

PROVINCE FOREST PLAN MONITORING AND EVALUATION REPORT

For Activities Related to Southern California National Forests

February 2000

I. Introduction

The current National Forest Management Act regulations require reporting to the Forest Supervisor on how well the Land and Resources Management Plan (Forest Plan) is working and whether changes in the Forest Plan (amendments or revisions) are needed. The text from 36 CFR 219.12(k) reads as follows:

"At intervals established in the plan, implementation shall be evaluated on a sample basis to determine how well objectives have been met and how closely management standards and guidelines have been applied. Based upon this evaluation, the interdisciplinary team shall recommend to the Forest Supervisor such changes in management direction, revisions, or amendments to the forest plan as are deemed necessary."

A province-wide review of current Forest Plan direction for riparian areas, on-going activities, and habitat conservation assessments resulted in the identification of numerous needs to amend or revise Forest Plan direction, standards and guidelines. The purpose of this report is to document some of the identified needs in a manner that demonstrates that the four southern California Forest Plans are ready for revision with respect to the management of threatened, endangered and sensitive (TES) species.

II. MONITORING ACTIVITIES FY97-99

A large number of TES species are dependent on riparian and aquatic habitats for all or part of their life cycles. There is high public demand for access to these areas. These conflicting demands led to a need for a focused effort on conservation of riparian habitats. In March 1999 all of the southern California National Forest leadership teams and staff specialists gathered to review the Riparian Conservation Strategy used by the Los Padres National Forest. Using this Strategy as a model, the Forests developed a set of interim management guidelines for riparian ecosystems.

In 1998, the National Forests in the Province recognized that many Forest management activities could be adversely affecting TES species. As result, the Province conducted an extensive review of on-going activities. The review concluded that existing Forest Plan direction was not sufficient to prevent adverse effects to TES species and their habitats.

Due to numerous species listings during the mid 1990's, the southern California National Forests initiated a comprehensive habitat conservation assessment called the Southern California Mountains and Foothills Assessment (SCMFA). The SCMFA is incorporated by reference into this document. After compiling existing information throughout southern California, a 15-member SCMFA Analysis Team met ten times in 1997, with follow-up in 1998 and 1999, to address the following questions: Given the new information compiled for the SCMFA, how well do the existing National Forest Plans address key management issues? How might they be changed to better address habitat conservation problems and promote needed management actions?

The SCMFA analysis team worked through a process of issue identification, analysis, and prioritization, utilizing information from the SCMFA. Key issues at a province scale (across all four National Forests) were highlighted, and a review of management direction in existing Forest Plans was conducted to determine if those issues were adequately addressed. The resulting product was a series of recommendations on key issues. These recommendations, along with information from the riparian interim management guidelines and the review of on-going activities, were used by a Province Interdisciplinary team (Province ID team) to develop the following evaluation. These key recommendations are provided by the Province ID team to the Forest Supervisors for consideration as Forest plan revisions or amendments and do not represent the agency's proposed course of action.

III. EVALUATION OF EFFECTIVENESS MONITORING RESULTS AND CONCLUSIONS

Existing Forest Plans provide the baseline for comparison with the current analysis of the management situation provided by province level assessments. Many management issues are addressed adequately in existing Forest Plans. What follows is a discussion of issues where the Province ID team felt existing Forest Plans could be strengthened. These issues and recommendations are organized into three sections: general Forest Plan issues, landscape-level management issues, and species-specific management issues.

In general, there is a need to develop management direction (Goals, Objectives, Standards and Guidelines, and monitoring requirements) in a consistent format for groups of species at the habitat level and individual species. Forest Plans should display the desired conditions in terms that are measurable and reflect the quality of the habitat for each of the species groups. Factors such as total amount of habitat, distribution across the landscape, connectivity to other patches of habitat, resilience to various disturbance regimes, land use patterns, amount of loss due to edge effects with incompatible land use, and exotic species invasions need to be considered in developing specific objectives for habitat conservation and in the identification of research needs. Key recommendations of the Province ID team are as follows:

A. General Forest Plan Issues

Consistent Direction Between Forests

There is a great deal of commonality among southern California National Forests in terms of the ecosystem types they contain and the management issues that they face. Many of these common issues are not addressed consistently in each Forest's existing Forest Plan. The Province ID team believes that more consistent Forest Plan direction is needed, working with communities, other agencies and neighbors on issues that are common to multiple National Forests.

Recommendation: The four Southern California National Forests should develop consistent management direction, including dialog with local and national publics.

