing no drafting unless immediate downstream discharge from drafting site is maintained at 1.5 cfs or greater.

    b. Permitting water drafting to remove no more than 50% of any stream's ambient discharge that is over 1.5 cfs.

    c. Allowing no drafting in or above stream reaches supporting pure populations of Lahontan cutthroat trout (See Section 4.5.16 and EIS Section 3.5.5.3).

44. Minimize, during July, management activity, such as logging and vehicular traffic, in deer population centers 2, 3, 4, 5, 7, 10, 12, 14, 15, 16, 22, 24 and 29. (See Wildlife Element Map)

45. Minimize management activity in deer holding areas 2, 3, 4, 6 and 10-18 during the following periods (See Wildlife Element Map):

    a. Holding areas above 5,000 feet elevation - May 15 to June 15 and October 1 to November 30.

    b. Holding areas below 5,000 feet elevation - May 1 to June 1 and October 15 to November 30.

46. Keep vehicle travel at low levels in deer winter ranges 2, 5, 6 and 7 from December 1 through April. (See Wildlife Element Map)

47. In key wildlife areas, regulate road use through seasonal or permanent closures. Do not close roads needed for permanent public use. (See Wildlife Element Map)

48. In key deer areas, reduce disturbance from normal traffic by leaving a screen of vegetation immediately adjacent to maintenance Level III, IV and V roads, where feasible and practical. Where screening does not exist or when existing screening cannot be protected during routine management activities, carryout subsequent management in a manner that will not impede the development of adequate screening.

49. Within deer holding areas 2, 3, 4, 6, 10-18 and deer population centers 2, 3, 4, 5, 7, 10, 12, 14, 15, 16, 22, 24 and 29. (See Wildlife Element Map):

    a. The average regeneration unit will be no greater than 10 acres, unless sizes and shapes are organized to optimize the usable area for deer.

    b. Plant conifers on a 6' x 12' spacing, with widest distance along contour.

    c. Release from grass, forb and shrub competition will be allowed until plantations are certified as acceptably stocked (typically 3 years).

    d. Grasses, forbs and shrubs may be planted after plantations are certified as acceptably stocked.

50. Seed skid trails, landings and temporary roads, where desirable and feasible, with species favored by wildlife.

51. Use the management plans for the North Kings, San Joaquin, Huntington, Oakhurst and Yosemite deer herds as deer habitat management guides.

52. Cooperate with private landowners to encourage resource protection on private lands.

53. Protect nests and dens of all sensitive wildlife species until young are gone. Arrange harvest units and other management activities to preserve nests and dens.

54. Protect Forest's 6 identified superior nest sites for peregrine falcons.

55. Protect important roost trees and feeding areas for wintering bald eagles at Shaver, Redinger, and Bass Lakes, and Pine Flat Reservoir.

56. No new management activities will be approved within goshawk nest site areas until a Forest Goshawk Network is approved. Nest site areas may encompass up to 50 acres of suitable goshawk habitat. Occupied nest sites found within areas where management activities have already been authorized shall be protected as described in S&G #53.

57. Provide 24 California spotted owl habitat areas (SOHAs) outside wilderness areas, each with at least 1,000 acres of suitable core habitat and 650 acres of replacement. Prior to approving new management activities within the 4,500 acre circle, as depicted on the spotted owl/sensitive furbearer element map, an analysis will be prepared and a SOHA plan written to identify the 1,000 acres of base habitat and 650 acres of replacement habitat.

58. Manage marten and fisher habitat management areas with the goal of maintaining sufficient amounts of habitat and habitat characteristics that contribute to the viability of these species. Validate assumptions of the Regional literature review as modified to meet Sierra National Forest conditions. Use information from research, administrative studies and monitoring to improve management for the maintenance of marten and fisher in coordination with California Department of Fish and Game.

59. Continue existing Forest uses in marten and fisher management areas when such activity will not directly or indirectly preclude use of the areas by marten and fisher.

60. Permit limited-timber yield harvests and other new activities in marten and fisher habitat management areas when supported by a biological evaluation and habitat management plan.

61. Prepare biological evaluations for proposed new activities in management areas with the objectives of maintaining sufficient amounts and distribution of marten and fisher habitat and habitat characteristics to contribute to a viable population and sustain the health and vigor of timber stands. Based on the biological evaluation and environmental analysis, utilize timber harvest practices such as salvage, sanitation, individual tree and group selection harvests that meet these stated objectives.

62. For connectivity, manage a minimum of 600 foot wide travelways, identified and mapped as part of the planning record, to provide linkage between marten and fisher habitat management areas. Continue existing Forest uses in and adjacent to travelways. Allow new management activities in travelways when they will not directly or indirectly preclude use by marten and fisher as determined by a biological evaluation.

63. Manage all marten and fisher reproductive sites, located outside designated habitat management areas, to retain suitable habitat attributes. Include 120 acres of suitable habitat if adjacent to mature timber stands or 500 acres if adjacent to open canopy areas. Identify recommended acreage and habitat conditions utilizing the biological evaluation process. The biological evaluation should analyze: a) whether to move habitat management area boundaries to incorporate known marten and fisher reproduction sites, or b) modify the boundaries of the seven identified habitat management areas to accommodate the use of suitable habitat, keeping acres managed for furbearers constant. Permit no new management activities in any reproductive site that will preclude use of the area by marten and fisher for reproduction, as evaluated in a biological evaluation.

64. Manage snag and down logs within each timber planning compartment as follows:

    a. Maintain an average of 1.5 hard snags/acre in sizes 15-24" DBH x 20' or larger in height in all time periods.

    b. Maintain an average of 0.5 hard snags/acre in sizes 25" or greater DBH x 20' or larger in height in all time periods.

    c. Maintain a sufficient number of live trees (replacement snags) in the compartment to sustain average densities in a. and b.

    d. Retain approximately 3 down logs/acre measuring at least 20" diameter x 20' in various stages of decomposition.

    e. Snags used to meet the average should be comprised of hardwood and softwood trees.

    f. Snags should be managed in small clumps of 5 or 6 that are well distributed through the compartment, and down logs should be uniformly distributed, where feasible.

g. Cedar snags should not be used to meet prescribed snag densities.

h. Snags used to meet the average should be concentrated more in the vicinity of streams, meadows, and the edges of openings.

i. Leave all snags and downed logs in riparian areas, where consistent with public safety and fisheries habitat objectives.

j. If the conditions in items a., b. and c. are not met in a compartment, the compartment should meet these conditions when project activity is completed.

65. On CAS timber land, forestwide, maintain and grow mast-producing oaks in numbers proportional to current inventory. However, where hardwoods and conifers coexist, the goal is to increase conifers, subject to limits imposed to protect oaks. Opportunity to increase conifers in regeneration units will be evaluated on a stand-by-stand basis, while targets for oak management will be evaluated by timber compartment or planning area.

66. Manage oaks where they occur naturally as follows:

    a. In harvest units and other treatment areas within key deer winter ranges, migration corridors, holding areas, and population centers, the abundance of oaks on CAS land (as measured by their contribution to regulated stand crown closure) should not be less than half the existing average oak crown closure of mast producing oaks on all CAS land within the deer areas, or 20% crown closure, whichever is greater. The existing, average oak crown closure in timber compartment deer areas and other planning areas should be determined from the best available data for 1985. Where regenerated stands average less than 20% crown closure of mast producing oaks prior to regeneration, retain all oaks to the extent practical.

    b. For other harvest units and treatment areas, the abundance of oaks (as measured by their contribution to crown closure) should not be less than one-quarter of existing average crown closure of mast producing oaks for all CAS land within the compartment or 10% crown closure, whichever is greater. Where regenerated stands average less than 10% before regeneration, retain all oaks to the extent practical.

    c. In noncommercial areas, retain all oaks for wildlife needs, except in existing and proposed shaded fuelbreak areas. Where desirable and feasible, undertake direct habitat improvement measures to increase the number of oaks.

67. Develop sensitive plant species management guides to identify population goals and compatible management activities that will maintain viability.

68. Manage sensitive plant species to avoid future listing as threatened and endangered. Ensure maintenance of genetic and geographic diversity and viable populations.

4.5.2.6
Riparian

69. Give primary management emphasis in riparian areas to protect and enhance the riparian ecosystem, riparian vegetation, water quality, soils, fish and wildlife resources.

70. Riparian area protection and Streamside Management Zone determination will be based on methods described in FSH 2509.22, Sierra Supplement 1 which gives specific direction for width determinations.

71. In the absence of on-site riparian area protective width determinations, riparian areas will extend 100 feet horizontally from the edge of perennial streams, lakes and reservoirs. Deviations resulting from on-site evaluations will be documented in project environmental assessments.

72. When on-site project evaluations identify the need to afford protection to intermittent and/or ephemeral drainages, the protection zone widths will be defined in accordance with the Forest Streamside Management Zone determination process as described in the FSH 2509.22, Sierra Supplement 1.

73. Riparian areas in the Forest will be mapped, inventoried, and monitored during the current planning cycle.

74. Manage vegetation in designated riparian areas so existing forestwide diversity is maintained in all periods.

75. Maintain or enhance productivity of Forest meadows to accommodate wildlife and range resources.

76. In stream reaches occupied by fish, any activity that results in trampling and chiseling of stream banks should not exceed 20% of any given stream reach. Controls such as re-routing trails, relocating dispersed campsites, and/or fencing of areas will be used to manage activities and improve riparian conditions in identified areas not meeting this standard.

77. Protect streamside zones by locating new roads outside of riparian areas, except at stream crossings.

78. Avoid constructing new roads within the perimeter of meadows and other riparian areas where opportunities exist to relocate or obliterate existing roads.

79. When existing routes through riparian areas and meadows are not compatible with riparian dependent resources, consider re-routing.

80. Allow picketing or tethering of stock in meadows and overnight tie-ups no closer than 100 feet of lakes and streams.

81. Seek flows below new hydroelectric projects that maintain riparian resources at adequate levels (near current, pre-project conditions) so as to protect water quality.

82. During relicensing of hydroelectric projects, seek flows favorable to riparian resources on projects obviously degraded by the project; when it doesn't conflict with instream flows recommended for the fishery resource.

4.5.2.7
Range

83. Provide structural and nonstructural range improvements to increase forage production and utilization to 40,600 AUMs/year by decade 5. Follow the direction in FSM 2211, during Forest Plan implementation, when updating and developing allotment management plans.

84. Emphasize multi-purpose brush manipulation treatments such as fuel reduction and/or prescribed burn projects, which will benefit wildlife, watershed, range, recreation and fire management.

85. Maintain current level of permit administration.

86. Use transitory forage produced by wildfire and other resource activities.

87. Extend grazing seasons into winter and early spring on low elevation annual grass ranges and utilize treated brushfields and transitory range.

88. Salt grounds will be located more than 1/4 mile from streams, meadows and trails.

89. Manage domestic livestock to meet wildlife needs in identified important wildlife habitat areas.

90. Manage available forage resources in wilderness areas for continued grazing in accord with existing allotment management plans, recreation stock and wildlife needs.

91. Maintain stock driveways and travelways in usable condition.

92. Perennial forage meadows presently in poor ecological condition, but having capability for improvement, will be managed to establish a fair or better ecological condition.

4.5.2.8
Timber

93. On lands where resource goals other than timber are emphasized, limited timber yield will be incidental to management of those resources. Silvicultural systems will be selected to meet site specific needs of those resources.

94. On lands where full and modified timber yield is the emphasized or co-emphasized resource, sustained timber production at the highest possible level is the management goal.

95. Establishment and growth of new timber stands is the priority goal for management activities on lands suitable for full and modified timber yield, where timber is the emphasized or co-emphasized resource during this planning period.

96. The silvicultural system best suited to meet the priority goal will be selected by a certified silviculturist, after an on-site analysis of the operational environment.

97. When necessary because of catastrophic damage or national emergency, harvest timber by appropriate silvicultural system and reforest all capable lands classed as unsuitable.

98. Conduct mortality salvage harvests on all CAS lands, where compatible with other resource values and uses.

99. Cooperate, when commensurate with benefits, with research organizations in trial applications of new practices designed to increase yields.

100. Provide maximum opportunities for firewood gathering by the public prior to closing roads and where compatible with other resources and uses.

101. Consider harvest areas as regenerated when any of the following conditions are met:

    a. Reproduction, in the minimum amounts specified below, has survived 3 growing seasons and the trees are distributed over 90% of the harvest area.

Minimum Number Of Trees / Acre

Forest Type	R-5 Site Class I	II	III	IV
Ponderosa pine	150	125	100	75
Mixed conifer	150	150	150	150
Red fir	200	200	200	200
Subalpine	125	100	75	75

b. Following removal of all merchantable overstory trees and completion of slash treatment, the basal area weighted mean age of residual growing stock is 50 years or less. The stand is stocked at 70% of desired basal area with growing stock trees more than 5" DBH and with a basal area weighted average height of at least 50% of expected dominant height for the site class concerned.

c. The stand is stocked with seedlings and trees <5" DHB and their projected growth would bring them to 70% of desired basal area and 50% of expected dominant height when the basal area weighted mean age reaches 50 years.

d. The combined stocking of trees >5" DBH and those <5" DBH will have the same result as the projected in the preceding definition.

e. Meets future management objectives.

102. In any year following initial regeneration and prior to a stand meeting a regeneration standard, if the number of surviving trees falls below that needed to meet a regeneration standard, the area will either be planted or receive necessary site preparation maintenance until regeneration standard is met. Such treatments may be discontinued if, through Plan amendment or revision, the land is removed from the "suitable" land classification or minimum stocking standards are reduced.

103. Areas being regenerated using an even-aged system shall be dispersed over each management area by employing the following standards, unless more restrictive standards are specified elsewhere in this Plan because of other resource considerations:

a. Maximum size of an individual area to be regenerated by an even-aged system is 40 acres, unless a larger area is approved, as provided for in the regulations.

b. Distance between regeneration units will average 660 feet or greater. If ground and stand conditions dictate, the Forest Supervisor may approve sales averaging less than 660 feet between regeneration units.

c. Regeneration areas cannot be located adjacent to previous regeneration units until the previous unit meets minimum stocking standards of trees 4.5 feet in height. (See S&G 101)

104. Regeneration of stands made necessary by natural acts need not comply with dispersion standards and guidelines.

105. When natural seed fall is the planned reforestation technique, provide a mineral soil seedbed on at least 70% of the harvest area, assuming BMP are implemented and soil productivity can be protected.

106. Improve genetic selection opportunities during precommercial thinning, and assure plantation stocking is generally at optimum levels, plus provide for planting at least 400 trees per acre, evenly distributed, where artificial regeneration is the reforestation technique.

