Appendix K - Response to Comments

Table of Contents

Appendix K - Response to Comments

Introduction

Public comments on the Draft EIS and Forest Plan as well as the Forest responses are presented in this chapter. The introduction discusses the ways to respond to comments and why some comments were not included. The content analysis section summarizes the types of issues commented upon. The next section includes the comments and the responses. Facsimile copies of the comment letters from public agencies and elected officials are included after the Response to Comments section. The last section includes a list of those who commented.

In the Response to Comments section, comments are grouped by general subject matter in the same order followed throughout the EIS with a General Section at the end. The comments may be paraphrased. Every attempt has been made to accurately capture each substantive comment and to display all of them. A substantive comment provides factual information, professional opinion or informed judgement related to the action being proposed. The original comment letters are available for review at the Forest Supervisor's Office in Yreka, California.

Where more than one person made similar comments, the comments have been combined and summarized. Whenever possible, a reference is made in the response to the location in the documents where the reader may find changes or supporting information. Abbreviations have been used throughout the appendix; refer to the Glossary.

The number(s) following each comment is the number assigned to the commentor's letter or other form of input and can be used by commentors to identify their comments. A list of the those who commented and their assigned numbers appears at the end of this appendix.

Possible responses to comments include the following (40 Code of Federal Regulations (CFR) 1503.4):

- Modify alternatives including the proposed action.
- Develop and evaluate alternatives not previously given serious consideration by the agency.
- Supplement, improve or modify the analysis.
- Make factual corrections.
- Explain why the comments do not warrant further agency response.

The vast majority of the comments related to the Preferred Alternative and Draft Forest Plan. It was the only alternative which has been modified in the Final EIS.

A new alternative was proposed by the Klamath Forest Alliance. Analysis showed that the majority of the features in this alternative were included in the other alternatives considered in detail, primarily the Preferred Alternative. Those features not included in another alternative were found to be unimplementable under current law, regulation or policy. The response to each proposal that was part of the Klamath Forest Alliance Alternative is included in this appendix under the appropriate resource area.

Several types of comments were not included for the following reasons:

- Comments agreeing with an alternative or complementing the document were not included when no response was necessary. These comments were read and used in designing the final alternatives. They will also be considered in selecting the alternative to be implemented.
- Some comments offering special expertise or data were not included. These commentors will be contacted individually when there is a need for their expertise or data.
- Some comments "incorporated by reference" the comments of other commentors. It would be difficult, time-consuming and speculative to determine which comments should be included. These commentors should refer to the comments of the individual or group they referenced to find the response to those comments.
- Comments unrelated to the Forest Plan may not have been included if they involved personal uses of federal land or vituperative dissatisfaction with existing laws, policies, etc. However, most comments outside the scope of the EIS were included with an explanation of why they are outside the scope.
- Some comments incorporated the commentor's comments on the President's Forest Plan. The responses are not included here as they can be found in the FSEIS.

References to Option 9, the President's Plan, the President's Forest Plan, Clinton's Plan, President Clinton's Forest Plan and similar were assumed to refer to the Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl (SEIS). The document was finalized in a Final SEIS (FSEIS) issued in February 1994 (USDA Forest Service and USDI BLM et.al., 1994). Additions were made to it in the Record of Decision (ROD) for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl

signed on April 13, 1994 (USDA Forest Service and USDI BLM, 1994).

The Forest would like to thank those who took the time to read the documents and provide a response. They greatly helped us improve the proposed Forest Plan and associated EIS for the Klamath National Forest.

Content Analysis

The Forest received 343 comment letters on the Draft EIS containing more than 3,200 individual comments. There were 116 individual letters, 33 form letters, 193 letters that appeared to be derived from form letters and a map. Comment letters were received from 2 Federal agencies, 4 State agencies, 1 local government group, 29 environmental groups, 4 timber industry organizations, 5 other organizations, 1 Native American group, 1 motorized recreation organization, 7 businesses and 287 individuals or families.

About 20% of the comments were on general planning issues. About 18% concerned biological diversity issues, 11% Wild and Scenic Rivers (WSRs), 8% wilderness and roadless areas, 7% timber issues, 4% watershed issues, 4% range issues, 3% wildlife issues, and 2% concerned fisheries issues.

The most individual comments were received on designating more WSRs and on more protection for riparian areas. The adequacy of public participation and involvement also received a large number of comments. There were many comments on the effect of the President's Plan on the Forest Plan. There were also a large number of comments on the need to retain roadless areas and to retain "old growth."

Response to Comments

Physical Environment

Geology Comments

Comment 1: The Draft Forest Plan provides little assurance that fragile slopes would be protected. All geologically sensitive lands should be removed from the timber base. It is too difficult to distinguish between high risk and extremely high risk areas.

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Response: In the Final EIS, the Preferred Alternative (Forest Plan) has been modified. Riparian Management Zones (RMZs) are now called Riparian Reserves (RRs) and include all unstable and potentially unstable lands. Timber harvesting and road-building would be permitted only when it helped achieve management objectives for the area.

Four landslide hazard classes were developed for the Forest during the planning process. **Extremely unstable lands** include: (a) active landslides, (b) inner gorges, (c) toe zones of slump-earthflow deposits and (d) steep (slopes greater than 65%) granitic mountain slopes which are highly dissected and deeply weathered. **Highly unstable lands** include: (a) steep portions of dormant slump-earthflow deposits, (b) portions of granitic terrane that are steep and moderately dissected or moderately steep (slopes 35-65%) and highly dissected, (c) steep, debris slide prone slopes and (d) steep moraines and terrace deposits. **Moderately unstable lands** include: (a) portions of dormant landslide deposits with slopes 0-65%, (b) portions of granitic terrane that are moderately dissected and moderately steep or are steep and exhibit low dissection, (c) steep (greater than 65%), unfailed mountain slopes and (d) moderately steep (35-65%) moraines and terrace deposits. Lands with a **low risk of landsliding** include: gentle, unfailed glacial deposits and terraces, (b) unfailed mountain slopes less than 65%, (c) granitic terrane with slopes less than 35% and that exhibit low dissection.

The Forest Supervisor using interdisciplinary team recommendations identified certain terrane types classed as **extremely unstable** as **geologically unsuitable** for sustained timber management due to their extreme sensitivity to disturbance. These include active landslides, toe zones of slump earthflow deposits, unconsolidated inner gorges and highly dissected granitic terrane. These areas would be removed from the timber land base in all alternatives. In the Preferred Alternative, consolidated inner gorges would also be identified as geologically unsuitable and not subject to programmed timber harvest.

A multitude of landslide hazard classification schemes have been developed and applied to various parts of the Pacific Northwest. Unfortunately, most of these schemes were developed independently, and it is not possible to make direct comparisons from one to another. For example, "high hazard" land under one system may include areas which are classed as "moderate hazard" by another. The approach used on the Forest was to stratify the land into the 4 classes described above. This system considers landform, slope material and slope steepness. When defined in this way, it is clear what types of land are in the **extreme** and **high** landslide hazard class.

Comment 2: Neither the Forest Ecosystem Management Assessment Team (FEMAT), the Scientific Analysis Team (SAT) or Draft Forest Plan's definitions of inner gorge slopes are adequate. The convex slope break at the top of the inner gorge is an especially failure-prone location, one of the hottest spots for mass erosion in the entire inner gorge. Removal of vegetation and road construction and flow diversions above the inner gorge itself can trigger progressive deformation and eventual failure of slope break, the inner gorge wall or the downslope toe.

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Response: Chapter 3 of the EIS under Geology defines and describes inner gorges. However, slope conditions at the upslope boundary of the inner gorge can vary considerably. For example, the slopes at the transition zone may be marked by flat to gentle slopes with a low risk of landslide potential, or the slopes can be in excess of 65%, susceptible to debris sliding, and may have a high landslide hazard. The variability of slope conditions at the upper boundary of the inner gorge indicates a need for an on-the-ground slope stability evaluation by an earth scientist on a project- and site-specific basis.

In the Final EIS, the Preferred Alternative has been modified to include unstable and potentially unstable lands in RRs. These lands are those prone to mass failure under natural conditions (unroaded, unharvested) and where human activities such as road construction and timber harvest are likely to increase landslide distribution in time and space to the point where this change is likely to modify natural geomorphic and hydrologic processes (such as delivery of sediment and wood to channels). Changes in hydrological processes will in turn affect aquatic ecosystems including streams, springs, seeps, wetlands and marshes. Land types included are: 1) active landslides and those which exhibit sound evidence of movement in the past 400 years, 2) inner gorges and 3) those lands identified as unstable by geologic investigations, using the criteria stated above. This includes lands already classified by the Forest as unsuitable for sustained timber production due to irreversible soil loss (refer to response to Geology Comment 1).

In the Final EIS, the Preferred Alternative has been modified to include a standard and guideline reflecting the need for site-specific delineation of unstable and potentially unstable land.

Comment 3: The Forest Plan provides no assurance that unstable lands will be identified. In theory, the unstable lands would be identified and protected through the watershed analysis process. But watershed analyses are not required outside of Key Watersheds and roadless areas; therefore, there is no formal mechanism for locating many unstable lands. In addition, the Forest Service and BLM have been notoriously reluctant to remove unstable lands from the timber base.

237

Response: Chapter 3 of the EIS, Geology, Issues, Projected Demands and Opportunities shows that the identification of unstable lands that are unsuitable for programmed timber harvest is a major issue of concern. It is acknowledged that the geologic inventory is incomplete and that there may be additional unstable, geologically sensitive lands that need to be identified, (e.g., toe zones of slump-earth flow deposits and sensitive granitic terrane). The Forest Plan provides the opportunity for establishment of minimum standards of geologic investigation and direction for maintaining and updating the Geologic Database. Proposed standards and guidelines applicable to all new Forest management activities in the Preferred Alternative provide the opportunity to reduce future management-related landslides. In the Final, the Preferred Alternative has been modified to include a standard and guideline which provides a mechanism for identifying unstable, geologically sensitive lands through geologic evaluations.

As Chapter 3 of the EIS explains under Geologically Unsuitable Lands, about 70,000 acres (4% of the Forest) have already been identified as unsuitable for timber production and are mapped in the Forest's Geologic Database. These lands would be removed from the timber base in all alternatives. The Preferred Alternative would also remove inner gorges on consolidated material and all unstable and potentially unstable land from the timber base.

Comment 4: The Draft Forest Plan will allow logging and road building activity to disturb vast areas of steep, unstable land resulting in accelerated landsliding and surface erosion that will further degrade stream ecosystems and eliminate vital habitat for aquatic species. Roadless areas and ancient forests tend to be located on steeper slopes than Federal lands generally and would not be protected from logging under the Draft Forest Plan.

237

Response: Geologically sensitive lands, defined as those with a high landslide risk, occupy 40% of the Forest. Approximately 4% of the Forest is classified as geologically unsuited for sustained, programmed timber harvest. The alternatives vary in how they treat management of geologically sensitive terranes. Refer to Table 4-3 on page 4-15 of the Final EIS for estimates of how much geologically sensitive land would be harvested by decade by alternative. Some of the alternatives evaluated in the EIS would limit management activities in the consolidated inner gorge terrane. This geologically sensitive terrane comprises an additional area (9%) of the Forest. Activities in this terrane are limited to Regulation Class 3 which would have the least risk of management-related landslide problems. The Preferred Alternative treats these lands as unsuited for programmed timber harvest. It also would place all unstable and potentially unstable lands into RRs. Further, other management constraints limit the amount of geologically sensitive lands available for timber-management related activities.

While it is generally true that steep lands are more unstable than gentle lands, important exceptions to this relationship are known to exist in this portion of the Klamath Mountains. Slump and earthflow deposits occupy about 215,000 acres on the Forest and are usually more gently than surrounding terrane (less than 65% slope). However, local studies (USDA Forest Service, 1989 and de la Fuente and Haessig, 1993) have demonstrated that these lands produce landslides at a rate much higher than surrounding mountain slopes, despite the fact that they are gentler. It was for this reason that geomorphic terranes were identified for the Forest Plan analysis which can accommodate landform and slope material as well as slope gradient.

While roadless areas and ancient forests tend to be located on steeper slopes than Federal lands generally, the watershed analyses that is part of the Forest's Ecosystem Analysis process at the landscape/watershed level provides one mechanism to identify unstable and potentially unstable lands in roadless areas, as many of these areas are within identified Key Watersheds. For other lands outside of Key Watersheds, site-specific geologic evaluations of potentially unstable lands are needed. In the Final, the Preferred Alternative has been modified to include a standard and guideline which provides for these type of evaluations. The Preferred Alternative also would make provision for retaining many of the areas that meet the criteria for "old growth" forests.

Comment 5: Air and water pollution from asbestos aggregate surfacing roads is unaddressed. Serpentine has traditionally been the preferred surfacing material for roads. Many miles of county and Forest roads are surfaced with serpentine aggregate that is highly susceptible to traffic-caused dust pollution.

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Response: Chapter 4 of the EIS, Geology and Air sections address air and water pollution from asbestos; refer to pages 4-16 through 4-17 and 4-36 through 4-37. Avoidance of use, dust abatement measures and paving roads would be used as mitigation measures for future quarry operations and road construction in ultramafic or asbestos-bearing rock in all alternatives. Asbestos hazards would be analyzed on all projects

where the potential exists to introduce asbestos fibers into the air or to develop water for domestic use which may contain asbestos.

The Forest Plan contains Forest-wide standards and guidelines related to asbestos hazards and provides direction on asbestos hazard inventory and assessment. Refer to Forest-wide Standards and Guidelines 1-5, 1-6 and 2-4 in the Forest Plan. Also refer to Table 5-1, Monitoring Plan by Resource, Geology, Geologic Hazards.

The statement that "serpentine has traditionally been the preferred surfacing material for roads" is incorrect, certainly for Forests in Region 5. Historically, serpentinite tends to meet the specifications for aggregate surfacing less often than many other rock materials. However, in some areas, only serpentinite was available. In any case, the problem of using asbestos in road surfacing was recognized at least as early as 1978 (refer to Forest Service White Paper on Airborne Asbestos in Region 5, September 1979).

Comment 6: Provide the latest data on California Air Resources Control Board and Forest research on water and air pollution hazards from asbestos pollution.

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Response: This information was not included in the EIS as it provides background information and was not an integral part of the analysis. In October 26, 1981 Radian Corporation under contract with Region 5 of the USFS produced a study of airborne asbestos emissions generated from rock crushing operations at quarry sites and by vehicle travel over aggregate-surfaced roads on the Klamath, Plumas, Shasta-Trinity and Six Rivers National Forests. The area airborne asbestos fiber concentrations were in all cases less than occupational standards set for asbestos by the Occupational Safety and Health Administration (OSHA) in effect at the time (and were in all but 2 cases less than present OSHA standards). Occupational standards, however, are not directly applicable to the population at large. Approximately a third of the air samples tested exceeded ambient levels of asbestos found in urban areas. No public exposure standards existed then or now.

The State of California Air Resources Board prepared a Technical Support Document for the Proposed Control Measure for Asbestos-Containing Serpentine Rock In Surfacing Applications dated October 1989. The report provides information on ambient asbestos monitoring studies carried out by the Air Resources Board in 1987 and 1988.

Pursuant to the Forest Service White Paper in 1979 and the findings of the Radian study in 1981, Region 5 has taken various steps to minimize the use of serpentine aggregate and to minimize public exposures.

- February 1983. R5 Supplement 16 to Forest Service Manual (FSM) 2100 prohibited use of asbestos-containing aggregate for road surfacing unless certain abatement measures were taken. During subsequent years, the use of a number of asbestos-containing aggregate sources was discontinued, and many miles of road were treated to minimize exposure.
- March 1986. R5 Supplement 19 to FSM 2100 deleted the above restrictions due to the FSM rewrite of that year. However, the restricted use of asbestos-containing aggregate continued in most cases.
- February 1990. California Air Resources Board "Proposed Control Measure for Asbestos-Containing Serpentine Rock in Surfacing Applications" was published. Region 5 currently follows the guidance in this control measure.

Since the adoption of the Asbestos Airborne Toxic Control Measure, the Forest has sampled 4 rock pits and quarries containing more than 10% serpentine rock. The samples were sampled and tested according to Air Resources Board Test Method 435, using a laboratory that performed trial studies of the analytical method. Samples from all 4 rock pits contained asbestos fibers; 2 quarries had fibers in excess of 5% and were found to be unsuitable for use as aggregate material. Two quarries had fiber counts of the range of 4% and 4.75%. None of the quarries were used.

The most recent study conducted by a contractor for the California Air Resources Board was published in August, 1992 and is entitled: *Development of a Technique to Estimate Ambient Asbestos Downwind from Serpentine Covered Roadways.* The study quantified asbestos concentrations downwind of serpentine covered roadways and related the concentrations to vehicle traffic, road surface materials and meterological and climatological conditions. A model was developed to predict short- and long-term average asbestos concentrations.

Comment 7: Chart the miles of roads in the Forest surfaced with serpentine aggregate. Specify the particular roads.

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Response: At the present time, there is no available data on roads surfaced with serpentine aggregate. There is some data on pits and quarries containing serpentine and asbestos, but a complete inventory is not available. There will be an opportunity to develop a Forest-wide inventory of rock resources that can identify pits and quarries containing serpentine and asbestos. Table 4-4 and the associated discussion in the EIS explain how much each alternative would request to inventory geological hazards of which asbestos is one.

The Forest contains approximately 5,100 miles of Forest Development Roads, not including County and State roads. The total Forest Road System includes over 6,000 miles of road. The road surface classifications within the development roads are as follows: 160 miles of paved surface roads (3%); 1,170 miles of aggregate surface roads (23%), 3,720 miles of native material surface roads (73%) and 50 miles of primitive surface roads (1%). Approximately 500 miles of road within the entire Forest road system currently pass through ultramafic rocks. Ultramafic rocks include peridotite and serpentinite and have a high potential for containing asbestos minerals.

Estimates have been made of the miles of new roads to be constructed in ultramafic rock by alternative and are displayed in Table 4-5 on page 4-17 of the Final EIS. Construction of new roads through asbestos-bearing rock will be avoided wherever possible. All alternatives except for Alternative E, allow for use of asbestos-bearing serpentine aggregate for road surfacing, if asbestos levels fall below the 5% maximum. Alternative E would avoid use of all asbestos-bearing rock.

Comment 8: Indicate the extent of compliance with the 5% asbestos content in road surface aggregate. Chart the results of testing quarries on the Forest that contain rock of greater than 5% asbestos content and the decisions to close down these quarries. Describe the action taken by Forests to close down and eliminate stockpiles of aggregate containing more than 5% asbestos.

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Response: These analyses are more appropriate at the project level as they relate to specific roads and quarries. The purpose of the Forest Plan is to set guidance for broad programs at the Forest level. However, the response to Geology Comment 6 gives a historical summary of the steps taken to minimize use of serpentine aggregate as well as the results of recent testing of serpentine aggregate at 4 pits and quarries on the Forest.

Comment 9: Explain measures to avoid and/or stabilize serpentine formations traversed by trails, roads, drinking water sources and causing air and water pollution. What measures are taken to stabilize existing roads surfaced with 5%+ serpentine gravel?

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Response: There are no State or Federal regulations pertaining to stabilization of serpentine rock formations traversed by existing trails or roads. Asbestos in drinking water supplies is regulated. Forest Service water supply systems with suspected asbestos hazards have been tested prior to the new standard. Water supply systems are currently being evaluated for compliance. Current and past practices have encouraged avoidance of use of asbestos-bearing aggregate for surfacing material. Forest-wide Standard and Guideline 1-6 addresses mitigation measures to protect the public from asbestos hazards.

The opportunity exists to monitor airborne asbestos at quarry operations, along unsurfaced roads through asbestos-bearing rock formations and along existing roads surfaced with serpentine. There is also an opportunity to inventory roads traversing serpentine formations and those surfaced in serpentine. Completion of monitoring and inventories would allow mitigation measures to be designed and implemented.

Comment 10: Assess hazards of asbestos pollution to at-risk groups including employees of the Forests, particularly children and school attendees, residential lease-holders and campground visitors.

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Response: Work in the area of risk assessment has been done by EPA and the California Air Resources Board. Although there is acknowledged uncertainty regarding the nature and extent of risk from toxic air contaminants, the control measure was established, in effect to minimize risk to the public. The Environmental Protection Agency (EPA) declined in 1982 to regulate public exposures to asbestos generated from road aggregates. At the present, there are only standards set for occupational exposure to asbestos. Public exposure limits do not exist. An analysis of at-risk groups is not possible without a standard to measure against.

Comment 11: Remove all forest land on steep and moderately steep slopes from the suitable timber base until specific sites are certified as having low landslide risk.

237

Response: Landslide hazard analysis examined the differences in landslide potential of 13 different geomorphic terranes identified in the Forest. Through the Forest Planning process, certain terrane types were classed as extremely unstable and geologically unsuitable after considering landform, slope material and slope gradient. These lands would be removed from the capable, available and suitable (CAS) land base in all alternatives. It is acknowledged that the geologic inventory is incomplete and that additional geologically sensitive lands need to be identified. In the Final Forest Plan, the Preferred Alternative has been modified to include a standard and guideline relating to geologic evaluations to remedy this.

Comment 12: Define regulations controlling off-highway vehicle (OHV), motorcycle and other dust-producing off-road vehicular traffic in serpentine formations.

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Response: No State or Federal measure deals with airborne asbestos from native-surfaced roads and OHV areas. Although over 70% of the Forest is open to OHV use, most of this area is on the eastside of the Forest, where there is no ultramafic rock and no risk

of asbestos hazards. There is very little OHV activity on the westside of the Forest due to the steep terrain.

Soils Comments

Comment 1: Rather than being regularly removed from the soil with the harvesting of the tree crop, nutrients need to be returned to the soil by means of remineralization. Later, when forest health has been restored, sustainable logging can begin.

98

Response: All alternatives would have standards and guidelines for retaining key soil and vegetation components such as snags and coarse woody debris (CWD) which provide for maintenance of nutrients and soil productivity during management activities. These are described for the Preferred Alternative in the Forest Plan under Forest-wide Standards and Guidelines, Physical Environment, Soils, Soil Productivity and under Biological Diversity. The projected effects are discussed in the Soils section of Chapter 4 of the EIS. One of the Forest-wide goals for the Forest Plan is for all activities to lead to a sustainable ecosystem.

Comment 2: Draft EIS, page 3-38 states "Broadcast burning after timber harvest puts some organic matter from the site back into the soil, but much of it is removed during timber harvest." It does not. It leaves a residue of inorganic matter.

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Response: This has been corrected in the Final EIS to state that broadcast burning puts some nutrients which are stored in the organic matter back into the soil.

Comment 3: Forest practices should maintain and/or restore natural processes of soil fertility, productivity and stability.

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Response: See response to Soils Comment 1.

Comment 4: The Draft EIS fails to consider possible violation of the National Forest Management Act's (NFMA's) requirement to maintain sustainable soil productivity. On page 4-21 the Draft EIS admits that despite adherence to standards and guidelines, it is likely that soil productivity would not be maintained on a small percentage of the area due to environmental conditions or human error during implementation at some time during the planning period. This discrepancy is shown by the admission that absolute levels of soil erosion as a result of different alternatives remain unknown.

154

Response: The Draft EIS was merely acknowledging that things do not always work out as planned, that errors are possible and there are times when the intent of the Forest Plan may not be met despite the Forest's best efforts. This is why monitoring is planned to assess the implementation and effectiveness of soil standards and guidelines and thresholds in maintaining soil productivity (Chapter 5, Forest Plan). If standards are not adequate to achieve the stated objectives, the standards can be changed through an amendment to the Forest Plan.

Absolute levels of soil erosion cannot be known as all effects described are forecasts of the future predicted through the use of models and other analysis tools.

Water Comments

Comment 1: Saying water quality will be maintained on sensitive geologic lands misses focusing where, why and how much.

5

Response: The Forest Plan EIS discusses planning at the forest level and does not try to go into detail concerning where and how much there is for each specific land type. Refer to the standards and guidelines for the specific management practices used to protect sensitive geologic lands.

Comment 2: Current degraded conditions are not acceptable as a baseline when measuring water quality, rather a pre-management baseline (including fire suppression) should be derived.

305

Response: The water quality analysis measures sediment production against a theoretical pristine condition. This baseline is much lower than a pre-fire suppression baseline. To determine a pre-management baseline, estimates of fire effects would need to be made and estimates of sediment production derived from the fire effects estimate. This procedure would be pushing the limits of reasonable science.

Comment 3: All watersheds should have adequate protection including comprehensive watershed management plans.

9 25 60 172 181 273 325

Response: All alternatives would establish RRs or RMZs. They would establish standards and guidelines for watershed protection. Refer to EIS, Chapter 4, Biological Diversity section. Some alternatives would accept a higher degree of risk than others depending on the relative emphasis placed on each resource. The analyses in Chapter 4, Physical Environment sections of the EIS discuss the projected effects on watersheds including landsliding, erosion, watershed condition and water quality. The projected effects on fish can be found in the EIS, Chapter 4, Fish. Part of the ecosystem management approach of all alternatives is to conduct landscape/watershed analysis.

Comment 4: Quantity and quality of water are the values most adversely affected by logging. The im-

pacts of logging have consequences for the entire planet.

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Response: Chapter 4 of the EIS displays the consequences of the proposed program for each alternative at the Forest level. Impacts at the planet level are outside the scope of this analysis.

Comment 5: Forest practices should maintain and/or restore surface and groundwater quality and quantity, including aquatic and riparian habitat.

98

Response: The Water, Biological Diversity and Fish sections of Chapter 4 of the EIS discuss how each alternative would do this.

Comment 6: What are the potential impacts of dredging on salmonid spawning and water quality?

282

Response: The affects of dredging would be the same with any alternative and are more appropriate for discussions at the site level than the forest level. Dredging increases stream turbidity immediately downstream of the dredging operation when the operation is active. The sediment stirred up by dredging generally settles out quickly or is diluted so that by some distance downstream an increase in turbidity is not noticeable. The dredging season is regulated by the State to minimize the impacts of stirring up spawning area on fish eggs.

Dredging generally acts to sort the substrate in a stream, washing away fine sediment and separating spawning-size gravel from coarser substrate. Fish will often spawn in these created spawning gravel beds. However, these gravel beds are not stable under high flows. The gravel can be washed away which would also wash away the fish eggs. Studies are currently underway to determine the extent to which this occurs. For more details, refer to the Environmental Impact Report for Suction Dredge Mining prepared by the California Department of Fish and Game (CDFG).

Comment 7: The Preferred Alternative should include the attention to water quality that Alternative D contains, including measuring management activities by potential cumulative effects.

303

Response: The Aquatic Conservation Strategy adopted by the Preferred Alternative exceeds Alternative D in attention to water quality. The Preferred Alternative in the Final EIS is consistent with the ROD for the FSEIS (USDA Forest Service and USDI BLM, 1994) which was modified from the draft to provide even more emphasis on water quality. Refer to Chapter 2, Description of Preferred Alternative and Chapter 4, Biological Diversity of the EIS. In all alternatives, cumulative effects assessments would occur at the site level prior to implementation of site-disturbing activities.

Comment 8: The Forest Service relies on the use of Best Management Practices (BMPs) to protect watersheds. These BMPs are not a proven method for assuring compliance with water quality law.

154

Response: BMPs are recognized by both the Federal and State of California governments as the best way to comply with the Clean Water Act. However the alternatives and project planning would rely on more than just BMPs to assure protection of watersheds and accurately assess water quality impacts. All alternatives would establish RRs, protect sensitive lands and have watershed restoration programs. Alternatives Preferred, D and D' would also establish Key Watersheds or refugia.

Comment 9: The Threshold of Concern (TOC) index calculation method is not field verified. It assumes that the sensitivity of a watershed is additive, relative to circumstances that occur within a watershed, rather than operating as a limiting factor that would have the most sensitive factor set the threshold. This concept requires monitoring to validate.

154

Response: The TOC calculation method used for the EIS is a method designed to capture the accumulated ground knowledge of the Forest watershed personnel. Their judgement is that the sensitivity of a watershed is additive rather than relying on a most sensitive factor. It is true that the method is not field verified and will take a great deal of time and varying climatic events to field verify. However, a method which can accurately predict the cumulative watershed effects over the complex situations which exist in any watershed has not yet been created. The method used relies on the field experience of the people who designed it.

Comment 10: The Draft EIS fails to analyze the impacts of increasing road densities on water quality, fisheries and the integrity of aquatic ecosystems. The Forest Service appears actively poised to violate the State and Federal anti-degradation requirements by degrading watersheds as long as, in its unexplained judgement, they remain above TOC levels. It is apparent now, at the planning stage, that the Forest Service plans to adopt a policy which plainly invites water quality degradation on repeated site-specific basis throughout the forest by failing even to consider water quality requirements as management constraints.

44 154 266

Response: The watershed model uses TOCs to express an "estimated upper limit to land use." This is not to say that a watershed above TOC is a degraded watershed, rather that an elevated risk of degrading water quality exists. This is slightly different than the

TOC generally used in Region 5. It is a "caution" or yellow light rather than a "stop" or red light. In other words, a watershed above TOC raises concerns about whether or not additional watershed disturbance activities are appropriate in the watershed. Site-specific analysis will be done for all watersheds to consider water quality requirements.

The FORPLAN model used for the EIS is cannot disaggregate management activities to the watershed level. As a result, Forest total disturbance levels are below TOC even though individual watersheds are listed as above threshold. A disaggregation model was used for the Preferred Alternative which identified potential problems at the watershed scale, given the assumptions used in the model (refer to Appendix B). The ASQ for the Final Preferred Alternative was adjusted to minimize or avoid effects in these watersheds because a conservative approach is consistent with this alternative's emphasis on aquatic resources.

Comment 11: With the decreasing trend in watershed condition and water quality and the increase in sediment production predicted in the Draft EIS, the Preferred Alternative cannot comply with water quality requirements.

154

Response: A decreasing trend in watershed condition and an increase in sediment production Forest-wide does not necessarily mean that water quality requirements would not be met. The Preferred Alternative would comply with applicable laws: any proposed project that is estimated to not comply during the site specific analysis would not be implemented. The analysis in the EIS displays the tradeoffs between alternatives, all of which were designed to comply with water quality requirements.

Comment 12: The National Forest should not be cut, grazed or mined. The value of water resources far outweighs these economic interests.

25

Response: Chapter 4, Water section of the EIS shows that water quality can be maintained under varying levels of the listed activities. The Multiple Use-Sustained Yield Act and NFMA establish timber production and grazing as valid uses of national forest and the U.S. Mining Laws declare all valuable mineral deposits on public lands open to exploration and purchase, given certain requirements.

Comment 13: Water should not be designated as a yield as if it were a desirable product.

98

Response: Water yield and whether it should be increased by vegetative manipulation was identified as an important issue by the public at the beginning of the planning process; refer to EIS, Chapter 1. Water yield is valued as a product for agricultural, domestic and fish use purposes; refer to discussions in the EIS, Chapter 3, Water and Fish sections.

Comment 14: Watersheds which provide water supply for community water systems (municipalities, special districts and small water systems - 5 or more hook-ups as per State of California definition) should be given special emphasis including full SAT riparian protection with no entry allowed within RRs, removed from timber base, priority for land consolidation in order to better protect water quality and flow timing (summer flows).

283

Response: The Preferred Alternative has been modified in the Final EIS. Interim boundaries for RRs would be the same as those recommended by SAT (Thomas et.al., 1993). RRs would be removed from the timber land base. The need for special emphasis for each community water system would be determined at the project level rather than in the Forest Plan for all alternatives. In all alternatives, land consolidation proposals would be considered on a site-specific basis and prioritized based on the degree to which they helped achieve management objectives.

Comment 15: The Draft EIS fails to analyze impacts and compare alternatives using as criteria the requirements of applicable laws including the Clean Water Act, Wild and Scenic River Act (WSRA) and NFMA.

283

Response: All alternatives must comply with applicable laws or become an unimplementable alternative. The analysis is dependent on displaying the tradeoffs associated with the alternatives, all within the limits of the law.

Comment 16: Agricultural and domestic water needs can be better met through exercising conservation and reclamation techniques.

314

Response: It is true that conservation and reclamation can decrease demands on water sources, however it is beyond the scope of the Forest Plan to regulate water usage on private land. All alternatives would propose various strategies for managing water on National Forest System (NFS) land; refer to Water, Biological Diversity, Riparian and Fish sections in Chapter 4 of the EIS.

Comment 17: Vegetation should be treated on more area to increase water flows.

277

Response: As discussed in Chapter 4, Water of the EIS, all alternatives would generate slight water yield increases above the current level during the planning period. There is little difference between alternatives in this item as the area available for vegetative manipulation in any alternative is limited and large

areas must be treated for any noticeable increase to occur.

Comment 18: The Forest Plan falls short in aggressively pursuing the adjudicated water right to maintain an adequate fishery in the Scott River. The Forest should be monitoring the effects of irrigation use on stream habitat loss, water quality and fish populations. This information could be used to develop a water-use plan beneficial to the agricultural community, as well as for fisheries maintenance.

72

Response: The EIS recognizes that stream flows are a concern for the fisheries in some streams with diversions such as the Scott River. However, the Forest Plan is not the proper venue to address such a complex and site-specific issue. Monitoring the activities of private landowners is outside the scope of the Forest Service, would likely be considered as too much government intervention and no funding is available for such activities.

Comment 19: Because the hydrologic system has evolved with "naturally-occurring" sedimentation, it will most likely be more cost-effective to remedy or avoid sedimentation resulting from management activities.

303

Response: This is generally a true statement. "Naturally-occurring" sedimentation is difficult to define, both in terms of overall extent and individual sources. Project planning would determine the need for sediment reduction by watershed and identify the most cost-effective ways to decrease sediment production where needed in all alternatives.

Comment 20: The models used to predict impacts to watersheds and aquatic resources have several flaws which make them unreliable as a basis for decision making. These include faulty assumptions such as high intensity burned acres equivalent to a clearcut in sediment production.

283

Response: One aspect of sediment production is the death or removal of large trees which increases a hillside's potential to landslide. Whether these trees are harvested or killed by fire does not matter when considering potential for landslides regardless of harvesting. Surface erosion sediment production estimates do not equate fire with harvest. Actually, high intensity fire has a greater potential for sediment production because of its greater removal of soil cover than occurs with harvesting even including the use of skid trails.