Describing Desired Future Conditions

The Province ID team believes that Forest Plans should describe measurable and realistic desired conditions for conserving species and maintaining ecological

processes. This includes consideration of environmental factors that cause reductions in habitat capability, yet fall outside the realm of activities that the Forest Service traditionally permits or regulates (e.g., invasive species, regulated stream flows). These factors are not addressed in the existing Forest Plans because there is the perception that there is not a direct cause and effect relationship between such factors and Forest Service-sanctioned actions.

Recommendation: Add Forest Plan direction that defines realistic and measurable desired conditions for key habitats and species. This direction would focus on conditions that the Forest Service has the ability to influence through management or permitted actions. However, the effect of other, less-controllable factors would be described and considered when determining if an identified desired condition is realistically achievable. This information will provide the public with a clearer understanding of what our management vision is and, perhaps more importantly, which factors we can and cannot influence.

B. Landscape-level Management Issues

At the broad landscape scale in each subunit within the assessment area, the Province ID team recommends that steps be taken to protect, restore, or simulate key ecological processes and minimize the potential for catastrophic habitat losses. Vegetation succession in most southern California terrestrial ecosystems is regulated by fire and climate; plant and animal communities are structured by competition and predator/prey relationships; aquatic systems are driven by temporal stream flow patterns; and all systems are dramatically affected by habitat loss to changing urban and rural land use patterns. These are the most critical processes to address.

Landownership Patterns and Potential Habitat Loss/Fragmentation

Existing Forest Plan direction identifies consolidation of land ownership as an objective. There is no direction to consider habitat fragmentation or linkage issues, especially at a regional scale, in the existing direction. Several landscape scale habitat conservation programs are currently underway lead by local/state government and private conservation organizations surrounding the Forests.

Recommendation: Establish management direction that identifies the need to maintain habitat linkages to surrounding habitat reserves and other openspace. Also provide direction to consider habitat loss and fragmentation in land exchange and acquisition proposals.

Understory Densification and Crown Fire Risk in Montane Conifer Forests

There is direction in existing Forest Plans to maintain sustainable stocking rates in forest types, but these are based on silvicultural objectives and do not adequately address the potentially catastrophic fuels problem.

Recommendation: Add management direction that: (1) describes the existing condition of declining habitat capability and increasing risk; (2) emphasizes the importance of this issue in terms of both potential habitat loss and threat to private property; and (3) identify desired conditions for montane conifer forest habitats. Establish defensible fuel profiles in strategic areas, particularly along the interface between lower montane chaparral and montane conifer forests and adjacent to mountain communities. Describe management options for addressing this problem.

Stand-replacing Fires in Big Cone Douglas-fir Forests

Increases in fire severity are causing an increase in stand-replacing fires in big cone Douglas-fir/canyon live oak forests. These mature forests are important to a number of TES species, including the California spotted owl, and are very slow to recover from fire. This problem is not addressed in existing Forest Plans.

Recommendation: Add management direction that: (1) describes existing condition of downward trend in extent of mature big-cone Douglas-fir stands; (2) identifies desired condition of maintaining and increasing the extent of mature big cone Douglas-fir forests; and (3) emphasizes the need to protect existing stands through fuels reduction in chaparral within and adjacent to these stands. Ensure that big cone Douglas-fir stand-protection guidelines are integrated with California spotted owl habitat management guidelines.

Stand-replacing Fires in Pinyon Pine Woodlands

Pinyon pine woodlands occur on desert-facing montane slopes. Fires in this type are historically infrequent, occurring approximately every 200-300 years. However, in the past decade there have been several large stand-replacing fires in pinyon stands. Although these fires may be within historic fire-return intervals, there is concern that an increase in non-native annual grass cover combined with increased human ignition sources may be increasing the potential for stand-replacing fires to occur in this type. There is no direction in existing Forest Plans on desired fire frequencies or suppression objectives in pinyon pine woodlands.

Recommendation: Establish management direction to minimize crown fires in pinyon pine woodlands. This management direction could: (1) encourage aggressive fire prevention and suppression strategies in pinyon pine woodlands and (2) identify the need for better information on trends in fire ignition and spread within this vegetation type due to increases in non-native grasses.

Degradation of Coastal Sage Scrub due to Frequent Fires

Coastal sage scrub (CSS) stands are highly flammable and become so at an early age. It is also a low-elevation plant community that is increasingly bordered by development. This combination is resulting in increased fire frequencies, which in turn, is causing degradation and type conversion of this habitat. Maintaining old-age stands of coastal sage scrub is essential for protecting dependent wildlife and plants. However, existing Forest Plans call for a management strategy that maintains short rotation ages in this vegetation type and the surrounding chaparral (e.g., 17 year rotations on the Cleveland NF and <12 year rotations on the Angeles NF).