107. Treat regenerated stands as necessary to assure the average unit has a sufficient number of merchantable trees to reach 90% of normal stocking within 6 decades of stand establishment.

108. Select tree species to plant or seed regeneration areas from those found in natural forests that have occupied the site.

109. Collect all seed from selected, phenotypically superior trees. Plant stock grown from seed collected within appropriate seed zones, except where a certified silviculturist certifies another location is acceptable.

110. The uneven-aged silvicultural system may be applied on suitable timber land in lieu of even-aged management when the following criteria are met:

a. After treatment, stand will contain at least three distinct and identifiable 20-year age classes. For this purpose planned regeneration following a selection method harvest may be counted as one age class.

b. Even-aged group generally will not exceed 2 acres in size.

c. Each age class in stand will occupy approximately equal areas after the second cutting cycle.

d. The cumulative cubic foot growth, up to the third cutting, will be favorably comparable to the CMAI for that of a new even-aged stand on the site.

111. Where timber management practices create residual forest fuels (dead biomass), secondary utilization (personal firewood use, commercial fuelwood and other commercial product utilization) will be preferred to on-site disposal whenever such utilization meets management objectives in a cost effective manner. Public demand for firewood will be given preference over other forms of secondary utilization.

112. In areas not meeting standards for wildlife snags, an ID team will determine which merchantable trees must be left to meet wildlife snag standards.

4.5.2.9
Diversity

113. Provide vegetation diversity to maintain viable wildlife populations, scenic qualities and to minimize losses from wildfire.

114. Provide and maintain at least five percent of each naturally occurring vegetative seral stage including annual grass, blue oak/savannah, diggers pine/oak, chaparral, black oak woodland, ponderosa pine, mixed conifer, Jeffrey pine, red fir and subalpine forest, where practical or where management direction states differently.

115. In the ponderosa pine, mixed conifer, hardwoods and red fir forest vegetation types, maintain at least 5% of the type throughout the Forest (outside wilderness) in each of the following seral stages:

Stage 1	Grass/Forbs
Stage 2	Shrub/Seedling/Sapling
Stage 3B/C	Pole/Medium tree with >40% crown closure
Stage 4B/C	Large trees with >40% crown closure
Stage 4C+	Multi-storied dominated by large trees and canopy closure greater than 70%.

Changes in seral stage distributions will be monitored every 10 years by management area, and compared to the FORPLAN database.

116. Manage chaparral primarily by prescribed burning.

4.5.2.10
Integrated Pest Management

117. Use an integrated pest management approach in the planning and implementation of all activities. Consider a full range of alternatives and base the selected alternative(s) on biological effectiveness, cost efficiency, and health and environmental safety.

118. Treat all freshly cut stumps in developed recreation areas with borax (sodium tetraborate decahydrate, EPA Reg. No. 1624-94; see FSM 2303.14 R-5 Supp. 164, 9/86).

119. Plant only sugar pine seedlings which are proven resistant to white pine blister rust, when available. If resistant stock is not available, plant no more than 10% untested seedlings.

4.5.2.11
Soil and Water

120. Preclude the impacts of cumulative watershed effects by applying appropriate BMP and mitigation measures during project implementation. Utilize regional CWE methodology when refined for application within the Forest to assess each project for potential to incur cumulative effects.

121. Determine recharge/contributing area for groundwater resources serving Forest Service wells used for recreation or administrative sites. Limit any Forest activities from taking place on defined recharge areas that would:

a. Introduce contaminants likely to enter groundwater,

b. Prevent or significantly reduce infiltration of recharging water, or

c. Intercept groundwater from reaching wells.

122. Improve water quality and protect soil productivity by restoring deteriorated watersheds on the basis of economic efficiency and severity of problem and its impact on downstream beneficial uses.

123. Avoid development in floodplains, wetlands, and riparian areas, except where alternatives will not meet essential management objectives or purposes. This includes bridges, approaches, water diversion structures and boat ramps.

124. BMP will be implemented to meet water quality objectives and maintain and improve the quality of surface water in the Forest. Methods and techniques for applying BMP will be identified during project level environmental analysis and incorporated into the associated project plan and implementation documents. (See Plan Appendix F)

125. Avoid tractor logging on highly erodible soils, where sustained slopes exceed 35%, except where supported by on-the-ground ID team evaluation.

126. Allow no regeneration harvest on highly erodible soils where sustained slopes exceed 65%.

127. Apply appropriate erosion prevention measures on all ground-disturbing activities (FSH 2409.23) prior to fall storms (October 1) and immediately upon completion of activity begun after November 1.

128. Apply appropriate erosion prevention measures (FSH 2409.23) on high erosion hazard soils under the following conditions:

    a. When exposed soils from an average of several 500-foot linear transects:

        1. Exceed 150 feet on slopes of 15-35%,

        2. Exceed 75 feet on slopes of 35-65%, or,

        3. Exceed 25 feet on slopes over 65%,

    b. On linear disturbances, such as skid trails and firelines, cross-drain area at the following intervals:

Interval Between Cross-Drain (feet)

% Slope	HEHR	VHEHR
0 -15	150	125
15 - 35	75	45
35 - 65	35	20
65 +	15	15

Installation must utilize proper engineering techniques and recommendations for high (VHEHR) and very high (VEHR) erosion hazard ratings, as defined in the Forest Soil Resource Inventory.

129. Road construction on areas with High and Very High Erosion Hazard will follow standards in FSH 2509.22, Sierra Supp. No. 1 which gives direction concerning soil stabilization and road surface drainage. See Soils Element Map for primary locations of highly erodible soils and soils sensitive to loss of productivity. (Also see Appendix V of the FEIS)

130. Plan and execute activities such as timber harvesting, site preparation and fuels reduction on soils sensitive to loss of productivity by using the following standards (see FSH 2509.18):

    a. Avoid mixing or removing soils below the A horizon. Roads, skid trails, firelines and log landings are exceptions.

    b. On completion of a ground disturbing project on less than 35% slope, maintain an average accumulation of 50% protective ground cover density in the 1 to 100-hour fuels with some 1,000-hour fuels up to 10" in diameter.

    c. On slopes over 35% with Very High and/or High Erosion Hazard soil, an ID team will evaluate ground cover needs and develop prescriptions.

131. Secure water rights and obtain water availability assurances for existing and foreseeable future Forest Service nonconsumptive and consumptive uses.

4.5.2.12
Minerals

132. Actively support orderly exploration and development of mineral and energy resources under NEPA, Federal Land Planning Management Act (FLPMA), and mining laws and regulations. Require disturbed area reclamation as soon as planned uses cease. Assist in planning for extraction of minerals to facilitate reclamation. Reclamation will include treatment of any unneeded mine shafts, tunnels, tailing ponds or any other on-site developments.

133. In conformance with P.L. 54-579 (Section 104), review and recommend to the Secretary of Interior by October 1991, whether, and for what duration, the various mineral withdrawals, exclusive of Congressional withdrawals, in the Forest will continue. Other agency withdrawals will be reviewed by the respective agency.

134. Initiate Forest Service withdrawals for new sites only when other available surface use and occupancy controls cannot protect surface resources.

135. Request public and quasi-public agencies, contemplating applications resulting in withdrawals, to review their applications with the Forest Service. Seek to minimize impact of withdrawal on mineral development, while protecting area included in the project proposal.

136. Require compliance with operating plans for surface protection and reclamation.

137. Require operating plans to include measures that control surface runoff and minimize soil erosion.

138. Require operating plans that provide for revegetation of disturbed areas to be in prescription within 2 years of conclusion of operating plan period.

139. Within withdrawn areas, all claimed valid existing rights will be verified by a Forest Service mineral examiner prior to authorizing any surface disturbing mineral activities or authorizing surface access development.

140. Access and development in specially designated areas and areas withdrawn from mineral entry, where valid existing rights may be exercised, are

restricted to the extent the integrity for which the area is designated must be maintained.

141. For locatable minerals, act on Notice of Intent and Plans of Operation in a timely manner.

142. Investigate patent applications in a timely manner.

143. As a minimum, determine validity of all claims located in Wilderness areas after Plans of Operation are submitted.

144. Require mine operators to furnish a performance bond to cover reclamation in amount equal to an estimate of the cost of reclamation.

145. Require all mining projects (including extraction of road materials) to provide for resource protection and rehabilitation.

146. All authorized surface use of a mining claim will be described in the Plan of Operation.

147. Off-claim uses and needs that can be tied to a specific claim will be authorized by special use permit or other conventional document.

148. Mineral activities which cannot be tied to a specific claim will be authorized only in the Plan of Operations approved for such activities (such as active exploration or prospecting not within the limits of a claim).

149. Actively pursue and resolve all unauthorized mineral-related land uses.

150. Establish and maintain a listing of all parcels of Forest land that have "acquired land" status.

151. Require lease conditions to be consistent with requirements for mining operations on locatable claims.

152. No leasable minerals in the oil or gas category are known to exist within the Forest. The one geothermal area is economically infeasible at this time. If any oil/gas is found, Forest Service manual direction will be followed.

153. Encourage utilization of the most energy efficient sources to obtain marketable, common variety mineral materials.

154. Establish and maintain an inventory of common variety materials within the Forest.

155. Identify common variety material sites needed for Forest purposes and rank each for development.

156. Quarry material, in excess of Forest needs, will be available for public use by permit.

157. Identify common variety material sites available for public use and rank each for development.

158. For each common variety materials site, prepare a development and rehabilitation plan prior to development and use.

4.5.2.13
Lands

159. Parcels of Forest land will be identified as suitable for exchange (in conformance with the Forest's Land Adjustment Plan to be developed after approval of the Forest Plan) and will be managed as a potential land exchange base. These parcels will be economically managed for a range of multiple use objectives and outputs with moderate timber, water and forage yields. Investments will be limited and long-term encumbrances will be reduced as follows:

    a. Authorize only temporary uses through special use permits.

    b. Existing permits which encumber the land will be terminated as opportunities arise.

    c. These lands will be managed for a range of multiple use objectives and outputs, but investments will be limited.

160. Participate with BLM in considering possible boundary adjustments along the Forest's western boundary.

161. In areas where the Forest is the predominate landowner, use the following actions:

    a. Emphasize acquisition of "inholding lands" to improve administration, reduce conflicts in use, and reduce costs related to right-of-way acquisition and landline survey.

    b. Emphasize landline surveys that support all resource programs and resolve trespass.

    c. Emphasize acquisition of rights-of-way for public access and to support resource programs.

    d. Limit Forest land use to benefit National Forest programs, or when in the National interest.

    e. Emphasize acquisition of land in key areas to protect fish and wildlife habitat.

162. In areas where the Forest is the minority landowner:

    a. Exchange to meet private land and other ownership goals to resolve conflicts in use.

b. Emphasize cooperative landline survey programs with adjacent owners to reduce costs and resolve suspected trespass.

c. Emphasize acquisition of rights-of-way to support resource programs, but coordinate access with other landowners.

d. Make the Forest's land use priority that which serves private, local and State government goals and resolves conflicts.

e. Cooperate with other landowners to encourage protection of fish and wildlife habitat on lands of other ownerships.

163. Discourage unwarranted expansion of peripheral boundaries of existing townsites.

164. Whenever conversion of important farmland, range, forest or wetland to other uses is proposed by actions or programs of other agencies or by licensing, permitting or approval of a Federal agency, advocate retention of these lands, unless other needs clearly override the benefits.

165. Within a reasonable time period, take appropriate criminal and civil action and resolve all cases of unauthorized occupancy and use.

166. Proposed sites for standard FM or television broadcast stations and radar stations will be separated from service-type radio installation sites by at least one air distance mile.

167. Require developers, who propose major projects with short turnaround time, to pay for desired services. Projects planned with adequate advance notice will be accomplished through normal planning/budgeting process as priorities and funds permit.

168. Encourage licensee acquisition of private lands within areas withdrawn by FERC.

169. Before considering land exchange, use purchase authority to acquire lands or interest in lands important for wilderness, wildlife or recreation.

170. Discourage conversion of prime farmland, forest range and wetlands to other uses.

171. Improve administration and management efficiency through land ownership consolidation and acquisition of identified key parcels. Emphasis will be directed toward cost-effective cases which will reduce management costs, facilitate protection and increase production of resource commodities.

172. Utilize land exchange authority to acquire lands, or interest in lands, important for wilderness, wildlife, or recreation.

173. Acquire permanent easements for all system roads. Recommend condemnation, if necessary.

174. Grants of right-of-way for roads and utilities will utilize common corridors, where feasible.

4.5.2.14
Hydroelectric Development

175. Encourage licensee acquisition of private lands within areas withdrawn by FERC, where beneficial for resource protection.

176. During power project licensing procedures, licensees will be responsible for development, operation, maintenance, and replacement of recreational facilities, the need for which is, or was, project related.

177. Require environmentally essential studies on all projects be completed and signed prior to issuance of 4e letter.

178. On all projects, require essential studies, plans and agreements be completed and approved prior to a Forest Service Special Use Authorization (SUA).

179. Mitigation for loss of public resources resulting from hydroelectric project development, will be borne by the licensee. Included, as applicable, will be compensation to the Forest for lost wildlife habitat, timber, commercial forest land, cultural resources, fishery values, visual resources and recreational opportunities.

180. All new powerline installations of 35 KV and less shall be underground, where technically feasible and desirable for resource protection, as determined by an environmental analysis. The Forest will actively pursue undergrounding of existing powerlines, where economically feasible and desirable for resource protection, as determined by an environmental analysis.

181. Bury new penstocks where feasible and desirable for resource mitigation, as determined by an environmental analysis.

182. Insure that EISs and/or EAs for hydroelectric projects evaluate and propose mitigation measures for secondary, and/or side effects of projects, such as crew housing, recreational needs and law enforcement problems.

183. Request cooperative assistance in revising the Forest's Land Management Plan direction for management area impacted by hydroelectric project

development. This should occur with development of the Recreation Plan. This revision should also show indirect resource losses.

184. During the project planning phase, consider the need for construction of trails, roads and/or recreational facilities prior to starting project development. The intent is to maintain or enhance current use and mitigate adverse impacts on recreation during construction.

185. Licensee will adopt the Forest's design motif and standard details to coordinate recreational visual standards throughout the Forest.

186. Facility signs will be made by the licensee in coordination with Forest standards and design motif.

187. Transmission lines, switchyards and access roads are considered direct impacts of the project and are evaluated with the other project facilities and documented in the environmental assessment or EIS.

188. For an Environmental Assessment, cumulative effects (hydroelectric-related) for more than one project are to be addressed in the drainage in which they occur, starting from the last point on the stream where any impacts may cease or are not evident and include all the area upsteam to the point of diversion.