Comment 21: Evaluate cumulative effects on aquatic resources and develop stream habitat protection measures based on the findings. All streams, including the smallest ones, are steep and unstable. Logged streambanks are subject to heavy runoff during flood periods.

44 45

Response: The Forest Plan evaluates cumulative watershed effects over large areas, not on every stream. Refer to Water, Biological Diversity and Fish sections in Chapter 4 of the EIS. Project analysis will evaluate cumulative effects on a smaller scale and in relation to a specific project. The Preferred Alternative has been modified so RRs include all streams which show evidence of annual scour, that is they typically carry enough water to move sediment every year, and areas determined to be unstable. The other alternatives would decide on management requirements for these areas on a site-specific basis.

All alternatives would use a ecosystem approach in which landscape/watershed analyses and project level analyses are used to assess current and proposed future actions. Watershed and site level analyses would establish final RR boundaries in the Preferred Alternative. These analyses would establish RMZ boundaries for the smaller streams in the other alternatives. These analyses would also identify site-specific management requirements and rehabilitation opportunities in all alternatives.

Comment 22: Jurisdiction in matters regarding both the Scott and Shasta River adjudications for water use are reserved to the Superior Court of Siskiyou County.

281

Response: The water rights have been adjudicated for the Scott and Shasta Rivers through the Superior Court and the Watermaster is responsible for enforcing the adjudication. The Forest Plan describes the role of the Forest in providing quality water for beneficial uses and is not intended to describe details of adjudication and use which are outside the scope.

Comment 23: The Final EIS needs to analyze the effects of the aggressive road building on riparian resources and water quality. Rather than proposing new road construction, the Forest Plan should implement a large-scale road closure program.

44 61 283

Response: The discussion of effects in the Water, Biological Diversity, Riparian Management and Fish sections in Chapter 4 of the EIS includes the effects of roads on water and riparian resources for all alternatives. Roads are a part of the Cumulative Watershed Effects (CWE) analysis for water resources. Also, the Standards and Guidelines in Chapter 4 of the Forest Plan provide direction concerning road construction and road closures for the Preferred Alternative. Removing and upgrading roads would be emphasized as part of watershed restoration. However, project analysis is the only place where the individual impacts of proposed road construction can be properly analyzed.

Comment 24: The Draft EIS presents a water quality analysis which openly contradicts the CWE analysis with a different conclusion. The different conclusion is due to future fire projections being included in the sediment analysis, but not in the CWE analysis. Presented with these 2 openly contradictory approaches, one might suppose that fire is of little consequence in the Klamath Region.

154

Response: The CWE analysis does not use projections of future fire because of the uncertainty of not knowing when, where or even if these future fires will occur as projected. However, precisely because fire is potentially of a major consequence, the fire projections are used in the sediment model, even with the uncertainty of when, where and how intense. These 2 approaches allow the reader to evaluate cumulative watershed effects both with and without projections of future fire. This may seem contradictory but it allows a more complete look at watershed effects than either approach alone.

Comment 25: The Draft EIS analysis relies heavily on the unjustified assumption that restoration work will be 70% effective at returning Class 2 and 3 lands to Class 1 condition in the same decade as treatment occurs. Directly contrary to this assumption, the Draft EIS later discusses the long-term nature of restoration projects. One would conclude from this that landslides, the one factor which is assumed to be controlled immediately upon restoration, is the only factor which affects watershed land Class distinctions. This is not, however, the case. The conclusion of the water quality analysis, based in part on the CWE analysis, that "more than 99% of the water would meet water quality objectives with all alternatives in the first decade" is therefore unfounded and contrary to law.

154

Response: The effectiveness of restoration work is only a small part of the water quality assessment. The assumptions used in this assessment are outlined in Appendix G of the EIS. However, the primary target of restoration which would restore Class 2 and 3 lands to Class 1 is road and landslide repairs. Both of these activities are effective in the short-term, but also improve long-term watershed health.

Comment 26: The cumulative effects models are untenable both physically and biologically. Failure to fully acknowledge, analyze and incorporate knowledge about cumulative watershed impacts will lead to further ESA proceedings and successful National Environmental Policy Act (NEPA) and NFMA appeals.

82

Response: The CWE models used for the EIS are the best available for use in this area. Although the models are not perfect, no model ever is; they are a synopsis of the accumulated CWE knowledge. Also, the models are not intended to stand alone but are accompanied by written discussions of watershed concerns on the Forest.

Comment 27: There is no reference to the newly developed Process for Evaluation of Projects in Riparian Ecosystems accepted by the Region.

82

Response: There is no process with this name accepted for use in Region 5. Projects in riparian ecosystems are evaluated no differently than projects throughout the landscape, through the NEPA process with interdisciplinary input and in compliance with appropriate laws and direction.

Comment 28: The chemical and biological component of the cumulative watershed effects analysis is missing.

82

Response: The chemical and biological components are covered in the Biological Diversity, Riparian Management and Fish sections of Chapter 4 of the EIS.

Comment 29: Forest practices should be the appropriate size, scale, time frame and technology for the area. Adopt an appropriate monitoring program, not only in order to avoid negative cumulative impacts, but also to promote beneficial cumulative effects on the forest.

98

Response: Chapter 2 of the EIS discusses the type of practices each alternative would consider appropriate for its given set of objectives. Chapter 4 of the EIS discusses the cumulative effects, both beneficial and adverse, projected for each alternative. Chapter 5 of the Forest Plan shows the proposed monitoring plan for the Preferred Alternative; the other alternatives would have similar monitoring plans.

Comment 30: Although TOC and Equivalent Road Acres (ERA) calculations have been used for years on the Forest to assess watershed conditions and project trends in sedimentation delivery to streams, neither has received proper monitoring to validate either predictive model. Intensive and extensive monitoring of selected streams or watersheds are needed to make validation possible.

72

Response: ERA calculations are used to estimate hydrologic disturbance levels; the Sediment Model is used to estimate sediment production. Both are used to analyze cumulative watershed effects as explained in the Water section of Chapter 4 of the EIS. As shown in Chapter 5 of the Forest Plan, validation of the techniques used to determine the TOCs in the CWE analysis used for the Forest Plan EIS would be part of the monitoring plan.

Comment 31: The EIS should clearly describe the contribution of salvage and sanitation harvesting to the CWE and soil erosion values and provide information on possible mechanisms to minimize these impacts.

282

Response: Salvage and sanitation harvesting is not considered a measurable impact when evaluating programatic CWE and soil erosion effects at the Forest level. Generally, the removal of dead and dying trees results in very little watershed impacts, unless accompanied by extensive road or skid trail construction or extensive fuel treatment measures. Roads and fuel treatment are covered in the watershed analysis.

Comment 32: Although the need for an aggressive fuels management program and an increase in new roads resulting from the use of a regeneration with reserve harvest prescription in the Preferred Alternative is understood, the CWE level remains high. The EIS should explore ways to reduce the cumulative watershed effects.

282

Response: RRs for the Preferred Alternative have been modified to include many ephemeral streams in the definition of intermittent streams and the minimum interim buffer width has been increased to the distance of 1 site-potential tree or 100 feet for all intermittent streams. All unstable and potentially unstable areas would also be included in RRs. Only 21% of the Forest would be regulated land and the road construction estimate has been reduced to 100 miles in Decade 1 and 50 miles in Decade 5 due to the decrease in regulated land between the Draft and Final EIS. No new roads would be constructed within released Second Roadless Area Review and Evaluation (RARE II) areas which retain roadless characteristics within Key Watersheds. There would not be any net increase in road mileage within Key Watersheds. All these additional requirements should reduce cumulative watershed effects.

Comment 33: The EIS should discuss the methods which will be used to assess the cumulative impacts of its own and non-Federal activities on watershed conditions.

282

Response: The proposed Forest Plan now includes a discussion of the objectives of Ecosystem Analysis at the landscape/watershed level. This process would include both Federal and non-Federal lands in the cumulative effects analysis for watershed condition and fuels. However, appropriate analysis methods will be determined at the landscape/watershed and site levels and will likely change over time as new methodologies become available.

Comment 34: Watershed restoration efforts should not focus on small-scale structural fixes like tree planting along riparian corridors, but on whole watershed systems and on decisions that will meaningfully improve these systems, such as removal of Key Watersheds from the timber base. Watershed restoration should begin at the headwaters. Restoration of riparian zones should not occur until the root causes are solved.

188 201 320

Response: Three types of restoration are considered by the alternatives as discussed in Chapter 4, Fish section of the EIS. Riparian, instream and hillslope restoration each focus on different problems and would correct problems at different levels. In ecosystem planning, a large view must be taken and all levels need to be addressed. The alternatives provide a mixture of which types of restoration would be emphasized in each alternative. All alternatives would remove considerable portions of the Forest from the timber base as discussed in the EIS in Chapter 2, Alternatives Considered in Detail and in Chapter 4, Timber Management. Restoration would occur as funding allowed in all alternatives; projects would be prioritized based on the projected benefits.

Comment 35: The Draft EIS and Forest Plan fail to address preservation and improvement of existing aquatic habitat at the watershed level.

201

Response: These documents cover the entire Forest as they are designed to set broad forest-wide programmatic direction. An explanation of the various levels of analysis has been included in Chapter 4 of the Final Forest Plan called Ecosystem Approach to Management. The landscape/watershed level is separate from the forest level. As smaller areas are considered, more detailed and specific data are considered. Ecosystem analysis at the landscape/watershed scale will address aquatic habitat at that scale.

Comment 36: Because of the preponderance of steep and very unstable slopes throughout the Dillon Creek drainage, all logging in unstable areas should be limited to helicopter yarding.

72

Response: The logging systems which will be used in the parts of the Dillon Creek drainage available for regulated timber harvest will be determined in project level analysis. Helicopter yarding is generally the lowest impact on water quality, however it does involve some watershed disturbance. Roads need to be close enough to the harvest area to allow helicopter access. Also, helicopters require larger landings than those needed for other logging methods. The total impact of logging method will be assessed when designing projects in Dillon Creek or any other area on the Forest and will be consistent with the management objectives of the area.

Comment 37: Watershed restoration should be the National Forest's top priority.

276

Response: The Forest Plan does not set any one activity as a top priority, rather it is a guide for all activities which are likely to occur throughout the Forest.

However, watershed restoration would be a high priority in many alternatives. Alternatives Preferred, D and D' would emphasize it and treat the most acres, followed by Alternatives E, A, B and B', C, Current/RPA and G(SOHA) in decreasing order.

Comment 38: Watershed restoration must begin at the headwaters. Describe the criteria which will be used to prioritize specific watershed restoration projects in the Forest Plan.

188 282

Response: Watershed restoration would be done at the specific locations identified through watershed analysis and project level planning as having the greatest benefit-to-cost ratios and having the greatest liklihood of success; refer to Forest-wide Standard and Guideline 6-47 in Chapter 4 of the Forest Plan. This may be the headwater area, the riparian area along major streams, road improvements or other activities. Projects would be reviewed by local interdisciplinary (ID) teams which would set prioritization criteria based on local circumstances.

Comment 39: The Forest Plan should include a cumulative effects analysis of the Salmon River watershed.

305

Response: This is outside the scope of the Forest Plan which analyzes effects at the Forest level. Ecosystem Analysis at the landscape/watershed level has been initiated for the South Fork of the Salmon River and eventually analyses for all the landscape/watersheds of the Salmon River will be completed. Prior to the implementation of any site-disturbing activity, a site-specific NEPA analysis would be conducted which would include the cumulative impacts of the proposed action and its alternatives.

Comment 40: The Forest Plan should include Alternative D's priority on watershed restoration and provision for activities on upland areas to be guided by water quality objectives.

303

Response: Although Alternatives Preferred, D and D' emphasize watershed health, all alternatives would have water quality objectives and a watershed restoration program. The Preferred Alternative uses many of the water quality considerations presented in Alternative D in its aquatic conservation strategy and expands on the watershed health theme by adding prescribed burning for watershed protection against future wildfire.

Comment 41: Management must realize that restoration is a natural process which human society (managers) cannot control. Management can and should rehabilitate damaged forest watersheds. Such rehabilitation can set the stage for and possibly accelerate the natural process of restoration.

283

Response: The terms restoration and rehabilitation are used interchangeably in the documents. This is consistent with common usage and with dictionary definitions.

Comment 42: The Preferred Alternative shows no improvement in riparian areas before the fifth decade. Develop a watershed strategy that protects the remaining riparian corridors and their water and fisheries resources as well as restoring or improving riparian corridors and watersheds.

235

Response: The EIS displays the effects for the first and fifth decades only to give an indication of the short-term and a longer term. While the first decade does not show a marked improvement from the current condition, the condition would be improving throughout the planning period in all alternatives even though Decades 2 through 4 are not displayed. The Aquatic Conservation Strategy adopted by the Preferred Alternative is described briefly in the EIS in Chapter 2 and in Chapter 4 under Biological Diversity. It is described in more detail in Chapter 4 of the Forest Plan.

Comment 43: Ecosystem health, watershed restoration and fuels reduction should be high priorities. This work will also provide jobs for displaced timber workers and maintain the health of local communities.

35 197 225 241

Response: The watershed restoration programs proposed by the alternatives are described in the Water and Fish sections of Chapter 4 of the EIS. The fuels reduction program for each alternative is in the Fire Management section of Chapter 4 of the EIS. The projected effects on jobs and local communities are described in the Social and Economics sections of Chapter 4 of the EIS.

Comment 44: Remove lands from logging where aquatic habitat shows impacts from sediment and roads. Clearly, the present critical state of the anadromous fisheries demonstrates that "timber business as usual" is inappropriate. The NFMA gives clear, specific guidance about the need to focus on protection of fish and aquatic resources at the Forest Plan stage.

201

Response: The alternatives would remove various lands from the timber base according to their goals and objectives; refer to EIS, Chapter 2, Individual Alternative Descriptions. The Water, Biological Diversity and Fish sections of Chapter 4 of the EIS discuss the consequences of each alternative on fish and other aquatic resources.

Comment 45: The Final Forest Plan would be dramatically improved by consistency with the SAT report, by ensuring protection of all riparian and landslide-prone areas and by including an updated list of key watersheds.

256

Response: The Aquatic Conservation Strategy of the Preferred Alternative in the Final EIS is a refinement of the SAT approach; refer to Chapter 4, Biological Diversity of the EIS and Chapter 4 of the Forest Plan. The Preferred Alternative was modified so that RR interim buffer widths now include 1 site-potential tree distance or 100 foot minimum for all intermittent streams as well as for all unstable and potentially unstable areas. Key Watersheds have been identified for the Preferred Alternative and a map overlay is included in the Final EIS map package.

Comment 46: Proposed standards and guidelines are almost certain to fail because they do not focus on the linkages between up-slope and up-stream management and downstream responses of riparian and stream habitat and species.

237

Response: The linkages are discussed in the Physical Environment and Fish sections, Chapters 3 and 4 of the EIS. These linkages were used to determine the Standards and Guidelines. For instance, Standards and Guidelines to protect unstable areas from landslide risk were established to avoid impacts on streams and riparian areas due to landslides. These effects are described in the EIS.

Air Comments

Comment 1: The potential implications of increased use of prescribed fire and underburning on long-term maintenance of national ambient air quality standards, prevention of significant deterioration and visibility protection is a concern. The EIS should describe in detail the increase in acres over existing fuels management and prescribed fire practices, the potential increase in particulate matter and potential impacts to visibility criteria.

282

Response: The increase in acres is presented in the EIS, Chapter 2, Table 2-5. Potential Suspended Particulate Matter (PM-10) is not estimated because the picture is complex as explained in EIS, Chapter 4, Air. Vehicle emissions and dust from construction and use of unpaved roads contribute to PM-10 as well as wildfire and prescribed burning. The amount and timing of vehicle use is outside of the Forest's control and would be nearly impossible to estimate as would estimating when and where wildfires are likely to burn. Any estimates would be very unreliable and would be useful for comparisons only, not as absolute estimates of pollution. In addition, using Forest-wide averages could mask potential effects in localized areas. This is why relying on adherence to State standards is believed to be the best way to prevent significant impacts.

Comment 2: Air quality regulations may impede prescribed burning critical to achieving desired forest conditions and to minimizing wildfire risks. Cooperative research, analysis and management efforts with the Air Resources Board and local Air Quality Management Districts may be needed to identify acceptable management practices and efficient permitting processes.

259

Response: No research is currently planned. Coordination with regulating agencies occurs prior to any prescribed burning, construction projects or other activities as explained in EIS, Chapter 4, Air. Coordination occurs on an on-going basis and is included in Forest-wide standard 5-2.

Comment 3: The EIS should provide a detailed discussion on the status of air quality planning for the area and indicate if there is an approved air quality implementation plan. The Forest Service should consult and coordinate with the Siskiyou County Air Pollution Control District to ensure that the proposed action conforms with existing efforts to maintain and improve air quality. The newly released General Conformity Regulations can be found in 40 CFR Parts 6, 51 and 93 (58 Federal Register 63214, November 30, 1993). These regulations should be examined for applicability to the proposed action.

452 82

Response: The State of California does not have an approved air quality implementation plan so a conformity determination can not be completed at this time. The Forest has coordinated with the Siskiyou County Air Pollution Control District and the Oregon State Department of Forestry during the development of this Forest Plan. These agencies are also contacted on an on-going basis for project implementation. Burn plans are prepared for all prescribed fires and filed with the Siskiyou County Air Pollution Control District. They are contacted before each burn is ignited to determine if it is permissible to burn on that day. Their determination is based on the cumulative activities proposed for that day in their area of responsibility.

Biological Environment

Biological Diversity Comments

Diversity

Comment 1: The uniqueness and richness of the Forest's biological diversity is not adequately described. What happened to "full disclosure" in the NEPA sense?

25 247

Response: Full disclosure relates to the effects of the proposed actions, not to a description of the existing environment. The descriptions in Chapter 3 of the EIS under Biological Diversity, Sensitive Plants, Wildlife and Fish discuss the variety and richness of the biological environment as well as the presence of endemic plants which are found no where else on earth. The other sections of Chapter 3 discuss the variety of the physical, social and economic environments as well as the biological.

Comment 2: Rather than pledging to meet biological diversity and wildlife needs, it would be useful to define the central need and the acres planned for specific treatments.

5

Response: In the Forest Plan, which gives much more detail on the Preferred Alternative than is possible in the EIS or the Summary, the central need or purpose of each management area is identified under Management Objectives and a fairly detailed description provided of what the area should look like in the future under Desired Future Condition. Detailed standards and guidelines can also be found in the Forest Plan, Chapter 4. Objectives for other alternatives are included in the planning records.

Comment 3: The Draft Forest Plan will require substantial revisions, re-analysis, more of an ecosystem perspective, stronger standards and guidelines and more vigorous monitoring if it is to successfully conserve biological diversity, improve the health of forest resources and provide for desired public recreation needs. It will lead to increased user conflict and resource degradation, but on paper will look good in political terms.

44 235 255 256 281

Response: In Chapter 4 of the Final Forest Plan, there is better documentation of the Ecosystem Management approach that was just being developed at the time the Draft Forest Plan was written. This approach will continue to improve and be refined over time through adaptive management. Adaptive management is a continuing process of action-based planning, monitoring, researching, evaluating and adjusting with the objective of improving the implementation and achieving the goals of the Forest Plan. The Final EIS and Forest Plan have been modified to more clearly show an ecosystem perspective. Additional standards and guidelines have been added and the analysis has been revised to include the modifications to the Preferred Alternative generated by public comment and by the ROD for the FSEIS. Chapter 4 of the EIS provides an analysis of how biological diversity, ecosystem health and recreation needs would be met by each alternative considered in detail. With any alternative and the increasing demands being made on the Forest for a limited amount of resources, there is likely to be increased user conflict.

Comment 4: A forest-wide biological diversity assessment should be conducted to identify elements at each spatial scale (genes to landscapes). A risk analysis should then be conducted for these sensitive elements of biological diversity under each alternative, such that likely impacts of proposed actions can be evaluated and compared. Failure to do so is in violation of NFMA, which requires that the Forest Service "shall collect quantitative data making possible the evaluation of diversity in term of its prior and present condition" [36 CFR 219.26], and "shall preserve and the diversity of plant and animal species, so that it is at least as great as that which would be expected in a natural forest" [36 CFR 219.27(g)].

44

Response: A forest-wide biological diversity assessment was conducted and is documented in Chapter 4 of the EIS under Biological Diversity. It discusses in some detail the projected effects on important elements of biological diversity for each alternative. However, it is at the forest-wide scale as is appropriate for a Forest Plan. Analyses at smaller scales such as the landscape or site are conducted when more detailed information is needed. Refer to discussion of scales that has been added under Ecosystem Approach to Management in Chapter 4 of the Final Forest Plan. The Forest Plan EIS also tiers to the larger scale analysis in the FSEIS that discusses the regional effects on biological diversity for lands within the range of the northern spotted owl.

Comment 5: The underlying assumption that ecosystems and their associated species can simply adapt to impacts from human management activities which are simply another form of change is simply erroneous and understates the known and severe adverse impacts that have resulted from intensive timber management, impacts that can be expected to continue with additional development and cumulative loss of important wildlife habitats.

44

Response: Ecosystems can and do adapt to change and this is a reasonable assumption. However, the concept of establishing a natural range of variability to set sideboards on how much change is desirable or acceptable was developed to avoid problems with

value judgements on how much change is too great. This concept is generally accepted by recognized members of the scientific community and is also an underlying assumption of the analysis.

Comment 6: Inadequate information is provided in the Draft EIS to evaluate the current and proposed future condition of biological diversity on the forest. You must first have a firm understanding of the current status of the ecosystem as a whole and its constituent species and communities best be obtained by carrying out a thorough biological diversity assessment on the forest involves carrying out a number of inter-related studies: habitat assessments to determine the availability of vulnerable habitats compared with historic or unmanaged conditions, species assessments and a gap analysis to identify areas of particular species richness and/or missing elements in the current system of protected areas. The information is necessary to develop conservation plans for maintaining all native habitats and species on the forest. Without this baseline information, the Forest Service is incapable of making informed decisions regarding biological diversity.

44 98 256 259

Response: The group of specialists convened to suggest the best way to analyze biological diversity felt that an adequate criteria for determining if biological diversity would be maintained is to compare the effects of proposed activities to the range of natural variability for key elements of composition, structure and function. This analysis was documented in Chapter 4, Biological Diversity of the EIS. This in addition to the ecosystem approach in which land areas are managed for groups of species is believed to better provide for biological diversity including fungi, arthropods, etc. than trying to provide set-asides for each individual species and avoids the impossible situation of trying to achieve perfect knowledge of all species in every ecosystem. Using these philosophies, the collection of the massive amounts of data you suggest is not obligatory.

However, assessments of representative wildlife species were conducted and can be found in Chapter 4, Wildlife of the EIS. Also, a good deal of information was collected and analyzed on individual species in both the Forest Plan planning process and in the FSEIS planning process. The analysis of the FSEIS is incorporated in the Forest Plan EIS through tiering and the recommendations for the Selected Alternative in the ROD for the FSEIS are incorporated into the Final Preferred Alternative for the Forest Plan.

A gap analysis was conducted by Region 5 during the process for determining where Research Natural Areas (RNAs) should be located to assure that there would be no missing habitat elements throughout NFS lands in the State of California. The United States Fish and Wildlife Service (USFWS) is currently implementing gap analyses at the State, Regional and National scales. The USFWS is working with others to complete a gap analysis for the State of California (Davis & Stoms, 1991). The USFWS is also responsible for preparing recovery plans for Threatened and Endangered (T&E) species. Many of your suggestions are on-going.

Comment 7: Emphasize management activities that promote the increase of desirable native plant species and communities, particularly those that currently have low population levels or limited distributions. Examples include rest rotation grazing systems, revegetation with native plant species and controlled burning in appropriate areas.

41 256

Response: All alternatives would emphasis the use of desirable native plant species. However, no alternative would limit management activities to only natives species as in some conditions, introduced species have a place. In some cases, it is impossible to distinguish if a plant is native or introduced. Refer to responses to Range Management Comments 4, 37 and 63.

Comment 8: Biological diversity is defined in the Draft EIS as "the variety of living things in an area and the ecological processes in which they function as a system" (3-29). Although this is a narrow definition of biological diversity, (for example, it does not recognize the hierarchical nature of diversity), it is probably adequate for most purposes. "Biological diversity must take into account local and national social values and needs as well as ecological process" (4-41). What is this supposed to mean? "Social values and needs" are not an element of biological diversity by any definition, and to attempt to "humanize" the term is misguided and scientifically inaccurate.

44

Response: While not included in the definition of biological diversity, the importance of various scales and levels is discussed in Chapter 3 of the Final EIS under Elements of Biological Diversity. In addition, the documentation starting on page 4-10 of the Final Forest Plan has been improved to include a discussion of the various scales and hierarchical nature of ecosystem management, of which managing for biological diversity is an integral part.

The statement on page 4-41 of the Draft EIS has been clarified to read "Managing for biological diversity must give consideration to local and National social values and needs as human activities along with ecological processes have a great influence on maintaining diversity." Local, State and National laws, regulations and policies have a great influence on how the Forest is managed, what activities are permitted there and, therefore, on how well biological diversity is maintained. The objective of this section of the document is to discuss important influences on the resource, not to define elements of biological diversity.

Comment 9: Informed evaluations about the impacts of proposed management alternatives on biological diversity are not possible, since the Forest has not yet completed a map-based ecosystem classification. The absence of a rigorous and scientifically-based ecosystem classification system makes decision-making about regional biological diversity difficult. The timber inventory does not adequately characterize the diversity and distribution of ecosystems on the forest.

44

Response: The timber inventory is an adequate proxy when the level of analysis deals only with forest-wide averages and the objective is to provide programmatic direction. How information is classified is not really related to whether the effects analysis is adequate. Refer to responses to Biological Diversity Comments 4 and 6 on the analyses used. The Final EIS tiers to the analysis in the FSEIS which analyses many important elements of biological diversity at the regional level.

Comment 10: The Forest Plan should display ecosystem management planning units as well as the management areas. There should be a schedule for prioritizing and completing ecosystem management planning. Desired future condition goals should be set with input from groups and individuals who use or are concerned with the Forest. Monitor biological diversity within managed watersheds to ensure that goals are met.

225 256

Response: A map has been included with the Final Forest Plan that displays the landscape/watersheds currently proposed as the units for ecosystem analysis. These may change over time as the process is still in the development stages and is evolving over time. A schedule is not included because completing ecosystem analysis is dependent on funding which comes from Congressional appropriations. Defining desired future conditions at the landscape/watershed level is an integral part of the ecosystem analysis process and will occur at that level of analysis using the desired future conditions established for management areas in the Forest Plan. Public input is a part of ecosystem analysis at the landscape/watershed and site levels. Biological diversity would be monitored at various scales in all alternatives. Refer to Chapter 5 of the Forest Plan for the Preferred Alternative's proposed Monitoring Plan.

Comment 11: The Forest has incredible diversity which should be managed for long term sustainability and not short term economic gain. The Forest Plan should emphasize protection of biological diversity and restoration of natural ecosystems. Describe the consequences of implementing this premise, rather than what impacts the timber program would have on the other resources. The timber program should be a consequence of this management rather than the focus of it.

32 33 225

Response: Sustainability is one of the proposed Forest-wide goals. Environmental health and community stability is another. Refer to Chapter 4 of Forest Plan, Forest-wide Goals. The intent of the Forest Plan is for wise ecosystem management with timber outputs as only one of the many by-products. Language to clarify this intent has been added to the Final Forest Plan. However, the aim of the EIS is to inform and disclose the environmental effects of the various alternatives. Because timber management affects many resources, it had to play a fairly prominent role in the effects analysis. This does not mean that it will drive management during implementation of the Forest Plan.

Comment 12: Previous methods of funding for projects motivated by economic outputs can still be used to fund ecosystem management activities. The revenues generated from the sale of commodity yields is still the best way to provide funding for restoration of non-revenue generating projects.

202 264

Response: The Forest intends to explore and use all possible sources of funding to implement the Selected Alternative to the fullest extent possible, despite the limited availability of appropriated funding from Congress. Alternatives with lower commodity outputs would have less funding available from the those particular sources.

Comment 13: It is inappropriate to lump grass and brush into seral stages 1 and 2. Permanent and secondary rangelands are often more important for biological diversity than forested areas and should be analyzed. NEPA directs that, in the absence of site specific data, scientific literature may be used to evaluate probable impacts to ecosystems. Also, the Forest should resolve the internal inconsistencies and omissions within the Draft EIS discussion of non-timber plant communities such as sagebrush, meadow and chaparral.

198 256

Response: The seral stage discussion for forested land was intended to apply to transitory range only, not permanent rangeland. A discussion of rangeland ecosystems has been added to Chapters 3 and 4 of the Final EIS under Biological Diversity. Additional discussions of non-timber plant communities have also been included in Chapter 4 of the EIS under Range Management. It is unclear what is meant by inconsistencies.

Comment 14: Studies all suggest that vegetation patterns on NFS lands have already been dramatically transformed by development, resulting in the loss of regional biological diversity. The Draft EIS does not

accurately communicate the existing condition of vegetative diversity on the forest, nor the impacts that have already occurred from the past management activities.

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Response: The analysis in the EIS deals with information at a forest-wide scale using forest-wide averages. This is appropriate for a proposed action that is to establish programmatic rather than site specific direction. The aim of the EIS is to disclose the projected effects of each alternative, not to discuss past history. Other documentation and research studies provide this type of information. Some discussion of effects related to past activities is provided to substantiate the projected effects, but this is, of necessity, limited as an EIS is not intended to be an encyclopedic document.

Comment 15: The Draft EIS states that under all alternatives, stand shape would be within the range of natural variability on a forest-wide basis; but no analysis or data are presented that support this claim. The analysis of vegetation patterns (stand shapes and sizes) presented in the Draft EIS as an indication of landscape structure is scientifically flawed and not useful as a means of measuring biological diversity. The major deficiencies in this analysis are twofold: 1) data on the stand shape and size are only presented as averages, which does not allow for any interpretations of the distribution of patch sizes and shapes and 2) failure to compare current stand size and shape distributions with natural ranges of variability. The only appropriate means of evaluating vegetation patterns at the landscape scale would involve additional analyses.

44

Response: All alternatives would include a standard and guideline that stand shape would be within the natural range of variability; this is the basis of the statement. The purpose of a Forest Plan is to provide programmatic direction at the forest-wide scale. Forest-wide averages are appropriate for the scale of analysis. A natural range of variability at the forest scale would have such a large statistical variability that it would encompass almost everything and have little value as a tool for comparison. Calculations at the landscape and site levels would likely be more valuable. Refer to the discussion on Ecosystem Approach to Management in Chapter 4 of the Final Forest Plan. More detailed information is appropriate for analyses at the landscape/watershed and site scales. It is at the site scale that projects are designed and management activities would be implemented. Whichever alternative is selected for implementation in the ROD for the Forest Plan would provide direction on stand shapes.

Comment 16: The EIS should discuss the ecosystem management approach, the proposed interagency coordination framework and how it will be incorporated into forest planning and implemented by the Forest. The discussion should evaluate potential mechanisms for assuring adequate interagency coordination. Although the Forest Plan presents an excellent framework for measuring biological diversity, it does not cover all of the components that compose biological diversity. Watershed based data gathering and analysis must be the foundation of the sustainable management of biological diversity. Without this approach, conservation of species, ecosystem and genetic levels of diversity is difficult if not impossible. The Draft Forest Plan and EIS are not ecosystem management documents. The Forest should update the biological diversity discussion in the Draft EIS to reflect Option 9, when Option 9 is finalized. FEMAT should be used as a guide in making the Final Forest Plan a true ecosystem plan.

256 259 282 283 306

Response: A description of the various scales involved in ecosystem management and some discussion of their relationship to the Forest Plan is included in Chapter 4 of the Final Forest Plan under Ecosystem Approach to Management. The proposed interagency coordination framework is being developed and implemented at the Ecoregion level and is outside the scope of this Forest Plan. The Final EIS tiers to the analysis in the FSEIS for late-successional and aquatic species. The Final Forest Plan is consistent with the ROD for the FSEIS.

Comment 17: While existing law forces management to respond to a few select species, the Forest Plan has taken the first step toward ecosystem management in this constrained environment. The proposed standards and guidelines for biological diversity are the most comprehensive presented in the four northern Forest Draft Plans.

256 259

Response: Chapter 4 of the Forest Plan has been modified to better document the ecosystem approach the Forest would use to provide for biological diversity.

Comment 18: Environmental consequences to biological diversity are based on the seral stage distribution that will be produced by implementing the Draft Forest Plan timber harvest standards and guidelines and on the acres allocated to each management prescription. Both of these criteria are invalidated by Option 9 as explained in the Draft EIS addendum itself. The addendum fails to clarify the relationship between the zoning proposed in the Forest Plan and that of Option 9.

256 259 283

Response: Maps showing land allocations in the Forest Preferred Alternative and in the FSEIS have been included in the Final Forest Plan and EIS for comparison purposes. As explained in the Addendum to the Draft EIS and shown by the maps and analyses in the Final EIS, there is not a significant difference in

the Preferred Alternative before and after the FSEIS is incorporated. Analysis at a forest-wide scale using forest-wide averages is not that precise and the differences in estimates with and without the FSEIS incorporated are not substantial even though there were some changes in land allocations.

Comment 19: The 4 Northern California draft plans do not present a consistent, ecosystem-based forest management scheme. Instead, they represent a lack of consensus within the Forest Service over the meaning of ecosystem management. Biological diversity management should be uniform across the Region.

237 256

Response: The basic principles are consistent. Much of the general guidance such as managing for late successional species and riparian management are the same. The Final Forest Plan has been modified to be more consistent with the other 3 Forests, but there is still room for differences due to the variation in issues and ecosystem types that exists between the Forests.

Comment 20: There is little in the Forest Plan to indicate that monitoring habitat components for baseline information, and scientifically adequate monitoring of the effects of projects on indigenous biological diversity would be considered or accomplished. Adaptive Management Areas (AMAs) and intensive forest management require sound monitoring programs.