Recommendation: Discontinue rotation age management direction for coastal sage scrub on all four National Forests. The Province ID team suggests that it be replaced with direction to manage for older age classes in CSS and emphasize minimizing fire in this vegetation type (with exceptions incorporated for managing urban interface stands and fuel breaks). Encourage aggressive fire prevention and suppression strategies in coastal sage scrub and low-elevation chaparral.

Managing Fire Return Intervals in Chaparral

Current direction in all southern California Forest Plans calls for aggressive age-class management of chaparral vegetation with relatively short rotation times. This age-class

management is accomplished primarily through the use of prescribed fire. Recent studies suggest that most chaparral plant communities are resilient to the existing fire regime, and burning to avoid stand senescence is probably not necessary. However, targeted burning to maintain age class mosaics in certain areas is an important tool for fuels management and for deer and upland game bird habitat improvement and sustaining wilderness values.

Recommendation: Modify Forest Plan direction to de-emphasize large-scale, aggressive age-class management in chaparral. Instead emphasize the need for age-class management in targeted areas: around and adjacent to forested areas, in areas with high potential for improving deer and upland game bird habitat, and in strategic areas for fuels management. Emphasize using age-class management in chaparral to reduce the potential for large chaparral wildfires to carry into adjacent forest stands and human communities.

Winter/Spring Burning

Some plants (particularly obligate-seeding shrubs) and nesting birds can be negatively affected by fires in the late winter or early spring. Under natural conditions, the “fire season” is in summer and fall. However, prescribed burns, particularly in chaparral, are often planned during the winter/spring period because it is a safe time to burn within established prescriptions. There is no direction in existing Forest Plans to consider seasonality issues when planning prescribed burns.

Recommendation: Establish Forest Plan direction that addresses seasonality issues in site-specific burn plans. This direction could describe the tradeoffs of winter/spring burning versus in-season burning.

Poor Recruitment of Foothill Oaks and Walnut Woodlands

Regeneration of oaks is poor in many of the Province’s foothill oak woodlands. There is much debate about the factors causing this condition and the seriousness of it. Livestock grazing and competition from introduced annual grasses are frequently mentioned factors, but the issue is complex. Oak regeneration problems are not addressed in existing Forest Plans.

Recommendation: Add management direction that describes the importance of foothill oak and walnut woodlands and identifies the need to promote better oak regeneration on National Forest lands. This direction should describe management options, such as reforestation, range management, and prescribed fire.

Invasive, Non-Native Plant and Animal Species

The spread of non-native pest species that displace, prey upon, or otherwise harm native species is a major problem in both aquatic and terrestrial habitats. The resulting decline in habitat capability is a key issue that is not adequately addressed in existing Forest Plans.

Recommendation: Add management direction that addresses control strategies for invasive, non-native plant and animal species. This direction could address the following: (1) describe the downward trend in habitat capability currently being caused by non-native species; (2) identify relationships between specific species of concern and specific exotics (e.g., cowbirds affect willow flycatcher and least Bell’s vireo; bullfrogs and sunfish affect ranid frogs); (3) identify the primary mechanisms

that cause the spread of these species; and (4) describe conditions that should trigger the implementation of control efforts. Such direction would need to be clear about the difficulties involved in eliminating non-native species and the circumstances needed for control efforts to be cost-effective. A guideline that establishes procedures to guard against inadvertent introductions of undesirable non-native species through authorized activities should be prepared.

Livestock Grazing in Riparian Habitats

Overgrazing in riparian areas can seriously lower habitat capability. Existing direction on grazing in riparian habitats varies considerably between National Forests.

Recommendation: Develop consistent, measurable standards for livestock grazing in riparian habitats that will maintain, improve or restore high quality riparian habitat.

Conservation Measures in Areas Within Special Use Permit Boundaries and Areas of Impact

There is a need for Forest Plans to provide further guidance on how to resolve conflicts between resource protection and permitted land use in areas that are within formally designated special use permit boundaries (e.g., ski areas, recreation areas, electronic sites, outfitter/guide use areas).