189. All new water development project areas will be considered for reclassification into "Developed Recreation" analysis areas. Reclassified analysis areas will be studied for required levels of development, new permitted uses, special conditions and other special management requirements or stipulations.

190. Where withdrawals are no longer needed, request applicants to relinquish them.

191. Tunnel muck in excess of Forest Service and developer's needs will be available for public use by permit.

192. The signing of a Decision Notice and issuance of a Special Use Authorization may occur simultaneously.

4.5.2.15
Cultural Resources

193. Inventory and evaluate cultural resources, giving priority to areas where land-disturbing activities are planned or likely.

194. Pending completion of forestwide inventory and evaluation, conduct a cultural resource survey adequate to make a determination of effect in all areas where land disturbing activities are planned, pursuant to 36 CFR 800.

195. Evaluate identified properties. Provide for nomination of sites to the National Register as appropriate.

196. Contribute to a system of natural history examples throughout the eastside foothills and southern Sierra Nevada Range.

197. Coordinate site identification, evaluation and management with concerned local Native Americans.

198. Coordinate Forest management practices to assure local Native Americans have access to and use of traditional food, medicinal and basketry resources.

199. Take measures to protect cultural resources by issuing Archaeological Resources Protection Act (P.L. 95-96) permits for excavation and/or removal. Emphasize criminal and civil penalties for unauthorized removal or disturbance; monitor impacts to and condition of properties; provide physical protection measures; mitigate impacts; provide for adaptive reuse; and maintain locational confidentiality.

200. Plan Forest projects so impacts to significant cultural resource sites are avoided or develop appropriate and adequate mitigation plans where impacts are unavoidable.

201. Priority will be given to preservation and maintenance, as opposed to removal of all historic structures.

202. Update the Forest's Cultural Resource Overview on a 5-year basis.

203. Remove backlog of unevaluated cultural resource properties. Target a specific number of Class II properties for evaluation each year. Nominate properties to National Register of Historic Places.

204. Consult with California State Historic Preservation Office in developing management plans for all significant (Class I) properties.

205. Provide a program of cultural history interpretation.

4.5.2.16
Transportation and Facilities

206. Improve the arterial and collector road system to emphasize economic efficiency, user safety and protection of adjacent resources.

207. Replace or rehabilitate major structures to support planned production activities or high use areas.

208. Build transportation system to standards that support planned uses and activities.

b. Emphasize cooperative landline survey programs with adjacent owners to reduce costs and resolve suspected trespass.

c. Emphasize acquisition of rights-of-way to support resource programs, but coordinate access with other landowners.

d. Make the Forest's land use priority that which serves private, local and State government goals and resolves conflicts.

e. Cooperate with other landowners to encourage protection of fish and wildlife habitat on lands of other ownerships.

163. Discourage unwarranted expansion of peripheral boundaries of existing townsites.

164. Whenever conversion of important farmland, range, forest or wetland to other uses is proposed by actions or programs of other agencies or by licensing, permitting or approval of a Federal agency, advocate retention of these lands, unless other needs clearly override the benefits.

165. Within a reasonable time period, take appropriate criminal and civil action and resolve all cases of unauthorized occupancy and use.

166. Proposed sites for standard FM or television broadcast stations and radar stations will be separated from service-type radio installation sites by at least one air distance mile.

167. Require developers, who propose major projects with short turnaround time, to pay for desired services. Projects planned with adequate advance notice will be accomplished through normal planning/budgeting process as priorities and funds permit.

168. Encourage licensee acquisition of private lands within areas withdrawn by FERC.

169. Before considering land exchange, use purchase authority to acquire lands or interest in lands important for wilderness, wildlife or recreation.

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171. Improve administration and management efficiency through land ownership consolidation and acquisition of identified key parcels. Emphasis will be directed toward cost-effective cases which will reduce management costs, facilitate protection and increase production of resource commodities.

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173. Acquire permanent easements for all system roads. Recommend condemnation, if necessary.

174. Grants of right-of-way for roads and utilities will utilize common corridors, where feasible.

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Hydroelectric Development

175. Encourage licensee acquisition of private lands within areas withdrawn by FERC, where beneficial for resource protection.

176. During power project licensing procedures, licensees will be responsible for development, operation, maintenance, and replacement of recreational facilities, the need for which is, or was, project related.

177. Require environmentally essential studies on all projects be completed and signed prior to issuance of 4e letter.

178. On all projects, require essential studies, plans and agreements be completed and approved prior to a Forest Service Special Use Authorization (SUA).

179. Mitigation for loss of public resources resulting from hydroelectric project development, will be borne by the licensee. Included, as applicable, will be compensation to the Forest for lost wildlife habitat, timber, commercial forest land, cultural resources, fishery values, visual resources and recreational opportunities.

180. All new powerline installations of 35 KV and less shall be underground, where technically feasible and desirable for resource protection, as determined by an environmental analysis. The Forest will actively pursue undergrounding of existing powerlines, where economically feasible and desirable for resource protection, as determined by an environmental analysis.

181. Bury new penstocks where feasible and desirable for resource mitigation, as determined by an environmental analysis.

182. Insure that EISs and/or EAs for hydroelectric projects evaluate and propose mitigation measures for secondary, and/or side effects of projects, such as crew housing, recreational needs and law enforcement problems.

183. Request cooperative assistance in revising the Forest's Land Management Plan direction for management area impacted by hydroelectric project

development. This should occur with development of the Recreation Plan. This revision should also show indirect resource losses.

184. During the project planning phase, consider the need for construction of trails, roads and/or recreational facilities prior to starting project development. The intent is to maintain or enhance current use and mitigate adverse impacts on recreation during construction.

185. Licensee will adopt the Forest's design motif and standard details to coordinate recreational visual standards throughout the Forest.

186. Facility signs will be made by the licensee in coordination with Forest standards and design motif.

187. Transmission lines, switchyards and access roads are considered direct impacts of the project and are evaluated with the other project facilities and documented in the environmental assessment or EIS.

188. For an Environmental Assessment, cumulative effects (hydroelectric-related) for more than one project are to be addressed in the drainage in which they occur, starting from the last point on the stream where any impacts may cease or are not evident and include all the area upsteam to the point of diversion.

189. All new water development project areas will be considered for reclassification into "Developed Recreation" analysis areas. Reclassified analysis areas will be studied for required levels of development, new permitted uses, special conditions and other special management requirements or stipulations.

190. Where withdrawals are no longer needed, request applicants to relinquish them.

191. Tunnel muck in excess of Forest Service and developer's needs will be available for public use by permit.

192. The signing of a Decision Notice and issuance of a Special Use Authorization may occur simultaneously.

4.5.2.15
Cultural Resources

193. Inventory and evaluate cultural resources, giving priority to areas where land-disturbing activities are planned or likely.

194. Pending completion of forestwide inventory and evaluation, conduct a cultural resource survey adequate to make a determination of effect in all areas where land disturbing activities are planned, pursuant to 36 CFR 800.

195. Evaluate identified properties. Provide for nomination of sites to the National Register as appropriate.

196. Contribute to a system of natural history examples throughout the eastside foothills and southern Sierra Nevada Range.

197. Coordinate site identification, evaluation and management with concerned local Native Americans.

198. Coordinate Forest management practices to assure local Native Americans have access to and use of traditional food, medicinal and basketry resources.

199. Take measures to protect cultural resources by issuing Archaeological Resources Protection Act (P.L. 95-96) permits for excavation and/or removal. Emphasize criminal and civil penalties for unauthorized removal or disturbance; monitor impacts to and condition of properties; provide physical protection measures; mitigate impacts; provide for adaptive reuse; and maintain locational confidentiality.

200. Plan Forest projects so impacts to significant cultural resource sites are avoided or develop appropriate and adequate mitigation plans where impacts are unavoidable.

201. Priority will be given to preservation and maintenance, as opposed to removal of all historic structures.

202. Update the Forest's Cultural Resource Overview on a 5-year basis.

203. Remove backlog of unevaluated cultural resource properties. Target a specific number of Class II properties for evaluation each year. Nominate properties to National Register of Historic Places.

204. Consult with California State Historic Preservation Office in developing management plans for all significant (Class I) properties.

205. Provide a program of cultural history interpretation.

4.5.2.16
Transportation and Facilities

206. Improve the arterial and collector road system to emphasize economic efficiency, user safety and protection of adjacent resources.

207. Replace or rehabilitate major structures to support planned production activities or high use areas.

208. Build transportation system to standards that support planned uses and activities.

209. All system roads are assigned to one of five maintenance levels, and will be maintained and operated in accord with established road management objectives, signed by the District Ranger, on file at the District and Supervisor's headquarters.

210. Controlled use of the road system including road closures, may be triggered by:

    a. Wildlife protection

    b. Snow or adverse weather

    c. Hazardous fire conditions

    d. Need for a full range of recreational facilities

    e. Protection of private interests

    f. Mining claim access.

    g. Protection of sensitive resources.

211. Road use will be limited by posted weight limits and special use (haul) seasons.

212. Encourage mass transit opportunities to major recreational destinations.

213. The arterial road system will be developed to an all-weather standard.

214. Build facilities to support planned management activities and public services.

215. Forest Service management goals, with respect to owned or leased buildings, are to:

    a. Discourage and eliminate housing for year-round occupancy.

    b. Meet all applicable air and water quality standards at all administrative and public service facilities.

    c. Remove, repair or replace all features adversely affecting or endangering the health and safety of Forest Service personnel.

    d. Locate new administrative facilities for maximum economic efficiency and resource management needs.

4.5.2.17
Air Quality

216. Avoid cumulative impacts to air quality by coordinating prescribed burning activities within the Forest, with burning activities conducted by others.

217. Mitigate fugitive dust impacts on air quality by including dust abatement as a requirement for all construction activities that have potential to generate dust.

218. Avoid prolonged effects from prescribed burning activities on air quality by burning only on AQCB - approved burn days when satisfactory wind dispersion conditions prevail.

219. Participate with AQCB to qualitatively define air quality control regulations and guidelines and effects of air quality on the Forest, from sources outside the Forest.

220. Obtain appropriate permits prior to conducting prescribed burning activities.

4.5.2.18
Protection

221. Use natural fire management to maintain wilderness ecosystems.

222. Unplanned lightning-caused ignitions, which occur where fire spread is effectively checked by natural barriers and where expected fire effects will not adversely affect the attainment of wilderness management objectives, can be managed under prescribed natural fire conditions. If fires have to be suppressed, they will be suppressed using either or all of the control, confine, or contain strategies.

223. Prescribed fire can be utilized to enhance wilderness values.

224. Throughout the fire management plan, identify areas and conditions where unplanned ignitions will be allowed to burn and where confine, contain and control suppression strategies will be used to meet management objectives.

225. Encourage adequate fire prevention, fire-safe construction and presuppression systems on private land to be developed in wildfire-prone areas.

226. Increase fire prevention, presuppression, fuelbreak systems and fire safety programs on Forest land.

227. Reduce activity fuels to acceptable levels in a cost effective manner. Reduce natural fuels as part of other resource projects.

228. Encourage cooperation and coordination with appropriate fire management agencies.

229. Provide intensive law enforcement.

230. Incorporate air quality management considerations into fire management.

231. Emphasize a chaparral management and natural fuels reduction program that has multi-resource benefits, as well as meeting fire management objectives.

232. Disposal of activity fuels will be economically feasible and commensurate with present and future fire risk hazard.

233. Fuelbreak systems will be completed in conjunction with timber harvest and range improvement projects.

4.5.3
Applicable to All Analysis Areas in Developed Recreation Management Area 1

234. Increase the number of camp units under the user fee system by at least 5% by 2000.

235. Permit day-only tie-up of pack and saddle stock no closer than 100 feet to lakes and streams, except in the Bass Lake area.

236. Allow overnight tie-up or tethering of pack and saddle stock no closer than 100 feet to lakes, streams or campsites, except in the Bass Lake, Huntington Lake, Shaver Lake and Dinkey Creek Analysis Areas, where overnight tie-up of pack, and saddle stock is prohibited.

237. Conduct regulated timber harvest where compatible with management standards and guidelines.

238. Conduct natural fuels reduction.

239. Float aircraft will not be allowed on lakes or reservoirs.

240. Complete a study in the Bass Lake, Huntington Lake and Dinkey Creek areas to identify structures, other than the residences in recreational tracts, which have not already been identified for management activity. Notify existing permittees of requirements 10 years in advance of any planned removal.

4.5.4
Applicable to Developed Recreation Analysis Area 2 (Merced River Canyon)

241. Coordinate with other agencies in administering whitewater rafting permits on Merced River.

4.5.5
Applicable to Developed Recreation Analysis Area 14 (Fish Camp)

242. Construct additional parking area for winter recreation in Fish Camp area.

243. Designate snowplay and cross-country ski areas.

244. Retain current capacity of Summerdale Campground and maintain its facilities at Development Level 3.

245. Limit overnight visits of a party to 7 consecutive nights in Summerdale Campground.

246. Maintain Camp Green Meadows at current capacity. Encourage year-round use of the facility.

247. Limit over-snow vehicles to designated routes and areas only.

4.5.6
Applicable to Developed Recreation Analysis Area 17 (Bass Lake)

248. Maintain recreational facilities at standard levels.

249. Encourage Madera County to continue limiting boat speeds to 40 mph from 8 a.m. to 8 p.m., and 5 mph from 8 p.m. to 8 a.m.

250. Encourage Madera County to limit maximum density of boats to one boat/4 acres of lake surface.

251. Restrict overnight boat mooring or anchoring on waters administered by the Forest to designated mooring sites or locations authorized by special use permit.

252. Allow limited expansion of boat dock, restaurant and grocery services at The Forks and Wishon Resorts. Maintain overnight facilities at present capacities.

253. Exchange land occupied by Summit Expeditions under current special use permit.

254. Maintain Emerald Cove and Sky Lakes Camps at their current capacity, emphasizing short-term use by organized groups or individuals. Require upgraded facilities and more year-round use.

255. Increase day-use parking capacity 50%.

256. Increase overnight campground capacity to 2,500 PAOT.

257. Prohibit overnight pack and saddle stock closer than 1/4-mile to the lakeshore, Willow Creek, and any Forest-developed recreational facilities. Use closer than 1/4-mile is prohibited, except under special use permit.

258. Restrict or eliminate exclusive individual special uses that interfere with general public use and enjoyment of the lakeshore.