306

Response: Chapter 5 of the Forest Plan shows the proposed monitoring plan. It is quite extensive. A number of items were added to the Final Forest Plan. A discussion of the Adaptive Management process and standards and guidelines for the AMA have been added to Chapter 4 of the Final Forest Plan, including the importance of monitoring.

Comment 21: The Forest Plan still uses land management dogma from the early and middle 1980s regarding resource extraction and anthropocentric habitat manipulation, indicator species, forest fragmentation and most importantly, biological diversity.

306

Response: Many changes have been incorporated in the Final. In particular, a description of the Ecosystem Analysis process at the landscape/watershed scale which was just being developed at the time of the Draft Forest Plan and EIS has been added. The Forest Plan and the entire management process is meant to develop and change with the times. Refer to discussion of Adaptive Management Approach under Ecosystem Management Approach in Chapter 4 of the Final Forest Plan.

Comment 22: Broad-based ecosystem approaches to wildlife issues that are designed to destroy multiple-use recreation in favor of non-motorized recreation will create management and social problems. Problems that in the end will cause a decrease in the general publics desire to preserve the very species we all strive to protect.

255

Response: Unfortunately, maintaining species viability can have adverse effects on certain types of recreation. The Forest Plan must adhere to the requirements of Endangered Species Act (ESA) and NFMA.

Comment 23: In order to describe standards and guidelines for ecosystem management, it may be a good idea to provide for the development of individual project standards and guidelines during project NEPA analysis. Site-specific conditions could be better accounted for and practices designed specifically for the conditions at hand.

283

Response: It is expected that project-level analysis will sometimes result in the development of standards and guidelines for individual projects. At other times, project-level analysis may identify a need to change forest standards and guidelines through the amendment process.

Comments 24: Many "old growth" stands have much less fire risk than earlier seral stages which have had management activities in them. The point is to make ecosystem management become real on-the-ground and then work with the highest fire risk areas first.

283

Response: Areas to be treated for fuel reduction would be prioritized at the project level based on site specific conditions and on resource objectives. If fuel management activities help achieve management objectives the risk of future fires would likely be the criteria used to prioritize stands for treatment. The stands with the greatest risk could be any age depending on the site specific conditions.

Comment 25: Given the level of faith and trust in forest land management at this time, ecosystem management especially with regard to fire practices needs to take place first in managed stands outside of the reserves. Silvicultural prescriptions or practices for areas having objectives other than timber management must be tried out experimentally in non-sensitive areas first. However, fire suppression will be needed in the reserves.

283

Response: There would not be a standard and guideline requiring treatments to be tested outside reserves before being applied in reserves in the Forest Plan. However, most activities including fuel treatment in the first several years of Forest Plan implementation would likely occur where there are no requirements for

additional analysis or for management plans to be developed due to the costs and time requirements.

Comment 26: Major emphasis upon the health and well-being of the forest ecosystem, a more balanced approach to all forest uses, especially the use of timber and forage in relation to others and sustainability is the essence of the new national forest management concept that is emerging.

313

Response: The Forest-wide Goals in Chapter 4 of the Forest Plan include sustainability and environmental health. The ecosystem approach is now described in the same chapter under Ecosystem Approach to Management.

Comment 27: Management of the Forest must be viewed in terms of management of surrounding and intermingled private lands and resources. Agency scientists should estimate what contribution to conservation strategies is appropriate for specific private lands. Likewise, water management on private lands can not be expected to play a significant role in the conservation and restoration of aquatic ecosystems. It is inappropriate for commodity production to be maximized on any public forests in the Province.

259 283

Response: Private land was assumed to contribute little to maintaining late-successional stages of vegetation. This is why all alternatives would provide for large blocks of unregulated land; refer to Biological Diversity in Chapter 4 of EIS. Generally, private land, along with wildland fires and management activities on the regulated portion of NFS land, is expected to provide for species which need early and mid-successional habitat such as deer so they do not become at risk. In the models designed to analyze watershed effects, activities on private land constrained public land actions considerably, particularly in areas with intermingled ownership. Commodity production was not maximized in any alternative considered in detail; refer to discussion of Benchmarks in Chapter 2 of the EIS.

Comment 28: The biological diversity monitoring program must be made consistent with the Draft EIS discussion, current scientific knowledge and standards and guidelines.

256

Response: Chapter 5 of the Forest Plan shows the proposed Monitoring Plan. Some modifications have been made in the Final, including adding the monitoring framework from the FSEIS. The monitoring plan will continue to be updated and modified as new information and techniques become available. It is unclear what the commentor feels is inconsistent as no specific examples were given.

Comment 29: In many respects national forest management planning isolates resource programs from each other. Standards and guidelines should be integrated by ecosystem goals and a specific desired future condition not by resource program. The Forest-wide Standards and Guidelines are generally directed at individual programs and not integrated into a direction that provides for accommodation of ecosystem management, a range of species and the variability that occurs on the Forest. The standards and guidelines presented also tend to direct for compliance with a minimum management requirement.

72 283

Response: Pages 4-10 and 4-11 of the Final Forest Plan include a description of the Ecosystem Approach to Management. The standards and guidelines for each management area are integrated by ecosystem goals and a description of the desired future condition. The Forest-wide standards and guidelines are organized by resource so the reader will know where to look for specific information; this does not mean that ecosystem management will not occur. The Late-Successional Reserves (LSRs) described on pages 4-100 through 4-107, the Managed Wildlife Area described on pages 4-113 through 4-116 and the Aquatic Conservation Strategy described on pages 4-6 through 4-7, 4-34 through 4-36 and 4-137 through 4-144 of the Final Forest Plan are designed to manage ecosystems rather than individual species and really highlight some of the details of the ecosystem approach. However, all management direction in the Forest Plan is part of ecosystem management. The Biological Diversity section tries to integrate issues that transcend several resources and show how ecosystem management will work. Establishing a minimum does not mean that the minimum is the objective, but it merely provides a lower limit. The goals and desired future condition try to portray the true management intent.

Comment 30: Forest ecosystem management and forest health are not really defined well.

283

Response: Definitions of ecosystem management and ecosystem health have been added to the Glossary of the Final EIS.

Comment 31: The watershed is the unit of management at both temporal and physical scales.

283

Response: The watershed is the unit of analysis used for the Forest's Ecosystem Analysis process at the landscape/watershed level. In Ecosystem Management there are three other levels that are important to the Forest Plan. They are Ecoregion, Subregion and site; refer to description added to Final Forest Plan in Chapter 4 under Ecosystem Approach to Management.

Comment 32: The primary interest in the Forest Plan appears to be forest protection for future biomass output.

298

Response: The Preferred Alternative's intent is to provide for multiple use with an emphasis on providing for aquatic and late-successional species. Any biomass output would be the result of ecosystem management, not the goal.

Comment 33: Planners have often focused on single and more easily studied wildlife species, rather than on whole ecosystems. The new ecosystem management approach attempts to move away from that narrow management focus.

256

Response: Chapter 4 of the Final Forest Plan has been modified to better emphasize and describe the proposed ecosystem approach.

Comment 34: The seral stage discussion does not distinguish between human-created and natural disturbance-created patches. Managed and unmanaged forest stands differ significantly in terms of their structure and composition, and are not equivalent in terms of their value for maintaining biological diversity at the landscape and stand scales.

44

Response: An analysis at the forest scale does not look at details, but at the broader picture. Additional analysis will occur at the landscape and site levels; refer to Final Forest Plan, Chapter 4, Ecosystem Approach to Management.

Comment 35: Vegetation community types that are already greatly reduced from their historic abundance including "old growth" ponderosa pine, eastside mixed conifer, Port-Orford-cedar, native grasslands, young natural (unmanaged) forests and all riparian and low elevation "old growth" forests exhibit extremely high diversity at both stand and landscape scales and provide important habitat for a disproportionate number of plant and animal species. However, the Draft EIS does not discuss the effects on diversity of the present rarity (relative to historic abundance) of these vegetation types that have been greatly reduced in recent years due to timber harvest, fire suppression and salvage logging. Nor does the Draft EIS provide a specific strategy for recovering a suitable distribution of these important communities to maintain forest-wide elements of diversity.

44

Response: The purpose of an EIS is to disclose environmental effects relating to the proposed alternatives, not past history. The goal stated in NFMA is "provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives, and within the multiple-use objectives of a land management plan adopted pursuant to this section, provide, where appropriate, to the degree practicable, for steps to be taken to preserve the diversity of tree species similar to that existing in the region controlled by the plan." Each alternative proposes a unique management strategy which would provide for biological diversity at different levels. All alternatives would utilize land allocations for wilderness; LSRs, Habitat Conservation Areas (HCAs) or Spotted Owl Habitat Areas (SOHAs); and riparian areas which would provide the opportunity for recovery of the communities mentioned in the comment.

Comment 36: A number of studies in the Klamath region would allow for determination of the natural range of variation. The Forest Service should abandon the 5% standard and carry out the necessary analyses to determine the natural range of variability for each seral stage by forest type by comparing current versus historic/unmanaged landscape conditions. This analysis should be conducted at multiple spatial scales, including relatively small watersheds (15-25,000 acres), large river basins (e.g. Salmon, Trinity) and entire regions (e.g. Klamath Mountains), and should incorporate and build upon the work that has already been done in this regard. Results of this analysis should be used to determine appropriate standards for appropriate landscape vegetation patterns and presented in the Final EIS.

44

Response: These analyses are being initiated at all the scales mentioned; refer to Final Forest Plan, Chapter 4, Ecosystem Approach to Management. This information is not compiled at the current time, however, and may not be appropriate at the forest scale.

Comment 37: Not all species/habitats are of equal concern for conservation. Maximizing species richness or local habitat diversity in a given area occurs at the expense of those species and habitat elements that are most critical for maintaining overall regional diversity and it is therefore not an appropriate or judicious course for land management. Instead, preserving native patterns of diversity should be the objective.

44 99

Response: Along with the forest level analysis in the Forest Plan EIS, the FSEIS analyses the proposed effects on critical species at the ecoregional level. Prior to the implementation of any site disturbing activities, analysis at the landscape/watershed and site levels would occur which would identify critical species at those 2 levels. The Final Forest Plan has been modified to include a discussion of the analysis that will occur at various stages to assure that ecosystem management will provide for biological diversity and critical species habitat. Native species would receive emphasis in all alternatives, but introduced species

would not be excluded if analysis showed them to be of benefit to the public good.

Comment 38: The NFMA mandate to provide a minimum of 5% of each seral stage within each vegetation type is probably inadequate to the survival of many late seral species. A minimum of 20% of each vegetation type in each late seral stage (4A, 4BC, 4C+) would better provide adequate late seral habitat and to avoid further species extinction associated with destruction and degradation of late seral habitat.

256

Response: The 5% was a regional requirement, not an NFMA mandate. NFMA requires that forest planning provide for a diversity of plant and animal communities. The 5% requirement has been replaced by guidance from the ROD for the FSEIS. The 20% minimum does not have any scientific basis. The analysis in the FSEIS which is tiered to by the Final Forest Plan EIS indicates that using an ecosystem management approach consistent with the FSEIS should adequately provide for late successional species.

Comment 39: The unique plant communities and areas of conifer enrichment should be preserved in all alternatives.

25

Response: Refer to EIS, Chapter 4, Sensitive Plants and Timber Management sections for discussions of how each alternative would provide for these communities.

Comment 40: The Draft Forest Plan states that "plant and animal communities would be managed to maintain a level of biological diversity similar to that currently existing on the forest" (page 2-25). Only by maintaining the full mosaic of naturally occurring vegetation and plant community types, in abundance and distribution similar to the forest's original unmanaged condition, may reasonable assurance of the maintenance of biological diversity be attained.

44

Response: This statement is what is required by NFMA; refer to response to Diversity Comment 35.

Comment 41: The EIS should describe the distribution of late-successional forest within non-reserved (matrix) areas and AMAs. Discuss how these areas will be managed and monitored and the potential impacts to significant ecosystem values.

282

Response: This type of analysis is more appropriate at the landscape/watershed and site levels. Potential impacts cannot be estimated until specific proposed actions with known locations have been identified. The analysis associated with the Forest Plan uses forest-wide averages and decisions to be made are programmatic.

Comment 42: Overall, the Preferred Alternative seems to promise better conditions for wildlife of all types than any other alternative except Alternative E. If it is revised to better conform to the preferred alternative in the Clinton Plan, the resulting plan should have consequences for late seral stage associated species similar to those of the Clinton Plan.

198 254

Response: The Preferred Alternative has been modified to be consistent with the ROD for the FSEIS (Clinton Plan). The Forest Plan EIS analysis for the Preferred Alternative tiers to the analysis for Alternative 9 in the FSEIS and has the same consequences for late-successional species at the ecoregional scale.

Comment 43: The biological diversity monitoring plan is inadequate. It appears that the Forest feels only seral stage distribution and opening structure are important. Moreover, the chosen method, Geographic Information System, is not the most precise method of seral stage distribution monitoring. Monitoring of a resource as important as seral stage distribution should be performed and reported more often than every 5 years. The level of monitoring presented in Table 5-1 is not adequate to assure that biological diversity or even stand level management will be monitored.

72 256

Response: The Monitoring Plan has been modified to include the Monitoring Framework from the ROD for the FSEIS. As new monitoring techniques are developed at the regional level and approved by the Regional Ecosystem Office, they will be included in the Forest Plan. The Monitoring Plan displayed in Table 5-1 of the Final Forest Plan displays forest-wide monitoring only. Site-specific projects may have additional requirements, which may provide important information at the Forest level. Also, items that are routinely monitored such as regeneration checks and items required by the FSM have not been included in Chapter 5 of the Forest Plan.

All monitoring is limited by funding which is allocated by Congress. Traditionally, funding has never covered all of the monitoring the Forest would like to do, so the items included in Table 5-1 are, of necessity, limited to those that can be accomplished within the proposed budget for the Forest Plan. In Table 5-1, monitoring for diversity has been changed to use remote sensing information with a Geographical Information System to map opening sizes and shapes. Ecological changes are generally slow, with the exception of disturbances such as wildland fire. It would not be productive to measure seral stages any more often than every 5 years as it would generally take longer than that for most vegetation types to move into a different seral stage and for any trends to be established. Of course,

if a catastrophic event such as the 1987 wildfires caused major changes, monitoring would not be delayed.

Comment 44: Standards and guidelines in the Forest Plan need to develop direction to monitor biological diversity and the aspects of ecosystem management at least at the levels recommended in the FEMAT report.

72

Response: Chapter 5 of the Forest Plan shows the proposed monitoring plan. Additional items were added to the final consistent with the FSEIS including elements for biological diversity and ecosystem management.

Comment 45: The objective of maintaining a minimum of 5% of each forest seral stage is arbitrary and capricious standard that is not based on scientific evidence and is inadequate to maintain biological diversity on the Forest. The Forest should manage for a seral stage distribution that is determined by suitable scientific analysis to be appropriate to rehabilitate, maintain or enhance ecosystem structure and function. The only reason presented in the Draft EIS for choosing this standard is that it appears in the regional forest planning guide.

44 54 256

Response: The Regional direction for a minimum of 5% in each seral stage has been replaced by the direction established in the ROD for the FSEIS and is no longer a requirement. However, the information is still displayed to highlight expected shortages by alternative in any given seral stage. Currently, there is no known criteria such as suggested in the comment and the commentors did not suggest a process to develop such criteria. The ecosystem approach in the Final Forest Plan which is consistent with the ROD for the FSEIS has been determined through analysis to be adequate to maintain critical seral stages and is expected to maintain biological diversity. Biological Diversity in Chapter 4 of the EIS includes projections of seral stage distributions that would likely be associated with implementation of each alternative.

Comment 46: Project-level silvicultural analysis should use as much of the historical record as possible to proxy natural conditions regarding patch sizes for each seral stage regarding the pattern of their distribution over the watershed and regarding forest structure by forest type.

283

Response: All alternatives would use an ecosystem approach which includes a landscape level analysis. The ecosystem analysis process at the landscape/watershed level gathers information on landscape elements including patches and their attributes. This information is then available for use in project-level planning.

Comment 47: The casual lumping of vegetative communities can result in errors. For example, the Draft EIS (page 3-31) places 43,000 acres in seral stage 2 which includes chaparral. However, on page 3-177, 150,000 acres are categorized as chaparral. Chaparral ecosystems are unique in California and provide habitat for many rare and important species, as well as erosion control, clean water and other resources. Without specific discussion, the public cannot evaluate the effects of grazing, fire management or other activities on these ecosystems.

256

Response: The seral stage analysis discussed on page 3-31 of the Draft EIS only covers land capable of producing commercial timber, roughly 1,390,000 acres. This has been clarified in the Final EIS in the discussion of seral stages in Chapter 3. The chaparral value of 150,000 acres which is mentioned on page 3-117, not 3-177, is an estimate of all chaparral on the Forest.

Comment 48: Table 4-17 notes that all of the Eastside and Westside true fir forests in seral stage 4BC will disappear within the next 50 years under all alternatives. Currently, 29,000 acres of the Forest is "old growth" true fir. No specific explanation is provided for the loss of this resource. The Draft EIS cites a combination of causes, but does not distinguish between them in magnitude. The Final EIS should contain a more complete explanation of this environmental consequence.

256

Response: The combination of causes are the specific explanation. Stands is this seral stage will either grow into 5C stands or experience a stand replacing event which would move them to an early seral stage. Because the locations of future management activities, wildfire, insect and disease attack are unknown and can not be estimated; it is impossible to quantify or distinguish in magnitude between these stand-replacing causes. Alternatives with more land in the timber base might likely have a slightly higher proportion of the stands being recycled by timber management activities, but this would only be true if the 4BC true fir stands occurred on regulated land. Likewise, alternatives with a more aggressive fuel management program might have fewer stands replaced by intensive wildlife, but this would only be true if fuel reduction activities were planned in or adjacent to 4BC true fir stands. Project-level analyses would be conducted prior to implementing site-disturbing management activities.

Structure

Comment 1: The Forest Plan should include a standard which states: green tree retention (GTR) shall be the greater of 15% of the sale unit volume or as called for in the Draft Forest Plan. One half of the 15% may

be clustered and the rest in scattered trees. This 15% should come from the largest trees in the sale unit. GTR shall be left through succeeding rotations and shall be augmented as necessary at the time of the next cutting to maintain retention. Retention may be in trees that have wildlife value. Standards will be established at the project level or programmatic level by wildlife, soils and fuels specialists. The desired size of green trees and snags will be a standard. If the stand is deficient, trees will be allocated to become those sizes. If those sizes are present they shall be retained. On cut-over or high-graded stands GTR should be clumped or scattered based upon project-specific stand conditions. If trees are windfirm, GTR may be in scattered trees. If the GTR retention does not contain adequate retention characteristics, additional trees will be left to grow into the amount and quality of the retention desired.

283

Response: The Preferred Alternative has been modified; it is consistent with the ROD for the FSEIS. The GTR requirement in Forest-wide Standard and Guideline 21-13 is similar to that in the comment in major features, but does not provide detailed direction for when suitable trees are not present. These details would be determined at the project level based on individual site conditions.

Comment 2: An objective of timber management in the Forest Plan should be to have all decay classes of snags and surface woody material generally represented on a stand basis. Recruitment of snags and down woody material should be accomplished by natural methods rather than by girdling or other artificial methods.

283

Response: In the Preferred Alternative, snag assessments would use the landscape unit as a basis rather than the stand as this would allow areas with lots of snags to compensate for areas where there are not enough snags to meet minimum requirements. This would better approximate conditions of natural variability. Using this basis, girdling would not have to be relied on as often as if a stand basis was used. Using existing snags and snag replacements is preferred, but there is no prohibition against artificial methods to create snags where they are in short supply to meet habitat objectives.

Comment 3: The Draft Forest Plan requires that 1.5 snags per acre be maintained forest-wide, averaged over 40 acres; and that a minimum of 3 downed logs per acre greater than 20 inches dbh be retained per acre across the Forest. This is not likely to provide adequate habitat conditions for numerous species.

256

Response: Page 4-25 of the Draft Forest Plan requires an average of 5 snags per acre and page 4-26 requires 5 to 15 large logs per acre. These standards have been retained in the Final Forest Plan, although the down log standard, Forest-wide Standard 6-16, is now an interim guideline and requires 5-20 pieces of CWD per acre. Forest-wide Standard and Guideline 8-22 provides for snags in the Final Forest Plan. These guidelines are expected to adequately provide for all species at the regional and forest scales; refer to environmental consequences analysis in FSEIS which is incorporated by reference in the Final EIS and to Wildlife section, Chapter 4, Final EIS.

"Old Growth"

Comment 1: No logging should be allowed in "old growth" stands. The Forest Plan would result in the continual destruction of Northern California's ancient forest ecosystem.

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101 102 103 105 106 109 111 112 114
117 125 129 130 132 136 137 141 144
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180 185 187 190 204 207 209 212 216
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273 274 283 288 297 298 320 335 336
338 339

Response: All alternatives would provide for some level of retention of stands which exhibit "old growth" characteristics and of late-successional stands. Refer to analysis and discussion in Chapter 4, Biological Diversity in the Final EIS for relative amounts by alternative.

Comment 2: The Draft Forest Plan fails to provide an accurate "old growth" inventory. As part of the Final Forest Plan, the Forest should emphasize timely completion (within 1-2 years) of a new, comprehensive "old growth" inventory that incorporates ecological definitions of "old growth" for the variety of forest types that are present.

44

Response: A stand structure inventory was completed in 1993 by Region 5 for the 4 Northwestern Forests in California within the spotted owl range. The inventory includes all structural features identified as potentially critical for defining "old growth". Defining the criteria for "old growth" that is appropriate for the Klamath Mountains Province is an on-going process. Upon completion, the results will be incorporated into forest planning and management.

Comment 3: The Draft Forest Plan fails to provide an ecological, quantitative definition of "old growth" forests. There should be a distinction between "ancient forest" and "old growth." The concept that ancient forests were an unbroken blanket of "old growth" from ridge top to ridge top, from the desert to the ocean, is simply wrong.

44 74

Response: None of the many existing definitions of "old growth" for various ecological types fit the types on the Forest very well. This is why the Forest evaluated how many acres fit the range of characteristics generally associated with "old growth" stands in Chapters 3 and 4 of the EIS under Biological Diversity. There does not seem to be a definition for the term "ancient forests" in the scientific literature. In the Wilderness Society's "End of the Ancient Forests" published in June 1988, the terms "ancient forest" and "old growth" are used interchangeably, but neither is defined. The descriptions in Chapter 3, Biological Diversity, EIS about seral stages and fragmentation as well as the seral stage map included in the Draft EIS map packet were designed to show that "old growth" is not believed to ever have been a large component nor to have occurred in large blocks on the Forest due to the history of frequent fire occurrence.

Comment 4: All forest watersheds should be managed to increase mature and "old growth" forest habitat over time and to provide habitat connectivity between reserves.

10 32 33 73

Response: Each alternative proposes its own strategy for maintaining late successional and "old growth" habitat as well as connectivity. The projected outcome of each alternative for these issues is discussed in Chapter 4 of the EIS, Biological Diversity under Seral Stage by Forest Type, "Old Growth" and Refugia and Connectivity.

Comment 5: Without continual recruitment of "old growth" replacement trees, "old growth" will be lost in an unplanned haphazard pattern that will thwart maintenance of the desired condition.

74

Response: The discussion under Seral Stage by Forest Type, Biological Diversity, Chapter 4, EIS shows how an individual stand might progress through seral stages over time. For all alternatives the westside types will have more acres in the latest seral stage 5C after 50 years than currently exists. Regeneration harvests, wildfire, insects and disease and activities on private land are expected to provide for early seral stages which will be the "old growth" of the more distant future.

Comment 6: Retain all critical habitat for ancient forest dependent wildlife species by establishing large reserves where logging and road building are off-limits.

9 57 283

Response: Alternatives Current/RPA, A, B, C, D, E and G(SOHA) would allocate large blocks of land for wildlife habitat where timber harvesting would be prohibited. Alternatives Preferred, B' and D' would allocate large blocks of land for wildlife habitat, but silvicultural activities designed to meet wildlife habitat objectives would be permitted. In all alternatives, critical habitat for T&E species which does not normally occur in large blocks would also be managed to recover those species.

Comment 7: The Draft EIS over-exaggerates the risk of catastrophic fire and disease outbreaks in late-successional/"old growth" forests. It is well-documented that multi-storied, late-successional forests are the most resistant to catastrophic fire and insect/disease outbreaks of all forest seral stages (Wickman, 1990, 1992, Perry 1988, Schowalter 1988, 1990, USDA Forest Service 1991, Kauffman 1990). In direct opposition to statements made in the Draft EIS, a large body of scientific research has indicated that traditional, intensive forest management practices are responsible for increasing the likelihood of catastrophic insect/fire events. (Agee 1990, Hessberg & Everett 1992, Martin & Sapsis 1992).

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Response: The statements made in the Draft EIS on the risk of catastrophic fire, insect and disease outbreaks affecting late-successional habitat and reserves are corroborated by a letter to President Clinton from researchers from the Pacific Southwest Research Station; Kevin S. McKelvey, Barry R. Noon, Jared Verner and Phillip Weatherspoon; dated June 29, 1993 (included in planning records). The letter requested that active management be allowed in reserves to allow dry forest ecosystems with high fire risk to be restored and maintained. The ROD for the FSEIS incorporated active management in the areas with higher fire risk of which the Forest is one. The letter cites their own research: "The California spotted owl: a technical assessment of its current status" and 3 other reports which support their position and which they feel applies to the Forest.

Comment 8: The Draft EIS fails to discuss how much late successional and "old growth" forest will be available for logging, thereby making evaluations of the ecological impacts associated with each alternative difficult. The Draft EIS fails to present important information about the landscape context of existing "old growth" forests in terms of patch size, connectivity, distribution, plant associations, protected status, etc. Simple acreage estimates are not sufficient to evaluate the past and proposed impacts.

44 254

Response: Inventories rely on dividing vegetation into strata (groups) with similar characteristics and then taking a statistically valid sample. The actual location of all late successional and "old growth" stands is not mapped. Forest-wide averages are appropriate for an analysis at the forest level. Landscape analyses using more detailed information will be done separately from the Forest Plan analysis; refer to Ecosystem Approach to Management on page 4-10 of the Final Forest Plan. Even more detailed information will be collected and

analyzed at the site level where specific projects are proposed.

Comment 9: The Draft EIS states that "late seral stage habitat is not expected to be limiting in any alternative as 20% or more of the forested land would meet the criteria for "old growth" in all alternatives" (4-53). No rationale or evidence is presented that suggests why 20% might be "sufficient", nor what criteria are being used to make this determination. If we seek to emulate the natural condition (a stated goal of ecosystem management), forest plan alternatives that attempt to restore the landscape back to dominance (60-70% of the forest) by late successional/"old growth" seral stages should be preferred.

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Response: The determination was based on the fact that all alternatives would have an increase in this type of habitat from the current condition. The 20% was not intended to be a threshold. It was merely noted that all alternatives would exceed 20%. Late-successional stages are not believed to ever have been dominant in the fire-regulated ecosystems in the Klamath Province; refer to EIS, Chapter 3, Fire Management for discussion on fire frequency.

Comment 10: The Draft EIS fails to analyze the adverse and cumulative effects of past logging on the amount and distribution of "old growth", which has reduced this valuable resource to a fraction of what it was 50-100 years ago. This reduction has lead to dramatic declines in the local and regional populations of many plant and animal species, a loss of regional biological diversity (e.g. landscape patterns) and adverse impacts to the functioning of forest and aquatic ecosystems (e.g. watershed conditions, nutrient cycling, etc.).

32 33 44

Response: The purpose of an EIS is to analysis environmental effects related to the proposed alternatives, not to record history or the effects of past actions. The EIS acknowledges that "old growth" is an important and scarce component of the ecosystem, but looks to the future rather than the past.

Comment 11: "Old growth", if logged at all, should be logged selectively, and such trees should be sold at much higher prices than younger trees.

98

Response: The alternatives vary in the types of prescriptions they would permit. None of the alternatives would assign prescriptions based solely on tree age, but rather on which prescription best achieves management objectives. The price of trees is based on many factors; tree size is one. The price charged for timber is outside the scope of the Forest Plan.

Comment 12: Timber management or any experimental silvicultural treatments should not be permitted in late-seral/"old growth" stands in reserves. Fuels reduction or prescribed burning should not be allowed inside reserves in non-late seral/"old growth" stands because of the fire risk from these projects and the lack of trust in the agencies.

44 283

Response: Timber management would not be allowed in any reserves under any alternative. Silvicultural treatments within LSRs for the Preferred Alternative and within HCAs for Alternatives B and D and would be permitted if these activities accomplished management objectives for the area. Alternatives Preferred, B and D would also allow prescribed fire and prescribed natural fire (PNF) in LSRs or HCAs.

Comment 13: The FEMAT's assessment of the ability of different options to protect the late successional/"old growth" forest ecosystem is seriously amiss.

237

Response: The assessment of the FEMAT team or of any other scientific group is not within the scope of this Forest Plan. The decisions made in the ROD for the FSEIS, however, provide direction for the Forest Plan and many of the analyses for the FSEIS are tiered to by the Forest Plan EIS. Any perceived weaknesses in the FSEIS should have been addressed to the preparer's of that document during the public comment periods on the Draft and Final EISs.

Comment 14: Timber management activities on the matrix must include a NEPA analysis and assessment of the impact of the project on connectivity between late-seral/"old growth" habitat.

276 283

Response: NEPA analysis will be conducted on all proposed timber management activities prior to implementation. If connectivity is an issue related to the proposed action, it will be assessed.

Comment 15: Will ecologically valuable and scarce late-seral and "old growth" stands in the matrix be altered into more simplified stands using the 180-year rotation with area control in the Draft Forest Plan? They have important benefits.

283

Response: The Final Forest Plan has been modified to use a range of rotation ages based on timber type rather than the 180-year rotation with area control proposed in the Draft. The GTR requirement would provide for the retention of important structural elements in all regeneration harvests; these stands would be altered to simpler structures, however. A standard and guideline has been added to the Preferred Alternative that would require all remaining late-successional stands to be protected in watersheds in which

there is 15% or less of these stands on Federal lands within the watershed.

Comment 16: At a minimum, the mitigation proposed in the FEMAT report for late-seral dependent fungi, lichens and bryophytes should be applied to the matrix in the Final Forest Plan.

256

Response: The Final Forest Plan standards and guidelines in Chapter 4 cover most of the mitigation measures mentioned in the FEMAT report for these species. Late-successional patches would be retained in the matrix through the standard and guideline mentioned in the response to Comment 15 as well as in establishing 100-acre protection buffers around known northern spotted owl activity centers. The CWD requirements in the Forest Plan allow a range which surround the value recommended in FEMAT. Standard and guidelines to minimize site disturbance, to survey and protect rare and locally endemic species are included in the Forest Plan. The GTR requirement provides for clumped leave trees of large size on regulated land (matrix). The Final Forest Plan has been modified to include large buffers on intermittent streams.

Comment 17: Option 9 would allow 25% of the ecologically significant "old growth" to be destroyed (OG 1 and 2).

237 256

Response: The Forest has no authority relative to the decisions made on the FSEIS. A discussion of how the alternatives proposed for the Forest Plan would address the issue of "old growth" is included in Chapter 4 of the EIS under Biological Diversity. In the Preferred Alternative, which incorporates the Selected Alternative from the ROD for the FSEIS, all OG 1 and 2 within Marbled Murrelet Zone 1 would be within LSRs.

Comment 18: The objective of the management plan should be to provide at least a 95% likelihood that all "old growth" species will remain viable and well-distributed for at least the next 200 years. Existing "old growth" needs to be maintained to provide for wildlife species.

237 254

Response: Chapter 4 of the EIS under Biological Diversity discusses the strategy each alternative would use to provide for biological diversity including "old growth." A standard and guideline has been added to the Preferred Alternative in the Final to retain all remaining late-successional stands in watersheds with 15% or less of these stands on NFS lands.

Comment 19: There is an assumption that the trees in the plantations will attain "old growth" stature in the changed climatic, soil and water conditions in which they are growing, that the necessary mycorrhizal associations can be reestablished and that they will furnish suitable habitat for late seral stage associated wildlife. These plantations may in fact have very different characteristics from the original "old growth" stands. For one thing, because of past management practices, they are not likely to contain large numbers of snags or much coarse woody material.

254

Response: The assumption that existing plantations can develop "old growth" characteristics over time has some validity in that many of the existing late successional stands today are believed to have become established after major wildfires in the past. It is believed that in many cases these fires were intense enough to leave conditions similar to those of a plantation. For any future plantation, all alternatives would require the retention of snags and CWD. The amount to be retained would vary by alternative. Alternatives Preferred, A, B, B', C, D, D' and E would also have GTR requirements.

Comment 20: Land slugs and snails are vulnerable to disturbance from fire, timber harvesting and grazing. They would be exposed to all of these hazards under the Preferred Alternative, even in reserves, backcountry and wilderness. The Klamath Mountains Province contains large numbers of rare and endemic varieties of these life forms which are afforded only minimal levels of protection.

254

Response: The Preferred Alternative would provide for the protection of rare and endemic mollusks through the survey and manage standard and guideline. Known sites for these species would be protected. Surveys would be conducted for rare and endemic species prior to any site-disturbing activities.

Comment 21: Small patches of "old growth" within the general forest matrix are important for the survival of fungi. The Preferred Alternative would not preserve such "old growth" fragments. Burning also may alter the generic composition of some types of fungi.

254

Response: The Final Forest Plan has been modified to include a standard and guideline which requires that all remaining late-successional stands be protected in watersheds in which these stands comprise 15% or less of NFS land.

Comment 22: The Forest Plan lacks recommendations for the management of those non-Federal lands that are essential to the health of LS/OG forest ecosystems and to the viability of species that rely on them.

237

Response: The Forest Plan only covers those things over which the Forest Service has been delegated authority. Providing direction for non-Federal land is inappropriate and outside the scope of the Forest Plan.