Recommendation: Add Forest Plan direction that more fully identifies a general, hierarchical process for resolving conflicts between resource protection and land use in areas where formal permit boundaries for special land uses have been established. An example of a possible process is as follows:

1. Identify habitat areas considered essential to the continued viability of a species and whose loss cannot be mitigated off-site. These are locations of rare species that occur in only a very limited number of areas. Those areas would be given site-specific protections.
2. For the habitats of sensitive species that are not narrowly restricted to a few locations, consider options to mitigate impacts off-site through land acquisition or habitat restoration.
3. When developing on-site measures to reduce impacts to non-sensitive resource values, frame them as general guidelines on the timing, size, and intensity of permitted activities. Avoid site-specific conditions whenever possible.

Infrastructure And Special Uses

The southern California National Forests are receiving an increasing number of requests to locate urban infrastructures, special use sites, and communication facilities on National Forest lands. There is a need to identify where such uses are appropriate. Some of the existing Forest Plans address this issue and others do not.

Recommendation: Add management direction in Forest Plans that identifies suitable locations for special uses such as communication sites, shooting areas, utility corridors and sediment placement sites.

Water Releases from Dams and Diversions

There are in-stream dams or diversions on almost every large stream flowing from National Forest System (NFS) lands. Altered stream flow regimes are seriously

decreasing the potential of these streams to support native riparian and aquatic habitat. In some drainages, rather minor changes in the management of water releases could greatly improve habitat capability for species of concern. The Forest Service has some limited abilities to influence how water is released from impoundments and diversions.

Recommendation: Establish consistent Forest Plan direction on the following concerns: (1) appropriate procedures for working with water and flood control agencies on pursuing minimum flow requirements (timing, duration, and volume of water releases; sediment transport and removal issues); (2) involvement in water rights claims through the State Water Resources Control Board. Forest Plans also need to identify the need for stream-specific analyses to determine desired conditions on water releases; and (3) need to determine historic flows, and relationship to native fauna and flora.

Mining-Related In-Stream Habitat Degradation

Suction-dredging and sand & gravel operations are the primary mining activities that affect riparian and aquatic habitats. The Forest Service has regulatory authority over these operations on National Forest land. The California Department of Fish and Game (CDFG) also issues permits for suction dredging and identifies which streams are open to this activity. Existing Forest Plans say little on this issue. The San Bernardino NF Forest Plan prohibits sand and gravel processing plants on National Forest land, but not the mining operations themselves.

Recommendation: Establish a consistent policy stating that sand and gravel operations within national forest boundaries will only be considered where they are consistent with management objectives for riparian or aquatic dependent resources. There is also a need to clarify what regulatory authority the Forest Service has regarding suction dredging and other forms of mining in streams.

Minerals Extraction

A significant portion of National Forest land is under claim for mineral deposits. Claims are particularly prevalent in the desert montane zone. Most mining operations are small, but there are large limestone mines on the San Bernardino NF. There is also some future potential for open-pit gold-mining operations and oil and gas leasing.

Recommendation: Establish Forest Plan direction that encourages development of site-specific conservation strategies (including withdrawal from mineral entry) for threatened, endangered, and Forest Service sensitive species to address the effects of existing and potential mining.

Effects of Recreation Activities on Habitat

Recreation activities such as campgrounds, day-use areas, roads, trails, off-highway vehicle (OHV) routes, organizational camps, ski areas, and recreation residences can adversely affect habitats and involve direct "take" of species. This is of particular concern in areas where the potential for damage to habitats occupied by sensitive species is high. All four National Forests currently have a similar Forest Plan guideline stating, "Resource impacts are to be mitigated in favor of riparian dependent resources." An example of an issue of major significance, the effect of campgrounds and roads in riparian habitat, is not addressed in existing Forest Plans.

Recommendation: Add specific management direction that: (1) describes desired conditions and provides guidance on where it is particularly important to control recreation-related habitat degradation (e.g., upland and riparian habitats occupied by sensitive species); (2) identifies on maps key habitat areas for species of concern and provides steps to minimize habitat degradation in those areas; (3) establishes a “No Net Loss” standard for riparian and wetland habitats within each Forest; (4) incorporates conservation recommendations from the riparian obligate species Biological Opinion.

Unauthorized Activities Associated with Vehicular Access

This category includes activities such as unauthorized collecting of reptiles, poaching, target shooting, unauthorized woodcutting, unauthorized OHV activity, vandalism, and dumping of hazardous materials. All of these difficult law enforcement issues occur almost exclusively along or near roads and trails. Each causes serious declines in habitat capability in localized areas. Desert montane habitats are particularly subject to such activities, because there are very few areas of limited access in this habitat.

Recommendation: Add management direction that addresses the resource value of areas with limited vehicular access for protecting sensitive species and habitats from unauthorized activities.