259. Construct a public day-use site for picnicking, swimming and fishing in the Willow Creek area.

260. Limit over-snow vehicles to designated routes and areas.

4.5.7
Applicable to Developed Recreation Analysis Area 28 (Mammoth Pool)

261. On Mammoth Pool Reservoir, maximum boat speed is 5 mph from 8 p.m. to 6 a.m. Between 6 a.m. and 8 p.m. maximum boat speeds are:

    a. September 11 to April 30: 20 mph.

    b. May 1 to June 15: Reservoir is closed to boating.

    c. June 16 to June 30: Limit boat speeds to 20 mph.

    d. July 1 to September 10: 35 mph between dam and the narrows above China Bar Campground; 20 mph above the narrows.

262. Maintain China Bar Boat Camp at current capacity.

263. Acquire Fuller Meadow for future public use.

264. Maintain all developed recreational facilities at standard levels.

265. Extend boat ramp to allow low water access during early spring and late fall.

266. Dam road and boat ramp will remain closed from May 1 through June 15, except for use by licensee and administrative vehicles.

4.5.8
Applicable to Developed Recreation Analysis Area 47 (Huntington Lake)

267. Limit motorboat speeds to 35 mph. For user safety, designate lower speed limits. Administrative boats are exempted.

268. Limit all expansion of overnight PAOT to that approved by existing project Environmental Assessments until completion of Huntington Lake Area Composite Plan.

269. Permit snow plowing on permittee roads under the following conditions:

    a. Roads must be constructed to a standard that allows snowplowing.

    b. Since the county road up to Deer Creek Tract access road near Lakeshore Resort has been plowed for many years, those recreational residence tract roads serviced by this portion of the county road may be plowed all winter.

    c. From the Deer Creek access road to the dam, permittee roads may be plowed from first snow through January 5 and again starting the weekend before Easter, provided snow is less than 2 feet deep.

270. Remove guest cabin on Lot 89 in Huckleberry Tract and Forest Service cabin at Billy Creek to avoid conflicts with policy and location in the public use areas.

271. Provide additional boat launching facilities.

272. Increase commercial boat slips and/or moorings only for short-term use. Emphasize slip development over open mooring.

273. Complete analysis and plan for Huntington Lake Recreation residence boat dock facilities by July 1, 1992. Adjust orientation and construction styles of docks to minimize impacts on the shoreline and lake, and other recreational uses of these areas. Tract associations will manage the docks for members only.

274. Prohibit pack and saddle stock closer than 1/4 mile to the lakeshore and any Forest Service developed recreational facilities. Use closer than 1/4 mile is prohibited, except under special use permit.

275. Reserve area between the dam and Lakeview Cabins for future recreational use. Encourage licensee to develop needed facilities as a condition of any project relicensing.

276. Require Sierra Summit to provide parking and vehicle storage only during summer season. Require other permittees to use this parking area, where their own space is limited and causing traffic congestion.

277. Limit over-snow vehicles to designated routes and areas.

278. Permit boat mooring and docking up to 14 days between July 1 and Labor Day, except at special use sites where limits are as specified in authorizing permits.

279. Encourage regional mass transit to Sierra Summit during winter months.

4.5.9
Applicable to Developed Recreation Analysis Areas 45 and 46 (Florence/Edison Lakes)

280. Permit boat speeds up to 15 mph. Prohibit towing of aqua-planing devices.

281. Limit overnight visits to 7 consecutive nights at boat camps.

282. Improve surface of Edison and Florence Lake roads as necessary for resource protection and user safety.

283. Discourage use of Edison and Florence Lake roads by trailers and motorhomes. Allow unrestrained access to any vehicle or combination of vehicle and towed trailer up to 40' long. Access by vehicles or combinations over 40' long will be by special permit only.

284. South of San Joaquin River, retain Mono Hot Springs in a near-natural condition to ensure availability of the springs for traditional Native American use.

285. Allow over-snow and helicopter access to resorts during winter months.

286. In power project licensing or relicensing of any project in excess of 5mw installed capacity, advocate that the project licensee remove snow from and open Kaiser Pass Road to public use by Memorial Day weekend in years when snowfall is less than 120% of normal, as measured at the Kaiser Meadow Snow Course on April 1.

287. Limit over-snow vehicles to designated routes and areas.

288. Encourage or develop regularly scheduled regional public transit to Florence and Edison Lakes.

289. Allow no regulated timber harvest. Timber damaged by a catastrophic event may be salvaged if an environmental analysis indicates its removal is feasible and environmentally valid.

4.5.10
Applicable to Developed Recreation Analysis Area 36 (Shaver Lake)

290. Exchange Dorabelle Campground and two other lakeshore properties, provided their use will remain dedicated to public recreational facilities. Until exchange with licensee occurs, manage Dorabelle at Development Level 4.

291. Advocate retention of licensee's lands for general public recreation.

4.5.11
Applicable to Developed Recreation Analysis Area 55 (Courtright/Wishon Reservoirs)

292. Limit boat speeds to 15 mph. Prohibit aqua-planing devices.

293. Limit overnight visits to 7 consecutive nights at boat camps.

294. Maintain primitive and semiprimitive motorized and nonmotorized recreation by closing roads to general two-wheel traffic upon activity completion.

295. Prohibit construction of private boat docks at Courtright Reservoir.

296. Restrict additional commercial recreational special uses or services.

297. Allow no regulated timber harvest. Timber damaged by a catastrophic event may be salvaged if an environmental analysis indicates its removal is feasible and environmentally valid.

4.5.12
Applicable to Developed Recreation Analysis Area 65 (Pine Flat Reservoir)

298. Renegotiate agreement with Corps of Engineers for recreational administration at Pine Flat Reservoir.

299. Maintain Forest's recreational sites at Development Level 3.

300. At designated locations which have been fireproofed, limit overnight camping in undeveloped areas to 4 nights.

301. Allow noncommercial group activities, provided groups exceeding 25 persons furnish their own toilet and sanitation facilities at locations where such facilities are not sufficient.

302. The Kings River Special Management Area management plan will establish limits of recreational use and acceptable change on the river.

4.5.13
Applicable to All Dispersed Recreation Analysis Areas in Management Areas 2 and 11

303. Maintain semiprimitive recreational opportunities where they now occur by closing roads, except designated OHV routes, immediately following project activities.

304. Where possible, increase the acreage of primitive and semiprimitive recreation by closing unneeded local roads.

305. Allow cross-country, over-snow vehicle travel, except in areas where use is prohibited or restricted to designated routes or areas provided there are more than 6" snow cover and vehicle tracks do not touch the ground.

306. Designate 4WD and trailbike route termini at popular lake and stream locations. These termini will normally be a minimum of 300 feet to a

maximum of 1/4 mile from the attraction, and will have parking facilities with vehicle controls.

307. Prohibit picketing or tethering of stock in meadows and overnight tie-ups within 100 feet of lakes, streams and campsites.

308. Provide corrals or hitching rails for pack and saddle stock in places where tie-up, hobbling or turning them loose is causing resource damage or user conflicts. Require such facilities to be used and that users bring sufficient feed for their stock.

309. Provide interpretive services, primarily brochures, maps and signs.

310. Restrict enduros to established travel routes in areas of light public use and to a time of year when interference with other activities and chance of environmental damage is minimized.

311. Regulated harvest is allowed in Analysis Areas 21, 23, and 58. Timber management is limited to salvage harvest following catastrophic events in Analysis Areas 3, 18, 48, 52 and 66.

4.5.14
Applicable to Analysis Areas 3 and 48 in Management Area 11

312. Construct trail/backcountry style bridges across South Fork Merced River to make river trail traversable year-long by hikers and horseback riders.

313. Provide for expansion of Sierra Summit Ski Area in vicinity of Red Mountain near Strawberry Lake.

4.5.15
Applicable to All Timber Analysis Areas in Management Area 4

314. Close unneeded local roads to public use. Consider these roads for possible designation as OHV routes prior to closure.

315. Allow cross-country, over-snow vehicle travel, except in areas where use is restricted to designated routes or areas, provided there are more than 6" snow cover and vehicle tracks do not touch the ground.

316. Allow enduros only on designated travel routes and require a special use permit for such events.

4.5.16
Applicable to Analysis Areas 22 and 49 in Management Area 4

317. Establish a 200-foot zone on each side of all reaches of tributaries to Portuguese and Cow Creeks where Lahontan cutthroat trout currently occur (January 1, 1989) and on all Class I, II and III tributaries above those reaches.

Apply the following standards within this zone:

a. Recommendations of a fisheries biologist must be considered prior to removal of any vegetation.

b. Trees must be felled and yarded away from the streamcourse.

c. No motorized vehicles will be allowed off permanent roads, except as authorized by permit or contract.

d. Slash and other debris will be kept out of streamcourses except for the purpose of fish habitat improvement. Woody debris removed from stream courses will be disposed of by methods other than machine piling or broadcast burning.

e. Dust abatement within 200 feet of streamcourses will be with materials other than petroleum products and recommended by a fisheries biologist.

f. Ephemeral channels may be crossed with equipment after consultation with a fisheries biologist.

g. Prohibit drafting in or above stream reaches currently supporting pure populations of Lahontan Cutthroat Trout.

4.5.17
Applicable to Analysis Area 70 in Management Area 9

318. Develop and implement a fuels reduction plan for Nelder Grove area by 1995.

319. Designate Nelder Grove a special interest area stressing historic, botanic and scenic features.

320. Adopt Nelder Grove management plan as part of the Forest Plan and develop visitor facilities centers and trails called for in the Nelder Grove Plan.

4.5.18
Applicable to Analysis Area 15 in Management Area 4

321. Issue a 10-year permit for Camp Redwood specifying retention of tent platforms only, maintaining capacity at present level, and resolving health and safety problems.

4.5.19
Applicable to Analysis Area 35 in Management Area 4

322. To ensure continued availability of redbud and other plants for traditional Native American uses, coordinate vegetation manipulation projects in Jose Basin with the local Native American community.

4.5.20
Applicable to Analysis Area 75 in Management Area 9

323. Manage Crater Lake Meadow area to recognize its geological features.

4.5.21
Applicable to Analysis Area 61 in Management Area 4

324. Close roads not necessary for administrative purposes in the area south of Rancheria Creek to maintain integrity of the Spanish Lakes OHV route.

4.5.22
Applicable to Analysis Area 73 in Management Area 9

325. Designate McKinley Grove a special interest area stressing botanic and scenic features.

4.5.23
Applicable to All Front Country Analysis Areas in Management Area 5

326. Close unneeded roads to motorized use to establish more areas for hiking, horseback riding, 4WD, trailbike use and other forms of recreation not normally associated with areas easily accessed by 2-wheel drive.

327. Maintain semiprimitive motorized and nonmotorized recreation where they now exist by closing roads immediately following project activities.

328. Projects will be planned to consider management of chaparral and associated ecosystems to increase multi-resource benefits, while continuing with reduction of wildfire conflagrations.

329. Chaparral management in Jose Basin and Sycamore Creek drainage (See Fire Element Map) will be given high priority for reducing buildup of naturally occurring fuels.

4.5.24
Applicable to Analysis Area 1 in Management Area 5

330. Establish historic railroad logging special interest area at old Trumbull Peak Incline on Merced River in conjunction with Stanislaus National Forest.

4.5.25
Applicable to Analysis Area 29 in Management Area 5

331. Limit boat speeds to 35 mph on Redinger Lake.

332. Provide Development Level 3 recreational facilities at Kerckhoff Lake.

333. Restrict overnight camping to designated sites at Redinger and Kerckhoff Lakes.

4.5.26
Applicable to All Analysis Areas in Management Area 12

334. Manage special management area according to the direction established in special management area plan.

335. Allow no new special use permits within this special management area until completion and approval of management plan.

336. Hydroelectric power development is prohibited, except through specific authority of Congress.

337. Allow no regulated timber harvest. Timber damaged by a catastrophic event may be salvaged if an environmental analysis indicates its removal is feasible and environmentally valid.

338. Allow no new mining claims.

4.5.27
Applicable to All Wilderness Analysis Areas in Management Area 3

339. Develop wilderness management plans utilizing limits of acceptable change.

340. Restore impaired wilderness resources, managing or limiting use, as necessary.

341. Locate campsites more than 100 feet from lakeshores, streams and trails, terrain permitting.

342. Advocate and enforce "pack-it-in, pack-it-out" program.

343. Allow discharging of firearms only in emergencies or for taking wildlife as permitted under State game laws.

344. Wheeled mechanical devices used for transporting people (except handicapped), camping gear or game are prohibited regardless of the method used to move the device.

345. Construct a moderate amount of new trails annually. Complete trail rehabilitation by 2010, emphasizing resource protection, safety and visitor dispersal.

346. Signs will be rustic and mounted on trees, rocks or native wood posts. Signing and trail blazing will be done only as necessary to provide for progressive travel. Other than passes, features will not be identified with signs.

347. Trail bridges crossing major drainages must be constructed of materials and by methods that will create the least long and short-term impact.

348. Consider efficiency and aesthetics when proposing resource protection improvements made of materials not native to site or area.

349. Locate wilderness ranger and trail crew camps at least 200 feet from main trails, public campsites, streams and lakeshores.

350. Prohibit additional tables and benches and maintenance of existing ones.

351. Remove snow survey sites when they can be correlated with sites outside Wilderness. If essential for safety purposes, allow cabins associated with snow measurement sites to remain in Wilderness until snow courses are correlated with and removed to sites outside Wilderness.

352. Prohibit loose herding of pack and saddle stock, except where area is signed.

353. Prohibit picketing or tethering of stock in meadows or overnight tie-up within 100 feet of lakes, streams or campsites.

354. Allow insect and disease infestations to run their natural courses, unless unacceptable loss will occur to wilderness resource, resources of adjacent lands, livestock or situation is hazardous to human health and welfare.

355. Coordinate with other involved Federal and State agencies to monitor cloud seeding practices and their impact on Wilderness.

356. Require removal of aircraft wreckage.

357. Contact military aircraft bases every 2 years to discourage low flights over Wilderness.

358. Inventory all structures within Wilderness, appraise their historic value, and determine if needed for management purposes.

359. Coordinate with CDFG on their aerial fish stocking program.

360. Maintain structural range improvements necessary to effectively manage range resources and protect wilderness values.

361. Determine the role of fire in the wilderness ecosystem and evaluate the need for applying wilderness fire policy in the John Muir, Ansel Adams, Kaiser, Dinkey and Monarch wildernesses. The evaluation will consider use of planned and unplanned ignitions and the options to use confine, contain or control strategies for suppression of wildfire.

362. The visual quality objective is Type I Visual Condition.

363. Commercial and noncommercial competitive events and events established for fund-raising (such as runs, hikes and trail rides) are incompatible with Wilderness and are not permitted.