Fragmentation, Edge, Connectivity

Comment 1: Fragmentation from logging and roads can cause loss of interior-dwelling species, an increase in edge habitat, the isolation of habitat patches due to increasing distance between suitable habitat patches and increasing barriers to movement and a reduction in patch sizes. Under the Preferred Alternative, stand size on regulated lands would average 8 acres at the end of 5 decades. This dramatic reduction in average stand size is a reflection of increased fragmentation of the forest into smaller, more isolated units. The Draft EIS fails to analyze the impact of fragmentation on populations of plant and animal species that are known to be susceptible to this change in habitat conditions. Failure to do so is in violation of NFMA and NEPA.

44 227 269

Response: As pointed out in Chapter 3 and 4 in the Biological Diversity section and as shown on the Seral Stage map included in the Draft EIS map packet, the Forest has a high degree of natural fragmentation. This is one of the reasons that species diversity is so great on the Forest. In the ecosystem approach used by the Preferred Alternative, large blocks of land such as wildernesses and LSRs provide for interior species. These blocks and other land allocations such as RRs which connect them prevent isolation of species.

The Final EIS clarifies that there is a difference between created stand (managed unit) size and patch (natural or created opening) sizes. Stand sizes would be similar for all alternatives. However, patch sizes would vary. The 8-acre average patch size estimate for the Preferred Alternative was an error and has been corrected to 15. These estimates are based on the likely design of cutting units on regulated land, not on increased fragmentation. Only 21% of the Forest would be regulated in the Preferred Alternative. These areas along with private land and intensely burned areas will provide for early and mid-successional species and for those that need edge habitat. When the patch size on regulated land is averaged with the larger patches on unregulated ground, the average will be much larger in the Preferred Alternative. The Forest would likely be less fragmented in the future than it is currently due to the large reserve areas and restrictions on roads within Key Watersheds. Chapter 4, Biological Diversity, Fragmentation provides a discussion of the effects on species which are susceptible to fragmentation which would apply to those areas of the Forest where fragmentation would occur, primarily the 17% of the Forest which would be Regulation Class 2. As pointed out in the discussion, these effects would be localized. These species are adequately provided for at the Forest level.

Comment 2: The Draft EIS fails to adequately analyze the influence of deleterious edge effects on sensitive elements of biological diversity. No quantitative analysis or even discussion of the impacts of edge effects on biological diversity are presented. Additional analyses should evaluate the distance that edge effects are known or expected to penetrate into adjacent forest stands for a variety of ecologically-relevant variables (microclimate, plants, songbirds, etc.) and utilize this information to determine the amount and distribution of forest interior habitat under each alternative for Decades 1 through 5.

44

Response: No harmful effects are anticipated at the forest-wide level. All alternatives would allocate large blocks of land to function as refugia and provide for species which are sensitive to edge effects. The Connectivity discussion in Biological Diversity, Chapter 4, EIS compares how various alternatives would provide and manage these refugia. The type of edge analysis suggested in the comment would be more applicable at the project-level because these effects are site-specific.

Comment 3: The statement that "little change is expected in the amount of interior habitat available to plant and animal species with any alternative" does not appear to be based on any rigorous analysis. In the Preferred Alternative, management guidelines in the matrix would not protect ecosystem values. Interior "old growth" conditions would be entirely eliminated from the matrix and residual patches of "old growth" in cutting units would be so small and isolated as to be of little ecological value. The overall effect would be a highly fragmented landscape with small patches and strips of "old growth" trees, but dominated by small trees and essentially devoid of "old growth" ecosystem characteristics. The Forest Plan claims that 180-year logging rotations would be used, but those stands would actually be cut on about 120-year rotations.

44 237

Response: In all alternatives, interior habitat needs would be provided primarily by unregulated (non-matrix) land allocations. In the Preferred Alternative, only a fifth, 21% of the Forest, would be regulated (matrix). These lands would be needed to provide for early and mid-successional species. The standards and guidelines for the matrix are not designed to meet the needs of late-successional species and interior species. The fragmented effect described in the comment would generally apply only to the portion of the matrix which was recently regenerated; these areas would provide for species which thrive in those type of habitats. The Preferred has been modified to use a range of rotation ages, based on forest type and biological need, rather than a straight 180 year rotation across the board. Another modification changed the area control modelling assumptions; 180-year rotations would not be cut at 120 years.

Comment 4: The Draft EIS erroneously defines edge effect as "the increased richness of plant and animal

species that occurs in the transition zone where two plant communities or seral stages meet and mix" (4-51). This outdated definition from a 1970s Forest Service publication (Thomas et.al., 1979) does not recognize the now well-documented adverse impacts associated with edge creation on native forest species. This suite of edge effects includes an increase in windthrow, invasion by weedy and non-native species, microclimatic change and population declines of species associated with forest interior conditions.

44

Response: The definition for edge effect is valid. Edge effect is beneficial and necessary for the survival of certain groups of species, even though it may be harmful for other groups of species. A discussion of the harmful effects has been added to page 4-50 of the Final EIS.

Comment 5: The Forest Plan should provide greater habitat connections between reserved lands. Corridors connecting intact wildernesses should remain completely unentered. The EIS should describe potential mechanisms to improve linkages and connectivity between refugia. Include a discussion of the role of non-reserved areas (matrix) in providing potential connectivity and the type of monitoring and evaluation which will be implemented to ensure connectivity is retained.

10 32 33 100 147 282

Response: The Preferred Alternative would provide the third largest connectivity corridors between wildernesses of the alternatives. Reed F. Noss's *Natural Condition and Context: Landscape Guidelines for Managing Klamath National Forest* states that the large blocks of land should be "continuous natural habitat, free of roads, clearcuts and other human intrusions," but does not indicate that keeping people and all activities out is necessary. Additional analyses would be conducted at the landscape/watershed level during ecosystem analysis to determine if linkages need to be improved using the best available information at that time on minimum effective widths. Determining minimum effective widths would require some agreement between experts in the field. A discussion of the role that regulated (matrix) lands play in connectivity has been added to Chapter 4 of the Final EIS under Biological Diversity as the third type of connective habitat. Additional monitoring elements for biological diversity are being developed at the regional scale as part of the implementation of the ROD for the FSEIS which would become part of the Forest Plan's Monitoring Plan upon completion.

Comment 6: The Draft EIS fails to present site-specific, quantitative analyses for connectivity. The simplistic acreage estimates do not effectively allow for the evaluation of whether the spatial configuration of habitat is sufficient to provide for the connectivity needs of wildlife. No comparison is made with historic landscape patterns. All proposed linkage zones should be analyzed in terms of their likelihood of meeting the needs of specific wildlife species for the movement and dispersal throughout the forest. Without any rigorous analysis, supposition is made that RMZs and other forest land allocations can sufficiently provide for the movement of all plant and animal species across the forest.

44

Response: The purpose of the Forest Plan EIS is to present environmental consequences at a forest-wide scale. Site-specific analysis would occur during project planning; refer to Ecosystem Approach to Management section on page 4-10 of the Final Forest Plan. Discussion is included on pages 4-52 through 4-55 of the Final EIS of the minimum size of each linkage between the large blocks. Chapter 3 of the EIS presents the existing situation; it states that certain existing land allocations such as RMZs provide opportunities for plant and animal dispersal, but that their ability to meet connectivity needs is variable and must be analyzed individually. There is no claim or supposition about their effectiveness. The discussion in Chapter 4 about Connectivity also states that effective widths have not been determined for the Klamath Province, so no estimates of effectiveness could be made (Final EIS, page 4-53). Agreement between experts in these fields is necessary before minimum effective widths can be identified and used as criteria in an analysis of the type proposed.

Comment 7: Landscape linkages should be a minimum 1 mile wide on the Siskiyou Crest and Scott Mountain Crest to maintain habitat connectivity across the Interstate 5 corridor in order to prevent the Goosenest Ranger District and Shasta National Forest from becoming biologically isolated from the remainder of the Klamath and Shasta-Trinity National Forests. Active land exchange to consolidate Federal ownership within these linkages should be supported.

283

Response: It is unclear how maintaining minimum widths of 1 mile in these areas on NFS land would help the problem of isolation when the private land which is primarily unforested in the valleys between NFS land is over 15 miles wide and does not meet the criteria for connective habitat.

Comment 8: The Draft EIS erroneously attempts to dismiss concerns regarding habitat fragmentation and connectivity by suggesting that Klamath Mountain landscapes are characteristically fragmented and disconnected and incorrectly assuming that it is not a problem to be corrected. In fact, the opposite interpretation is more likely to hold true: fragmentation of contiguous habitat patches is more likely to have serious and adverse impacts on biological diversity in

landscapes where these patches are naturally uncommon.

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Response: The EIS does not suggest that fragmentation and connectivity are not important issues. In fact, a detailed analysis is devoted to these concerns. The natural fragmentation is mentioned to provide a context and suggest that solutions that are accepted as scientifically valid in other parts of the country may not be as effective here or operate in the same way.

Ecological Processes and Health

Comment 1: A dynamic, changing environment, born of violent processes and dependent on catastrophic events for its very existence, cannot be preserved. HCAs may be great for spotted owls (may is a key word), but they are certainly detrimental to early seral habitat until the fuel loadings build to extreme levels from fire suppression and unplanned ignition returns the area to an early seral stage.

3

Response: Preservation is not the intent of any alternative. In all alternatives, some areas would have active management and others would permit very limited management activities depending on resource goals. Alternatives B and D proposed silvicultural and fuel management activities within HCAs. The Preferred Alternative provides for thinning and salvage within LSRs (previously HCAs) as well as for fuel management activities. In all alternatives, regulated lands, fires and activities on private lands are expected to provide for the needs of early seral species.

Comment 2: To ensure that they are not extirpated due to ignorance, data must be gathered including fungal inventories, soil nitrogen status and cycling information, soil fauna and floristic surveys for all species impacted by management, not merely Sensitive species. Numerous organisms including decomposers, nitrogen fixing organisms and other nutrient cyclers, lichens and insects are afforded legal protection under the ESA.

256

Response: The ecosystem approach and the Survey and Manage Standard and Guideline in the Preferred Alternative should adequately provide for these and other little known species. In the other alternatives, these species would be provided for at the site level.

Comment 3: The Forest should establish control plots in each vegetation and soil type within each managed watershed to accurately evaluate the effects of standards and guidelines and of management activities.

256

Response: In all alternatives, monitoring would be limited by the amount of funding received from Congress. Refer to Chapter 5 of the Forest Plan for the proposed Monitoring Plan for the Preferred Alternative.

Comment 4: The Forest Plan's reserve system assumes that fire and other natural disturbances will not have a significant impact on current and future "old growth" forests. Increasing the number and size of reserves would make provision for this.

237

Response: The Forest Plan does recognize the role of fire and other disturbances. An aggressive fuel management program which includes extensive use of prescribed fire and prescribed natural fire is an integral part of the Preferred Alternative. Thinning and salvage activities would also be permitted in LSRs to maintain ecosystem health and reduce the risk of epidemic insect and disease attacks. The Preferred Alternative would have the largest number of acres in unregulated land allocations of any alternative.

Comment 5: The Forest Plan should give high priority to restoring the health of Forest ecosystems and rehabilitating watersheds.

10 79 216 247 277 283

Response: The Forest Plan does emphasize watershed restoration; refer to Aquatic Conservation Strategy described on pages 4-34 through 4-36 of the Final Forest Plan.

Comment 6: The Forest Plan does not clearly show how standards and guidelines will lead to desired future conditions or show the location and nature of management activities.

259

Response: Ecosystem management must occur on several scales; refer to page 4-10 of the Final Forest Plan, Ecosystem Approach to Management. The Forest Plan is only intended to provide broad, programmatic direction. Projects will be proposed at the site level of analysis and locations of management activities determined at that point. All projects implemented would have to be consistent with Forest Plan management direction. Analysis at the landscape/watershed level would further refine desired future conditions.

Comment 7: The 4 Forest Plans in Northwestern California together may lead to a regional landscape with a very pronounced contrast between private and public lands with neither emulating pre-management conditions. This cumulative effect may not be optimal for either biological or social values. Reductions in the timber supply from NFS land has caused a significant increase in harvesting on private lands due to significant increases in lumber prices.

259

Response: This is outside the scope of the Forest Plan, but coordination with other agencies and with

private landowners is underway to work on these types of issues at the Province level, the river basin level and the landscape/watershed level.

Comment 8: The EIS should include the cumulative impacts of both Federal and non-Federal actions on species viability for terrestrial and aquatic species whose range extends beyond the National Forests, for landscape patterns important for biological diversity and for water and air quality.

237 259 282

Response: The Forest does not control actions on non-Federal land and it is often difficult to obtain accurate information on existing conditions and proposed activities on private property. The viability analysis at the forest level assumes that private activities would neither be beneficial or detrimental and that NFS land must adequately provide for species viability alone. The regional viability analysis for late-successional and aquatic species in the FSEIS which covers the entire northern spotted owl range has been incorporated by reference in the Final EIS. Landscape patterns will be analyzed during ecosystem analysis at the watershed/landscape level. The Important Interactions discussions in Chapter 4 of the EIS for Physical Environment and Air include the effects of non-Federal activities.

Comment 9: The Forest Plan fails to establish benchmarks for ecosystem integrity or portray current ecosystem conditions. It is unclear if the desired future conditions are consistent with ecosystem integrity or if the proposed management will move the system toward or away from the desired future condition. Analysis of the impacts of management requires a starting point of current ecosystem composition, structure and pattern.

259

Response: The benchmark for ecosystem integrity is that important compositional, structural and functional elements be within the natural range of variability. Forest-wide averages for compositional and structural features have been displayed in Chapter 3 of the EIS under Biological Diversity. Any more detail would not be appropriate for a forest-wide analysis. Because the range of variability is extremely large at the forest level, desired future condition descriptions are necessarily general. They are being refined during ecosystem analysis at the landscape/watershed scale. Monitoring is planned to determine if ecological integrity and health is being achieved; refer to Chapter 5 of Final Forest Plan for Monitoring Plan.

Comment 10: The Forest Plan recognizes biological diversity as a critical issue, but the measures employed to evaluate different alternatives are, by and large, individual resource, economic or social concerns poorly related to ecological integrity.

259

Response: These are the best indicators currently available for a forest-wide analysis. Many other analyses suggested by commentors are appropriate at the landscape or site scale, but would not provide any useful information when forest-wide averages are the unit of measurement.

Comment 11: The disparity between the ASQ and the Sustained Yield may leave the forest in an unhealthy state and in so doing, endanger our communities further.

202

Response: Long Term Sustained Yield (LTSY) is the maximum timber yield that can be sustained indefinitely once all stands on lands managed for timber production have been converted to a managed state as explained in Chapter 4 of the EIS under Timber Management. Timber harvest levels are planned under a sustained, non-declining yield constraint. That is, harvest levels must be scheduled that are equal or increase over time. They can not be high early in the planning period and then drop off at some time in the future. The allowable sale quantity (ASQ) planned for the first decade is relatively low, but increases by the fifth decade as displayed in Table 2-4 of the EIS for all alternatives. As land suited for timber production comes under management, the age class distribution improves (each age class comes to have approximately equal distribution) and the average growth rate is expected to increase. This has the effect of increasing the sustainable level of harvest in later decades. This should not create any forest health problems. Both the LTSY and ASQ apply to regulated land only.

Comment 12: The California Department of Forestry and Fire Protection (CDF) has developed particular expertise in the representation of ecosystem conditions in geographic information systems and the development of analytical tools to support ecosystem management. A collaborative effort would lead to substantive, rigorous and constructive comments that could significantly improve the Forest Plans' likelihood of contributing to ecosystem integrity and sustainable economic development of northwestern California.

259

Response: Coordination with CDF led to the 2 agencies each taking lead responsibility for ecosystem analysis at the watershed level in different watersheds and agreeing to work together and share information. The information systems are not appropriate for analysis at the Forest Plan level, but will be invaluable in Forest Plan implementation at the landscape/watershed and site levels.

Comment 13: It is important to recognize the role disease, pests, fire and natural processes have in a dynamic forest ecosystem. The EIS should describe how forest management will work with and mimic

natural processes in achieving desired future conditions.

282

Response: The EIS emphasizes the importance of ecosystem dynamics in Chapters 3 and 4 under Biological Diversity. Standards and guidelines under Biological Diversity in Chapter 4 of the Forest Plan also emphasis the dynamics and natural processes. However, a description of how this will be done is not appropriate. Refer to response to Ecological Processes Comment 14.

Comment 14: The EIS should discuss the methods which will be used to assess the cumulative impacts of its own and non-Federal activities on the forest ecosystem.

282

Response: The Forest Plan's purpose is to provide programmatic direction on what should be done and the EIS's purpose is to display the effects of various alternative ways of managing the Forest. The "how to" details and descriptions are left to the project-level analysis that will occur before any site disturbing activities. There is not one single method of analysis that fits all situations. Analysis methods will be selected at the landscape/watershed and site levels based on the scope of the proposal and the issues related to it.

Comment 15: Include recommendations for the management of non-Federal lands as necessary to ensure forest ecosystem integrity and species viability.

237

Response: The Forest does not control actions on non-Federal land and it would be inappropriate to make recommendations to private landowners. This is the role of CDF and the State and Private Forestry branch of the Forest Service.

Comment 16: It appears unlikely that given the lost of timber revenues the Federal government will continue to subsidize National Forests for the decades needed to achieve true ecosystem management. Unless the Forests can convert into revenue the non-timber values that are driving forest policy, the move to ecosystem management will always be at risk.

259

Response: Receiving adequate funding to implement Forest programs has always been and always will be a real and valid concern. The Forest intent is to implement ecosystem management to whatever extent is possible based on funding received. If the Forest Plan is not fully funded, less watershed analyses will be completed and fewer projects per year implemented. However, all projects will be planned and designed in an ecosystem approach using ecosystem principles. The intent is for a more integrated approach in the future. The desired future condition does not have to be fully achieved in 1, 10 or even 50 years. The Forest will continue to work towards these goals, adjusting them and management requirements, as necessary, if new information arises.

Comment 17: Ecosystem health is discussed in terms of the diversity of forest structure classes. However, timber and silviculture elements consider forest health in terms of young actively growing conifer trees, a small subset of all structural classes. Similarly, thinning operations for the enhancement of late-successional forest may greatly limit the extent of the early seral stage brush component of the forest ecosystem.

259

Response: Ecosystem health encompasses all structure classes to provide for species diversity and viability. On lands managed for timber production, conifer trees in certain structural classes are the desired condition. Likewise, on lands managed for late-successional species other compositional and structural elements are important to achieving the desired condition and thinning may help achieve these conditions in some stands. While early seral stages may be limited on lands managed for late-successional species, they should be more prevalent on lands managed for timber production and forage. Thinning often encourages early seral brush species for a short period of time by opening up crown canopies.

Comment 18: Economic and ecological sustainability, including the prevention of listing additional species as T&E and protection of aquatic habitat, requires that the Forest Plan recognize and correct in a timely manner the impacts that threaten the ecosystem.

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Response: The proposed Forest Plan emphasizes ecological health and sustainability; refer to Forest-wide Goals in Chapter 4 of the Forest Plan. Refer to Chapters 3 and 4 under Biological Diversity, Riparian Management, Wildlife and Fisheries for thorough discussions of Threatened, Endangered and Sensitive (TE&S) species, species viability, ecosystem health and riparian habitat. The Forest Plan provides a ecological approach designed to provide for ecological health and economic stability.

Comment 19: The goal can be to simply let natural processes occur where appropriate. Not every acre of forest needs to be managed in order to provide for forest health. Management intervention to help restore forest health should concentrate on areas which have already seen extensive management. The Forest Plan should concentrate silvicultural treatments in areas which are already roaded and have been previously "managed" for timber. During the first decade and possibly longer, thinning from below for sawlogs and biomass and salvage of trees which can be expected to die within 2 years provide the total timber output. Prescriptions should aim at accelerating the development of late seral conditions as the means to healthier

forest ecosystems. Silvicultural activities, however, should be excluded from all riparian areas.

283

Response: A number of land allocations in the proposed Forest Plan would emphasize letting natural processes occur. These include wilderness, RNAs and Backcountry which would comprise about 23% of the total Forest. Most of the land that would be managed for timber production (Regulation Class 2) is located in areas that are already roaded and which were timber emphasis areas in the past. Thinning and salvage are expected to be a much larger portion of the timber program in the future than they were in the past. However, the Forest Plan would not limit silvicultural activities to these 2 prescriptions. A full range of prescriptions would be available to help achieve the variety of goals that would be established for the various management areas. Accelerating the development of late seral conditions may sometimes be the objective in parts of the Special Habitat (which includes LSRs) and Managed Wildlife Management Areas, but this would not be a forest-wide goal that applied to all management areas. The standards for some management areas are designed to provide for early and mid-seral species to maintain their viability in an ecosystem approach. Silvicultural activities would be allowed in RRs when they led to the achievement of RR goals which are to benefit aquatic and riparian-dependent species.

Comment 20: Resource extraction and other potentially damaging or disturbance promoting activities, including high intensity recreation should not be located in areas identified in watershed analysis as containing high levels of biological diversity, particularly in late-seral dependent or other Sensitive unique species or associations.

256

Response: The land allocations proposed for each alternative were designed to provide for areas with special values consistent with the theme of each alternative. Watershed analysis as part of an ecosystem analysis process at the landscape/watershed level would occur in all alternatives. Restrictions would be determined at the project level based on the results of the landscape and site analyses.

Comment 21: Implement management actions in a manner that complements ecological processes and the natural variability of the Forest. The composition, structure and function within the ecosystem shall be managed in a manner to promote long-term sustainability.

256

Response: This is Forest-wide Standard and Guideline 6-1 in both the Draft and Final Forest Plans. The wording has been modified slightly in the Final, but the intent is the same.

Comment 22: To maintain the long-term health, sustainable yield and the integrity of the forest ecosystem; the entire forest land base should be considered. For ecosystem management to be successful, it must be practiced on the broadest land base possible. All acres need to be considered, not just those areas remaining once single or exclusive uses have been removed from the management base.

202 264

Response: In all alternative, ecosystem management is considered to be what is proposed on all land allocations. All alternatives have multiple use objectives. They take different approaches and provide different mixtures of outputs based on their themes. All alternatives have some areas that are managed for one primary purpose due to existing laws and in this sense the size of the available land base is basically outside the scope of the analysis. Areas that emphasize single or several uses are invaluable in providing for species diversity and viability needs. If all needs can be adequately provided through the proposed management strategy, the outputs produced will be sustainable. When all acres are considered as a whole, the multiple resource functions discussed in Chapters 2 and 4 of the EIS are fulfilled.

Comment 23: The Draft EIS predictions of future seral stage compositions do not account for the effect of wildfires. Given the importance of fire in the forest, the omission of fire effects is itself inexcusable. However, this omission is further convoluted by a statement indicating that fire effects were in fact included in the analysis. Due to stand replacing events such as timber harvesting, wildfire, insect infestation and diseases; most of the stands currently in these seral stages which are in unregulated areas would be converted to early seral stages (Draft EIS at 4-46). One is not surprised, then, to discover that actual seral stage acres could be very different from the projections (Draft EIS at 4-43).

154

Response: As stated in Chapter 4 of the EIS under Biological Diversity, Methodology, the seral stage predictions did not include the effects of wildfires or the effects of fuel reduction programs on wildfire intensity due to the difficulty in predicting when and where wildfires would occur and the non-spatial nature of the FORPLAN model. The statement that wildfires are accounted for as part of the mortality function included in FORPLAN means that an estimate of volume reductions due to wildfires killing trees is included. These are identified in the EIS as flaws in the model and the likely effects of wildfires on seral stages are disclosed by the narrative to compensate for these flaws. The importance of fire as the ecosystem's regulator is emphasized throughout the document.

Comment 24: Without a quantitative analysis of the effects of fire suppression and prescribed fire on

ecosystem structure and function, the Forest Plan cannot integrate these major programs into ecosystem management.

259

Response: These programs are integrated. Refer to Chapter 3, Biological Diversity for a discussion of how past fuel treatment has influenced current ecosystem conditions. This information was used to develop the models that project the effects of each alternative on seral stages and other components. The effects of fire are not separated from the rest of the effects. Ecosystem management is looking at a system as an integrated whole, not dividing it into parts. The intent of prescribed burning is for fires to burn at low to moderate intensity which generally does not change the seral stage. Additional analysis will also occur at the landscape and site levels.

Comment 25: The Forest Plan does not analyze the role of both fire and fire management in structuring ecosystems. There is no analysis of how fire will affect the development of LSRs in the Preferred Alternative. Stand-replacing fires in reserve areas are sufficiently common that they may swamp the influence of the reserve itself. Managers should take into account the risk of low, medium and high intensity fire when developing conservation strategies.

72 74 259 283

Response: The role of fire is discussed in Chapters 3 and 4 of the EIS under Biological Diversity and Fire Management. Standards and Guidelines Management Area (MA) 5-27 through MA 5-29 have been added to the Final Forest Plan to address the risk of fire in LSRs. MA 5-36 requires that fire management plans be prepared for each LSR as part of landscape/watershed analysis, province planning or the LSR assessment. Once this assessment is completed, prescribed fire and PNF would be used in the LSR to reduce the risk of intense, stand-replacing fires occurring.

Comment 26: Periodic intense devastating wildfire has been a pattern through the Forest since European settlers attempted to exclude fire from the ecosystem. Catastrophic fires that devastate entire watersheds preclude any management of the 17 management areas listed in the proposed Forest Plan. The Forest Plan should place a strong emphasis on vegetative manipulation to minimize the effects of wildfire, including vigorous stocking control of timber stands.

264

Response: Catastrophic fire does not preclude management, but is an important factor in planning management strategies in the proposed Forest Plan. The Preferred Alternative does emphasize vegetative manipulation to minimize wildfire effects; refer to MA 5-27 through MA 5-29 in Management Area 5 and to Forest-wide Standards and Guidelines 21-29 through 21-32 in Chapter 4 of the Final Forest Plan. The Preferred Alternative would also have an aggressive fuel reduction program including the use of prescribed fire and PNF to try to counteract the effects of past fire suppression and allow fire to play its natural role in regulating the ecosystem.

Comment 27: In pre-European settlement days, Native Americans managed the forests with fire. After settlement, ranchers burned the hills every fall as they led their cattle down out of the high country. Fire suppression stopped these practices and had a major impact on the Forest. These practices are not mentioned in the Draft EIS. In fact, many historical observations that could have been provided by "long-term residents" have been omitted in favor of quoting research papers or other scientists.

74 296

Response: The effect of fire suppression is discussed thoroughly in the EIS in Chapters 3 and 4 under Biological Diversity and Fire Management, both. The purpose of an EIS is to disclose the effects relating to the proposed alternatives, not to record history. The Analysis of the Management Situation for each resource area which was prepared as background information for the EIS does include more historical data and is part of the planning records on file at the Supervisor's Office in Yreka.

Species Viability

Comment 1: The Draft Forest Plan fails to demonstrate reasonable, empirical basis to believe that the Preferred Alternative will ensure the maintenance of viable, well-distributed populations of all wildlife species. The Draft EIS fails to empirically analyze the population viability of Sensitive wildlife species on the forest and the cumulative impacts from proposed management under each alternative. In order to determine the habitat distributions necessary to sustain viable populations, the agency must determine 1) current population sizes, trends and habitat associations for all Sensitive species, 2) what "viable" populations sizes are, 3) how much habitat must be provided in order to support these numbers and 4) how the habitat must be distributed and connected so that individuals may "interact with others" on the forest. The Forest Service fails to adequately address any of these points in the Draft Forest Plan. The Forest Plan must include a more detailed and locally-tailored conservation plan for aquatic and riparian-dependent species; it cannot safely tier such considerations up to regional-scale documents like FEMAT.

44 82 154 237

Response: Refer to Wildlife and Biological Diversity sections of Chapter 4, EIS for analyses of habitat conditions that would likely provide for species viability at the Forest level. These analyses show that adequate habitat would be available for TE&S and indicator species and include discussions of connective

habitat. The Forest Service is responsible for managing the habitat, but the CDFG and USFWS are responsible for managing the wildlife species. The EIS tiers to the FSEIS for its analyses for late-successional, "old growth" and aquatic species at the regional level for the Preferred Alternative. The Preferred Alternative in the Forest Plan also includes additional standards and guidelines at the forest level to provide for conservation of these species. These include riparian, hillslope and instream restorations programs.

Comment 2: Viability ratings for the preferred alternative in the FSEIS assume funding for watershed rehabilitation. However, these funding levels can not be guaranteed. Aquatic team leader Jim Sedell was asked in Congressional hearings what the effect on anadromous stocks at risk would be if funding was not appropriated. He said viability ratings would fall to 50 to 55%. The NFMA viability requirement is not satisfied if species are afforded only a 50-50 chance of survival.

283

Response: Implementation of all proposed activities in the Forest are dependent on receiving adequate funding from Congress. If Congress chooses not to fund certain activities, they can not be accomplished. This is outside the authority of the Forest Service.

Comment 3: The Draft Forest Plan can only tier to the viability analysis in the FSEIS if they invoke the same or stricter standards and guidelines.

82

Response: The Final Forest Plan and EIS has been modified to be consistent with the ROD for the FSEIS. The viability analysis at the regional level for Alternative 9 in the FEIS is tiered to in the Final EIS as are the other environmental consequences analyses.

Comment 4: In the Draft EIS, the RMZ width designation for the Preferred Alternative (page 2-25) is wider than for Alternative C (page 2-44), yet Table 2-15 (page 2-62) shows total RMZ acreage that is 135% higher for Alternative C (173,200 acres) than for the Preferred Alternative (73,800 acres). How is that possible?

72

Response: As explained on page 2-60 of the Draft EIS, when acres fall into more than 1 land use category, they are displayed in Table 2-15 in the category with the most constraining standards and guidelines to avoid double-counting acres. Many more of the RMZ acres may show up in other categories for the Preferred Alternative than for Alternative C. In addition, the acres for RMZs for all alternatives only include those which were mapped on the database, generally the larger steeper streams and do not present the entire picture. The figures in this table and other similar tables are included to provide comparisons between alternatives and not intended to represent absolute numbers. So, although the Preferred includes additional smaller streams and wetlands in its RRs in the Final, they are not mapped and do not show up on the acre estimates that come from the database. In the Final Forest Plan under Management Area 10, an estimate for these intermittent streams and wetlands is included to correct this weakness.

Late-Successional Reserves

Comment 1: Alternative Preferred protects less acres of suitable owl habitat than the system proposed in 1992 by the Spotted Owl Recovery Team. These reserves are inadequate to ensure the survival of spotted owls and other "old growth" species.

8 44 237 256 324 337

Response: The Preferred Alternative was modified to add some additional areas to the LSRs in the Final EIS. The analysis of the FSEIS, which is incorporated by reference in the Final EIS, shows that the ecosystem approach of the Preferred Alternative would provide for owl and late-successional species needs at the regional level. The Habitat Capability Model (HCM) for the spotted owl in Chapter 4 of the EIS under Wildlife and the analysis under Biological Diversity shows that habitat needs would also be provided at the forest level.

Comment 2: Fire management within HCAs confuses the ecological role of fire and biomass utilization (Draft Forest Plan Management Area Standard 5-20).

72

Response: The wording of this standard and guideline, now MA 5-38, has been clarified in the Final Forest Plan. The role of fire is to "maintain long-term habitat quality and ecological processes."

Comment 3: Dillon Creek is important for summer steelhead. The LSRs in the Preferred Alternative for the North Fork and mainstem Dillon Creek would provide much needed protection against logging and road building on the very steep and unstable slopes adjacent to the stream. Returning furbearer migration corridors to the matrix might delete these corridors.

72

Response: The furbearer areas in the Draft Forest Plan were always in the matrix (regulated land); they were proposed for Regulation Class 3. The Preferred Alternative has been modified; the furbearer areas proposed in the Draft EIS are no longer a land allocation; these areas would now be managed for other resources. The analysis in the FSEIS, incorporated by reference into the Final EIS, shows that furbearers are adequately provided for in the ecosystem approach of the Preferred Alternative which provides for all late-successional species at the regional level. The HCMs for fisher and marten show that there will be adequate habitat for these species at the forest level. Another modification of the Preferred Alternative in the Final

EIS includes all unstable and potentially unstable areas in RRs which should provide adequate protection for all aquatic species.

Comment 4: Critical habitat should be designated to preserve all flora and fauna in the Forest Plan.

9 147

Response: The goals of the Forest Plan are wise management for healthy, stable and sustainable ecosystems; not for preservation. Critical habitat for T&E species as delineated by the USFWS would be managed according to the recovery plans for those species in all alternatives. The environmental analysis in Chapter 4 of the EIS shows that biological diversity would be maintained.

Comment 5: Management activities in stands adjacent to reserves should provide for the "feathering" of activities at the boundary next to the reserves.

283

Response: None of the alternatives includes a blanket requirement to buffer reserves. However, the standards and guidelines for visual quality objectives (VQOs) provide for project design which would achieve buffering effects so that sharp visual contrasts do not exist.

Comment 6: Some of the HCA areas should be General Forest on the Preferred Alternative map.

2

Response: These areas, now known as LSRs are part of the ecosystem management approach of the Preferred Alternative and are designed to provide for the viability of late-successional and "old growth" species (refer to FSEIS). The design of the entire system is such that individual areas cannot be removed and managed for other purposes without affecting the viability analysis.

Comment 7: The Draft EIS falsely claims that "silvicultural techniques and objectives can enhance existing forest stands for "old growth" values without including any scientific, peer-reviewed evidence. The decision of whether to allow any such experimentation should be accompanied by a risk analysis. The Forest Plan should not allow thinning, salvage, road development or other logging activity in reserves.

44 79 237 254

Response: The analysis in the FSEIS, which is tiered to by the Final Forest Plan EIS, gave the President's Plan a higher species viability rating because these type of management activities were proposed for this purpose. This is an integral part of the alternative. This scientific analysis should provide adequate supporting data.

Comment 8: Is it realistic to project reductions in annual acreages of high intensity fires while planning for increased reserves in the Forest Plan?

74

Response: The Preferred Alternative proposes an ambitious fuel reduction program which, if implemented, is expected to reduce the number of acres that would burn at high intensity in wildfires. While the Preferred Alternative has been modified in the Final EIS to include more acres in LSRs and RRs, fuel management activities are allowed in these reserves as long as certain standards and guidelines are followed and management area goals are met. LSR standards state that "some natural fires may be allowed to burn under prescribed conditions" after watershed analysis, province-level planning or a LSR assessment has been completed. RR standards require that "strategies should recognize the role of fire in ecosystem function."