III. Species-Specific Management Issues

The rarity of some species necessitates more intensive, site-specific management attention. Essential habitat areas for improvement and conservation of these species should be identified and actions taken to protect those areas from degradation. Rare plant communities also require this type of attention.

Findings from the SCMFA suggest that there are 91 plant and 42 animal species that merit site-specific attention (Mountains and Foothills Assessment, Appendix A, page 381). Many of these species are federally listed as threatened or endangered. Many of the species occur in very few locations, so the amount of area required to conserve them is small. There is also considerable overlap in the distribution of rare plant species and rare plant communities. For some species, there is not enough information on their distribution and abundance to identify habitat areas for them. Management needs in essential (as defined by FSM 2670.5) habitat areas are likely to repeatedly involve several key steps.

Key Steps for Managing Essential Habitat Areas

1. Divert land use activities away from essential habitat areas to the extent necessary to maintain or improve the habitat capability for dependent species. If necessary, this includes closure or relocation of recreation sites, transportation routes, special uses, and resource-extraction operations.
2. Control populations of non-native species that displace, prey upon, or otherwise harm the target species to the extent necessary to maintain or improve the capability of the habitat.
3. Protect, conserve, restore, or simulate key ecological processes such as fire cycles and stream flow regimes to the extent necessary to maintain or improve the habitat capability for the species.

4. Minimizing potential for catastrophic accidents that would trigger a decline in habitat capability (e.g., dozer lines through these areas during fire emergencies, large water releases from upstream reservoirs during the breeding season).

Recommendation: The Province ID team recommends that the species identified in Appendix A of the SCMFA should receive site-specific management consideration in the revised Forest Plans. This would include: (1) establishing criteria for identification of essential habitat areas for each of these species (including, where appropriate, the size and number of such areas) and (2) providing direction for managing these essential habitat areas that reflect the key steps described above. For species that occur on more than one National Forest, it is important that the four Forests have a consistent strategy for the identification and management of species-specific habitat areas.

CONCLUSION

The data documented in the Southern California Mountains and Foothills Assessment, the Interim Management Guidelines for Riparian Ecosystems, and the review of on-going activities constitute new information. Evaluation of these data indicates a need for Forest Plan revision on the four Forests of the southern California Province. Recommendations provided by the Province ID team identify some of the specific portions of existing Forest Plans that need to be revised. The Province ID team also recommends that the Interim Management Guidelines for Riparian Ecosystems be incorporated into revised Forest Plans.

IV. ACTION PLAN

FY2000

Establish ID teams to develop recommended revisions to Forest Plans based on monitoring and evaluation efforts.

Initiate public dialog on needed changes to Forest Plans.

FY2001

Develop Proposed Action and Purpose and Need for revisions.

Issue NOI for Forest Plan revisions.

FY2002

Issue Draft EIS on Forest Plan revisions.

FY2003

Issue Final EIS on Forest Plan revisions.

V. STATUS OF PREVIOUS YEARS' RECOMMENDATIONS

No previous southern California-wide Forest Plan amendments or revisions have been proposed.

VI. UPDATE OF RESEARCH NEEDS

A number of research needs have been identified that include but are not limited to:

1. Research on effects of fire on big-cone Douglas-fir distribution.
2. Monitoring protocols for specific TES species.
3. Effects of recurrent fires on habitat quality for California gnatcatcher.
4. Effects of dust on carbonate plants.
5. Fire risk to pinyon pine woodlands.
6. Oak regeneration.
7. Effects of OHV disturbance on wildlife.
8. Species habitat requirements.
9. Effects of seasonality of prescribed burns.
10. Effects of introduced species on plant and animal habitat.
11. Effects of recreation use on TES species.
12. Effects of altered fire return intervals on conifer species associated with chaparral.
13. Effects of altered fire return intervals on conifer forests.
14. Social and economic aspects of Forest use.

VII. LIST OF PREPARERS

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VIII. LOCATION OF SUPPORTING DOCUMENTATION FOR MONITORING ACTIVITIES

Southern California Mountains and Foothills Assessment - National Forest Supervisors' offices
Interim Management Guidelines for Riparian Ecosystems – National Forest Supervisors' offices

IX. PUBLIC DISCLOSURE/PUBLIC PARTICIPATION

A summary of the recommendations in this document will be distributed to the public using existing Forest Plan mailing lists. A complete copy of this report, the Interim Management Guidelines for Riparian Ecosystems, and the Southern California Mountains and Foothills Assessment will be available on the Southern California Conservation Strategy web site.

X. APPENDIX OR REFERENCE TO OTHER RECORDS

None identified.