364. Prohibit filing of new mining claims in designated Wilderness areas.

365. Minimize impacts of all mining activity on the wilderness resource.

366. Eliminate invalid mining claims and unauthorized occupancy.

4.5.28
Applicable to All Wilderness Analysis Areas Except 39 in Management Area 3 (John Muir, Ansel Adams, Dinkey Lakes, Monarch)

367. Limit party size and number of stock per party to a level that protects social and natural resource values. The level may vary within or between Wildernesses.

368. Limit overnight visits to 14 days in each Wilderness.

369. Permit maintenance of existing CDFG stream flow-regulation dams, weirs and control gates in Ansel Adams Wilderness.

370. The Pacific Crest Trail Management Plan and Management Direction is incorporated into this Plan as part of the standards and guidelines.

371. Avoid any development at Blayney Hot Springs that will interfere with traditional Native American use of the spring.

4.5.29
Applicable to Wilderness Analysis Area 39 in Management Area 3 (Kaiser)

372. Limit party size and number of stock per party to a level that protects social and natural resource values. The level may vary within or between Wildernesses.

373. Limit overnight visits to 7 days.

374. Prohibit overnight camping closer than 200 feet to Upper Twin and Nellie Lakes.

375. Prohibit pack and saddle stock closer than 1/4 mile to Jewell, Campfire, Walling, Bill, Bobby and Bonnie Lakes. Use closer than 1/4 mile is

prohibited unless covered under a special use permit.

376. Issue no additional commercial packer or commercial backpacking permits, except for cross-country skiing activities.

377. Establish a Research Natural Area for white fir/red fir in Home Camp Creek area.

SECTION 4.6 - Summary of Acreage Distribution by Management Prescription and Areas

TABLE 4.01 - ACREAGE DISTRIBUTION BY MANAGEMENT PRESCRIPTION AND AREAS [1]

PRESCRIPTION	MANAGEMENT AREAS											
	1	2	3	4	5	6	7	8	9	10	11	12
WILDERNESS			527,938									
WILD & SCENIC [2]	3,840		13,760							640	6,080	2,720
MINIMUM LEVEL MANAGE-MENT [3]	14,430	650		23,800	4,070				330	290	20,030	1,200
LIMITED - TIMBER YIELD [3]	14,000	450		140,680	1,370				200			
MODIFIED - TIMBER YIELD [3]	7,670	1.030		50,640	5,760							
FULL-TIMBER YIELD [3]	3,030	640		101,170	2,260							
DEVELOPED RECREATION [4]	75,631	3		327	4							
ADMINISTRA-TION SITES	238			138	155	20	1	2			2	
SPECIAL INTEREST AREAS Botanical / Geological									5,093			
KINGS RIVER SPEC. MGMT. AREA												24,368
EXPERIMEN-TAL FOREST							3,200					
EXPERIMEN-TAL RANGE								4,580				
RNA			1,200					80		2,850		
LAND EXCHANGE												
Acquisition	200		560	2,150	1,350							
Base	3,200			11,640	26,320	310						
DISPERSED RECREATION [5]	56,887	33,609		200,760	11,292						57,758	24,368
FRONT COUNTRY					136,839	620						

[1] Numbers are approximate due to rounding.
[2] See appendix for specific recommendations and designations.
[3] Includes only CAS land.
[4] Includes water area.
[5] Includes both dispersed no harvest and dispersed with harvest.

SECTION 4.7 - Forestwide Table of Commodity Outputs and Costs

TABLE 4.02 - AVERAGE ANNUAL OUTPUTS DURING FIRST FIVE DECADES

RESOURCE ELEMENT	BASE YEAR 1982	1980 RPA Goals for		DECADES [1]				
		1990	2030	1991-2000	2001 - 2010	2011 - 2020	2021 - 2030	2031 - 2040
RECREATION								
Developed Public (M RVD)	750.0	1950.0	2880.0	781.7	407.1	441.6	478.4	519.8
Developed Private (M RVD)	830.0			923.3	1467.9	1593.4	1736.6	1890.2
Dispersed (M RVD)	2033.6	3360.0	4160.0	2095.8	2384.7	2652.4	2936.8	3330.7
Wilderness (M RVD)	220.0		462.8	518.3	567.6	617.0	617.0	617.0
Restricted, Usable OHV Areas (except Alt.B which is "Open")								
Summer (M Acres) [2]	346.0			285.0	280.0	280.0	275.0	275.0
Winter (a) (M Acres) [2]	83.8			73.0	70.0	65.0	60.0	55.0
Winter (b)(M Acres) [2]	168.5			110.5	105.5	105.5	105.5	105.5
Roads and Trails Open Only to OHV								
Summer (Miles) [3]	249.0			198.0	208.0	218.0	228.0	238.0
Winter (Miles) [3]	30.0 [4]			32.0	37.0	42.0	47.0	52.0
Roads and Trails Closed Only to OHV								
Summer (Miles)	160.0			30.0	30.0	32.0	32.0	34.0
Winter (Miles)	160.0			20.0	20.0	20.0	20.0	20.0
Visual Quality Index (%)	93.0			93.8	92.9	92.0	91.2	91.2
WILDLIFE AND FISH								
Bald Eagles (Wintering Indiv.)	5-10			5-10	5-10	5-10	5-10	5-10
Peregrine Falcon (Pairs)	0			3	3	3	3	3
Deer (Number x 1,000)	15.0			18.4	23.0	28.0	28.0	28.0
Spotted Owls (Pairs)	130			108	97	86	75	69
SOHAs	Nonexistent until 1984			29	29	29	29	29
Goshawk (Pairs)	50			50	50	50	50	50
Lahontan Cutthroat Trout (Pops.)	2			2	2	2	2	2
Paiute Cutthroat Trout (Pops.)	2			2	2	2	2	2
Resident Fish (M Pounds)	100			100	100	105	110	110
Wildlife User Days (M WFUD)	329.7			346.9	380.6	408.9	438.6	461.1
Fish User Days (M WFUD)	141.3			148.7	163.1	175.2	188.0	197.6
Direct Habitat Improvement								
Wildlife (M Acres)	2.6	12.7	5.45	2.0	2.0	2.0	2.0	2..0
Fish (Acres or Structures)	3.0			90.0	90.0	95.0	95.0	110.0
RANGE								
Grazing (M AUM)	35.0	38.1	40.2	37.5	30.0	40.0	40.6	40.6
TIMBER								
Allowable Sale Quantity (MMBF)	110.0	149.1	163.4	88.0	88.0	88.0	88.0	88.0
Allowable Sale Quantity (MMCF)	17.4	23.8	26.1	14.1	14.1	14.1	14.1	14.1
Reforestation (M Acres)	1.1	6.5	7.6	3.0	2.1	1.9	1.3	1.2
Timber Stand Improvement (MAcres)	0.5	4.9	5.0	4.1	4.1	4.4	3.2	2.6

[1] Decade 1 is the planning period 1991-2000. Decades 2-5 are projections only.
[2] Includes areas up to 30% slope located outside wilderness: (a) Winter = Areas suitable for 4WD and trailbike use, but not necessarily open to cross-country use; (b) Areas suitable for oversnow vehicle and open to cross-country use.
[3] Estimated number of miles, actual miles to be determined in Forest OHV Plan.
[4] Does not include 45 miles of designated snowmobile routes and undesignated routes in areas where cross-country over the snow vehicle travel is permitted.

RESOURCE ELEMENT	BASE YEAR 1982	1980 RPA Goals for		DECADES [1]				
		1990	2030	1991 - 2000	2001 - 2010	2011 - 2020	2021 - 2030	2031 - 2040
WOOD PRODUCTS OTHER THAN SAWTIMBER								
Fuelwood (M Cords)	22.5			22.5	22.5	22.5	22.5	22.5
Biomass (M MCF)	0			No Projection Made				
WATER								
Quality (MM Ac.Ft. at Mtg Objectives)	2.514	1.882	1.903	2.559	2.555	2.552	2.544	1.538
Increased Quantity (MM Ac.Ft.)	2.565	270	310	.060	.057	.054	.044	.035
Watershed Improvement (Acres)				226	226	---	---	---
LANDS AND MINERALS								
Minerals (Operating Plans)	21	53	69	15	18	20	20	20
Land Acquisition (Acres)	0	500	0	250	250	200	0	0
TRANSPORTATION								
Trail Const./Reconst. (Miles)	26	54	42	47	37	27	0	0
Road Construction (Miles)	36			17	6	2.5	1.5	0.5
Road Reconstruction (Miles)	41			7	7	16	5	4
Maintained Road System (Annual Miles)	2550			2720	2780	2805	2820	2825
FACILITIES								
Dams and Reservoirs								
Forest Service (Number)	0			0	0	0	0	0
Other Federal (Number)	0			0	0	0	0	0
Other State/Local (Number)	3			3	3	3	3	3
Private (Number)	25			25	25	25	25	25
Administrative Sites								
Forest Service Owned (Number)	26			20	20	20	20	20
Leased (Number)	6			6	5	5	5	5
PROTECTION								
Fuel Treatment (Acres) [2]	0	3000	2600	7020	6440	8090	6830	6310
(a) Fire-related Fuel Treatment				1000	1000	1200	1500	1500
(b) Timber-related Fuel Treatment				4990	4720	5520	3680	3180
(c) Fuel Treatment for Other Resources				2000	2000	2000	2000	2000
Expected Acres Burned by Wildfire								
Intensity Level 1	36			46	48	51	54	53
2	91			102	106	124	129	127
3	221			91	95	110	115	113
4	429			501	523	524	549	541
5	577			330	344	564	591	582
6	924			1093	1141	958	969	988
HUMAN RESOURCES								
Programs (Enrollees)	38	16	16	38	38	38	38	38
TOTAL BUDGET ($MM)								
	18.7	18.9	20.8	23.1	23.8	24.9	25.3	26.9

[1] Decade 1 is the planning period 1991-2000. Decades 2-5 are projections only.
[2] Combination of Wildlife and Protection (sum of a, b, and c).

TABLE 4.03 - FORESTWIDE SUMMARY OF ESTIMATED ANNUAL OUTPUTS AND ACTIVITIES DURING FIRST FIVE DECADES

ELEMENT/ACTIVITY	UNIT OF MEASURE	1991 - 2000	2001 - 2010	2011 - 2020	2021 - 2030	2031 - 2040
Cultural Resource Inventories	M Acres	70	35	---	---	---
Cultural Resource Evaluation	Sites	6	6	6	6	6
Visual Resource Inventory and Planning	M Acres	157.5	---	---	---	---
Visual Resource Improvement	Acres	538	532	280	168	---
Developed Recreation Use	M RVDs	1705	1875	2035	2215	2410
Dispersed Recreation Use	M RVDs	2096	2385	2652	2937	3331
Trail Construction	Miles	3.0	2.0	1.0	---	---
Trail Reconstruction	Miles	45.0	35.0	26.0	---	---
Wilderness Areas Management [1]	M Acres	527.9	527.9	527.9	527.9	527.9
Wilderness Use	M RVDs	462.8	518.3	567.6	617.0	617.0
Habitat Improvement - Threatened, Endangered, Sensitive Species [2]	Structures	20.0	20.0	---	---	---
Habitat Improvement-Wildlife	Acres	2000	2000	2000	2000	2000
Habitat Improvement-Fish	Acres / Structures	100.0	90.0	95.0	95.0	110.0
Range Administration	M Acres	102.7	101.4	101.8	107.0	118.8
Range Forage Improvement	Acres	---	---	---	---	---
Range Improvements, Maintenance	Acres	100.0	100.0	100.0	100.0	100.0
Grazing Use	M AUMs	37.5	38.5	40.5	40.6	40.6
Planting & Replanting	Acres	2990	2090	1875	1335	1220

[1] Does not include 24,553 acres administrated by Inyo National Forest.
[2] Recovery goals for federally-listed Threatened and Endangered Species and viable populations for Sensitive Species will be met by the end of the 2nd decade.

Note: Decade 1 is the period 1991-2000. Decades 2-5 are projections only.

ELEMENT/ACTIVITY	UNIT OF MEASURE	1991 - 2000	2001 - 2010	2011 - 2020	2021 - 2030	2031 - 2040
Site Preparation for Natural Seeding	Acres	500	1165	1005	560	530
Release and Weeding	Acres	2065	2645	1750	1425	1220
Precommercial Thinning	Acres	2005	1460	2645	1750	1425
Live Volume (Solid) Chargeable	MM BF	88.0	88.0	88.0	88.0	88.0
Personal Use Firewood	M Cords	22.5	22.5	22.5	22.5	22.5
Watershed Improvement	Acres	22.6	22.6	-	-	-
Annual Water Yield	MM Ac. Ft.	2.559	2.555	2.552	2.554	2.538
Nonrecreation Special Uses	Cases	750	900	900	900	900
Property Boundary Location	Miles	59	23	10	4	3
Land Exchange	Acres	400	400	400	400	400
Land Aquisition	Acres	250	250	200	-	-
Mineral Leases and Permits	Operating Plans	15	18	20	20	20
Road COnstruction	Miles	17	6	2.5	1.5	0.5
Road Reconstruction	Miles	7	7	6	4	4
Treatment of Activity Fuels	Acres	4990	4720	5520	3680	3180
Treatment of Natural Fuels	Acres	1000	1000	1200	1500	1500
Fuelbreak Construction	Acres	702	20	20	20	20
Fuel Treatment Maintenance	Acres	1000	1000	1000	1000	1000

Note: Figures beyond 1985 estimated average annual amounts.
Note: Decade 1 is the period 1991-1999. Decades 2-5 are projections only.

4.8
MANAGEMENT AREA PRESCRIPTIONS, PRACTICES, OUTPUTS, AND ACTIVITIES

4.8.1
Management Area 1 (Developed Recreation, 75,631 Acres)

This Management Area consists of Analysis Areas 2, 14, 17, 28, 36, 45, 46, 47, 51, 55 and 65. These units are land and water areas popular for recreation. Most have considerable amounts of capital investments in recreational facilities. Upper Kings River and a portion of South Fork Merced River have been designated by California Fish and Game Commission as wild trout streams. The Merced River has been inventoried, recommended and designated as a National Wild and Scenic River. Program emphasis is on developed recreation at appropriate levels of development and intensity (see management standards and guidelines). Rural and roaded natural recreational opportunities are stressed. Other very important considerations are water quality, visual conditions, and wildlife. Regulated timber harvest is allowed on suitable land where compatible with primary goals. The Kings River has been designated as a Wild and Scenic River.

Management prescriptions for this management area consist of the following general management prescriptions, forestwide management direction and applicable management standards and guidelines. Also shown is a list of activities and outputs [1] expected from applying the prescriptions. For specific fire management direction see Appendix E.

The following general management prescriptions and acres in each prescription apply to this management area in order of priority. This priority may change due to individual project analysis. If there are conflicting prescriptions, the most restrictive will have precedence.