Comment 9: Treatments within LSRs should not be limited to stands less than 80 years in age.

37

Response: The ROD for the FSEIS provides direction for the Forest Plan. As the Forest is in the California Cascades and California Klamath Provinces which have increased risk of fire, the Guidelines to Reduce Risks of Large-Scale Disturbance apply and have been incorporated into the LSR standards and guidelines for the Forest Plan. These include provisions that risk-reduction efforts may be appropriate in older stands under certain specified conditions; refer to LSR Standards and Guidelines in MA 5, Chapter 4, Forest Plan.

Key Watersheds

Comment 1: The Salmon River and Clear Creek in their entirety should be managed as Key Watersheds. Key Watershed designation should include non-Federal land as the prospect for success of salmon restoration without them is not good.

82 72 128

Response: The entire Salmon River and Clear Creek watersheds would be Key Watersheds in the Preferred Alternative in the Final EIS. However, the Forest Service has no authority to extend this designation to non-Federal lands. The Forest Service would coordinate with and try to gain the cooperation of all concerned and affected interests in at the landscape/watershed and site planning levels. Key Watershed designation does not mean the area is a reserve, however. Both Federal and non-Federal land would be managed to meet established management objectives which could be anything, including timber management objectives.

Comment 2: Boulder Creek, Canyon Creek, Kelsey Creek, Bogus Creek, Indian Creek, Beaver Creek, mainstem Scott River and Shasta River should be designated Key Watersheds.

10 11 32 33 54 72 73 82 188 197 216 235 247 283 305

Response: The analysis in the FSEIS showed that the proposed Key Watershed network for Alternative 9 which was incorporated into the Klamath Preferred Alternative provided adequately for at-risk species at the regional scale. Even without Key Watershed status, all streams would be protected by RRs and Standard and Guidelines for water quality.

Comment 3: Establish Key Watersheds which sustain salmon and steelhead fisheries. These areas would allow observance of natural processes, provide models for restoring natural resources as well as compensate for historic and off-forest cumulative effects. Monitoring is important to ensure that watersheds are recovering and maintaining aquatic populations.

18 54 57 82 99 136 237 258 266 283 304 305

Response: The Preferred Alternative would establish Key Watersheds; refer to page 4-34 of the Final Forest Plan. Alternatives D and D' would establish riverscape refugia to provide for the conservation of a wide variety of species; refer to Chapter 2 of the EIS. The other alternatives would rely on the mixture of land allocations and associated management requirements to provide for fish viability. Refer to the analyses for Biological Diversity and Fish in Chapter 4 of the EIS. Monitoring will be designed by watershed and will depend on the activities planned for that watershed.

Comment 4: What is the rationale for establishing a network of Key Watersheds? How are they to be defined and managed?

82

Response: Refugia are a cornerstone of species conservation strategies. Refugia provide high quality habitat which is crucial for maintaining and recovering at-risk stocks of anadromous salmonids and resident fish species. The system of Key Watersheds will serve as refugia. Fish biologists and hydrologists identified the best existing habitats and those with the greatest potential for restoration for anadromous and other fish species. The network for the Preferred Alternative considered the amount and distribution of habitat for major stocks at a regional level based on professional judgement. A map overlay of these Key Watersheds has been included in the map packet for the Final EIS and Forest Plan. Page 4-56 of the Final EIS and Forest-wide Standards and Guidelines 6-23 through 6-37 in the Final Forest Plan contain descriptions of the purpose and management requirements of Key Watersheds.

Comment 5: The EIS should disclose the consequences of compromising the Key Watershed concept, of shrinking RRs in size or number and of incrementally increasing the level of extractive activity within RRs. All changes in boundaries or locations of Key Watersheds between Johnson et.al.(1991), SAT and FEMAT need to be justified in the text of each EIS.

82

Response: The Key Watershed concept would be established as part of the aquatic conservation strategy of the Preferred Alternative and would not be compromised if the Preferred Alternative is selected for implementation. The RRs established in the Preferred Alternative are interim standards and may be adjusted through landscape/watershed analysis and site-specific evaluation as explained in Chapter 4 of the Forest Plan. The types of extractive activity allowed are defined in the Standards and Guidelines, but the level is not. The EIS analysis is based on the proposed Standards and Guidelines so the actual ground determined boundaries and level of extractive activity would not affect the overall analysis. Johnson et.al. (1991), Thomas et.al. (1993) also known as SAT, and USDA Forest Service (1993) known as FEMAT were used in developing the Key Watershed network proposed in the Preferred Alternative. While these documents provided important information and valuable recommendations, they did not constitute direction. Changes from them do not have to be justified in this analysis.

Comment 6: No alternatives were considered in establishing Key Watersheds. The biological adequacy of various options for numbers and sizes of watershed reserves across a forest and different guidelines for management activities within watershed reserves are not assessed. All pertinent scientific references should be used to identify Key Watersheds.

82

Response: Key Watersheds are designed to serve as refugia which are a cornerstone of most species conservation strategies. The Key Watersheds for the Preferred Alternative were identified previously by Johnson et.al. (1991) using Forest recommendations and by Thomas et.al. (1993) also known as the SAT report. While these groups were familiar with current scientific literature, the actual selection of watersheds relied on the site-specific knowledge of fish biologists and hydrologists working on each Forest to identify important habitat. Professional judgement was used to determine that the system was adequate in terms of amount and distribution of habitat for the major stocks across the region during the development of the FSEIS.

Comment 7: The use of the word "should" in the case of the Key Watershed concept is probably not strong enough. "Justifiable" reasons not to do so could be put

forth, even though we believe this concept is integral to protecting the beneficial uses of the Forest waters.

303

Response: "Should" is used because watersheds are variable and needs will be different depending on site conditions. The intent is for management discretion to determine how best to meet the objectives of each watershed. Both landscape/watershed and project-level analyses will be required before any actions are initiated within a Key Watershed, except for actions which are categorically excluded from documentation in an environmental analysis or environmental impact statement.

Comment 8: Treat Key Watersheds and roadless areas as reserves to be managed for conservation of aquatic biological diversity by removing them from the suitable timber base, prohibiting new road construction and decommissioning most existing roads.

44 82 201 237

Response: Key Watersheds are managed to preserve aquatic habitat but this does not mean that they are removed from the suitable timber base. Removal from the timber base depends on management area allocations. The management guidelines for Key Watersheds are discussed in Chapter 4 of the Forest Plan.

Comment 9: The urgency of establishing refugia for anadromous salmonids and managing those refugia with the single focus of reversing declines in numbers of stock and individuals within those stocks is notably absent from the Forest Plan. Criteria for identifying refugia and a plan for establishing an integrated network with adjoining forests should be included. Specific stocks\species and other Sensitive species associated with individual stream systems must be identified in order to understand the value of those systems.

54

Response: The network of Key Watersheds proposed in the Preferred Alternative is consistent with the ROD for the FSEIS and incorporates its urgency. This system is designed to provide for the recovery of at-risk fish stocks while providing for all other aquatic species at a regional scale. Because an ecosystem approach is used, individual stocks and species do not need to be identified on each individual stream. The analysis in the FSEIS indicates that it is adequate for recovering at-risk stocks and describes how the network was developed. Since the network was developed for the entire northern spotted owl region, the network is integrated for all the forests in the region.

Comment 10: Key Watersheds should serve as a surrogate for critical habitat designations provided in the ESA. Documented population abundance and viability in Key Watersheds would hopefully eliminate the need for Federal listing.

82

Response: The intent for establishing Key Watersheds in the Preferred Alternative was to serve as refugia. Alternatives D and D' would establish riverscape refugia. Refugia, a cornerstone of species conservation strategies, provide high quality habitat crucial for maintaining and recovering at-risk stocks of anadromous salmonids and resident fish species. Species would not be listed if it was found to be unnecessary.

Comment 11: All Sensitive aquatic species (not limited to wild anadromous fish) threatened with extinction in California should be used as a criteria to identify Key Watersheds in the Preferred Alternative.

82

Response: The focus of the Key Watershed network is to serve as refugia for at-risk anadromous fish stocks. The Key Watershed network is designed primarily to meet the habitat needs of large, highly mobile species such as anadromous fish. The RR network would directly serve the habitat needs of less mobile species with smaller ranges such as tailed frogs. The ecosystem approach of the Preferred Alternative is expected to provide adequately for other aquatic and riparian-dependent species. Other aquatic and riparian-dependent species could include subsets of mammals, amphibians, mollusks, plants, lichens and bryophytes. The combination of the Key Watershed network, RRs, existing high quality riparian and stream habitat and improved riparian and stream conditions expected in the future would benefit other riparian-dependent species.

Comment 12: Key Watersheds must be identified on maps in order to see how proposed land allocations mesh with the concept of refugia.

54 82

Response: An overlay for Key Watersheds has been included in the map packet for the Final Forest Plan and EIS.

Comment 13: The Forest Plan did not consider naming WSRs as Key Watersheds. Fisheries are often found to be an outstandingly remarkable value for WSRs.

82

Response: WSRs and Key Watersheds have entirely different objectives and land configurations. WSRs are designated by corridors to preserve the free-flowing condition, protect outstandingly remarkable values and provide for recreational activities. Key Watersheds take in large blocks of land and are managed for habitat to function as refugia. However, the Key Watersheds proposed in the Preferred Alternative would include the Salmon River and Wooley Creek which are

designated WSRs as well as Dillon, Clear, Elk and Grider Creeks which would be proposed for designation as WSRs in the Preferred Alternative.

Comment 14: A comprehensive road inventory must be conducted within each Key Watershed to identify which roads need maintenance, upgrading or decommissioning. An implementation schedule for carrying on this program is a priority for Key Watershed management.

54

Response: This detailed analysis is not appropriate at the Forest Plan level. However, Forest-wide Standard and Guideline 20-1 in Chapter 4 of the Final Forest Plan provides that transportation planning will be an integral part of landscape/watershed analysis and environmental analysis. Planning at these levels would include a review of Road Management Objectives and proposals for the development of new roads. Activities relating to road needs would be scheduled at this time.

Comment 15: Existing road mileage within Key Watersheds should be reduced with priority given to removing roads that pose the greatest risks to riparian and aquatic ecosystems.

72

Response: In the Preferred Alternative, existing road mileage in Key Watersheds would be reduced if funding permits. No new roads would be constructed in released roadless areas within Key Watersheds. Landscape/watershed analysis would be required prior to initiating any actions within a Key Watershed with the exception of those categorically excluded from NEPA documentation.

Comment 16: The Forest Plan's treatment of Key Watersheds is inadequate, failing to clearly emphasize the absolute necessity of such designations to halt the race towards extinction for salmonid stocks on the Forest. This should be the Forest's only priority.

54

Response: If selected, the Preferred Alternative would establish Key Watersheds to act as refugia. The value of Key Watersheds as one part of the Aquatic Conservation Strategy is discussed in Biological Diversity, Chapter 4 of the EIS. However, this strategy may be unable to save fish stocks by itself. Many other factors are also involved which are outside the control of the agency: the availability of food, number of predators, quality of habitat in the ocean and in streams outside the Forest boundary, ocean fishing, fishing in streams, level of stream flow, climate. Because of the complexity of the situation and because of the mandate to provide for multiple uses in the Forest, fish viability cannot be the Forest's only priority.

Watershed Analysis

Comment 1: The Draft Forest Plan appears to be striving to eliminate the need to do watershed analysis wherever possible, by simply writing it out of the standards and guidelines. Protection is weakened by providing 2 exceptions to build roads in RMZs. Roads can be built in RMZs as long as it can be shown that more damage would result if the road is built outside the RMZ (MA 10-31). A clause allowing road construction if necessary to meet "other management objectives." This exception suggests that road building is permitted in a RMZ if it is the only way to access timber.

82

Response: Standards and guidelines covering landscape/watershed analysis have been added to the Final Forest Plan in Chapter 4. RMZs have been changed to RRs in the Final to be consistent with the FSEIS. Timber production is not an objective of RRs and would not be included as "other management objectives" within these areas. However, there are likely to many cases where access to other Management Areas, some of which may have timber objectives, would be permitted if impacts could be adequately mitigated. Because upslope and downstream processes are connected, there may be some situations where it is environmentally preferable to build a road in a RR, rather than outside the RR. Landscape/watershed analysis and site-specific analysis will look at the whole picture and provide information for these types of decisions to be made.

Comment 2: Watershed analysis is unlikely to result in protection of aquatic ecosystems. On the contrary, the agency has tended to use watershed analysis to justify logging watersheds that are in relatively good condition. An ecosystem-oriented approach should protect the remaining high quality and prevent further degradation of other stream habitats.

237

Response: Landscape/watershed analysis is part of an ecosystem approach to analyzing and managing watersheds for both ecological and human needs. If "protection" is defined as disallowing any further disturbances, than watershed analysis does not offer protection. However, if "protection" is defined as promoting ecological health by guiding human activities, than protection is very much a part of watershed analysis. A watershed analysis will recommend activities designed to meet ecosystem management objectives which may include logging as well as watershed restoration and other management actions.

Comment 3: The locations of each watershed unit that will be a part of watershed analysis should be displayed.

283

Response: The Final Forest Plan and EIS includes a map of the analysis watersheds as proposed by the Klamath National Forest although these units are subject to review at the basin level. These watershed units are subdivisions of larger watershed units accepted at the National level by Federal agencies. The Basin Plans, when finished, will display the analysis watersheds to be used for each basin.

Comment 4: Watershed analysis needs to be expanded to accurately forecast cumulative watershed effects of widely scattered projects over time within a watershed.

225

Response: One of the products of a landscape/watershed analysis is a process for assessing cumulative watershed effects for the watershed. The watershed analysis will outline the process and discuss the existing condition but the project analyses will forecast the effects of the project alternatives along with the watershed effects of concurrent projects, past and foreseeable future projects. It is not possible for the watershed analysis to accurately forecast cumulative watershed effects for projects that are not yet designed.

Comment 5: Chapter 2, page 2, column 2 and Chapter 3, page 2, column 2 of the Draft Forest Plan: The establishment of "watershed management plans" is not within the scope of the U.S. Forest Service as applies to private lands. Processes which purport to be binding on non-participants without legal authority and proper provision for due process or redress should not be allowed.

281

Response: Cumulative effects analyses using the best estimates available will cover all lands when appropriate as required by the implementing regulations for NEPA. However, the management requirements in the Forest Plan are intended to apply to NFS land only. This has been clarified in the Final Forest Plan in the sections cited in the comment above. While there is no intent to try to direct activities on private lands, every effort will be made to coordinate with private landowners on activities which could affect both parties.

Comment 6: Watershed analysis needs to be defined at the forest level. Watershed analysis from a silvicultural view needs to be done on-the-ground, include the number of acres by seral stage, the mapped locations of all seral stages and their acreage and an assessment of the watershed's historical pattern and acreage of seral stages, including the average patch size for each seral stage. Conclusions should be drawn from on-the-ground data and assessments rather than from just using a modeling approach.

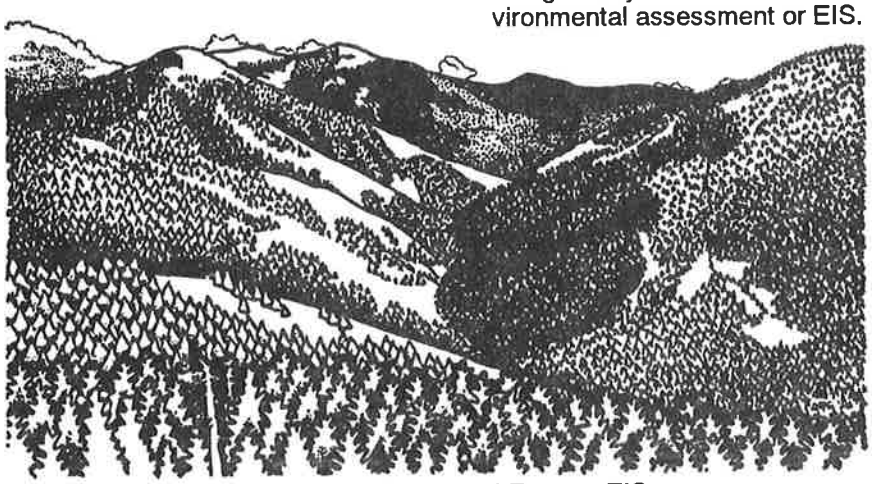
283

Response: Watershed analysis is being defined at the regional level. A watershed analysis guide has already been written and is being tested and refined through the pilot watershed analysis process. On the Forest, the watershed analysis will be an integral part of ecosystem analysis at the landscape/watershed level which is currently being used. The best available on-the-ground data is compiled and used. Field checking is also a part of this process. The extent and utility of the models used will be continually refined over time.

Comment 7: Until watershed analysis has occurred, Key Watersheds should not be included in calculations of the ASQ, as described in the Klamath Forest Alliance Alternative. Probable sale contributions calculated from these watersheds should be non-interchangeable. AMAs should be considered in the same manner.

283

Response: Land allocations are not set up to change as you propose in the Forest Service planning process, so this portion of your proposed alternative has not been considered in detail in any alternative. Land allocations of some type must be made in the Forest Plan, this cannot be delayed until another level of analysis has been completed. Unless a Forest Plan amendment is signed based on new information, land allocations are expected to remain over the 50 year planning period and likely beyond. In the Preferred Alternative, some areas within Key Watersheds and AMAs would be in the timber base and some would not depending on the management areas in which they fall. Prior to the implementation of any activity within a Key Watershed, a landscape/watershed analysis would be required, except for activities that are categorically excluded from documentation in an environmental assessment or EIS.



Riparian Management Comments

Comment 1: The protection provided to riparian areas in the Draft Forest Plan appears to be adequate for this biologically rich and key part of the landscape.

8 82 198

Response: The Preferred Alternative has been modified in the Final Forest Plan and EIS to be consistent with the ROD for the FSEIS; the documentation in the Final Forest Plan and EIS reflects this. Management Area 10 is called Riparian Reseve rather than Riparian Management Zone. RRs are no longer defined by stream classes. Criteria for final RR boundaries would be established in watershed analysis which is part of ecosystem analysis at the watershed/landscape scale. Final RR boundaries would be identified at the project level; refer to MA10-1 in the Final Forest Plan. Interim boundaries are proposed for the Preferred Alternative; refer to MA10-2 in the Final Forest Plan for a description. Intermittent and ephemeral streams which show signs of annual scour, wetlands less than 1 acre in size as well as unstable and potentially unstable areas would be included in RRs.

Comment 2: Protect riparian areas. Timber harvest and road-building should not be allowed in streamside areas in the Final Forest Plan, including ephemeral headwater streams.

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Response: The Final Forest Plan is consistent with the ROD for the FSEIS; refer to response to Riparian Management Comment 1. No timber yields would be scheduled in RRs including sanitation and salvage, however, salvage and fuelwood cutting may occur if required to attain Aquatic Conservation Strategy objectives. Road construction is not prohibited in RRs; however, roads must cross streams in the most efficient way possible to minimize the impacts to the riparian area and be consistent with Aquatic Conservation Strategy objectives. Ephemeral streams outside of RRs would be examined on a site-specific basis to determine the appropriate protection.

Comment 3: Wetlands less than 1 acre should be protected in the Forest Plan as they may provide critical habitat for some species and are extremely sensitive to management activities.

54

Response: The Preferred Alternative was modified in the Final Forest Plan and EIS to include wetlands less than 1 acre as RRs. The interim RR boundary at a minimum would include the wetland and extend to the outer edge of the riparian vegetation.

Comment 4: Streams bearing amphibians were not designated Class 1 or Class II streams independent of fish presence in the Forest Plan. Larger riparian zones may be necessary on small headwater streams to maintain amphibians which may be more sensitive to sediment and temperature impacts than fish.

54 82 256

Response: Stream classes are not used to define RRs in the Final Forest Plan; refer to response to Riparian Management Comment 1. Fish-bearing streams, which are basically equivalent to the Class I and II streams in the Draft EIS, have the largest RRs in the Final EIS, but intermittent and some ephemeral streams as well as small wetlands are now included in RRs. The description of the Preferred Alternative and the standards and guidelines have been modified in the Final EIS to better express the intent to manage by ecosystems not by individual species. RRs for the Preferred should adequately protect amphibian habitat since they include nonfish-bearing perennial streams, intermittent streams and other important aquatic habitat. Amphibian habitat located during project-level analysis should receive adequate protection through the Forest-wide Survey and Manage standard and guideline under Biological Diversity.

Comment 5: Riparian area distances should be based on site potential tree heights. The RMZ 2 definition for the Preferred Alternative should include "landslides and landslide-prone areas" in its definition. These areas should be excluded from scheduled timber harvest. The most vital link in a watershed are the ephemerals in the uppermost sections.

54 82 237 256

Response: Site potential was inadvertently left out of the Draft Forest Plan descriptions and has been included in most Final interim definitions of RRs. There is no longer an RMZ 2 in the Preferred Alternative; refer to response to Riparian Management Comment 1. There have been a number of modifications to the Preferred Alternative in the Final EIS and Forest Plan. RRs would include unstable and potentially unstable areas. There would not be a scheduled timber harvest in any type of RRs. Additional RRs include intermittent and ephemeral streams that have a definable channel

and show evidence of annual scour or deposition. In addition, actual RR boundaries would be determined at the local level through the watershed analysis process and would include protection of unstable headwater areas. Refer to MA10-1 and MA-2 in the Final Forest Plan.

Comment 6: While there is no scheduled timber harvest from riparian areas, there is an implied harvest. What is meant by "design silvicultural activities for existing regenerated stands to achieve riparian goals?"

54

Response: Incidental yields of timber may be produced as a result of management activities designed to achieve management goals in any management area where timber harvest is not expressly prohibited. This is part of ecosystem management. Timber production would not be the goal. Any amount of timber produced would not occur on a regular basis or be sustainable, but merely a by-product. In the Final Forest Plan, "riparian goals" has been replaced by "Aquatic Conservation Strategy goals" which better describes the ecosystem approach intended by this alternative. An example might be thinning a stand along a stretch of stream to help meet the goal of thermal regulation.

Comment 7: There is some confusion whether the minimum distance on either side of Class I and II streams in the Preferred Alternative is 200 or 300 feet.

54

Response: The 200 feet is incorrect. Definitions of RRs for the Preferred Alternative have been modified; refer to MA10-2 in the Riparian Reserves Management Area in the Final Forest Plan.

Comment 8: All components of the Aquatic Conservation Strategy should be retained.

72 75 95 201

Response: The Aquatic Conservation Strategy is part of the Preferred Alternative. The documentation has been improved to make this clear; refer to pages 4-6 and 4-35 of the Final Forest Plan.

Comment 9: The Preferred Alternative standards and guidelines for range management would allow continued degradation of riparian values from livestock. Livestock should be banned from riparian areas.

54 98 311

Response: Riparian Reserves MA10 includes Standard and Guideline MA10-73: "Adjusting grazing practices to eliminate impacts that retard or prevent attainment of Aquatic Conservation Strategy objectives. If adjusting practices is not effective, eliminate grazing."

Comment 10: How would road construction in the riparian area facilitate accomplishment of management objectives that no road construction could not accomplish? How would construction result in less impact to riparian resources than no construction?

54

Response: The Aquatic Conservation Objectives are to provide for the health of aquatic resources in an ecosystem approach. The entire picture must be considered, not just one portion. There may be situations where roads are built through a RRs to meet the objectives of management areas adjacent to the RR or roads may be constructed to allow for restoration activities. There are cases where road construction in a RR which has stable soil would cause less cumulative impacts to the stream system and watershed than building the road outside the RR on unstable land. There is greater soil movement in unstable areas and larger volumes of soil could move downslope and be delivered to the stream system.

Comment 11: The goal for sediment loading in the Forest Plan should be to maintain natural sediment regimes in basins, both in terms of amounts generated and timing of release and storage rather than not exceed the transport capacity of the stream.

54

Response: The documentation has been improved to make this clear. Refer to Aquatic Conservation Strategy objectives on page 4-7 of the Final Forest Plan.

Comment 12: Although the Draft EIS recognizes the critical functions and the magnitude of potential impacts associated with intermittent streams, no justification or analysis is provided that explains why no less than full protection standards are warranted or acceptable in these sensitive areas.

44

Response: Scheduled timber harvest would not be allowed in RRs including sanitation and salvage, however salvage and fuelwood cutting could occur if required to attain Aquatic Conservation Strategy objectives. Intermittent and ephemeral streams would be within the RRs if they show evidence of annual scour or are unstable or potentially unstable.

Comment 13: SAT report guideline RF-10 which prohibits sidecasting into riparian areas should replace MA 10-36 in the Draft Forest Plan which provides an excuse for this harmful activity to occur.

82 256

Response: Standard and Guideline MA10-42 in the Riparian Reserves Management Area provides for "restricting sidecasting as necessary to prevent the introduction of sediment to streams." Draft MA10-36 has been retained as MA10-49 in the Final Forest Plan with a minor modification: "Designed road fills may

extend beyond the cleared roadway when the management action is less detrimental to riparian resources." Designed road fills are not the same as sidecasting. Road fill material is deliberately placed to support the road bed, often using special technical design features to minimize damage and prevent the material from moving off the site. Sidecasting is generally waste material that is piled on the side of the road. The intent is to provide the leeway to perform mitigation measures that would minimize environmental effects.

Comment 14: SAT report RF-9 which restricts water drafting when instream flows become limiting should replace Draft Forest Plan standard MA 10-39 which does not restrict water drafting at low flows.

82 256

Response: Final Forest Plan Standard and Guideline MA10-71 in the Riparian Reserves Management Area states: "Locate water drafting sites to minimize adverse effects on stream channel stability, sedimentation, and in-stream flows needed to maintain riparian resources, channel conditions, and fish habitat."

Comment 15: Adopt SAT report RF-8 to improve road monitoring specific to riparian areas to supplement Draft Forest-wide Standard and Guideline 19-3.

256

Response: Standard and Guideline MA10-47 in the Riparian Reserves Management Area is very similar to SAT RF-8.

Comment 16: SAT report RF-7 which provides for "reconstruction" of road crossings to provide for fish passage should replace Draft Forest Plan MA 10-34 which does not. The need to provide passage at "historic" fish bearing streams should be included.

82 256

Response: Standard and Guideline MA10-46 in the Riparian Reserves Management Area states "Provide and maintain fish passage at all road crossings of existing and potential fish-bearing streams."

Comment 17: SAT report RF-4 which calls for an inventory to evaluate culverts and stream crossings should replace Draft Forest Plan MA 10-33 which provides an excuse not to upgrade: "show through analysis that a lesser failure would result in less habitat damage than the larger structure with less risk of a failure." Stream crossings should accommodate 100-year floods. Replace Draft Forest Plan MA 10-34 with SAT Report RF-5.

54 82 256

Response: Standard and Guideline MA10-44 in the Riparian Reserves Management Area requires new structures to be constructed and existing ones "determined to pose a substantial risk to riparian conditions" to be "improved to accommodate at least the 100-year flood, including associated bedload and debris." The statement quoted in the comment (intended to require an analysis to determine the scope of the problem, not as an excuse to avoid fixing it as it appears when quoted out of context) is not included in the Final Forest Plan. Standard and Guideline MA10-42, like SAT RF-5, calls for "minimizing disruption of natural hydrologic flow paths" for existing and planned roads.

Comment 18: Replace Draft Forest Plan MA 10-37 and MA 10-38 with SAT RF-3.

82 256

Response: The intent of SAT RF-3 is met by Forest-wide Standard and Guideline 20-1. All roads would be reviewed in the ecosystem analysis process at the landscape/watershed level, not just those in RRs. The Road Management Objectives for those in RRs would include Aquatic Conservation Strategy objectives. Non-system roads that were not needed and roads not meeting objectives would be obliterated pending funding availability. Draft Standard MA 10-37 has been retained in the Final as MA10-50. MA10-38 from the Draft Forest Plan was reworded as MA10-51 in the Final Forest Plan. These standards were retained as they provide direction on what to do with closed roads, restored roads and temporary roads.

Comment 19: Replace Draft Forest Plan MA 10-31 with SAT report RF-1.

256

Response: Standard and Guideline MA10-42 in the Riparian Reserves Management Area requires that existing and planned roads meet Aquatic Conservation Strategy objectives by minimizing road and landing locations in RRs, completing watershed analyses prior to construction of roads or landings, preparing road design criteria, minimizing disruption of natural hydrologic flow paths and several other items.

Comment 20: Draft Forest Plan standard MA 10-41 should be modified to restrict "hazard" tree removal if those trees are needed for shade or slope stability.

82 256

Response: A roadside tree is labeled a "hazard" and felled if is determined that it poses a threat to human safety. The standard provides that the down trees could be removed only if CWD requirements are met. A down tree would not provide much shade, but could be very valuable for slope stabilization. If it was determined that down trees in RRs met any Aquatic Conservation Strategy objectives, they would be left. Consistency with management objectives does not have to be repeated in each standard and guideline.

Comment 21: The Forest Plan RMZ for inner gorge slopes should include an additional 200-300 foot no-cut, no-road buffer zone above the slope break to reduce ground water and surface flow impacts and

maintain vegetative stability. Logging and road construction activities should be avoided on any terrain adjacent to and above inner gorge slopes that shows signs of deep-seated mass failure.

82 256

Response: The Preferred Alternative has been modified in the Final Forest Plan and EIS to include all unstable and potentially unstable land in RRs. The determination of which areas this includes is difficult and can only be done on the ground with a site analysis. Requiring an additional 200-300 foot buffer around all inner gorges would be excessive.

Comment 22: The Desired Future Condition for Management Area 10 should not include small local hatcheries. The trend is toward decreasing hatchery emphasis.

72

Response: This is true and the sentence has been removed in the Final.

Comment 23: The word "extremely" should be dropped to provide for inclusion of high risk landslide areas as part of riparian areas.

256

Response: The Preferred Alternative has been modified in the Final Forest Plan and EIS to include unstable and potentially unstable land in RRs. The actual delineations of these areas would occur at the landscape/watershed and site levels.

Comment 24: Riparian buffers in the Draft Forest Plan may not adequately protect riparian-dependent lichen species and maintain microsite conditions. Two or three site-potential tree heights should be used in determining the greatest distance for buffers adjacent to wetlands, ponds, springs, bogs, fens, seeps, etc. Also, there is a concern whether the headwater areas would be protected.

79 82 188 256

Response: The standards and guidelines proposed in the Final Forest Plan plus the other elements of the ecosystem approach should be adequate for all the concerns listed. The standards have been modified in the Final; refer to responses to Riparian Management Comments 1, 2 and 3. The provisions for intermittent streams, ephemeral streams and small wetlands should take care of headwater areas. These provisions plus the Forest-wide Survey and Manage standard and guideline under Biological Diversity in Chapter 4 of the Final Forest Plan should provide for lichens and microsite conditions. With these provisions and the Aquatic Conservation Strategy providing for the health of entire watersheds, an interim minimum buffer of 1 site-potential tree for wetlands and of 2 site-potential trees for lakes and natural ponds is believed to be sufficient.

Comment 25: In Chapter 4 of the Draft Forest Plan, MA 10-9 and MA 10-14 appear to both apply to trails, new or existing, while MA 10-9 clearly is referring to OHV routes. All user groups should be treated in the same fashion.

255

Response: In the Final Forest Plan, the Preferred Alternative has been modified. The 2 standards and guidelines referred to in the comment have been replaced by MA10-22, a more general one that states in part: "New recreational facilities within RRs, including trails and dispersed sites, should be designed to not prevent meeting Aquatic Conservation Strategy objectives."

Comment 26: The Forest Plan should prohibit sanitation facilities within 100 feet of a water source.

255

Response: This is provided for in the Aquatic Conservation Strategy objective on page 4-6 that states "Maintain and restore water quality." Several standards and guidelines in the Riparian Reserves Management Area also cover it. MA10-25 requires that "Recreation facilities within the 100-year flood plain shall be guided by Executive Order 11990 and 11988 (Floodplain Management)..." MA10-36 states: "Prohibit solid and sanitary waste facilities in RRs."

Comment 27: As livestock forage is dependent upon some sort of water sources to sustain vegetation, grazing should not be prohibited in riparian areas. Are such radical strategies as the total exclusion of grazing near water and wetlands in proportion to the contribution of the impact of grazing to the overall problem of low fish counts? Are the costs environmentally and economically justifiable?

281

Response: There is no proposal for total exclusion of grazing from riparian areas in any alternative. However, Standard and Guideline MA10-73 in the Riparian Reserves Management Area in the Preferred Alternative requires that the Aquatic Conservation Strategy objectives be met or that grazing practices be eliminated or adjusted. In all alternatives, if site specific analysis finds that grazing needs to be adjusted or prohibited in certain areas, all adjustments would conform to the procedures set out in existing laws. Any exclusions would be justified by the need to avoid listing at-risk or Sensitive species as T&E which would likely cost less environmentally and economically in the long run than waiting to fix the problem after those species populations had declined to the point where they needed listing.

Comment 28: The Draft EIS fails to analyze the impacts of failure to designate or prescribe for riparian

management in accordance with FEMAT, the SAT Report and PACFISH.

283

Response: The purpose of an EIS is to compare alternatives and estimate the effects of those alternatives on the environment. It is not to estimate how the effects would compare with the estimates that were developed for other reports.

Comment 29: The EIS should discuss the methods which will be used to assess the cumulative impacts of its own and non-Federal activities on riparian habitat.

282

Response: The purpose of the Forest Plan is to provide guidance at a Forest-wide scale on how NFS land should be managed. A number of methods to assess cumulative effects may be appropriate depending on the scope of the proposed action at the project scale. Also, new methods of analysis are continually being developed. It does not seem prudent to prescribe a single method of analysis and try to make it fit all cases. The most current and appropriate method would be determined at the time of each site-specific analysis.

Comment 30: The Forest Plan should not assume that human recreation and specifically motorized recreation activities are incompatible with riparian areas. There is also a biased attitude in the comment that "riparian areas are also the focus of water-related recreation such as fishing, hunting, camping and hiking." Motorized recreation users enjoy the availability of the recreational attributes of this area as much as any other user group.