Prescription	Acres	Resource situation
1. Developed recreation (includes water area)	75,631	See Alternative A map. Analysis Areas 2, 14, 17, 28, 36, 45, 46, 47, 55 and 65.
2. Dispersed recreation	56,887	See Recreation Opportunity Class Objectives and Wildlife Elenent maps. Analysis Areas 2, 14, 17, 28, 36, 45, 46, 47, 55 and 65.
3. Wild and Scenic River Designated	3,840	See W&S Element map. Analysis Area 2 and 65.
4. Land exchange (acquisition) [2]	80	See private land in Analysis Area 47.
Land exchange (base) [3]	3,200	See definition in prescription to identify land for exchange.
5. Administrative site	238	See Administrative Site Resource map located in Forest Facility Master Plan.
6. Minimum-level management	14,430	See SOHA and Furbearer Element map. Analysis Areas 17,45,47,55 and 65. Analysis Areas 45, 46 and 55 leading to Florence/Edison Lakes and Courtright/Wishon Reservoirs.
7. Limited-timber yield	14,000	See Visual Quality Objective, Soil Sensitivity, SOHA and Furbearer and Soil Erosion Hazard Element maps. Analysis Areas 2, 14, 17, 28, 36, 45, 47, 55 and 65.
8. Modified - timber yield	7,670	See Visual Quality Objective and Wildlife Element maps. Analysis Areas 1, 14, 17, 28, 36, 45, 47, 55 and 65.
9. Full-timber yield	3,030	See Alternative A map. Analysis Areas 14, 17, 28, 36 and 47. This is the residual that is left after prescriptions 3, 5, 6, 7 and 8 have been applied.

On this page, a prescription was identified for each Analysis Area. The following list identifies the Standard and Guidelines used in that Analysis Area. If there are conflicting Standard and Guidelines, the most restrictive will have precedence.

[1] Some outputs are measured only on a forestwide basis and therefore, are not listed here (see Forestwide Summary Table 4.03).
[2] Acquisition - Land suitable for wildlife, timber, or riparian purposes and identified to acquire.
[3] Base - Existing National Forest land available for disposal.

Standards & Guidelines	Applicable Areas
1 - 240	Analysis Area 2, 14, 17, 28, 36, 45, 46, 47, 55 & 65.
241	Analysis Area 2
242 - 247	Analysis Area 14
248 - 260	Analysis Area 17
261 - 266	Analysis Area 28
267 - 279	Analysis Area 47
280 - 289	Analysis Area 45 and 46.
290 - 291	Analysis Area 36
292 - 297	Analysis Area 55
298 - 302	Analysis Area 65

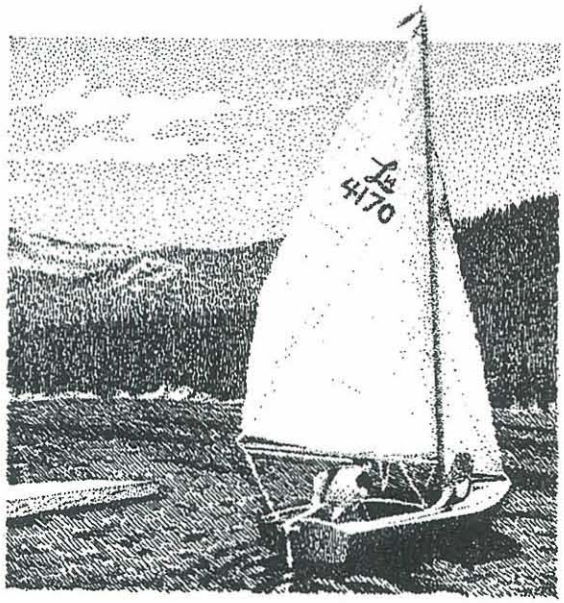


TABLE 4.04 - MANAGEMENT AREA 1: ESTIMATED AVERAGE ANNUAL OUTPUTS AND ACTIVITIES DURING NEXT FIVE DECADES

OUTPUT / ACTIVITY	UNIT	1991 - 2000	2001 - 2010	2011 - 2020	2021 - 2030	2031 - 2040
Trail Reconstruction	Miles	3.7	1.5	0.6	-	-
Trail Construction	Miles	0.2	0.4	0.2	-	-
Habitat Improvement - Fish	Acres / Structures	10	9	9.5	9.5	11
Range Forest Improvement	Acres	-	-	-	-	-
Range Improvements, Maintenance	Acres	-	-	-	-	-
Range Administration	M Acres	6.4	6.4	6.4	6.4	6.4
Planting & Replanting	Acres	175	115	105	75	70
Sire Preparation for Natural Seeding	Acres	30	65	60	30	30
Release & Weeding	Acres	120	150	150	100	80
Precommercial Thinning	Acres	110	85	150	100	80
Watershed Improvement	Acres	38	-	-	-	-
Treatment of Activity Fuels	Acres	285	270	315	205	180
Treatment of Natural Fuels	Acres	80	80	80	80	90
Fulebreak Construction	Acres	-	-	-	-	-
Fuel tTreatment Maintenance	Acres	5	5	5	5	5

4.8.2
Management Area 2 (Dispersed Recreation, 33,609 Acres)

Management Area 2 consists of Analysis Areas 21, 23, and 58. These areas are used primarily for primitive and semiprimitive dispersed recreation and will remain generally nonroaded and undeveloped.

Primary emphasis for this management area is dispersed use, stressing semiprimitive nonmotorized and semiprimitive motorized recreation with Visual Condition Type III or better. Regulated timber harvest, grazing and wildlife management activities are allowed on suitable land. However, road construction will be held to a minimum and most new roads closed on completion of management activities to retain dispersed recreation. Use of existing 4WD and 2-wheel vehicle access routes into these areas will generally be allowed to continue.

The management prescriptions for this Management Area consist of the following general management prescriptions, forestwide management direction, and applicable management standards and guidelines. Also shown is a list of activities and outputs [1] expected from applying the prescriptions. For specific fire management direction see Appendix E.

The following general management prescriptions and acres in each prescription apply to this Management Area in order of priority. This priority may change due to individual project analysis. If there are conflicting prescriptions, the most restrictive will have precedence.

Prescription	Acres	Resource Situation
1. Dispersed recreation	33,609	See Alternative A map. Analysis Areas 21, 23 and 58.
2. Minimum-level management	650	See SOHA and Furbearer Element map. Analysis Areas 21, 23 and 58.
3. Limited - timber yield	450	See Visual Quality Objective, SOHA and Furbearer, Soil Sensitivity, and Soil Erosion Hazard Element maps. Analysis Areas 21, 23 and 58.
4. Modified-timber yield	1,030	See Visual Quality Objective Element map. Analysis Areas 21, 23 and 58.
5. Full-timber yield	640	See Alternative A map. Analysis Areas 21, 23 and 58.
6. Developed Recreation		See Alternative A map. Analysis Areas 21 and 58.
7. Administration Site		See Administrative Resource map located in Forest Facilities Master Plan.

On this page, a prescription was identified for each Analysis Area. The following list identifies the Standard and Guidelines used in that Analysis Area. If there are conflicting Standard and Guidelines, the most restrictive will have precedence.

Standards & Guidelines	Applicable Areas
2, 4, 14 - 20, 22 - 29, 31 - 54, 56 - 206, 208 - 211, 213, 216 - 220, 222 - 233, 303 - 311	All S&Gs listed here apply to Analysis Areas 21, 23 and 58.

[1] Some outputs are measured only on a forestwide basis and therefore, are not listed here (see Forestwide Summary Table 4.03).

TABLE 4.05 - MANAGEMENT AREA 2: ESTIMATED AVERAGE ANNUAL OUTPUTS AND ACTIVITIES DURING NEXT FIVE DECADES

OUTPUT / ACTIVITY	UNIT	1991 - 2000	2001 - 2010	2011 - 2020	2021 - 2030	2031 - 2040
Trail Reconstruction	Miles	2.2	1.2	1.3	-	-
Trail Construction	Miles	0.1	0.1	0.1	-	-
Habitat Improvement-Wildlife	Acres	50	50	50	50	50
Habitat Improvement-Fish	Acres / Structures	20	18	19	19	22
Range Forage Improvement	Acres	-	-	-	-	-
Range Improvements, Maintenance	Acres	-	-	-	-	-
Range Administration	M Acres	2..6	2.6	2.6	2.7	2.5
Planting & Replanting	Acres	25	20	15	10	10
Site Preparation for Natural Seeding	Acres	-	-	-	-	-
Release & Weeding	Acres	20	25	15	15	10
Precommercial Thinning	Acres	20	15	25	15	15
Treatment of Activity Fuels	Acres	45	40	50	35	30
Treatment of Natural Fuels	Acres	6	4	4	2	2
Fuelbreak Construction	Acres	61	2	2	2	2
Fuel Treatment Maintenance	Acres	100	100	100	100	100

4.8.3
Management Area 3 (Wilderness, 527,938 Acres)

Management Area 3 is comprised of Analysis Areas 20, 39, 40, 41, 42, 43, 44, 53, 54, and 62. It consists of the Forest's portion of Ansel Adams, John Muir, and Monarch Wilderness areas and entire Dinkey Lakes and Kaiser Wilderness areas. These areas vary in use from John Muir, which is one of the most heavily used areas in the country, to Monarch which is one of the most lightly used. Dinkey Lakes Wilderness is expected to become one of the more heavily used areas, based on past history prior to Wilderness status.

Most of this Area is at high elevations and receives the majority of the Forest's snowpack, a very important water source for hydroelectric projects, recreation, and irrigation. With many lakes and streams, water quality is also very important. There is considerable hydroelectric potential within Kings River and San Joaquin River systems, however, major portions of these rivers were on the National Rivers Inventory and now have been recommended for or designated as Wild and Scenic Rivers.

Other notable features include John Muir and Pacific Crest Trails, Paiute cutthroat trout populations in Stairway and Sharktooth Creeks, Minarets Peaks of the Ritter Range, San Joaquin River canyons featuring Balloon Dome, a red fir/white fir research natural area, the terrain in Kings River Canyon; and the extensive late successional stage forests.

The primary management emphasis is preservation and maintenance of wilderness character and values, high water quality, and options for future consideration of streams for National Wild and Scenic River status. Appropriate dispersed recreation with established capacities are very important, as is maintenance of habitat for late seral stage dependent wildlife and protection of the Paiute cutthroat trout. Grazing is allowed in suitable areas.

Management prescriptions for this management area consist of the following general management prescriptions, forestwide management direction, and applicable management standards and guidelines. Also shown is a list of activities and outputs [1] expected from applying the prescriptions. For specific fire management direction see Appendix E.

In those portions of Ansel Adams (formerly Minarets) and John Muir Wildernesses and all of Kaiser Wilderness designated as a Class I air quality area, visibility is the most sensitive indicator of air pollution. Visibility monitoring in Yosemite National Park will be a proxy for trends in the Forest's wildernesses.

The following general management prescriptions and acres in each prescription apply to this management area in order of priority. This priority may change due to individual project analysis. If there are conflicting prescriptions, the most restrictive will have precedence.

Prescription	Acres	Resource Situation
1. Wilderness	527,938	See Alternative A map. Analysis Areas 20, 39, 40, 41, 42, 43, 44, 53, 54 and 62.
2. Wild and Scenic River		
Recommended	11,200	See Wild and Scenic River Element map. Analysis Areas 20 and 54.
Designated	2,560	
3. Research Natural Area [1]	1,200	See Alternative A map. Analysis Areas 7, 33, 41, 67 and 68.
4. Land exchange (acquisition)	560	See definition in prescription to identify land for exchange. Analysis Area 54.

On this page, a prescription was identified for each Analysis Area. The following list identifies the Standard and Guidlines used in that Analysis Area.

If there are conflicting Standard and Guidlines, the most restrictive will have precedence.

Standards & Guidelines	Applicable Areas
22, 25, 31, 32, 53, 56, 58, 69 - 75, 76, 79, 80, 89, 90, 122, 123, 124, 132, 134, 136 - 150, 193, 194, 199 - 201, 203, 204, 216, 218, 221, 230, 339 - 366	All S&Gs listed here apply to Analysis Areas 20, 39, 40, 41, 42, 43, 44, 53, 54 & 62.
367 - 371	Analysis Areas 20, 40, 41, 42, 43, 44, 53, 54 & 62.
372 - 377	Analysis Area 39.

[1] Some outputs are measured only on a forestwide basis and therefore, are not listed here (see Forestwide Summary Table 4.03).

TABLE 4.06 - MANAGEMENT AREA 3: ESTIMATED AVERAGE ANNUAL OUTPUTS AND ACTIVITIES DURING NEXT FIVE DECADES

OUTPUT/ACTIVITY	UNIT	1990 - 2000	2001 - 2010	2011 - 2020	2021 - 2030	2031 - 2040
Trail Reconstruction	Miles	29.1	22.5	16.0	-	-
Trail Construction	Miles	2.0	1.2	0.6	-	-
Habitat Improvement - Threatened / Endangered, Sensitive Species	Structures	2.0	2.0	-	-	-
Range Administration	M Acres	8.5	8.5	8.5	8.5	8.5
Treatment of Natural Fuels	Acres	360	380	180	180	180

4.8.4

Management Area 4 (General Forest, 316,290 Acres) [1]

Management Area 4 consists of Analysis Areas 4, 6, 9, 15, 19, 22, 24, 27, 30, 35, 37, 38, 49, 50, 51, 56, 60 and 61. The northeast portion of Analysis Areas 22 and 38 and Analysis Area 61 is nonroaded and undeveloped. However, the primary road system in remainder of area is in place. Recreation is mostly dispersed, stressing roaded natural recreation, and some semiprimitive motorized recreation. Developed recreational facilities are small and scattered throughout the area to accomodate use. The area is highly productive and well suited to timber, wildlife and range activities. Tributaries to Cow Creek and Portuguese Creek currently contain Lahontan cutthroat trout. Moderate amounts of sensitive and highly erosive soils occur in the area. Two notable redwood groves are located within the area.

Primary emphasis for this Management Area is regulated timber management, coordinated with wildlife needs, and maintenance and protection of sensitive soils. Designated OHV routes will remain open. Continued dispersed recreation, stressing roaded natural recreation, and maintenance of developed facilities are also management goals. Existing Lahontan cutthroat trout habitat and population will be maintained and protected as well as the Forest's sensitive plants. Range activities compatible with wildlife objectives are allowed on suitable land to maintain and improve forage conditions. Nelder and McKinley Groves of giant Sequoias will be studied for classification as special interest areas. Special recognition will be given Native American concerns when planning and conducting Forest activities in Analysis Area 35. Visual resources will be managed in accord with the Visual Resource Element Map. Wildlife habitat needs will be coordinated with management activities, as specified by standards and guidelines and the Wildlife Element Map.

Management prescriptions for this management area consist of the following general management prescriptions, forestwide management direction, and applicable management standards and guidelines. Also shown is a list of activities and outputs [2] expected from applying the prescriptions. For specific fire management direction see Appendix E.

The following general management prescriptions and acres of each prescription apply to this management area in order of priority. This priority may change due to individual project analysis. If there are conflicting prescriptions, the most restrictive will have precedence.

Prescription	Acres	Resource Situation
1. Full-timber yield [3]	101,170	See Alternative A map. Analysis Areas 4, 6, 9, 15, 22, 24, 27, 30, 35, 37, 38, 49, 50, 51, 56, 60 and 61. This is the residual that is left after prescriptions 2, 3, 7 and 8 are applied.
2. Modified - timber yield [3]	50,640	See Visual Quality Objective and Wildlife Element maps. Analysis Areas 4, 6, 9, 15, 22, 24, 27, 30, 35, 37, 38, 49, 50, 51, 56, 60 and 61.
3. Limited - timber yield [3]	140,680	See Visual Quality Objective and SOHA and Furbearer Element maps. Analysis Areas 6, 9, 15, 22, 27, 30, 35, 37, 38, 49, 50, 51, 56, 60 and 61.
4. Dispersed recreation	200,760	See Recreation Opportunity Class Objectives Element map. Analysis Areas 4, 6, 9, 15, 22, 24, 27, 30, 35, 37, 38, 49, 50, 51, 56, 60 and 61.
5. Administrative site	138	See Administrative Resource map located in Forest Facilities Master Plan.
6. Land exchange (acquisition) [4]	2,150	See Forest Land Acquisition map.
Land exchange (base) [5]	11,640	See definition in prescription to identify land for exchange.
7. Developed recreation	327	See Alternative A map. Analysis Areas 9, 15, 22, 27, 35, 38, 50, 51 and 56.

[1] Includes CAS, non-forested and commercial forested land not suitable for timber management.
[2] Some outputs are measured only on a forestwide basis and therefore, are not listed here (see Forestwide Summary Table 4.03).
[3] Includes only CAS land.
[4] Acquisition - Land suitable for wildlife, timber or riparian purposes, and identified to acquire.
[5] Base - Existing National Forest land available for disposal.

8. Minimum - level management [1]	23,800	See SOHA and Furbearer Element map.

On this and the preceding page, a prescription was identified for each Analysis Area. The following list identifies the Standard and Guidelines used in that Analysis Area. If there are conflicting Standard and Guidelines, the most restrictive will have precedence.

Standards & Guidelines	Applicable Areas
1 - 33, 36 - 220, 224 - 233, 314 - 316	All S&Gs listed here apply to Analysis Areas 4, 6, 9, 15, 22, 24, 27, 30, 37, 38, 49, 50, 51, 56, 60 and 61.
317	Analysis Areas 22 and 49
321	Analysis Area 15
322	Analysis Area 35
324	Analysis Area 61

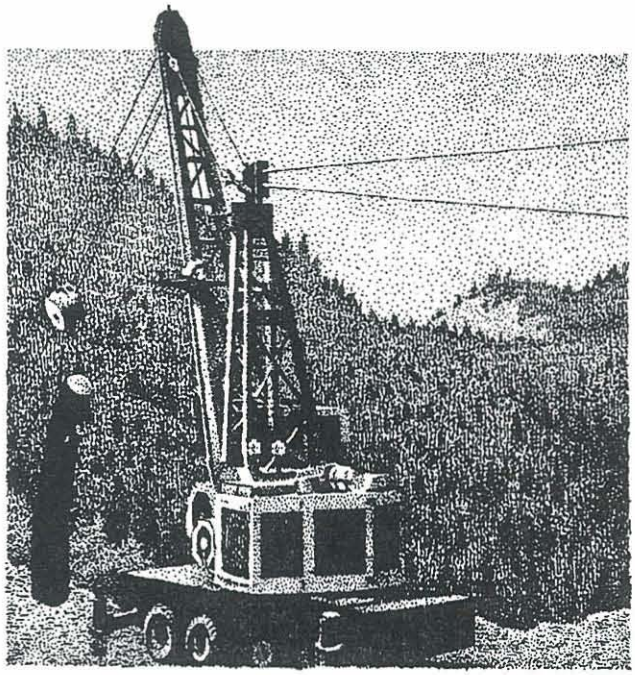


TABLE 4.07 - MANAGEMENT AREA 4: ESTIMATED AVERAGE ANNUAL OUTPUTS AND ACTIVITIES DURING NEXT FIVE DECADES

OUTPUT/ACTIVITY	UNIT	1991 - 2000	2001 - 2010	2011 - 2020	2021 - 2030	2031 - 2040
Trail Reconstruction	Miles	6.0	7.0	7.0	-	-
Trail Construction	Miles	0.2	0.3	0.1	-	-
Habitat Improvement - Threatened / Endangered, Sensitive Species	Structures	8.0	8.0	-	-	-
Habitat Improvement-Wildlife	Acres	500	500	500	500	500
Habitat Improvement-Fish	Acres / Structures	40	36	38	38	44
Range Forage Improvement	Acres	-	-	-	-	-
Range Improvements, Maintenance	Acres	70.0	70.0	70.0	70.	70.0
Range Administration	M Acres	43.2	43.2	43.4	45.5	45.5
Planting & Replanting	Acres	2665	1865	1675	1195	1090
Site Preparation for Natural Seeding	Acres	465	1090	935	525	495
Release & Weeding	Acres	1840	2360	1510	1250	1080
Precommercial Thinning	Acres	1790	1300	2360	1560	1270
Watershed Improvement	Acres	101	101	-	-	-
Treatment of Activity Fuels	Acres	4450	4210	4925	3285	2835
Treatment of Natural Fuels	Acres	475	475	475	475	505
Fuelbreak Construction	Acres	206	8	8	8	8
Fuel Treatment Maintenance	Acres	380	380	380	380	380

[1] Includes only CAS land.

4.8.5
Management Area 5 (Front Country, 136,839 Acres)

Management Area 5 consists of Analysis Areas 1, 5, 8, 10, 12, 16 and 29. The area includes most of the low elevation foothill land in the Forest and many steep-walled canyons. Vegetation is primarily chaparral, with some areas of oak-grass, and a small amount of suitable timber land. Recreational uses are quite limited. Access varies from well-roaded, urban situations to barely accessible. Much of the area has high erosion hazard and very heavy fuels. Where slopes and soils permit, suitability for range and wildlife activities is high.

Primary management emphasis is on wildlife and range management activities, with adequate protection of watershed values on highly erosive soils. Fire protection and natural fuels reduction are very important. Multi-resource benefitting projects (wildlife, range and fire) are a management objective. Timber harvest is scheduled on land where slopes are generally less than 35%. Investments for future timber yields will be made only where risk of fire is comparable to that generally found in Management Area 4. Special recognition will be given to Native American concerns in Analysis Area 29 when planning and conducting Forest activities.

Management prescriptions for this management area consist of the following general management prescriptions, forestwide management direction, and applicable management standards and guidelines. Also shown is a list of activities and outputs [1] expected from applying the prescriptions. For specific fire management direction, see Appendix E.

The following general management prescriptions and acres in each prescription apply to this management area in order of priority. This priority may change due to individual project analysis. If there are conflicting prescriptions, the most restrictive will have precedence.

Prescription	Acres	Resource Situation
1. Front country	136,839	See Alternative A map. Analysis Areas 1, 5, 8, 12, 16 and 29.
2. Dispersed recreation	11,292	See Recreation Opportunity Class Objectives and Wildlife Element maps. Analysis Areas 1, 5, 8, 10, 16 and 29.
3. Administrative site	155	See Administrative Site Resource map located in Forest Facility Master Plan.
4. Minimum-level management	4,070	See SOHA and Furbearer Element map. Analysis Areas 5, 12, 16 and 29.
5. Limited-timber yield	1,370	See Visual Quality Objective, Soil Sensitivity and Soil Erosion Hazard Element maps. Analysis Areas 5, 8, 10, 12 and 16.
6. Modified-timber yield	5,760	See Visual Quality Objective and Wildlife Element maps. Analysis Areas 5,8,10,12,16 and 29.
7. Full-timber yield	2,260	See Alternative A map. Analysis Areas 5, 8, 12, 16 and 29. This is the residual that is left after prescriptions 3,4,5 and 9 have been applied.
8. Land exchange (acquisition) [2]	1,350	See Forest Land Acqusition map.
Land exchange (base) [3]	26,320	See definition in prescription to identify land for exchange.
9. Developed recreation	4	See Alternative A map. Analysis Areas 5, 8 and 29.

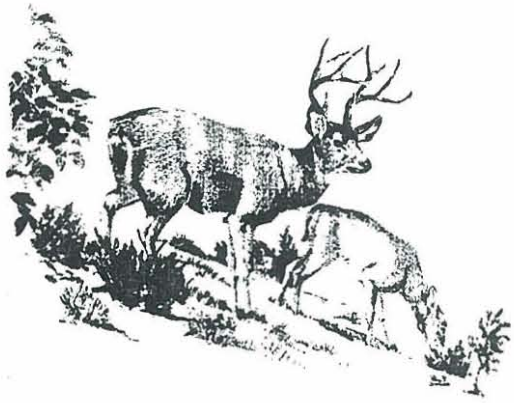
On this page, a prescription was identified for each Analysis Area. The following list identifies the Standard and Guidelines used in that Analysis Area. If there are conflicting Standard and Guidelines, the most restrictive will have precedence.

[1] Some outputs are measured only on a forestwide basis and therefore, are not listed here (see Forestwide Summary Table 4.03).
[2] Acquisition - Land suitable for wildlife, timber or riparian purposes, and identified to acquire.
[3] Base - Existing National Forest land available for disposal.

Standard & Guidelines	Applicable Areas
1 - 29, 32 - 89, 91 - 220, 224 - 233, 326 - 329	All S&Gs listed here apply to Analysis Areas 1, 5, 8, 12, 16 and 29.
330	Analysis Area 1
331 - 333	Analysis Area 29

TABLE 4.08 - MANAGEMENT AREA 5: ESTIMATED AVERAGE ANNUAL OUTPUTS AND ACTIVITIES DURING NEXT FIVE DECADES

OUTPUT/ACTIVITY	UNIT	1991 - 2000	2001 - 2010	2011 - 2020	2021 - 2030	2031 - 2040
Trail Reconstruction	Miles	3.0	2.3	1.1	-	-
Habitat Improvement - Threatened /Endangered, Sensitive Species	Structures	10.0	10.0	-	-	-
Habitat Improvement-Wildlife	Acres	300	300	300	300	300
Habitat Improvement-Fish	Acres / Structures	10	9	9.5	9.5	11
Range Forage Improvement	Acres	-	-	-	-	-
Range Improvements, Maintenance	Acres	30.0	30.0	30.0	30.0	30.0
Range Administration	M Acres	26.6	29.8	30.0	33.0	40.5
Planting & Replanting	Acres	125	90	80	55	50
Site Preparation for Natural Seeding	Acres	-	-	-	-	10
Release & Weeding	Acres	85	110	75	60	50
Precommercial Thinning	Acres	85	60	110	75	60
Watershed Improvement	Acres	20	50	50	-	-
Treatment of Activity Fuels	Acres	210	200	230	155	135
Treatment of Natural Fuels	Acres	2060	2060	2060	2060	2070
Fuelbreak Construction	Acres	435	10	10	10	10
Fuel Treatment Maintenance	Acres	515	515	515	515	515



4.8.6
Management Area 6 (Parcels Exterior to Forest Boundary, 620 Acres)

Management Area 6 consists of Analysis Areas 11, 13, 25, 26 and 31. These are isolated parcels outside the main Forest boundary. Analysis Areas 25 and 26 no longer contain National Forest land. One parcel is utilized as an administrative site, the others are subject to land exchange.

Management emphasis is to retain the administrative site and continue to make the other parcels available for land exchange.

Management prescriptions for this management area consist of the following general management prescriptions, forestwide management direction, and applicable management standards and guidelines. For specific fire management direction, see Appendix E.

The following general management prescriptions and acres in each prescription apply to this management area in order of priority. This priority may change due to individual project analysis. If there are conflicting prescriptions, the most restrictive will have precedence.

Prescription	Acres	Resource Situation
1. Administrative site	28	See Administrative Site Resource map located in Forest Facilities Master Plan.
2. Land exchange (base) [1]	310	See definition in prescription to identify land for exchange.
3. Front country	620	See Alternative A map. Analysis 11, 13, 25, 26 and 31.

On this page, a prescription was identified for each Analysis Area. The following list identifies the Standard and Guidelines used in that Analysis Area. If there are conflicting Standard and Guidelines, the most restrictive will have precedence.

Standards & Guidelines	Applicable Areas
25, 29	Analysis Areas 11, 13, 31
53	Analysis Areas 11, 31
51, 66, 68	Analysis Areas 13, 31
85, 91	Analysis Areas 31
124	Analysis Areas 11, 13, 31
127	Analysis Areas 11, 13, 15, 31
133, 135 - 142	Analysis Areas 11, 31
144 - 151	Analysis Areas 11, 31
159, 162	Analysis Areas 11, 31
165	Analysis Areas 11
193 - 199	Analysis Areas 11, 13, 31
214, 215	Analysis Areas 13
219, 220, 226, 228	Analysis Areas 11, 31
52, 225	Analysis Areas 25, 26

[1] Base - Existing National Forest land available for disposal.

4.8.7

Management Area 7 (Experimental Forest, 3,200 Acres)

Management Area 7 consists of Analysis Area 57, Teakettle Creek Experimental Forest. The Experimental Forest was established for watershed research dealing with water quality and quantity. Vegetation consists primarily of virgin, mature red and white fir. It provides highly suitable habitat for late successional stage, dependent wildlife species. The area has high timber capability, but is unavailable for regulated harvest.

Management emphasis is to continue management as an experimental forest for watershed purposes under the guidance of the Pacific Southwest Forest and Range Experiment Station. The area will be managed in accord with its establishment report. Unregulated timber harvest may take place, when needed.

Management prescriptions for this management area consist of the following general management prescriptions, forestwide management direction, and applicable management standards and guidelines. For specific fire management direction, see Appendix E.

The following general management prescriptions and acres in each prescription apply to this management area in order of priority. This priority may change due to individual project analysis. If there are conflicting prescriptions, the most restrictive will have precedence.

Prescription	Acres	Resource Situation
1. Experimental forest	3,200	See Alternative A map. Analysis Area 57.
2. Administrative site	1	See Administrative Site Resource map located in Forest Facility Master Plan.