255

Response: There is no assumption of incompatibility. Recreational uses and roads would be permitted in the RRs; however, these uses must be consistent with Aquatic Conservation Strategy objectives. The quote was not intended to be biased nor to exclude motorized use. The uses were given as examples and not intended to be all inclusive. The standards and guidelines do not exclude motorized recreation as long as it is compatible with the objectives of the area, just like all other uses.

Comment 31: The prohibition on permanent structures or residential occupancy associated with mining within riparian areas in the Preferred Alternative could amount to a taking under the Fifth Amendment. Each case should be analyzed and determined. Pre-existing, valid existing rights should be included here, too.

230

Response: This standard and guideline has been reworded to allow some exceptions in the Final Forest Plan. Not allowing new structures or requiring existing structures to be relocated would not constitute a take as no private property rights have been lost or devalued. It is standard operating procedure to review each mining proposal on an individual basis and determine which activities are necessary and appropriate. Any valid existing rights protected under law would be maintained.

Comment 32: The effects of livestock grazing on wetland native plant communities and other riparian resources is not well developed in the Riparian Management section in Chapter 3. The mention of Dr. Menke's findings of increased plant species richness on grazed wet meadows in the Marble Mountains without a more complete discussion gives the false impression that riparian areas generally benefit from livestock grazing. A more accurate assessment of how riparian areas respond to grazing or no grazing is already listed in Table 2-16 and in Chapter 4, Range Management section.

198

Response: The reference to Dr. Menke's study has been moved to Chapter 3, Range Management where a more balanced discussion of the effects of grazing is located.

Comment 33: Chapter 3, Riparian Management, Riparian-dependent Resources should include native plant species and communities with the other primary riparian-dependent resources listed in the second paragraph.

198

Response: This has been added in the Final EIS.

Comment 34: The Riparian Management Area goals and desired future condition should not include "desirable non-native plants." Non-native plant and animal species whether introduced purposefully or not, are a primary threat to rangeland ecosystems.

198

Response: Desirable non-native species have a role in forest management. In some cases, it is difficult to determine whether some plant and animal species are native or were introduced.

Comment 35: Seasonally moist wetlands should be included in Management Area 10.

198

Response: In the Final Forest Plan, the documentation has been improved to include "seasonally saturated soil" in the definitions of wetlands in MA 10.

Comment 36: The Draft Forest Plan does not specify how complex combinations of wetlands and stream channels will be protected as integrated wholes.

82

Response: The Preferred Alternative has been modified to include intermittent streams, wetlands less than an acre and unstable land in RRs. The description

of the Aquatic Conservation Strategy, included in Chapter 4 of the Final Forest Plan, shows that the intent for management is an ecosystem approach.

Comment 37: The guidelines for Management Areas 12 and 13 conflict with those of Management Area 10. Timber harvest is an example.

72

Response: The standards are not conflicting. Where management areas overlap, the most constraining standard for each resource takes precedence. For Scenic and Recreational WSRs, there would be no scheduled timber harvest within RR, but harvest would be scheduled for the area within the WSR corridor that is outside the RR.

Comment 38: Add after first sentence in Draft Forest Plan MA 10-38: "These areas should be configured for long-term drainage and stability."

72

Response: This has been added and is now MA10-51 in the Final Forest Plan.

Comment 39: In Draft Forest Plan MA 10-29, add "and settling ponds" after the words "waste dumps."

72

Response: In the Final Forest Plan, this standard has been replaced by MA10-36 which has more inclusive language: "Prohibit solid and sanitary waste facilities in RRs." MA10-36 also specifies the conditions under which exceptions would be allowed.

Comment 40: Insert the word "healthy" between "maintain" and "riparian" in the middle of the first line of Draft Forest Plan MA 10-18

72

Response: This standard has been replaced. The new wording in MA10-28 in the Final Forest Plan includes "maintain or restore riparian resources."

Comment 41: Add to end of first sentence in Draft Forest Plan MA 10-7 "...or during periods of migration, spawning or egg incubation of anadromous fish."

72

Response: This standard has been modified to include the suggested phrase and is now MA10-20 in the Final Forest Plan.

Comment 42: Add to Draft Forest Plan MA 10-6 the sentence:"Future watershed and stream habitat improvement projects should increase the amount of area meeting these criteria."

72

Response: While this statement may be true, it is not a standard and guideline. It provides rationale rather than direction, so was not added.

Comment 43: Draft Forest Plan MA 10-1 should require riparian resource objectives to be met rather than addressed.

72

Response: The wording has been modified as suggested and is now MA10-4 in the Final Forest Plan.

Sensitive Plant Species Comments

Comment 1: The impacts of the Forest's grazing program on Sensitive plants and on natural communities should be evaluated and the results disclosed.

44 128

Response: A discussion of the effects of grazing has been added to Chapter 4 of the EIS under Sensitive Plant Species. Where Sensitive plants are known to occur within grazing allotments, the potential effects are disclosed and possible mitigation measures are discussed. Additional analysis is contained in the Forest-wide Biological Evaluation of all grazing allotments completed in August of 1994, which is incorporated by reference into the Final EIS. The analysis indicates that for Sensitive plant species, some individuals might be affected but grazing as proposed would not lead to Federal listing as T&E for any species.

Comment 2: Conservation strategies for Sensitive plant species and their communities should be developed and adopted pursuant to appropriate environmental review, prior to any resource extraction, recreation development, or other ground disturbing management activities in Sensitive plant habitat.

283

Response: NEPA requires environmental analysis be completed for projects prior to the implementation of site disturbing activities. This is part of Forest Plan implementation. Refer to Ecosystem Approach to Management in Chapter 4 of the Forest Plan. The standards and guidelines in all alternatives would provide for survey and protection of Sensitive species in project planning.

Comment 3: The Draft Forest Plan standards and guidelines for Sensitive plant species do not contain the specific guidance and timelines that will ensure the maintenance of Sensitive plant species populations and habitat.

256

Response: The management guides that would be developed for each listed Sensitive plant species in all alternatives would contain this level of detail. Individual Sensitive plant species have different habitat and management needs, requiring site specific assessments in most cases. In the interim, standards and guidelines in all alternatives would mandate protecting known populations and surveying for new populations.

Individual species management guides would be prioritized by management sensitivity and available funding.

Comment 4: The Forest Plan should require that all conservation strategies or species guides will be developed for all Sensitive plants during this planning cycle. Habitat guides rather than single species guides should be prepared for associations of co-occurring species in the same habitat. They should be produced on a schedule of at least 2 per year. Species should be prioritized for conservation strategy development based on vulnerability to damage by management.

256

Response: Forest-wide Standard and Guideline 7-1 requires the preparation of management guides for Sensitive plant species. Flexibility is left so guides can address multiple species if appropriate. A timeframe is not identified as preparation of these guides depends on attaining funding, which is allocated by Congress and outside the scope of the Forest Plan. Prioritization of species by sensitivity to management has already been done. Completion of species management guides would occur as budgets allow.

Comment 5: There is nothing in the Draft Forest Plan to guarantee that currently unknown sensitive populations will be protected during project implementation.

256

Response: In the Final Forest Plan, Forest-wide Standard and Guideline 6-8 requires project areas to be surveyed for the presence of all Sensitive species prior to project activities. Standards 7-1 and 7-4 provide for the protection of Sensitive plant populations.

Comment 6: While specific standard and guideline language states that management activities may be used to enhance habitat for disturbance-requiring species (standard and guideline 7-3), there is nothing to show that Sensitive species habitat will be protected from disturbance if undisturbed conditions are required by the species.

256

Response: Standard 7-3 states that the natural ecological processes that created the species habitat will be used in managing the habitat. While no species is totally isolated from disturbance, the management of the forest would provide the degree of protection necessary to achieve desirable habitat conditions. Standard 7-4 further states that disturbances should be avoided during critical periods of plant growth. If all periods are critical they would all be avoided. Standard 7-1 states that habitats should be enhanced to maintain reproducing, self-sustaining populations.

Comment 7: The monitoring plan is much too vague. No monitoring or reporting frequency is given. It does not specify the number or type of projects to be monitored each year. The variation from standard that would trigger action is also vague. A "significant" change in habitat condition is not defined.

256

Response: The combination of factors that influence individual Sensitive species and populations is too complex to put into tabular format. The characteristics of each species would be considered when developing species specific guidance. Forest-wide standard 7-1 requires that management guides be developed first for species with higher risk. Any required monitoring for individual species would be identified in the management guides.

Comment 8: For botanical resources in general, the biological diversity standards and guidelines include some good protection, particularly in their specific recognition and promotion of native plant communities. However, some additions and clarifications will provide more comprehensive protection for the Forest's botanical resources.

256

Response: The specific responses to the proposed additions to standards and guidelines are discussed in the following comment responses. The general character of the suggested standards and guidelines are recommendations as to the types of tools that should be used to protect Sensitive plants. There are two general problems with defining tools in a forest plan. First is the lack of ability to keep pace with technology improvements, such as remote sensing that can locate habitats or the likelihood of habitats on broad scale surveys. Secondly, protection requirements should be site specific; what works in one situation may not be best for all habitats and conditions. The guidance in the Forest Plan focuses on an ecologic approach that leaves the choice of tools selected for the conservation of species to project analysis and the development of species management guides.

Comment 9: Add the following standard and guideline for Sensitive plants: Analysis of the probable effects of all projects on Sensitive and endemic plants and plant communities and their known or potential habitat will be part of the environmental analysis process.

256

Response: Forest-wide Standards and Guidelines 6-14, 7-2, 7-3, 7-4, 10-1 and 10-3 meet this intent.

Comment 10: Add the following standard and guideline for Sensitive plants: Consult the California Native Plant Society Inventory of Rare and Endangered Vascular Plants of California and California Department of Fish and Game (CDFG) Natural Diversity Database during project analysis for potential

Sensitive species and community locations, habitat types, and potential management conflicts.

256

Response: This has not been included as a standard and guideline. Refer to Response to Sensitive Plant Species Comment 8. However, the Region 5 Sensitive plant list is based largely on information from California Native Plant Society and its database. Information has been regularly exchanged for 15 years with the California Native Plant Society and with CDFG. The primary data in the California Native Plant Society database on Sensitive species on the Forest comes from Forest Service botanists. The latest information is collected for each Forest Service project from all available sources, but updating the Forest Service database is ongoing.

Comment 11: Add the following standard and guideline for Sensitive plants: Perform floristic surveys for all project planning areas and managed watersheds, irrespective of presence or absence of known Sensitive plant populations or habitat in the area, to ensure that unrecorded Sensitive populations and species are not lost by management.

256

Response: Forest-wide Standard and Guideline 6-8 provides for surveys for Sensitive species.

Comment 12: Add the following standard and guideline for Sensitive plants: Avoid activities which adversely impact Sensitive plant populations or communities.

256

Response: This is covered by Forest-wide Standards and Guidelines 7-2, 7-3 and 7-4.

Comment 13: Add the following standard and guideline for Sensitive plants: The Forest shall monitor the effects of past and current management and mitigation measures on Sensitive and endemic plants. Report status and trend of Sensitive plant populations and communities in managed areas every year. If monitoring shows a decline in viability within 2 years, a conservation strategy and/or management guide for the species and/or habitat will be developed and management adjusted within 1 year.

256

Response: The proposed standard was not added. The monitoring plan specifies that a 20% change in individuals or range would require further monitoring, management action to mitigate the effects of management or changes in management process. This would be done through monitoring populations in a variety of management regimes over time. Changes in populations, both increases and declines, are natural occurrences in an ever changing environment and are particularly common in habitats exposed to droughts, fire and other natural influences. A decline over 2 years doesn't necessarily indicate a need for change in Forest management.

Comment 14: The Draft EIS fails to perform an analysis from which the decision maker and public can determine the extent to which proposed Botanical Special Interest Areas (SIAs) and proposed RNAs are adequate to protect the botanical resources for which they were established.

283

Response: The intent in the Forest Plan is to recommend establishment of these areas to avoid irretrievable and irreversible effects. Further analysis would occur during establishment reports for RNAs and during development of implementation strategies for SIAs. Forest Plan identification is merely a single step in a fairly lengthy process.

Comment 15: Add the following standard and guideline for Sensitive plants: Conservation strategies should: a. Identify management activities which conflict with each species and its habitat, b. State which management activities are permitted and prohibited in the Sensitive species habitat and why, c. Record the habitat requirements, known populations and potential habitat for the species, d. Describe the current status and trend of the species, e. Describe appropriate mitigation measures, if available, for minimizing management impacts to the species, with advantages and disadvantages of each, f. Describe permitted responses to unplanned emergencies such as wildfire to reduce impacts on habitat, g. Be signed by Forest Supervisor, h. Be incorporated by reference into Forest Plan upon completion.

256

Response: The intent of the Forest is to prepare amendments to the Forest Plan for each of the species guides. This would be a NEPA document and would require the information you suggest. It would be a part of the Forest Plan, not a reference to it. These are signed by the Forest Supervisor or the Regional Forester as appropriate.

Comment 16: Add the following standard and guideline for Sensitive plants: In the interim while guides are in development, map, record and protect habitat for Sensitive and endemic plant species. Conservation strategy development should be a prerequisite to potentially harmful management activities in Sensitive plant habitat, such as mining, logging, OHV access, prescribed burning, recreation development, etc.

256

Response: Forest-wide Standards and Guidelines 6-8 and 7-1 through 7-4 provide for surveys and management that would maintain viable populations. The interim measures suggested are current management practices and would continue as a result of Forest Plan implementation. Analysis of the potential effects on

Sensitive plant species and their habitats is a prerequisite to all management activities whether or not a conservation strategy has been written.

Comment 17: Add the following standards and guidelines for Sensitive plants: Provide reports of new and existing Sensitive plant populations to the CDFG Natural Diversity Database and the California Native Plant Society Inventory annually. Coordinate Sensitive plant inventory and protection efforts with the CDFG, USFWS, The Nature Conservancy, California Native Plant Society and other concerned agencies and groups. The Forest's Sensitive plant species list should be reviewed and updated at least annually in coordination with the USFWS and other knowledgeable agencies, organizations, academics and individuals.

256 307

Response: This was not added as a standard. The Forest has been providing copies of all new Sensitive plant data to the CDFG database and California Native Plant Society for 15 years. The Sensitive plant list is developed at the Regional level in coordination with USFWS, CDFG and other concerned groups. Species management accommodates input from these and other partners whenever possible or desirable. These partnerships are expected to continue.

Comment 18: The Draft EIS takes a species approach to botanical resources - focusing only on plants on the "Sensitive" list. This single species approach is not consistent with ecosystem management. Sensitive plants should be analyzed as parts of communities and alternatives must analyze and display the extent to which alternatives will protect or sustain plant communities which include Sensitive plants, including prescribed fire, logging, and post-logging treatments. The Final EIS should also analyze the extent to which plant communities that include Sensitive plants need no-management buffers in order to maintain community integrity.

283

Response: The single species approach in the Sensitive Plants section is not the only approach in the document. Under Biological Diversity, the analysis discusses communities and their composition, structure and function for each alternative. Further, the Botanical SIAs and RNAs feature the management of communities. The need for buffers for Sensitive plant populations would be evaluated at the project level in all alternatives. This allows for consideration of site-specific conditions relating to soil, aspect and elevation as well as species requirements.

Comment 19: Add the following standards and guidelines for Sensitive plants: Every species noted in the field will be investigated to the extent necessary to ensure that it is not a Sensitive species (refer to Forest Service Handbook (FSH) 2609.25 Sec 1.11c.2).

256

Response: Forest Service Manual and Handbook requirements have not been repeated in the Forest Plan to avoid needless bulk. They are part of the direction for managing the Forest; refer to Figure 4-1 in the Forest Plan.

Comment 20: The goal for Botanical Resources should be to: "Practice the use of native species for all revegetation and erosion control project."

256

Response: Some circumstances make this impractical. First seed sources for native species may not be available. Secondly the source of the seed may be from a different gene pool that could dilute or eliminate existing native stocks. Thirdly native seeds such as grasses may preclude reforestation mandated by NFMA within 5 years of regeneration. Refer also to Region 5 Native Species Policy dated 6/94.

Comment 21: Add the following standards and guidelines for Sensitive plants: Use only local and native species in all revegetation projects including road obliteration, road cut stabilization, post-fire rehabilitation, post-harvest planting and management, and erosion control. If it is impossible to use native species for revegetation, use species that are not invasive, allelopathic or likely to significantly compete with natives for nutrients, water or space. The Forest Botanist and/or Ecologist should determine the varieties, planting or seeding rate and methods to be used in revegetation projects, particularly post-wildfire rehabilitation.

256 277

Response: Although native species would be emphasized, there are circumstances where non-native species may be appropriate. Forest-wide Standard and Guideline 6-11 covers this. Refer to response to Sensitive Plant Species Comment 20.

Comment 22: Add the following standards and guidelines for Sensitive plants: Species and methods for revegetation (seeding or planting density, planting techniques, etc.) projects will be selected by the Forest Botanist and/or Ecologist to ensure that they are native to the project area.

256

Response: The purpose of the Forest Plan is to provide programmatic direction. This type of "how to" detail is left to the project level.

Comment 23: Add the following standards and guidelines for Sensitive plants: Conduct all projects in accord with the biological diversity standards and guidelines.

256

Response: Forest-wide standards would apply to all projects. It would be redundant to state under each resource that projects must comply with all other forest goals and standards.

Comment 24: Add the following standards and guidelines for Sensitive plants: Avoid the use of post-wildfire seeding. Give preference to natural revegetation processes. Use seed-free mulch where necessary for erosion control or watershed protection.

256

Response: This is covered by Forest-wide Standards and Guidelines 6-1 and 6-14. Refer to response to Sensitive Plants Comment 8.

Comment 25: Add the following standards and guidelines for Sensitive plants: Defer grazing in burned areas for 3 years following wild or controlled fire in chaparral. Grazing in other burned areas will be allowed only when a team including the Forest Botanist and/or Ecologist determines that grazing will not accelerate erosion or adversely affect Sensitive species.

256

Response: Forest-wide Standard and Guideline 23-27 covers grazing after fires. It does not set timeframes as these can vary widely depending on site-specific conditions.

Comment 26: Add the following standards and guidelines for Sensitive plants: Monitor the effectiveness of all revegetation projects on soil cover, erosion rate, water quality, etc. Monitoring should compare planted or seeded areas to similar control areas undergoing natural revegetation. The Forest Botanist will design the monitoring protocol. Monitoring results will be reported annually.

256

Response: This is more appropriate for project level monitoring. The intent of the Forest Monitoring Plan is to determine if programs are meeting Forest Plan direction and if the programs are effective. Refer to Chapter 5 of the Forest Plan.

Comment 27: Consider adding the following to the standards and guidelines for Sensitive plants: Prescribed burning and fuels management NEPA analyses shall address long-term vegetative health and vigor, biological diversity needs, and the effects of thinning and of frequency and season of burning on soil productivity and on Sensitive and other native plant and animal communities in accordance with NFMA.

256

Response: This was not added as a standard. Part of this is covered by Forest-wide Standard and Guideline 6-14. However, actual issues to be addressed in any NEPA analysis are dependent on the proposed action and would be determined individually for each project.

Comment 28: Add the following standards and guidelines for Sensitive plants: Prescribed burning will be avoided during the early and peak active growing season.

256

Response: Forest-wide Standard and Guideline 7-4 in covers this.

Comment 29: Add the following standards and guidelines for Sensitive plants: Herbicides will only be used: a. when their use is consistent with the biological diversity standards and guidelines, b. when their use is essential to meet management goals that include maintenance and enhancement of native plant communities, such as eradication of non-native noxious weed populations, c. after all alternative methods have been considered with appropriate NEPA analysis. Season and technique of application will minimize non-target impacts. Narrow rather than broad spectrum compounds will be used. Watersheds and water bodies will be protected. Compounds will be applied only to the target species. Aerial spraying and other practices which impact non-target organisms will be avoided.

256

Response: Forest-wide Standards and Guidelines 21-54 and 21-55 cover when herbicides would be used. The NEPA process is the proper place to decide which herbicide and what application is best suited to meet the needs of a situation.

Comment 30: Add the following standards and guidelines for Sensitive plants: As an early part of all project planning develop and maintain a viable supply of local native plant materials (seeds or propagated material), including shrubs and grasses, for post-project revegetation and site rehabilitation. Maintain a bank of local seeds and cuttings from a range of ecosystems in each Forest to be used for revegetation. This should follow a similar protocol used for developing materials for post-timber harvest replanting.

256

Response: Forest-wide Standards and Guidelines 6-11 and 6-12 cover the use of native plants. Some project planning options may include the collection of seed and other plant materials. However, this decision is deferred to that level of planning as the strategic collection of materials would be difficult to maintain and very expensive to operate. The genetic studies which would be necessary to establish seed zones might be prohibitively expensive.

Comment 31: Add the following standard and guideline for Sensitive plants: Permits will be issued for the collection of all miscellaneous forest products, such as mushrooms and plants. Harvest strategies and implementation schedules will be developed for species subject to intensive harvest impacts. Monitor-

ing will track impacts to species and habitats subject to intensive harvest impacts.

256

Response: This has not been added. The need for permits, harvesting strategies and implementation schedules would be identified at the project level after a site analysis because circumstances and requirements would likely vary by species and by project proposal. The effects of harvesting special products and the need for monitoring would be identified in an analysis consistent with NEPA requirements. Refer to response to Sensitive Plants Comment 8.

Comment 32: The Forest Sensitive plant species list is incomplete. Please consider surveying to determine the occurrence of additional species and evaluating them as candidates. The California Native Plant Society would be happy to provide additional information on the species listed in our letter including habitat type, locations of populations, lowering period and management threats.

256

Response: This is outside the scope of the Forest Plan as listing is done at the Regional level. The Region 5 Sensitive plant list is being revised and will include evaluation of all of these species. Information from the California Native Plant Society is being used in the Regional process.

Comment 33: The Forest should consider adding plant Management Indicator Species (MIS).

256

Response: Plant MIS have not been identified in the Forest Plan, although it was considered. There has been much controversy over the value of MIS. Completion of the ecological inventory on the Forest should provide much useful information for determining plant associations and which plants would be the most sensitive indicators. This information should help in deciding if plant MIS would serve the intended purpose.

Comment 34: The tone of the segment on TE&S Plants is severely biased toward motorized user groups. This is shown in that the bulk of the discussion is centered on vehicles and vehicular access. Vehicular access does not in and of itself cause a problem, the use after the access may.

255

Response: There is no discussion of vehicles or vehicular access in either Chapter 3 or 4 of the EIS under Sensitive Plants, only a mention of road construction. The comment seems to be unfounded.

Comment 35: The Draft EIS fails to adequately acknowledge and define the botanical significance of the forest. It fails to perform or display an analysis from which the decision maker and public can determine the extent to which alternative will be effective in preserving the forest's botanical resources.

283

Response: The botanical significance of the Forest is discussed in Chapter 3 of the EIS. The alternatives are evaluated in Chapter 4 according to the risks associated with the proposed management strategy of each alternative. The analysis in Chapter 4 has been expanded to include the effects of grazing and fuel treatment.

Wildlife Comments

Comment 1: The California Wildlife Habitat Relationships (WHR) data base is mostly derived from anecdotal information, is in an early stage of development and must be revised before it can be used for wildlife management. The data needed are not easily obtained and require extensive and intensive field work. Explain the measures being taken to improve the WHR system. Specific steps to be taken include (a) Detailed inventory - research of distribution and habitat association of wildlife; (b) Determination of habitat needs of each species; (c) Experimentation to determine impacts of environmental perturbations on populations, reproductive success, survival rates.

45

Response: HCMs have been used to predict habitat quality and quantity for some time. HCMs also provide a means to show how a particular habitat parameter was used, and the level of availability of that parameter. They also provide a consistent and repeatable comparison of alternatives. The FSEIS, SAT and FEMAT reports have also provided further information on those species associated with late successional habitats. The HCMs were developed from the most current research available, and do need local validation. Some modifications were made based on local knowledge. This validation process will continue as Ecosystem Analysis is completed at the landscape/watershed level. Individual project implementation monitoring will provide additional information at the stand level. Pages 4-61 through 4-63 and Appendix I of the Final EIS discuss the capabilities of the HCM models to predict habitat quality and quantity. Chapter 5 discusses future monitoring efforts.

Experimentation to determine the effects of environmental perturbations on population parameters such as survival rates is not likely to be an effective means of monitoring habitat. After nearly a decade of intensive, expensive studies on northern spotted owls, this information is still not available for this single species. For the majority of species, available information will be limited to distribution, relative abundance and habitat association.

Comment 2: The use of HCMs as presented in the Draft EIS is not a biologically or legally adequate means of evaluating population viability for MIS and TE&S species on the forest. HCMs were never intended to and are not sufficient for analyzing population viability, because they: 1) overestimate habitat capability by failing to take into account the spatial configuration and landscape context of potential habitat, 2) erroneously assume potential habitat is always occupied, 3) provide results which are so general that evaluations are not ecologically meaningful, 4) have not been subject to error analysis or field verification, and 5) are being used in place of field-based population surveys (a direct violation of the MIS approach).

44

Response: The HCMs were not used to predict species viability. These models were used primarily to assure that suitable habitat was available across the Forest where it was ecological applicable, and that the quality of habitat would be sufficient to support breeding populations (high or moderate habitat capabilities). The HCMs also provided a consistent approach to analyze and compare how each of the alternatives would affect wildlife habitat. Where high or moderate habitat quality was predicted at the forest level, the maintenance of population habitat and distribution was assumed.

Species viability for late successional species was addressed at the regional level (northern spotted owl range) in the FSEIS which is incorporated by reference in the Final EIS; refer to page 4-40.

Diversity and its maintenance are discussed thoroughly; refer to pages 3-29 to 3-40 and to pages 4-38 to 4-35 in the Final EIS. It is assumed that maintenance of composition, structure and function of the ecosystem would provide adequately for maintaining the viability of local species.

Comment 3: The use of MIS has been seriously challenged by biologists in recent years. Alternatives such as the Verner guild approach should be considered. What are the advantages of aggregate wildlife planning? The use of MIS as described in the Forest Plan Monitoring Plan will probably not be sensitive enough to determine effectiveness of, or compliance with, standards and guidelines. Select additional species that are likely to be most sensitive to alterations in habitat associated with management actions. Describe how MIS monitoring is expected to function. Set target population levels (based on species population viability analysis) for each MIS species on the forest and outline a procedure and schedule for monitoring indicator species by field inventories and census studies. How can the Forest Service assess the impacts associated with habitat fragmentation, roads and many other factors that are known to influence populations of MIS (and those hundreds of additional species for which MIS are supposed to represent) if gross measures of habitat capability, not species population sizes and trends, are measured? Convenience of monitoring should not be allowed to dictate which species are selected as MIS.

44 45 72 281

Response: The concept of using certain organisms as 'indicators' of habitat quality is recognized as suffering from a number of theoretical and technical problems. However, use of this concept is mandated in NFMA as a part of the process of monitoring Forest Plan implementation. The application of ecological monitoring to forest ecosystems is a rapidly evolving science and no single integrated approach has been established

as credible. It is likely that a mixed approach, consisting of monitoring of certain 'species of interest' (TE&S, species with narrow habitat tolerances, etc.), habitat components (snags number and distribution, water quality, seral stage diversity) and guilds of species based on general habitat associations will be the most effective and technically feasible approach in the foreseeable future.

At the present time, there simply is insufficient information available regarding habitat associations, population dynamics and inventory/monitoring techniques for the vast majority of organisms occupying the Forest. Consider the tremendous expenditure of money and effort directed towards estimating 'viability' of a single, easily studied species, the northern spotted owl. It is unrealistic to believe that population viability analyses will be available for more than a fraction of the species on the Forest. Rather, basic information on occurrence, abundance and distribution relative to general habitats will be used and updated as research provides more detailed information. The Forest recognizes the complexity of monitoring and MIS, and also recognizes that information and technology will likely change and affect our monitoring program in the future.

The monitoring approach proposed in the Forest Plan would include a number of elements and not rely solely on MIS species; refer to Forest-wide Standards and Guidelines 8-21 and 9-8 in the Final Forest Plan.

Monitoring efforts would include the following:

1. Species and guilds of species with similar habitat (not niche) associations would be formally monitored. Some of these species, such as woodpeckers, indicate snag availability but also provide nesting and roosting sites for many other avian and mammalian species. Others (red breasted sapsucker) are considered to be "keystone species," providing important resources (sapwells) for certain insects, bats, hummingbirds and other birds. Undoubtably there are many additional species with important habitat relationships that the Forest could add to it's MIS list; it is likely that as more is learned about these species many would be incorporated into the monitoring program.
2. The Forest would continue to conduct point counts (Breeding Birds Survey Routes) for birds across all Ranger Districts. These counts provide an important source of monitoring data on a wide variety of habitats. These counts are supplemented by data from 3 MAPS stations (Monitoring Avian Productivity and Survival) that provide more detailed information on bird populations. Both of these efforts are designed to measure abundance and detect trends in birds populations. Population changes may then be traced back to habitat perturbations or other factors. This approach more closely resembles the Verner guild approach.
3. A number of 'special interest' species such as northern goshawk, northern spotted owl, Pacific fisher, black-tailed deer and Swainson's hawks would continue to be monitored by the Forest due to their status as T&E species or as important game species. Trends in population size or distribution of these species may be compared to trends in availability of a number of habitat elements or may lead to the monitoring of important prey species or plant community elements.
4. Individual habitat elements (down material, snags, talus) would be tracked.

In addition the Forest would utilize an ecological approach to help make wildlife predictions. Management of individual species has placed the Forest Service in a position where it continually lacks the information needed to make specific management decisions. The adoption of ecosystem management is changing the focus of management from individual species needs to maintaining ecological structure, composition and functions. Management of the ecosystem within an acceptable range of variability would provide for the greatest level of species viability. Management of this nature will also resolve some of the controversy over the habitat indicator debate.

The measures of habitat capability used in the EIS include the best available information about each species' habitat relationships at the forest level. This information provides a starting point. For most species, much remains to be learned about inventory techniques, population size and habitat associations.

Comment 4: Enhance wildlife breeding areas through immediate action.

104

Response: Pages 4-60 through 4-91 in the Final EIS address the need to maintain sustainable wildlife and fisheries habitat on the Forest. Sustainability would be one of the primary goals; refer to page 4-4 in the Final Forest Plan.

Comment 5: The wildlife analysis should use real, unbiased scientific data coupled with realistic and reasonable regulations that take into account the needs of the human species. The northern spotted owl is a most distressing case of the mis-use of the ESA. The severe restrictions in management area prescriptions for wildlife needs designed to destroy multiple-use recreation in favor of non-motorized recreation will create managerial and social problems. A broader vision must be applied to ESA that incorporates human recreation and facilities in all forms and for all use groups.

255

Response: The analyses in the EIS used the best data, literature, models and interpretations available. The criteria used were based on laws and regulations found in the Code of Federal Regulations. Forest Service management direction is designed to imple-

ment those laws. Management requirements were not designed to destroy multiple-use recreation. The alternatives provide for a range of recreational opportunities; refer to responses to Recreation Management Comments 9 and 10. Re-writing the ESA is the responsibility of Congress and outside the scope of this EIS.

Comment 6: The Draft EIS fails to analyze the impacts of existing and proposed road densities on wildlife resources. The existing road network and plans for further construction in the Preferred Alternative threaten the distribution and viability of many species, yet no attempt is made to assess the magnitude of impacts on species viability or to propose mitigation.

44

Response: A general discussion of the potential effects of roads on wildlife is provided on page 4-60 of the Final EIS. In additional, the effects of open road density on black bear and black tailed deer are discussed on pages 4-77 and 4-78 through 4-81. Although roads do result in the removal of vegetation which provides habitat; at a forest-wide level, this was not considered to be substantial relative to the acres of vegetation removed through projected harvesting. The primary effects of roads on wildlife considered in this analysis relate to the potential for harassment as a result of vehicle traffic and increased access to animals during hunting season. Thus, the effects of open road density (versus total road density) was assessed.

In the Preferred Alternative, the average open road density at the end of the fifth decade increases to 3.09 miles of open road per square mile on regulated land. This would fall within the low habitat capability range for the 2 wildlife species considered. Open road density, however, is only one of many factors which affects the quality of wildlife habitat. Forest-wide standards and guidelines would direct the management of open road densities to reduce the level of human interactions with wildlife species, especially during critical times of the year. Some areas such as Key Watersheds and LSRs would include standards and guidelines which further constrain road construction.

Comment 7: The comment about the joy of viewing wildlife should include the motorized recreation enthusiast.

255

Response: This has been added in the Final EIS.

Comment 8: The wildlife consequences state that OHVs driven off road into sensitive areas have the greatest potential for disturbance. These uses cannot have greater impacts to wildlife than poaching, camping in direct contact with water sources and even illegal fuelwood gathering. This is not possible when the majority of the land base where most species exist (riparian, wilderness, etc.) is off limits to vehicular access. An OHV's potential for impact is in illegal use. There are studies that show an increase in stress in many species because of the fact that a hiker appears as a predator to an animal.

255

Response: This discussion has been modified in the Final EIS.

Comment 9: The forest-wide goals and emphasis do not provide a realistic ecological direction. They focus on a few species in an unrealistic manner.

72

Response: Forest-wide goals relating to wildlife may appear to be biased towards a few species (TE&S, game, MIS) because legal mandates require that these species be addressed. The vast majority of species occurring on the Forest are included under Biological Diversity, which assumes relationships between plant community diversity and wildlife species diversity.

Comment 10: The Preferred Alternative anticipates a continuing trend of habitat and wildlife decline. Measures need to be presented that stem the decline and enhance species numbers and habitat.

45

Response: The Preferred Alternative predicts an increase in suitable habitat for most species; refer to pages 4-60 through 4-84 of the Final EIS. An increase in late-successional habitat is also predicted for all alternatives within the next 50 years; refer to pages 4-43 and 4-51 in the Final EIS.

Comment 11: Monitoring precision/reliability should be at a high level. If annual monitoring of a moderately reliability determines a 20% decline in a localized population of flycatchers, then it may be not be possible to implement timely management strategies that would increase or stabilize the population.

307

Response: The Monitoring Plan has been modified in the Final Forest Plan to remove this column as its meaning was unclear to most readers. Precision and reliability will be as high as possible given available funding and monitoring design.