On this page, a prescription was identified for each Analysis Area. The following list identifies the Standard and Guidelines used in that Analysis Area. If there are conflicting Standard and Guidelines, the most restrictive will have precedence.

Standards & Guidelines	Applicable Areas
25, 43, 53, 58 - 64, 68 - 69, 71 - 72, 74 - 77, 85 - 89, 91, 93, 120 - 129, 133, 139, 177 - 179, 182, 188, 193, 197, 199, 200, 210, 217, 220, 227, 230, 232	All S&Gs listed here apply to Analysis Area 57.

4.8.8
Management Area 8 (Experimental Range, 4,580 Acres)

Management Area 8 consists of Analysis Area 32, the San Joaquin Experimental Range. The area is used for research purposes, under the direction of the Pacific Southwest Forest and Range Experiment Station. The area also contains an administrative site and a blue oak-digger pine Research Natural Area.

The management emphasis is to continue use of the range for research by the Experiment Station and California State University, Fresno to continue managing the RNA in accord with its establishment report.

Management prescriptions for this management area consist of the following general management prescriptions, forestwide management direction, and applicable management standards and guidelines. For specific fire management direction, see Appendix E.

The following general management prescriptions and acres in each prescription apply to this management area in order of priority. This priority may change due to individual project analysis. If there are conflicting prescriptions, the most restrictive will have precedence.

Prescription	Acres	Resource Situation
1. Experimental range	4,580	See Alternative A map. Analysis Area 32.
2. Research Natural Area	80	See Administrative Site Resource map located in Forest Facility Master Plan. Analysis Area 68.
3. Administrative site	2	See Alternative A map. Analysis Area 32.

On this page, a prescription was identified for each Analysis Area. The following list identifies the Standard and Guidelines used in that Analysis Area. If there are conflicting Standard and Guidelines, the most restrictive will have precedence.

Standards & Guidelines	Applicable Areas
17, 68, 125, 193, 199, 201, 209 - 211, 215, 218 - 220, 228, 230	All S&Gs listed here apply to Analysis Area 32

4.8.9

Management Area 9 (Special Interest Areas, 5,093 Acres)

Management Area 9 contains seven established special interest areas in Analysis Areas 34, 59, 69, 70, 71, 72 and 73. Analysis Area 34, Carpenteria Botanical Area was established as a special interest botanical area for Carpenteria californica. It is to be managed in accord with the establishment report. Analysis Area 69, Devils Peak Botanical Area is established to protect and conserve Yosemite onion, Congdon's wooly Eriophyllum and Congdon's lewisia. An establishment report will be prepared.

Analysis Area 59, the Kings Cavern Geological Area, contains several limestone caverns and was established to protect and maintain this geological feature. Analysis Area 72, the Courtright Intrusive Contact Zone Geological Area was established to preserve the scientific value of the bedrock exposure and provide interpretation of the features for the enjoyment of visitors. Within Analysis Area 71, the Dinkey Creek Roof Pendant Geological Area was established to preserve a metamorphosed remnant of sedimentary bedrock, which existed before granitic intrusion formed the modern Sierra Nevada Range. The management prescription for the Kings Cavern and Courtright Geological Areas is to continue management as geological areas in accord with implementation plans. The Dinkey Creek Geological Area will have an implementation plan prepared.

Analysis Area 70, Nelder Grove Historical Area is established to preserve giant Sequoias, early railroad logging activity, and prehistoric habitation sites by Native Americans. An establishment report will be prepared. Analysis Area 73, McKinley Grove Botanical Area is established to preserve giant Sequoias. An establishment report will be prepared.

Management prescriptions for this management area consist of the following general management prescriptions, forestwide management direction, and applicable management standards and guidelines. For specific fire management direction see Appendix E.

The following general management prescriptions and acres in each prescription apply to this management area [1] in order of priority. This priority may change due to individual project analysis. If there are conflicting prescriptions, the most restrictive will have precedence.

Prescription	Acres	Resource Situation
1. Special Interest Areas	5,093	See Alternative A map. Analysis Areas 34, 59, 69, 70, 71, 72 and 73.
2. Minimum-level management	330	See SOHA and Furbearer Element map. Analysis Areas 59, 69, 70 and 73.
3. Limited-Timber Yield	200	See SOHA and Furbearer Element Map. Anaylsis Area 73.

On this page, a prescription was identified for each Analysis Area. The following list identifies the Standard and Guidelines used in that Analysis Area. If there are conflicting Standard and Guidelines, the most restrictive will have precedence.

Guidelines	Applicable Areas
5, 17, 22, 25, 51, 66, 85, 89	All S&Gs lisAnalysis Areas ted here apply to 34, 59, 69, 70, 71, 72 and 73.
43, 53, 56, 58 - 64, 69 - 82, 97, 113 - 116, 120 - 131, 133, 139, 193 - 201, 208, 210 , 217 - 220, 225 - 233	Analysis Areas 70 and 73
57	Analysis Area 70
204, 205	Analysis Area 70
318 - 320	Analysis Area 70
323	Analysis Area 75
325	Analysis Area 73

[1] Total acres of prescription exceed management area acres because part of the acres involve underground caves.

4.8.10
Management Area 10 (Research Natural Areas, 2,850 Acres)

Management Area 10 contains two existing and two recommended Research Natural Areas. It includes Analysis Areas 33 and 68 and Analysis Areas 7 and 67.

The existing Backbone Creek Research Natural Area for Carpenteria californica lies within Analysis Area 33. Within the San Joaquin Experimental Range is the existing blue oak-digger pine Research Natural Area (Analysis Area 68). Analysis Area 7 contains the recommended Bishop Creek Pacific Ponderosa Pine Research Natural Area and lies between South Fork Merced River and Yosemite National Park. Within the Kaiser Wilderness is the recommended Home Camp Creek white fir/red fir Research Natural Area (Analysis Area 67).

The purpose and primary management emphasis of Research Natural Areas are to promote and protect natural diversity, to provide opportunities for study of plant succession and other biological and physical phenomenon over long periods of time, and for non-manipulative research observation and study in accord with their establishment report.

The management prescriptions for this management area consist of the following general management prescriptions, forestwide management direction, and applicable management standards and guidelines. For specific fire management direction, see Appendix E.

The following general management prescriptions and acres in each prescription apply to this management area in order of priority. This priority may change due to individual project analysis. If there are conflicting prescriptions, the most restrictive will have precedence.

Prescription	Acres	Resource Situation
1. Research Natural Areas	2,850	See Alternative A map. Analysis Areas 7,33,67 and 68.
2. Wild and Scenic Rivers (Designated)	640	See Wild and Scenic Rivers Element map. Analysis Area 7.
3. Minimum - level management	290	See SOHA and Furbearer Element map. Analysis Area 67.

On this page, a prescription was identified for each Analysis Area. The following list identifies Standard and Guidelines used in that Analysis Area. If there are conflicting Standard and Guidelines, the most restrictive will have precedence.

Standards & Guidelines	Applicable Areas
22, 25, 31, 32, 58, 68, 133, 139	All S&Gs listed here apply to Analysis Areas 7, 33, 67 and 68.
56	Analysis Area 67
57	Analysis Area 67
377	Analysis Area 67

4.8.11
Management Area 11 (Dispersed Recreation-No Timber Harvest, 57,758 Acres)

This Management Area consists of Analysis Areas 3, 18, 48, 52 and 66. The areas are characterized for the most part as being nonroaded and undeveloped and are used primarily for primitive and semiprimitive dispersed recreation. They have limited suitability for timber, range and wildlife management activities. Analysis Area 18 contains some suitable developed recreational opportunities, if demand occurs.

The area generally exhibits one or both of the following conditions:

1. High elevation with a short growing season and low timber productivity or

2. Inaccessability, which will result in high development costs.

South Fork of Merced River was designated as wild trout fishery by CDFG. Merced and South Fork Merced Rivers have also been designated as a Wild and Scenic Rivers.

Primary management emphasis is dispersed recreation, stressing primitive and semiprimitive recreation with Visual Condition Type III or better. Other important considerations are wildlife (especially those species favoring late successional stage vegetation), grazing and watershed. Most OHV routes will remain open with reconstruction or relocation permitted, if necessary. Any proposed OHV routes will be considered on a case-by-case basis and covered by a project environmental assessment. Timber harvest may be considered only if a catastrophic event occurs within the area.

Management prescriptions for this management area consist of the following general management prescriptions, forestwide management direction, and applicable management standards and guidelines. Also shown is a list of activities and outputs [1] expected from applying the prescriptions. For specific fire management direction, see Appendix E.

The following general management prescriptions and acres in each prescription apply to this management area in order of priority. This priority may change due to individual project analysis. If there are conflicting prescriptions, the most restrictive will have precedence.

Prescription	Acres	Resource Situation
1. Dispersed recreation	57,758	See Alternative A map. Analysis Areas 3, 18, 48, 52 and 66.
2. Wild and Scenic River (Designated)	6,080	See Wild and Scenic Rivers Element map. Analysis Area 3 and 18.
3. Minimum-level management	20,030	See SOHA and Furbearer Element map. Analysis Area 3 and 18.
4. Administrative Site	2	See Administrative Site Resource map located in Forest Facility Master Plan.

On this page, a prescription was identified for each Analysis Area. The following list identifies the Standard and Guidelines used in that Analysis Area. If there are conflicting Standard and Guidelines, the most restrictive will have precedence.

Standards & Guidelines	Applicable Areas
2, 4, 14 - 20, 22 - 24, 27, 31, 32, 34 - 36, 38 , 40 - 42, 51 - 63, 68 - 82, 88, 91, 92, 97, 122 - 124, 128, 131 - 152, 159, 161, 162, 165, 193 - 205, 216, 218 - 220, 224 - 233, 303, 311	All S&Gs listed here apply to Analysis Areas 3, 18,48, 52 and 66.
312 , 313	Analysis Areas 3 and 48.

[1] Some outputs are measured only on a forestwide basis and therefore, are not listed here (See Forestwide summary 4..03).

TABLE 4.09 - MANAGEMENT AREA 11: ESTIMATED AVERAGE ANNUAL OUTPUTS AND ACTIVITIES DURING NEXT FIVE DECADES

OUTPUT / ACTIVITY	UNIT	1991 - 2000	2001 - 2010	2011 - 2020	2021 - 2030	2031 - 2040
Trail Reconstruction	Miles	1.0	0.5	-	-	-
Habitat Improvement-Wildlife	Acres	800	800	800	800	800
Habitat Improvement-Fish	Acres / Structures	20	18	19	19	22
Range Administration	M Acres	0.9	0.9	0.9	0.9	0.9
Watershed Improvement	Acres	0.1	-	-	-	-
Treatment of Natural Fuels	Acres	25	25	25	25	30

4.8.12
Management Area 12
(Special Management Area, 48,668 Acres)

Management Area 12, Kings River Special Management Area, is comprised of Analysis Areas 63 and 64 (24,368 acres) in the Sierra National Forest, and 24,300 acres in the Sequoia National Forest. Major activities occurring near and within the area are rafting, hunting, hiking and fishing. Some 50 miles of trails provide access to and along portions of the river. Topography, vegetation and difficult access restrict recreational opportunities. Kings River above Pine Flat Reservoir supports excellent fisheries and has been designated a California Wild Trout Stream.

This area is characterized by steep slopes covered with dense brush interspersed with areas of rock outcrop and openings of annual grassland. Occasional stands of timber occur at higher elevations particularly on north facing slopes. The Kings River is an important water source for hydroelectric power generation at Pine Flat Dam and for recreation and downstream irrigation. It is on the National Rivers Inventory with some sections being studied for National Wild and Scenic River status, while other sections have already been designated.

The more noteworthy features, aside from the river, are Garlic Falls and several groves of giant Sequoia, including the Boole Tree.

Management emphasis will be recreation; protection of the area's natural, archaeological, and scenic resources; and management for fish and wildlife. Land is withdrawn from mineral entry, however, existing claims are permitted. Existing OHV routes will remain open. Timber harvest may be considered if a catastrophic event occurs within the area or for wildlife management.

Management prescriptions for this management area consist of the following general management prescriptions, forestwide management direction, and applicable management standards and guidelines. Also shown is a list of activities and outputs [1] expected from applying the prescriptions. An implementation plan will be completed for the area which will contain site specific management direction [2]. For specific fire management direction, see Appendix E.

The following general management prescriptions and acres in each prescription apply to this management area in order of priority. This priority may change due to individual project analysis. If there are conflicting prescriptions, the most restrictive will have precedence.

Prescription	Areas	Resource Situation
1. Special Management Area	48,668	See Alternative A map. Analysis Area 63 and 64.
2. Dispersed Recreation	48,668	See Recreation Opportunity Class Objectives and Wildlife Element maps. Analysis Areas 63 and 64.
3. Wild/Scenic Rivers (Designated)	2,720	See Wild and Scenic Rivers Element map. Analysis Area 63 and 64.
4. Minimum - level management	1,200	See SOHA and Furbearer Element map. Analysis Area 63.

On this page, a prescription was identified for each Analysis Area. The following list identifies the Standard and Guidelines used in that Analysis Area. If there are conflicting Standard and Guidelines, the most restrictive will have precedence.

Standards & Guidelines	Applicable Areas
2, 3, 4, 14 - 16, 31 - 36, 38, 40, 53 - 55, 58 - 60, 63, 66c - 77, 80 - 82, 85, 86, 89 - 90, 92, 123, 128, 137 - 141, 143, 145 - 148, 150, 162, 166, 170, 194 - 202, 205 - 206, 217, 219 - 221, 228 - 231, 334 - 338	All S&Gs listed here apply to Analysis Areas 63 and 64

[1] Some outputs are measured only on a forestwide basis and therefore, are not listed here (see Forestwide Summary Table 4.03).

[2] A site specific implementation plan will be completed in 1991 containing direction for both the Sierra and Sequoia National Forests.

TABLE 4.10 - MANAGEMENT AREA 12: ESTIMATED AVERAGE ANNUAL OUTPUTS AND ACTIVITIES DURING THE NEXT FIVE DECADES

OUTPUT/ACTIVITY	UNIT	1991 - 2000	2001 - 2010	2011 - 2020	2021 - 2030	2031 - 2040
Trail Reconstruction	Miles	5	3	3	-	-
Trail Construction	Miles	0.5	-	-	-	-
Habitat Improvement - Wildlife	Acres	350	350	350	350	350
Range Administration	M Acres	10.0	10.0	10.0	10.0	10.0
NOTE: Miles of trail reconstruction and trail construction are estimated. Actual miles will be determined during development and implementation of the Management Plan, to be completed by 1991.