Comment 12: The USFWS and the State need to cooperate in implementing and evaluating the effects of the 4(d) rule on the northern spotted owl and the ecosystem at large and on any future rule-making efforts to ensure adequate ecosystem assessment and monitoring.

259

Response: This is outside the scope of the Forest Plan. The USFWS has proposed changes to the 4(d) rule.

Comment 13: In violation of NFMA, the Forest Service has not conducted the necessary species inventories and collection of baseline data on wildlife such that informed evaluations of the current and proposed future conditions of the forest can be made. Presently there is a dearth of information on the current status, abundance, and distribution of species that have been classified as Sensitive and ESA candidates on the Forest. This is particularly true for plants, invertebrates, amphibians, reptiles and some interior forest species. For the Forest Service to proceed in haste with forest planning in the face of this inadequate data base and significant information gaps represents a degree of high biological risk that is not in the long-term public interest, and is contrary to the legal requirements on the agency to protect biological diversity.

44

Response: The Forest EIS was prepared as directed by the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA), as amended by NFMA. The steps used to prepare the Forest Plan and EIS are outlined on pages 1-2 and 1-3 of the Final EIS. Although not as detailed as some would prefer, the best available information was used to analyze the existing situation and predict impacts of various proposed management actions. The Forest has conducted inventories for many species including aquatic species, salamanders, northern spotted owls, furbearers, northern goshawks, grassland/sage-steppe species and marble murrelets. Intensive studies of goshawks, Swainson's hawks and spotted owls have resulted in published reports on habitat relationships and population dynamics on the Forest. This information has been added to reviews of available literature to provide the current knowledge base upon which the EIS is based. The Forest Plan would provide the flexibility to modify goals and management requirements if necessary as new information is obtained.

Additional analysis at the regional level on late-successional species in the FSEIS is incorporated by reference into the Final EIS. The Preferred Alternative incorporates the requirements of the ROD for the FSEIS which is based on extensive assessments of a large number of aquatic and late-successional species and the latest scientific information including the FEMAT report.

Delays in finalizing the Forest Plan to gather massive amounts of data seems to constitute the greater risk to biological resources as then the Forest would continue to be directed by the 1972 Multiple Use Plans.

Comment 14: Directives and sufficient funds to complete forest-wide flora and fauna inventories and monitoring projects should be issued before proceeding with development activities. Adjust management decision-making in the Final Forest Plan to reflect the habitat needs and protection requirements of Sensitive species that are present or potentially present on the forest.

44

Response: The Forest is directed to prepare and implement a Forest Plan by NFMA. Funds are appropriated by Congress and ear-marked for certain activities. In the past, developmental activities have generally been funded at a high level, while inventory and monitoring activities have been funded at a low level or not at all. The Final Forest Plan includes Forest-wide Standard and Guideline 6-17, a Survey and Manage requirement as well as a Monitoring Plan in Chapter 5. Wildlife standards and guidelines are designed to provide for wildlife needs, including Sensitive species. Refer to Chapters 4 and 5 of the Final Forest Plan.

Comment 15: The Forest Plan cannot legally rely upon the wildlife viability assessments conducted as part of the Clinton Forest Plan, which are on a much larger, regional scale. Population viability assessments must be conducted at the scale of the forest, and based on site-specific information on population sizes, trends, and habitat affinities specific to the Klamath region. Failure to do so is in direct violation of NFMA.

44

Response: The analyses in the FSEIS relating to wildlife viability of late-successional, "old growth" and aquatic species at the regional scale are incorporated by reference in the EIS. Additional analyses at the forest-wide level are included under Biological Diversity, Wildlife and Fisheries in Chapter 4 of the EIS. Further analyses will be conducted at the landscape/watershed and site levels prior to project implementation; refer to pages 4-10 and 4-11 of the Final Forest Plan. Refer also to response to Wildlife Comment 16.

Comment 16: Viability assessments based on professional judgment should be accompanied by at least crude population estimates for species such as marten and fisher that have low population densities and large ranges or small total population sizes.

237

Response: Crude estimates of population size and potential viability were provided in the Draft EIS. These estimates were based on overall availability of suitable habitat and did not reflect spatial relationships such as territory spacing, fragmentation and connectivity. They have not been included in the Final EIS, because the population estimates were so speculative. Population estimates for species with large ranges are better addressed at the regional scale as was done in the FSEIS which is tiered to by the EIS. For many species methodologies do not exist to estimate population sizes. Such estimations will require a long-term approach best conducted within the framework of the Monitoring Plan.

Comment 17: All northern spotted owls should be included in a National Critical Habitat Preservation System.

9

Response: The Preferred Alternative would establish LSRs which would provide for northern spotted owls and other late-successional species. The other alternatives propose HCAs, except for G(SOHA) which proposes a SOHA network. Refer to Wildlife, Chapter 4, EIS. However, all alternatives would call for management and conservation, rather than for preservation.

Comment 18: Goosenest is an area of special concern for connectivity of northern spotted owl habitat. The Interagency Scientific Committee (ISC) identified the spotted owl population east of Interstate Highway 5 as being in danger of becoming reproductively isolated from other populations. Thus proper management of this area, including maintenance of spotted owl habitat linkage, is a priority which has not been addressed by the delayed management of the AMA scheme.

154

Response: Of the 12 reproductive pairs of northern spotted owls located on the Goosenest Ranger District, 10 are located within a large LSR. Pairs located within the AMA occupy higher-elevation true fir habitats that appear to be marginal for long-term reproductive success. An intensive marking study in the area reveals low occupancy and reproductive success in the AMA portion of the District. Thus far no movements of owls between the LSR and the area east of Highway 97 have been detected. Management of appropriate habitats and connectivity of owl habitat will be an important component of the AMA Plan.

Comment 19: The Draft EIS fails to evaluate compliance with ESA, relying instead on the ISC report which is now superseded by the FEMAT report. The Draft EIS suffers from the failures of the FEMAT report to consider compliance with the ESA.

154 266

Response: Any alternative selected for implementation would be brought into compliance with the ESA. All alternatives would be consistent with existing T&E species recovery plans and would be amended to include other recovery plans as they are finalized; refer to page 2-10 in the Final EIS. Provisions of the ROD for the FSEIS are incorporated in the Final Forest Plan. The ROD for the FSEIS provides programmatic direction on the management of late-successional and aquatic species, including T&E species. Appendix G of the FSEIS (which was not substantially modified from the draft) includes the Biological Opinion from the USFWS finding that the FSEIS does in fact provide a reasonable approach to the protection and recovery of T&E species associated with late successional forests. A Biological Evaluation will be submitted to the USFWS on the Forest Plan. This evaluation will incorporate the Biological Opinion on the ROD for the FSEIS by reference.

Comment 20: Keep all Sensitive species (salmon, murrelet, spotted owl, etc.) in the forefront of future planning with a maximum rather than minimum survival standard.

147

Response: It is impossible to maximize survival of species that have conflicting needs. For example the northern spotted owl and the northern goshawk prefer different foraging habitat and prey. They do require similar nesting habitats. The best to be hoped for is a balance considering all species needs.

Comment 21: Draft Forest Plan Management Area Standard and Guideline 6-4 should exclude rather than discourage livestock because the management area is so small.

72

Response: Excluding livestock through fences or other measures would be expensive and difficult as population locations are likely to change over time. In the Final Forest Plan, the Siskiyou Mariposa Lily has been moved to MA5, Special Habitat; refer to pages 4-111 and 4-112 in the Final Forest Plan.

Comment 22: All critical habitat for spotted owls, wolverines, pine martens, fishers, etc. should be retained.

270 273

Response: Critical Habitat is designated by the USFWS for T&E species; the Forest Service is required by law to protect critical habitat for these species. Marten, fisher and wolverine are not protected under the ESA and do not have Critical Habitat designated for them. Critical Habitat for northern spotted owls is largely contained within LSRs and HCAs. Any alternative selected for implementation would protect Critical Habitat consistent with USFWS recovery plans as stated on pages 2-10 and 2-11 of the Draft EIS. Marten, fisher and other late-successional species habitat would be provided for by the land allocations in the various alternatives.

Comment 23: The monitoring plan for bald eagle and Peregrine falcon identifies annual monitoring and reporting frequency. Annual monitoring plans should include several visits to the nest site to determine occupancy or nesting attempts early in the season as well as the reproductive success later in the season.

307

Response: Current protocols for monitoring bald eagle and peregrine falcon nest sites specify timing, duration and frequency of monitoring visits. The Forest and contract personnel follow these protocols and will continue to do so. The details of these protocols are

not specified in the Forest Plan to allow flexibility if protocols change in the future as new information is obtained. Early visits may not be the best method for some species that are highly susceptible to disturbance during courtship, nest-building and incubation, and weather/snow conditions may not permit access to some sites early in the season. A balance must be achieved between the value of early-season nest success data and the potential costs of disturbance.

Comment 24: The Forest should develop specific management objectives (protection zones, the number of territories that will be managed, monitoring goals, etc.) for bald eagles and peregrine falcons. These specific management criteria could be included in the HCMs in the Forest Plan. The notion to use the Recovery Plans for guidance to manage the 2 species is laudable. Unfortunately, the Recovery Plan for peregrine falcons is not specific on habitat management and only talks in broad generalizations with regard to peregrine falcon management. The Recovery Plan was not designed to be used as a guide for habitat management, and it's interpretation would be subject to biases, political intent and peregrine falcon field experience of the user. A definition of peregrine falcon foraging habitat should be included.

306 307

Response: Specific management criteria are difficult to determine for habitat generalists such as peregrine falcons and bald eagles. Both of these species nest and forage in a wide range of habitat types and conditions, and many important components of their habitat (water bodies, large cliffs) are not typically managed by Forest Service activities. Peregrine falcons forage over most habitats on the forest, specific descriptions are not useful in this context. The HCMs in the EIS provide descriptions of conditions at existing territories, and give a range of important attributes to be considered at the local project level. The Forest Plan is specific with regards to numbers of territories to be managed and monitored; refer to page 3-49 in the Final EIS and to pages 4-107 and 4-109 in the Final Forest Plan. All newly discovered territories would also be protected; refer to Forest-wide Standards and Guideline 8-8 and 8-10.

Comment 25: *The Recovery Plan for the Northern Spotted Owl - DRAFT*, April, 1992, should be finalized and published as a final document. Isn't one of the goals of Forest Service planning to provide for the recovery T&E species? Will Option 9 plus the 4(d) rule provide for recovery? Won't the Recovery Plan still be needed?

283

Response: Preparation of recovery plans for species listed as T&E by the USFWS are the responsibility of the USFWS and are outside the scope of the Forest Plan. It is the responsibility of the Forest Service to manage the habitat of listed species consistent with those recovery plans. The ESA specifically requires the USFWS to prepare a recovery plan for every listed species. A final Recovery Plan for the Northern Spotted Owl will be prepared. Based on the analysis in Appendix G of the FSEIS, there is a high likelihood of recovery for the Northern Spotted Owl.

Comment 26: Most of the basic information regarding peregrine falcons within the EIS needs fine-tuning. e.g. 1) gulls, cedar waxwings and flickers are also important food items for the peregrine falcons on the Forest, 2) sensitive time periods for breeding extend through August at several Forest nest sites 3) the Peregrine Falcon Recovery Plan offers no direction, but provides recommendations, 4) nest failure rates on the Forest are mostly due to eggshell thinning induced by DDE (a metabolite of DDT) with additive mortalities caused by embryotoxicity, 5) nest ledge enhancement have occurred on 14 ledges at 11 sites on the Forest, and 6) at least one potential peregrine falcon nest site per Ranger District have been identified for monitoring, though few have been examined in recent years.

306

Response: 1) Peregrine falcons prey on a wide variety of avian species, the species taken frequently vary annually and among territories. Territory location and habituation of individual falcons often results in apparent 'specialization' on some prey species. The list of prey species provided in the EIS is intended to portray some typical species in the common size classes ... many additional species are possible. 2) Breeding peregrine falcons are most sensitive during the early phases of reproduction (courtship, incubation, brooding), and are not apt to fail after the nestlings are old enough to thermoregulate. Failure during late nestling/early fledging is rare and is typically associated with direct intrusion to the eyrie ledge by climbers. On the Forest, most young peregrine falcons are fully fledged by mid-to late July, very few remain on the eyrie ledge as late as August. The dates given in the EIS are intended to show typical breeding chronologies. Any activities occurring near active peregrine nest sites would be regulated according to the actual reproductive chronology at that site, not the forest-wide average. 3) The Pacific Coast Recovery Plan provides general management factors to be considered at the forest level; more specific management would be developed at the site level. The wide variety of habitats occupied by breeding peregrine falcons (low-elevation riverine cliffs, rock quarries, skyscrapers, bridges, high-elevation wilderness) means that no single management scheme will be widely appropriate. 4) DDT is the ultimate source of DDE ingested by peregrine falcons. It is more correct to attribute the effects of this compound to DDE. "Other poisonous compounds" is intended to represent the list of present and future environmental contaminants expected to be active in food chains in the Pacific Northwest. It has been changed to "environmental contaminants in the Final EIS. 5) Nest ledge enhance-

ments in the form of addition of gravel to bare rock ledges and creation of larger ledge surfaces has been the primary management tool used to improve peregrine habitat on the Forest. 6) Past experience in northwest California has demonstrated that colonization of 'new' nest sites often occurs at unexpected locations (smaller cliffs, near urban areas. etc). The Forest annually surveys a number of potential cliff sites, rather than concentrating on a small subset of preselected cliffs.

Comment 27: Please give the specific literature citation for snag levels necessary to support high quality peregrine falcon habitat. To my knowledge, this level of specificity regarding peregrine falcons and snags has not been accomplished in theory or in practice. Thus, the reference by the Draft Forest Plan that snag levels above a certain threshold could be removed is nebulous at best, in addition to being insupportable scientifically.

306

Response: Snags are important to peregrine falcons for a number of reasons. Peregrine falcons frequently use tall emergent snags or dead-topped live trees as loafing perches and launch sites for prey capture attempts. Some prey species, particularly band-tailed pigeons and northern flickers, are most vulnerable to predation by falcons as they fly to and from perches on tall snags. Several prey species depend on snags as nest sites or foraging sites, and their population levels are likely affected by availability of snags. On the other hand, there are no data that demonstrate upper or lower limits to snag needs by peregrine falcons; the numbers given in the Forest Plan reflect a combination of 1) snag needs of primary peregrine prey species at high population levels, and 2) best professional judgement of snag numbers needed as foraging perches. Above a certain level, the costs in terms of fire hazard begin to outweigh the postulated benefits of high numbers of snags to peregrine falcons.

Comment 28: Contrary to what is listed within the Draft Forest Plan, there may be instances where the maintenance of developed recreation sites may not be prudent and could induce "take." More flexibility is necessary to close or limit recreation areas should the need arise.

306

Response: All proposed activities, including recreational developments are analyzed for possible impact to TE&S species. Where the proposed activity has the potential to adversely affect listed species, the project is generally modified to minimize or eliminate the adverse affect. In rare cases the impacts cannot be mitigated, and the document is forwarded to the USFWS who is responsible for overseeing the management and recovery of listed species. If implementation of the project will not adversely affect the continued existence of any listed species, the USFWS will allow the project to continue. In cases where they feel the project could jeopardize the existence of a species, implementation of the project will be denied.

The flexibility to modify activities relating to maintenance or expansion of recreation facilities exists within the section 7 requirements of the ESA. The effects of 'new' activities on T&E species would be documented during the consultation process. Any new construction, development or maintenance activities with the potential to disturb T&E species would be planned accordingly, including seasonal limitations and project mitigation. Existing recreational facilities have not been demonstrated to have a negative effect on T&E species, and incorporation of guidelines specifying procedures for limiting existing facilities do not appear necessary.

Comment 29: A study of the effects of OHV use on black-tailed deer undertaken at the Hollister Hills State Vehicular Recreation Area should be reviewed and incorporated into the discussion.

255

Response: The study was reviewed and the information was helpful in revisiting various conclusions.

Comment 30: Monitoring the success of each peregrine falcon nest site annually will be difficult at best because most nest sites fail. Simply monitoring nesting success will not provide adequate or scientifically sound information to assist resource management and will not have any long-term validity for scientific significance. The Forest should use qualified and experienced biologists to monitor the occupancy, reproductive success and potential fledging of young from each nest site, at the very least.

306

Response: In avian monitoring the term 'success' is used to describe whether or not a nest attempt produces any fledged young. In reality, the important measure here is whether there are adult falcons available for recruitment into the adult breeding population. Measuring success, counting young, or counting fledglings provides only a fraction of the information needed to estimate population performance. The primary cause of the decline of peregrine falcon populations was, and continues to be, environmental contaminants such as DDE. This factor is largely outside the planning process. Therefore, increasing the intensity of monitoring efforts is unlikely to provide data that would allow the Forest to refine management strategies for this species. Monitoring priorities are set by the Pacific States peregrine falcon working group, and with limited budgets must be balanced with the needs of other species.

Comment 31: The width of your designated "primary" protection areas should be variable due to the ecological needs of the peregrine falcons, not due to the local

vegetation and terrain. These latter factors can help in developing spatial boundaries, but should not be the main guiding forces to zones. Utilize local knowledge of the peregrine falcons past behavioral tendencies at nest sites to reduce and eliminate any potential for "take." This should be a high priority.

306

Response: The width of protection areas surrounding peregrine falcon nest sites are based on the only credible information available; terrain, local vegetation and special features such as riparian areas and water bodies; using best professional opinion on how those features may be used by falcons. Knowledge of falcon behavior would be included in this judgement. However, observations of falcon behavior are typically anecdotal and highly biased towards behaviors that are readily observed and habitats easily seen from eyrie observation points. Systematic collection and analysis of foraging locations using radio telemetry is the only scientifically accepted method of determining spatial habitat selection by far-ranging raptors such as falcons. In addition, high use areas tend to change with turnover of individual falcons at each site, and changes in prey populations. Habitat-disturbing activities proposed at the site level within peregrine falcon habitat would undergo consultation under the ESA, and more specific local information would be considered at that time.

Comment 32: The terms Nest/Roost Protection Area and Primary Protection Area are used in the Draft Forest Plan; Primary and Secondary nest protection zones in the Draft EIS; and Primary, Secondary and Tertiary nest protection zones in the final and draft management plans for several nest sites on the Forest. Consistent terms would be helpful. The terms used in the management plans are the more recently accepted format.

306

Response: The terms Primary, Secondary and Tertiary nest protection zones were used in management plans for several peregrine territories on the Forest, however these management plans have not been reviewed nor approved by species experts or the USFWS and remain as draft reports. The protection zones used in the Draft EIS, primary and secondary nest protection zones, are also used in the Final EIS and Forest Plan.

Comment 33: The management strategies for peregrine falcons and eagles should not be virtually identical.

306

Response: At the level of resolution considered in the Forest Plan, it is not unexpected that management strategies for bald eagles and peregrine falcons would appear very similar. Both species require a substantial buffer against disturbance at nest sites, and both species benefit from a larger area of enhanced foraging habitat and reduced disturbance. In addition, these species are similar in their tendency to forage in riparian areas, over water and in large openings. Specific management options tailored to nest site habitat, foraging habitat and prey base would be considered at lower levels of resolution such as territory management plans, ecosystem analysis at the landscape/watershed level and project planning.

Comment 34: The peregrine falcons on the Forest have the lowest productivity of all monitored subsets of peregrine falcons in the Pacific Northwest that have not been subject to recent manipulation. The levels of eggshell thinning are far beyond what might be considered an acceptable post-DDT level and have not increased significantly during the past 10 years.

306

Response: It is significant to note the low productivity of peregrine falcons in the Klamath Mountains Province, however it is also important to note that despite nearly a decade of high levels of eggshell thinning, no reduction in the known number of occupied peregrine territories has occurred on the Forest. It is not known whether 'new' eyries discovered in the past 5 years represent newly colonized sites or simply sites not previously surveyed.

Comment 35: Goals and emphasis for wildlife and wildlife habitat that deal with ecological conditions need to provide for early and mid-seral species as well as those species associated with "old growth" conditions. These goals should optimize biological diversity.

72

Response: In a healthy, functioning ecological system there will be various levels of early and late seral stages at any given time. The emphasis on late successional stages in Alternatives Preferred and C are based on the assumptions that the early seral stages would always be present due to the effects of fire, timber harvesting and natural catastrophes. There are also many mature and late seral stage species that are currently Federally listed as TE&S species, thus implying that this is the most limiting habitat type. More emphasis has been placed on these species in the Final Forest Plan.

Comment 36: The discourse of DDT should be removed. The term "probably" really has no place in a scientific discussion (Draft EIS, page 3-48).

255

Response: The word "probably" does not appear in the discussion on DDT on page 3-48 of the Draft EIS. The term "primarily" indicates that, although the relationship of DDE contamination, reduced eggshell thickness and reduced reproductive success is well-established, other factors such as predation and weather also affect reproductive output. Because environmental contaminants have been established as the primary agents responsible for declines in

peregrine populations (as well as osprey and bald eagle), the discussion in the EIS is pertinent and has been retained in the Final EIS.

Comment 37: The ESA should not restrict multiple-uses due to perceived sound (legal DBA levels are very low on OHVs) and disturbance issues (as if a vehicle is more disturbing than a walking person, who will constitute a predator threat to the bird) for peregrine falcons. Restrictions on new routes will be invoked and existing ones threatened with closure if a pair should decide to nest near one. Highways which transport non-motorized users will not be closed (seasonally or otherwise) or rerouted if this should occur but multiple-use vehicle routes will.

255

Response: The ESA speaks to the recovery and protection of Federally listed T&E and proposed species. Disturbance to T&E species is prohibited by the ESA and will be evaluated on a case-by-case basis in a Biological Assessment and in consultation with the USFWS. Any threat to the continued existence of a listed species or its habitat must first be approved by the USFWS. "Taking" of a species or its habitat is forbidden by law without the written permission of the USFWS. Thus if any activity proposed or permitted by the Forest Service, including the noise of an OHV, threatens a species, then the proposal must be modified, or forwarded to the USFWS for their review and recommendations. One of those recommendations may be that the project is canceled.

In many cases however, falcons occupy sites in proximity to major highways and system roads and appear to be habituated to the sight and sound of vehicular traffic. Restrictions are most likely to be used on new sources of disturbance (trails, recreational facilities, roads), which can best be routed away from the falcon nest site during the planning process.

Comment 38: Since the requirements of the FSM must be met under any alternative, the agency must develop general conservation strategies for Sensitive species and ensure that all alternatives being considered will "avoid or minimize" impacts to those species. Unfortunately, the management guidelines for many Sensitive species as presented in the Draft EIS are clearly insufficient in this regard, as they do not take into account most recent scientific information, are based on outdated model for single pair reserves, and only provide for minimum areas that are unlikely to meet the habitat needs for these species.

44

Response: Conservation assessments for each Sensitive species on the Forest would be prepared as funding becomes available in all alternatives. The best available information suitable for a forest-wide analysis was used. The management guidelines proposed are believed adequate to provide for species on the Forest and are based on scientific studies and local information. The Preferred Alternative would establish LSRs and RRs which are multi-species reserves and use an ecosystem approach which includes an Aquatic Conservation Strategy.

Comment 39: The Forest must ensure that all species meriting special classification and management as Sensitive are also classified. While interagency cooperation will be essential in this effort, the absence of species data in Natural Heritage and USFWS programs does not release the Forest Service from this responsibility.

44

Response: The Sensitive species designation is a Forest Service designation to give emphasis to management of an at-risk to prevent the need for that species to be listed. There are many species for which there is little scientific information available. The lack of information in itself, does not necessarily warrant a Sensitive listing. The best available information has been used in the analysis.

Comment 40: The amount of suitable habitat currently available for Sensitive species is not accurately determined. It is impossible to evaluate the impacts of proposed management alternatives on these species because they do not account for spatial distribution and habitat fragmentation.

44

Response: The habitat suitability and capability have been adequately determined for the scale of analysis at hand. Spatial distribution and habitat fragmentation were considered in interpreting the modeling results.

Comment 41: The Forest should conduct surveys for Federal category 2 candidate species to determine their status and distribution. Standards and guidelines should be developed for their protection.

307

Response: The category 2 species on the Forest are the willow flycatcher, loggerhead shrike and ferruginous hawk. These species should be detected by point count monitoring. Habitat conditions and trends have been reviewed with CDFG. The forces that place these species at risk in other parts of their range do not appear to provide acute or chronic impacts to their habitats on the Forest. Other species that could potentially exist on the Forest, but have not been detected during extensive inventories and surveys include the Sierra Nevada red fox, black tern, Cascade yellow frog, foothill yellow frog, and mountain yellow frog.

Comment 42: The standards and guidelines for maintenance of nest site integrity for willow flycatchers in the Forest Plan should include measures to improve habitat as well as elimination of actions that degrade nesting opportunities for this species.

307

Response: Forest-wide Standard and Guideline 8-18 in the Final Forest Plan includes direction to analyze habitat conditions at occupied sites. Based on those assessments, appropriate management techniques would be used to maintain or enhance habitat suitability.

Comment 43: The Siskiyou Mountain and Del Norte salamanders surely require more management consideration than "promote a moist microclimate with a closed, forested canopy." Additional standards that promote connectivity of salamander habitat to protect genetic diversity of disjunct populations are necessary to protect the species from potential listing and probable extirpation.

306

Response: These 2 salamanders and several others would also be covered by Forest-wide Standard and Guideline 6-17 in the Final Forest Plan which relates to surveying and managing these species.

Comment 44: The summer steelhead fishery in Dillon Creek may not receive adequate protection from logging and road building on the very steep and unstable slopes adjacent to the stream if furbearer migration corridors are put back into the matrix in the Forest Plan.

301

Response: The furbearer areas were always in the matrix in the Preferred Alternative; they were Regulation Class 3 in the Draft Forest Plan. However, the Preferred Alternative has been modified in the Final EIS and Forest Plan. There is no longer a land allocation for furbearers; the LSRs which increased in size from the Draft EIS are expected to adequately provide for furbearers. The Dillon drainage is primarily an LSR and also has a lot of unregulated (non-matrix) land due to harsh sites and incapable soils. It is also a Key Watershed and the Aquatic Conservation Strategy objectives are expected to provide adequate protection for summer steelhead.

Comment 45: Management Area 6 fails to include State-listed species, many of which are endemic to the Klamath Province. The management area prescription needs to be expanded to include species such as the Siskiyou Mountain salamander (*Plethodon stormi*) and Yreka phlox (*Phlox hirsuta*).

72

Response: The intent of Management Area 6 in the Draft Forest Plan was not to include all Sensitive species, but only those which needed a land allocation to provide for species viability. Many species can be adequately provided for by standards and guidelines. The management areas have been modified and renamed in the Final Forest Plan. Management Area 5 is now Special Habitat and includes the *Calochortus persistens* as well as LSRs, bald eagles and peregrine falcons. Management Area 6 is now a Managed Wildlife Area. Greater emphasis is placed on management of Siskiyou Mountain Salamander and other species in the Final Forest Plan (refer to Forest-wide Standard and Guideline 6-17 and Table 4-3 which relate to survey and management of species.

Comment 46: The provisions made in the Draft Forest Plan fail to identify and protect sufficient habitat to insure the viability of marten and fisher. Maximum occupancy is erroneously assumed. There is no provision for fragmentation or connectivity. There is no site-specific data to show that species needs would be met for size of home range. The Draft EIS attempts to include additional acreage of unregulated lands as potential habitat, even though much of this land is totally unsuitable for these species (e.g. brushfields, rock slopes, etc.). In addition, the Addendum to the Draft EIS returns these areas to the matrix and asserts, without supporting analysis or citation, that the LSR is expected to provide adequate suitable habitat to maintain viability of marten and fisher. The impact of the FSEIS on fisher and marten should be evaluated in a draft supplemental EIS and a management scheme developed, including habitat reserves and travel corridors, that will provide a high likelihood of maintaining viable populations of these species. All forms of logging should be eliminated in designated fisher and marten reserves.

44 128 145 237 241 243

Response: The combination of LSRs, wilderness, RRs and other large unregulated areas provide habitat for marten and fisher. The assessment of the numbers of reproductive units potentially provided by those areas was based upon home range sizes and the amounts of forest habitats. In addition, the Preferred Alternative would include a Managed Wildlife Area which would provide habitat for fisher. Mitigation measures within the matrix which would require retention of snags, green trees and CWD and the establishment of 100-acre LSRs are expected to reduce impacts to marten and fisher in the matrix.

Comment 47: Explain the management advantages and disadvantages of variation between forests in MIS numbers and species.

45

Response: There is enough commonality between the 4 Northwestern California forests' monitoring plans to ensure that consistent monitoring occurs. The addition of other species to the monitoring list is a reflection of the desires of some forests to include species in monitoring that could be evaluated without significant expense. Point counts for birds normally include noting all species present, some forests will report on many of them others will not. Both can indicate that the habitats evaluated have been assessed for compliance with planning objectives.

Comment 48: Overall wildlife populations have not declined due to grazing as critics contend, but have

been enhanced through the multiple-use of Federal lands. Moose, elk, bighorn sheep and antelope populations have increased.

281

Response: While it is true that many populations of wildlife have been increasing over the last decade, others have been declining. Wildlife and grazing impacts have been studied in many areas. On the Forest, grazing levels have been reduced significantly since the 1920s. However, in the last decade only site-specific adjustments in grazing use have been made to address local resource and social concerns.

Comment 49: Due to predation on livestock, the timber wolf and grizzly bear should not be introduced. Elk should not be re-introduced as they may destroy fencing and private livestock pasture, render forage management on grazing allotments unmanageable and push ranchers off their traditional range. Elk reintroduction may not be compatible in wilderness allotments.

281 283

Response: None of the alternatives would establish a policy for re-introducing large predators; refer to Table 2-16 under Wildlife, Chapter 2, EIS. Elk have already been re-introduced on the Forest by CDFG. Prior to re-introduction of any species, one of the criteria reviewed is the impact on the local Forest users. If there is a high risk of damage to private property the species may not be reintroduced. Alternatives B, B', D and D' would include standards specific to elk.

Comment 50: Even though Forest-wide standards and guidelines provide some accommodation of big game values, that accommodation is not carried through in management area prescriptions. The failure to identify areas of value, even though called for in Draft Forest-wide standards and guidelines 8-53 and 8-57, results in inadequate accommodation for big game species. This is particularly a concern when long-term management of the Forest will result in the reductions of early seral stages.

72

Response: Some of the standards and guidelines have been modified in Management Areas 14 and 16 in the Final Forest Plan; refer to pages 4-161 through 4-165 and 4-171 through 4-175. Forest-wide standards and guidelines have also been modified to provide more emphasis on early seral stage species. One of the primary difficulties in analyzing impacts to big game and early seral stage species, is that predicting the location, size and intensity of fires is highly speculative. Thus predicting how the habitat will change within a given area is difficult. In the Preferred Alternative, allowing fire to fulfill its ecological role in the ecosystem would be emphasized. Fire would be used to improve early seral stage habitat. The standards and guidelines cited in the comment do not call for identifying areas of value, but rather for providing quality habitat.

Comment 51: The Forest Plan should use the northern goshawk management strategies recommended in the Southwest Region (USDA, 1992) to provide better protection. To comply with NFMA, new survey data for goshawks must be compiled before planning decisions are made. The monitoring of the goshawk population is outdated. Up-to-date surveys should be conducted during the same year for all 4 forests and the plans should base their analysis on the same, recent benchmark year. The standards and guidelines for northern goshawk in the 4 Northern California Forest Plans are inconsistent and inadequate to assure viability.

44 237 307

Response: Although the Southwest Region goshawk management strategy represents the latest scientific information on forest management for this species, it was developed for southwestern pine forests and is not appropriate in the mixed conifer and fir types found on the Forest. The Preferred Alternative incorporates large LSRs and RRs which are predicted to maintain a well-distributed viable population of goshawks across the Forest. In addition, the Forest has developed standards and guidelines based on research conducted locally. Forest-wide Standard and Guideline 8-20 in the Final Forest Plan would provide special protection for goshawk pairs located in the matrix and on the Goosenest AMA.

Density estimates, habitat relationships and population performance of northern goshawks have been studied on the Goosenest Ranger District for over 10 years. Inventories are more sporadic on the western districts, where steep terrain make surveys difficult. A 'benchmark' population survey of the 4 northwestern California forests would be technically and logistically unfeasible. Monitoring of known territories, combined with evaluation of habitat associations of all known nest sites, will likely be used to assess the performance of the Forest goshawk population during the planning period.

Comment 52: Management Area 14 fails to recognize most of the big game habitat on the Forest. There is no accommodation of big game values on the westside of the Forest. Even the areas that are designated on the Goosenest Ranger District are incomplete and do not include much of the high value big game habitat that occurs on that district. The standards and guidelines presented are inadequate and need to be modified to address other big game species as well as other areas on the Forest.

72

Response: This management area has been redefined in the Final EIS; refer to Preferred Alternative Map in the Final EIS map packet. The name has also been changed to Winter Range and the goals now

include elk. The area has not been extended to the westside of the Forest, but Forest-wide standards and guidelines for deer and elk winter range would apply on the westside.

Comment 53: Forage Management Area 16 does not include much of the area that is crucial big game habitat on the eastside of the Forest. The emphasis of livestock over wildlife is inconsistent with the values of the area as well as the needs identified in the McCloud Flats Deer Herd Plan. The goals and standards and guidelines of this management prescription need to be changed to better accommodate wildlife values.

72

Response: This Management Area has been re-defined in the Final EIS; refer to Preferred Alternative Map in the Final EIS map packet. The goals have been modified so that livestock management actions would be designed to enhance wildlife habitat. The standards and guidelines have also been modified; refer to pages 4-171 through 4-175 in the Final Forest Plan.

Comment 54: MA14-5 standard should require water developments to be constructed to minimize disease transmission problems. The development of a water source every 2 miles should be reconsidered and may be unnecessary for wildlife needs.

72

Response: This standard has modified to develop water sources for wildlife where necessary; refer to Standard and Guideline MA14-5 in the Final Forest Plan.

Comment 55: Draft standard MA14-16: If reforestation is a priority in this area, it must be modified to accommodate and feature big game values.

72

Response: Standard and Guideline MA14-17 has been added in the Final Forest Plan to clarify that any reforestation efforts would promote winter forage values and the development of optimum thermal cover.

Comment 56: MA 14-13 and 14 need to be standards, rather than guidelines.

72

Response: This Management Area has been re-defined in the Final EIS; refer to Preferred Alternative Map in the Final EIS map packet. The name has also been changed to Winter Range. Standards are no longer distinguished from guidelines as they were in the Draft Forest Plan, but are considered a single term. MA14-13 remains the same in the Final Forest Plan, but Draft MA14-14 is not included in the Final Forest Plan as the area is now unregulated; any vegetative manipulations would be to meet management area goals for winter range.

Comment 57: Of all the alternatives, the Preferred Alternative results in the largest drop in deer herd population. Most species of wildlife, particularly early and mid seral species are largely ignored. Implementation of the Clinton Plan will likely exacerbate this problem.

72 74

Response: The ROD for the FSEIS, whose direction is incorporated in the Final Forest Plan, is designed to provide habitat for late-successional species to aid in the recovery of T&E species. This may result in a decline of early seral stage species. Additional analysis has been conducted on early seral stage associated species for the Final EIS. In this analysis the role of fire was viewed in greater detail as it pertained to early seral stage species. Proposed treatments in the Preferred Alternative are expected to help stabilize deer populations. In addition, many areas of the Forest would be managed for early seral stage habitat components and would provide habitat for early seral stage associated species.

Comment 58: The range management section of Management Area 14 needs to direct allotment management plans to provide a forage allocation for big game.

72

Response: In the Preferred Alternative, the allocation of forage resources to big game species or livestock is based on a carrying capacity concern. The intent is not to focus on a single capacity value, but rather on the ecological status. Modifications to grazing permits would be based on whether the site's current condition and trend were leading to achievement of the desired future condition or not. As site-specific analysis is completed for each allotment, wildlife needs would be addressed at the site level and the effects in relation to the requirements would be discussed.

Comment 59: Detailed information regarding big game values provided during the development of the Forest Plan should be incorporated. Draft Management Area Standard and Guideline MA14-4 should deal with age classes of browse stands rather than seral stages.

72

Response: Information on big game values has been added to the Final EIS. Standards for Management Area 14 have been modified to address browse classes rather than seral stages; refer to MA14-4 in the Final Forest Plan.

Fisheries Comments

Comment 1: The Draft Forest Plan fails to provide adequate protection for anadromous fish and aquatic diversity. The best remaining aquatic habitat on the Forest is not adequately protected. The Preferred Alternative does little to improve the likelihood of recovering populations for many at-risk stocks to 1940s levels; projections suggest declines may continue. A much more aggressive recovery plan for anadromous fish is needed to prevent listing of at-risk fish stocks under the ESA.

11 39 44 52 59 63 82 99 188
193 197 204 235 236 241 247 270 283
305 315 327

Response: The Aquatic Conservation Strategy outlined in the Preferred Alternative in concert with applicable State and Federal laws would provide strong measures to protect habitats on the Forest important to the fisheries resource. RRs would be established on all water courses which includes headwaters, river sources and intermittent stream courses. Habitat is the main focus of fisheries management on the Forest. Standards and Guidelines in the Forest Plan would ensure that all aquatic species have adequate water quality, temperatures and habitat conditions within each species' natural range. Key Watersheds which are part of this strategy would include some of the best aquatic habitat in the Forest. Recovering populations to 1940 levels may not be possible. Many factors outside the scope of the Forest Plan have led to the current situation of at-risk anadromous fish stocks including dams on rivers, ocean conditions including depletion of food sources such as pilchard and squid as well as protection of predators such as sea lions, ocean fishing and fishing at the mouth of rivers; refer to response to Fisheries Comment 8. The watershed restoration program for the Preferred Alternative would be aggressive in recovering aquatic habitat.

Comment 2: The Smolt Output Model using the Habitat Quality Rating does not generate numbers "actual outputs," but numbers for "comparison purposes only" Where no data exists from stream surveys, smolt numbers are estimated by multiplying available habitat acres times average smolt densities for similar streams. Sedimentation effects on fish are not included in the model due to complexity. Neither are the effects on fish habitat from peak flow increases, summer flow modification and riparian conditions resulting from timber harvest. These are flaws.

54

Response: Smolt outputs are intended for comparison purposes only to give an idea of the amount of fish the habitat could support under each alternative. Absolute outputs cannot be estimated due to all the factors outside NFS boundaries, some of which are mentioned in the response to Fisheries Comment 1. The purpose of the Forest Plan is to provide direction for managing the Forest. The Forest Service has responsibility for managing habitat only. Populations, however, are affected by many factors outside the scope or the Forest Plan, especially anadromous species.

Comment 3: The Draft EIS proposes building 15-28 miles of new roads per year in the various alternatives. The environmental and economic consequences of this aggressive road building program are not analyzed or revealed in violation of NEPA. The EIS should correct this by analyzing the impact of this road building on aquatic and riparian resources, water quality and (via impacts on visual quality) on our recreation industries.

38 283

Response: Road construction was an important element of the Sediment Model which was used to analyze effects on water quality and fisheries resources. All alternatives were analyzed in terms of their effect on aquatic habitat and therefore fish production in Table 4-26, page 4-99 in the Draft EIS. The Smolt Model included the effects of roads; refer to response to Fisheries Comment 4. Roads were also considered in the forest-wide analysis for visual effects and are an important element of determining which lands fit each ROS class in the recreation analysis. In the Final EIS, the Preferred Alternative has been modified to reduce the amount of new road construction to 20 miles in the first decade and 5 miles in following decades.

Comment 4: What data generated the numbers in Table 4-26 (EIS, 4-99)? Do the 235,800 pounds of commercial-caught fish have any basis in reality and, if not, who would ever know?

54

Response: Most of the management indicators for fisheries, including fish caught commercially are based upon smolt output estimates. Smolt estimates were derived from predicted changes in physical habitat suitability on a forest-wide basis. A multiplier was used to predict survival rates from smolt to adult. Other factors were applied to estimate the portion of total adults that are taken by the various types of fishing.

Existing smolt production was estimated by intensive biological surveys using the methodology of Hankin and Reeves (1988). These counts provide a "snapshot" view of standing crops at one moment in time and may vary according to habitat conditions present (such as temperature, available cover and food availability). Current smolt numbers for streams without biological surveys were estimated from multiplying available habitat acres times average smolt densities for streams with similar geomorphic characteristics.

A smolt output model was developed to compare land management strategies through predicted variations in smolt numbers reflecting only those impacts to fish populations resulting from implementation of alterna-

tives. Factors such as climatic influences, poaching and harvest, and off-Forest influences on fish populations are not included in the comparative analysis.

The smolt model utilizes sediment model outputs which include existing and future sediment generation from landslide and surface sources (refer to EIS Appendix B). For the fisheries analysis these sources include harvest, road and wildfire derived sediment from landslides over undisturbed level and harvest and road derived sediment from surface erosion over undisturbed level, delivered to streams. The smolt output model weights and combines these sediment sources to assess relative change in aquatic habitat from the existing condition by alternative. Smolt production is then calculated based on the predicted habitat condition. A lag time coefficient is built into the model to account for the delay expected between management activities and their influence on habitat conditions.

However, it should be recognized that landslides, debris torrents and other coarse sediment delivery mechanisms may be temporally and spatially distinct from chronic fine sediment introduction. In this way, the effects on fish habitat and smolt production will also differ by lifestage and duration. Effects from timber harvesting not included in the sediment model include peak flow increases, summer flow modification and riparian conditions.

Comment 5: An aggressive public education program should be developed within the fisheries program which would encourage participation in various water conservation strategies, as well as allow for the dissemination of important information relative to other fishery issues. A fourth item should be added to Forest-wide Standard and Guideline 9-1 in the Draft Forest Plan: "Provide educational opportunities regarding the needs of resident and anadromous fisheries to private individuals residing along inventoried streams."

72

Response: One of the goals of the fisheries program in the Preferred Alternative would be to increase public awareness and appreciation of aquatic resources; refer to page 4-7 of the Final Forest Plan. Alternatives D and D' would have an aggressive program of public education as a major part of the fisheries program. The other alternatives would not emphasize this aspect of the fisheries program.

The forest-wide standards and guidelines for fisheries have been modified to better clarify the role of the Aquatic Conservation Strategy in the Preferred Alternative. Forest-wide Standards and Guidelines 9-6 and 9-7 in the Final Forest Plan meet the intent of the standard proposed in the comment without providing special treatment to any single group.

There are a number of ways in which Forest personnel currently interact with the public to increase awareness about fisheries issues and ecosystem concerns. Some of these are through school programs, youth-hiring programs, ecosystem analysis at the landscape/watershed level, project analysis, involvement in local Coordinated Resource Management Planning groups (Scott River, Shasta River, Salmon River), participation in National Fishing Week activities (on Happy Camp and Goosenest Ranger Districts). In 1992, the Forest was a primary participant in the development of a Salmon Symposium and Festival for education and interaction among private, public and academic groups.

Comment 6: Anadromous fishery resources are almost entirely dependent on upstream watersheds for their perpetuation. Fisheries are valuable to local economies as well as to anglers.

201 245

Response: All alternatives would use ecosystem analysis at the landscape/watershed level to identify opportunities for managing watersheds. The value of fish is discussed on page 3-74 of the EIS. Fish are valuable to local economies through the numbers of anglers brought into the area. Fish are also part of the ecosystem that attracts other recreationists.

Comment 7: Incorporation of Key Watersheds in the Preferred Alternative does not guarantee that viable populations of TE&S species will be maintained. By using some of these species as MIS, the Forest has taken the burden off CDFG by now becoming responsible for acquiring the data on populations and habitat for these species.

82

Response: Key Watersheds are only one aspect of the Preferred Alternative's ecosystem approach; refer to Chapter 2 of the EIS under Individual Alternative Descriptions and to page 4-34 of the Final Forest Plan. Adequate habitat to provide for species viability is projected; refer to Chapter 4 of the EIS, Biological Diversity, Wildlife and Fisheries sections. The Forest has not assumed any of CDFG's responsibilities, that is outside the scope of the Forest Plan. The Forest Service had CDFG have always cooperated to help each other achieve their respective missions.

Comment 8: The long-term environmental and economic values of the Forest should take precedence over the short-term extraction of timber. The riparian damage that will inevitably follow logging of these pristine areas will destroy the salmon and steelhead runs for good. Dam building and over-fishing have contributed to the decline. If the watershed is kept intact, however a fishery can be restored.

66 322

Response: All alternatives are designed to provide for the long-term stability of the Forest as well as for short-term needs; refer to Purpose and Need for a Forest Plan on page 1-1 of the EIS. The elimination of logging would not necessarily equate to the indefinite continuation of salmon and steelhead runs on the

Forest; refer to response to Fisheries Comment 1. In fact, many logging practices if properly applied do not have any adverse affects on fisheries. Habitat degradation within the Forest is only one of a number of factors limiting salmon and steelhead runs; however, it is the only one within the scope of the Forest Plan. The primary factors are degradation and loss of freshwater and esturine habitats, timing and overexploitation in commercial and recreational fisheries, migratory impediments such as dams and loss of genetic integrity due to the effects of hatchery practices and introduction of nonlocal stocks (USDA Forest Service, 1993).

Comment 9: Stream habitat is in worse condition than the Draft EIS indicates. Available data indicate that national forest streams are mostly in poor condition in areas that have been logged. Consequently, much stronger measures to protect and restore habitat are needed than those proposed.

237

Response: No citations of the "available data" were included nor was there any discussion of conditions on the Forest in the literature included with the comment letter. The best available methods were used to evaluate fisheries habitat conditions on the Forest in the EIS. These include site-specific data from 19 anadromous streams; refer to Chapter 3, Fisheries. All alternatives would include standards and guidelines designed to maintain and restore fisheries habitat. The Preferred Alternative was modified to incorporate stronger measures in the Final EIS based on public comment and on the ROD for the FSEIS which provides guidance for the Final Forest Plan. The Aquatic Conservation Strategy in concert with applicable State and Federal laws should be adequate to protect habitats important to the fisheries resource.

Comment 10: The Draft EIS fails to consider compliance with the California Porter-Cologne Act and the Federal Clean Water Act (refer to 40 C.F.R. 131.12 and State Water Resources Control Board, Board Res. No. 68-16 (Oct. 28, 1968, reconfirmed July 10, 1986). The California North Coast Regional Water Quality Control Board adopted a Water Quality Control Plan for the North Coast Region (Basin Plan) pursuant to these above-referenced acts. This Basin Plan requires specific, quantitative levels of temperature, turbidity, dissolved oxygen and other water quality measures in each of the river reaches affected by activities on the Forest. Alarmingly, the Forest Service plans on relying on the use of BMPs to protect the watersheds. These BMPs, however, are not a proven system for assuring compliance with water quality law.

154 266

Response: Refer to page 3-25 of the Final EIS: "The Porter-Cologne Act Water Quality Control Act, part of the California Water Code, established a State Water Resource Control Board and nine Regional Water Quality Control Boards as the principal group responsible for the coordination and control of water quality." Also, "Established to control non-point pollution from management activities, BMPs have been certified by the State Water Resources Control Board and Environmental Protection Agency, under authority granted them by the Clean Water Act." Also Table 3-16 in the Final EIS establishes habitat condition criteria; refer to response to Fisheries Comment 12.

Comment 11: The complexity of the salmonid community requires complex habitats to meet the requirements of all species.

201

Response: A set of habitat criteria is outlined in Table 3-16 of the Final EIS with associated values and/or descriptions that are designed to meet the needs of the various fish assemblages on the Forest. How each alternative would address these criteria is discussed on pages 4-85 through 4-91 in the Final EIS. The Preferred Alternative includes an Aquatic Conservation Strategy which provides for managing aquatic species in an ecosystem approach; refer to page 4-34 of the Forest Plan.

Comment 12: The Draft EIS relies on a 1988 Draft Proposal for Managing and Monitoring Streams for Fish Production by James Sedell which was intended to provide direction in the Columbia River Basin."

201

Response: This information is the best information available. The EIS discloses the source and quality of the data for the public and future resource managers so adjustments can be made for the bioregional differences between the Columbia River Basin and the Klamath River Basin. Sedell's values have been adjusted in Table 3-17 in the Final EIS (Table 4-23 in the Draft EIS) to reflect local conditions where appropriate. The existing condition of these habitat parameters was determined through stream habitat assessments which utilize the standard Region 5 "modified Bisson" methodology (McCain et. al. 1990). Riparian evaluations of standing tree density, canopy composition and CWD recruitment potential as a component of stream cover were also used.

Comment 13: The temperature column in Table 3-15 in the Draft EIS should state if daily means, monthly averages or something else is represented.

72

Response: Temperatures are the maximum recorded during the habitat assessment survey. This has been clarified in the Final EIS; the table is now Table 3-17.

Comment 14: Because many of the off-forest factors that affect fish populations mentioned in Chapter 3 are not controllable, the quality of habitat within NFS boun-

daries is even more valuable for the continued existence of the fisheries.

72 237

Response: All alternatives would include RRs or RMZs. Management of aquatic habitat is emphasized in Alternatives Preferred, D and D'. The Preferred Alternative has been modified to strengthen its Aquatic Conservation Strategy in the Final EIS based on public comments and on the ROD for the FSEIS; refer to page 4-34 of the Final Forest Plan.

Comment 15: There is a great concern when none of the 19 index streams surveyed meet the average noon shade criteria of 80%, only 12 streams meet the minimum criteria for pools and none of the streams meet the minimum criteria of 15 large trees per acre. If this data is correct, what is the state of the rest of the fisheries on the Forest?

82

Response: In all alternatives, the conditions on the rest of the streams on the Forest would continue to be assessed as would the appropriateness of the criteria; refer to response to Fisheries Comment 12. All alternatives would include restoration programs; refer to Water and Fisheries sections of Chapter 4 of the EIS. The Preferred Alternative would emphasize watershed restoration as part of its Aquatic Conservation Strategy. Restoration opportunities would be identified through ecosystem analysis at the watershed/landscape scale. There would be coordination with other agencies at the Basin scale. Watersheds in the best condition and most critical to the maintenance of at-risk fish populations would be designated Key Watersheds. Restoration of Key Watersheds would be emphasized.

Comment 16: On page 3-65 of the Draft EIS, "run" needs to be clarified in the section on fall chinook salmon. The definition of escapement should read "...the number of grilse and adult salmon surviving to spawn." Figure 3-8 does not include Salmon and Scott River escapements as stated. Is the next-to-last paragraph in this section referring to fish production when it mentions off-forest constraints?

72

Response: The term "run" refers to adult spawner escapement; this is clarified on page 3-64 in the Final EIS. However, the sentence in the Draft EIS "The 1990 fall chinook salmon run was significantly smaller than what we project pre-season" referred also to the total in-river run. The term "escapement" is better defined in the EIS Glossary on page 7 and the definition in Chapter 3 has been removed. Figure 3-8 does include the Salmon and Scott Rivers as they are part of the Klamath River Basin, however, they are not displayed separately. The "next-to-last paragraph" reference to off-forest constraints refers to ocean conditions, commercial fishing, sport fishing and the uses on non-public lands which affect salmon escapement.

Comment 17: The timing of nutrient delivery to a stream system when flows are low is more important than the amount. Wetlands could serve as ideal filters in allotments where nutrient loading is a concern. Properly managed grazing has the potential to provide great benefits as a vehicle for redistributing water, nutrients and seeds.

281

Response: All alternatives would provide for special management of RRs or RMZs allowing these areas to function as filters. The Forest is working with grazing permittees to assess and monitor the range conditions, water quality and riparian habitat conditions on the Forest to ensure proper management of the rangelands; this would continue in all alternatives.

Comment 18: The 4 Northern California forests encompass more than 2.5 million acres of recently disturbed terrain that essentially drains down to about 6,500 acres of salmon gravels. Such information is buried in the fragmented approach to landscape ecology that these plans represent.

269

Response: The purpose of the Forest Plan is to provide management direction at the forest level. Cumulative effects are analyzed at the regional scale in the FSEIS, which is tiered to by the Forest Plan EIS. Erosion and aggradation within a watershed are part of the natural processes within a landscape. A stream system in balance is often said to be in "dynamic equilibrium." Changes can occur within the watershed while its structure, function and ability to support fish, wildlife and the chemical and physical interactions associated with them remain insignificantly altered. The primary concern within the Forest is maintaining systems in balance, not the total reduction of soil movement.

Comment 19: The Forest Plan should not tolerate the current degraded environmental condition of the sport and commercial fisheries. The status quo is not acceptable because it has not produced viable populations of fish stock and should not be used as a baseline. A Forest Plan which accepts and forecasts such a bleak future for the fishing industry is not acceptable.

201

Response: Forecasting the future of the fishing industry, bleak or otherwise, is outside the scope of the Forest Plan. Neither do National Forests have jurisdiction to regulate the fishing industry. Fishing intensity (commercial and sport) is recognized as an important influence on anadromous populations; refer to Species Association section on page 3-62 of the EIS and to response to Fisheries Comment 8.

There is no information to indicate that salmonid populations are on a increasing trend. Alternatives were compared using available information, which

shows a downward trend in salmonid populations on the Forest.

Comment 20: The assertion that structural improvements to streams will restore aquatic ecosystems is unfounded.

54 201 283

Response: The EIS does not intend to infer that in-stream structural treatments alone will restore aquatic ecosystems. Page 4-91 of the Draft EIS states that, "Because channel and hillslope processes are connected, restoration projects are most effective when the approach integrates riparian, instream and hillslope needs." Also, "Watershed rehabilitation methods can include road surfacing, road removal, culvert modification and landslide and fill stabilization. Desirable stream temperatures may be achieved through a combination of inchannel, riparian and hillslope rehabilitation."

Watershed recovery is difficult to predict because of the varying climatic zones on the Forest, the varying degrees of degradation (natural and human caused), the stochastic nature of wildland systems, impacts from off-Forest activities and differing restoration techniques used. Recovery is also dependent on the desired condition. Therefore, the models used to estimate recovery were for comparison purpose only using the same assumptions for all alternatives.

Comment 21: With the tremendous decline in salmon numbers, it is incomprehensible that the Department of the Interior would encourage a commercial netting fishery for Indians on the Klamath River.

12

Response: This is outside the scope of the Forest Plan. The Forest Service is a branch of the Department of Agriculture, although we coordinate with the USFWS in the Department of Interior, especially in matters of T&E species. The Forest provides annual adult spawning count information to the USFWS and the CDFG for use in developing harvesting levels for commercial, native American and sports fisheries.

Comment 22: The discussion of the effects of water temperature on salmonids needs to be expanded. Temperatures above 60°F are known to begin to adversely affect every life stage of salmonids. The length of exposure to elevated (or depressed) water temperatures also affects survival of salmonids. The potential exists for the "uninformed" to use 78°F as a minimum temperature tolerance instead of a maximum (for short-term exposure).

72

Response: Lethal temperatures for fish have been identified in the Final EIS, Chapter 4, Fisheries. The temperature criteria in Table 3-16 of the Final EIS has been adjusted to 69°F.

Comment 23: The Scott River drainage should be a Key Watershed in the Forest Plan. Many fisheries scientists believe that the chinook salmon population of the Scott River drainage is a genetically distinct stock group within the Klamath River Basin.

72

Response: Key Watersheds in the Preferred Alternative were identified for best existing habitat and greatest potential for restoration (USDA Forest Service and USDI BLM et. al., 1994, page B-91). In relation to other watersheds on the Forest, Scott River does not have a high potential for restoration because of the varied activities occurring on private lands that affect salmonids and their habitat. The Forest Service would protect fish habitat on NFS lands in all alternatives consistent with State and Federal laws.

There is no evidence that the Scott River run is a genetically distinct run. However, the Forest is supporting a proposal from a geneticist at California State Polytechnic College to investigate the genetic distinctions in chinook salmon in the Klamath River Basin.

Comment 24: The entire Clear Creek drainage should be a Key Watershed due to values for summer steelhead and spring chinook.

72

Response: The Preferred Alternative has been modified to include the entire Clear Creek Watershed as a Key Watershed; refer to Analysis Watersheds Map in the map packet.

Comment 25: What happens to other species that may be listed as Sensitive or Endangered on the Forest? Why do some fish species get special attention when others that are already recognized as Sensitive, receive little or no extra protection?

82

Response: The Forest does not contain any fish species listed as T&E under the ESA. Region 5 has designated spring chinook and summer-run steelhead as Sensitive. The Sensitive designation is an internal mechanism to provide certain species additional consideration during management planning and activities. Standards and guidelines are designed based on population needs. Some species are better provided for at the forest level and others can be better addressed at the project level using site-specific information. There are times that some species receive more attention than others. This is usually due to public interest, Congressional or Regional direction (and therefore, funding), State and Federal requests, scientific evidence and location of project proposals.

Comment 26: How can salmon, incredible creatures so integral to the diversity of this landscape, be reduced to numbers of pounds caught by the sport and commercial fisheries?

54

Response: Pounds of fish produced on the Forest and the amount harvested by fisherman were estimated to provide a quantitative comparison of the outputs that might be generated by implementing each of the proposed alternatives. Estimates for several other indicators were also presented in the analysis to assist the decision-maker in selecting between alternatives. These were by no means the only measures of aquatic health; refer to Biological Diversity and Fisheries sections of Chapter 4 of the EIS.

The purpose of the Forest Plan is to prescribe measures to manage aquatic habitat, but the Forest is not responsible for actual harvest quotas for the anadromous fish species. That authority rests with the Pacific Fisheries Management Council.

Comment 27: If listing summer steelhead under the ESA is to be averted, the Aquatic Conservation Strategy contained in Option 9 of the President's Forest Plan must be applied to Key Watersheds supporting summer steelhead even if Option 9 is not adopted.

301

Response: The Preferred Alternative in the Final EIS is consistent with the ROD for the FSEIS. The Aquatic Conservation Strategy from the ROD has been adopted.

Comment 28: The Draft EIS lacks important information about the Forest Plan's impact on salmon. Based on a recent geographic information system analysis of salmon data, an estimated 3.4 million acres of land within the salmon's existing range is located outside reserves and would be subject to logging and road building. Moreover, only 30% of the non-reserved land containing salmon habitat is inside Key Watersheds; the remainder would be subject to extensive land-use disturbance without the safeguards provided in key watersheds.

237

Response: The FSEIS analyzed the effects on aquatic species at the regional level and is tiered to by the Final EIS. The Forest Plan EIS's purpose is to disclose effects at the forest level; refer to page 4-10 in the Final Forest Plan for a discussion of the levels of analysis. The effects on aquatic species are discussed in Chapter 4 of the EIS under Biological Diversity and Fisheries.

Key Watersheds are not inclusive of all salmon habitat in the Preferred Alternative; this was not the intent. However, the Aquatic Conservation Strategy measures would include establishment of RRs, a watershed restoration program and the use of watershed analysis as well as the establishment of Key Watersheds. In addition, special requirements would apply to unstable areas and other sensitive areas. There would be some management activity in Key and non-Key Watersheds, but the descriptor "extensive land use disturbance" is misleading. The level of intensity of forest management activity is expected to be consistent with sustaining ecosystem health and providing quality habitat for all aquatic species.

Comment 29: The Forest Plan clearly fails to protect salmon and other wildlife by allowing all of parts of the Somes, Butler, Dillon, Grider, Six Mile, Clear and Trail Creeks watersheds to be logged. The draft plan also calls for building roads and logging 61% of the remaining roadless areas on the Klamath. Protecting unlogged watersheds and roadless areas are essential to prevent endangered and threatened salmon stocks from becoming further endangered or extinct. Moreover, the plan fails to designate key watersheds for the Scott and Shasta Costa rivers even though these two watersheds have Coho and Chinook salmon stocks known to be "at high risk of extinction."

54 235

Response: Although 61% of the roadless areas may be open to management, this does not equate to saying that 61% of this area would be logged. The actual area to be "logged" in any given decade under ecosystem management might be several percent of the total acreage released from roadless classification. The assumption that logging equals habitat degradation is not valid. There are many examples of timber harvesting on the Forest that have not adversely affected aquatic habitat.

The Shasta-Costa is on the Siskiyou National Forest. If this refers to the Shasta River, neither the Scott or Shasta River watersheds would be designated Key Watersheds in the Preferred Alternative because they do not have a high potential for restoration; refer to response to Fisheries Comment 23. Management requirements, particularly the Aquatic Conservation Strategy, would provide adequate protection for salmonids while they are within NFS boundaries.

Comment 30: Additional study and the development of specific guidelines to protect sensitive (including, but not limited to T&E) aquatic species in areas where commercial grazing takes place should occur.

332

Response: In general, most grazing on the Forest occurs in high elevation areas that are above anadromous habitat. One study in the Marble Mountain Wilderness has been completed on the grazing affects on meadow vegetation and wildlife (Van Sickle, 1994). The Forest (in coordination with UC Davis) is scheduled to begin monitoring this year to look at the effects of grazing on woody vegetation and channel conditions along streams associated with allotments. The Preferred Alternative has been modified to include more specific guidelines for grazing; refer to pages 4-63 through 4-68 and 4-144 in the Final Forest Plan.

Comment 31: The American Fisheries Society has not petitioned the USFWS to list spring chinook salmon or summer steelhead as Threatened.

281

Response: This has been corrected in the Final EIS. The winter-run chinook is Federally listed as Threatened, but does not occur on the Forest. The National Marine Fisheries Service received a petition to list coho salmon under ESA in October of 1993 and one to list coastal steelhead on February 16, 1994; this information has been included on page 3-61 of the Final EIS. Under the process outlined in the ESA, the National Marine Fisheries Service has 1 year from the petition date to make a determination on if the species should be proposed for listing. Once a species becomes proposed for listing, public comments can be made to the appropriate agency (the National Marine Fisheries Service in this case). Information about petitions and proposals for listing can be found in the Federal Register: for Coho (Fall 1993), Steelhead (May or June 1994).

Comment 32: The Draft EIS appears to conclude that fish populations are declining due to factors beyond the control of the Forest Service. It is difficult to accept this conclusion when no alternative proposed considered the full set of aquatic protection standards recommended by the Scientific Assessment Analysis Team in its March 1993 Report. Since none of the alternatives predicts a viable future for the aquatic habitat, a new aquatic alternative needs to be developed.

82 201

Response: The EIS identifies factors outside the agencies control to present the cumulative picture for salmonids; refer to response to Fisheries Comments 1 and 8. The Preferred Alternative has been modified to be consistent with the ROD for the FSEIS and contains strong measures to protect aquatic habitats; refer to Chapter 4 of Final Forest Plan, pages 4-6 to 4-7, 4-34 to 4-36, 4-133 to 4-144.

Comment 33: Since deteriorated forest habitat is widely recognized as a principal cause of severe decline of fish stock, fish numbers to secure viability and fish habitat requirements need to be considered in detail. Several fish species in the Forest are already in varying stages of the ESA listing process.

201

Response: All alternatives propose standards and guidelines to provide for healthy riparian habitat. Restoration programs would also aid in the recovery of degraded habitat. Refer to Fisheries section, Chapter 4, EIS. Research to set desired conditions for habitat has occurred elsewhere in the Pacific Northwest (Sedell, 1988; Sedell et.al., 1991; Meehan, 1991). Currently, studies are being conducted to determine the natural range of variability for important habitat parameter values (shade, water temperature, amount of wood, substrate composition) on the Forest and to verify or adjust values identified for other physiographic areas; refer to page 3-69 of EIS.

There is no guarantee that anadromous stocks at risk will not become listed under the ESA. Coho and coastal steelhead have been petitioned for listing. Factors such as ocean conditions, commercial harvest, actions on private lands and hatchery influences are outside Forest Service jurisdiction, yet may play a crucial role in the decline or survival of salmonids on Federal lands. The ecosystem analysis process at the landscape/watershed level allows and requires greater interagency and public coordination. This is a positive step in ensuring viability of fish stocks at risk in the Forest.

Determining the number of individuals needed in a population to ensure viability is difficult. The Forest Service must be concerned with population trends, but the agency's jurisdiction is the management of habitat not populations. However, the Forest does coordinate spawning count efforts with CDFG and is involved with the population-stock-evolutionary signatures unit investigation with Cal State Northridge and Humboldt State University.

Comment 34: Prohibiting construction of new roads in roadless portions of Key Watersheds and stabilizing failing roads and stream crossings should take precedence over installation of instream habitat structures which could be rendered ineffective by landslide sediment.

301

Response: The Preferred Alternative has been modified to prohibit new road construction within Key Watersheds; refer to Forest-wide Standard and Guideline 6-23 in the Final Forest Plan. Watershed restoration in the Preferred Alternative would focus on removing and upgrading roads. The documentation in the Final Forest Plan has been improved to make this clear; refer to Forest-wide Standards and Guidelines 6-47 and 6-49.

Comment 35: Given the Congressional support and recognition of the Klamath Task Force and Fishery Council, the Forest is obligated to provide a better future for anadromous fish.

201

Response: The Forest recognizes its responsibility as evidenced by the goal statements pertaining to the Biological Environment on pages 4-6 and 4-7 and by the Desired Future Conditions section in pages 4-15 through 4-17 in the Final Forest Plan. "Better future" is seen as viable populations existing in a healthy riparian system. National Forests are mandated by ESA and NFMA to protect aquatic resources which include salmon.

Comment 36: The Draft EIS provides no assurance that summer steelhead and spring chinook salmon populations will survive future forest management. Indeed, it admits that management activities which reduce the quality of fish habitat in the Scott river drainage or any critical habitat for sensitive species could lower fish numbers to levels which may not be recoverable which would decrease fish diversity and weaken the resiliency of remaining salmonids to environmental and physiological stressors. These would be irreversible and irretrievable effects.

154

Response: The EIS discloses that cumulative conditions (ocean, freshwater and fishing) may be so poor for salmonid survival that irreversible and irretrievable effects could occur, despite the best efforts to improve Forest habitat conditions. In the case of the Scott River, there are many activities occurring within the drainage which are not controllable by the Forest but may contribute to weakening the resiliency of remaining salmonids to environmental and physiological stressors.

Comment 37: The Draft EIS analysis of fishery survival is fatally flawed. The unintended contribution of Forest Service maintained roads to fish poaching is not acknowledged. The impacts are likely significant. Specific seasonal or permanent road closures may be necessary.

82 152

Response: As population size decreases, the impacts of poaching increases. Because the amount of poaching is unknown, there is no way to quantitatively assess its impact. Poaching could be evaluated within the category of legal sport fishing. However, the amount of legal sport fishing also varies according to number of fishing licenses sold and restrictions placed by CDFG. In the longer term, habitat loss and modification and legal fishing probably create a greater threat to the survival of steelhead on the Forest and elsewhere. (USDA Forest Service, 1993, page V-2; Nehlsen et.al., 1991; Higgins et.al., 1992). Poaching alone is not considered a "significant" threat to salmon populations on the Forest. This is supported by others:

"Primary factors contributing to the decline of anadromous salmonid stocks include (1) degradation and loss of freshwater and esturine habitats; (2) timing and overexploitation in commercial and recreational fisheries; (3) migratory impediments such as dams; and (4) loss of genetic integrity due to the effects of hatchery practices and introduction of nonlocal stocks (Nehlson et.al., 1991). Often two or more of these factors operating in concert are responsible for a decline in population numbers." (USDA Forest Service, 1993, page V-10 and 11).

Comment 38: Regional planners need to be reminded of the importance of balance in populations as a significant factor in the overall "ecosystem" approach - not only in the area of competition for primary resources of food, water and space; but in the equilibrium of the food chain. Much evidence shows that natural predators cause high mortality of anadromous salmonids.

281

Response: Removal of natural predators of the salmon is not within the jurisdiction of the Forest Service and is outside the scope of the Forest Plan. Activities that occur outside NFS lands are being addressed by the Klamath River Basin Task Force and Technical Work group. The CDFG participates on both the Task Force and Working group. The implementation of the Aquatic Conservation Strategy, including ecosystem analysis, in the Preferred Alternative would create a better situation for agencies and private citizens to work together on these type of issues.

Comment 39: The Forest is commended for its foresight where it states on page 4-125 of the Forest Plan: "Identify and control the cause of riparian area degradation before initiating restoration projects."

82

Response: This is also a part of the Watershed Restoration program in the Aquatic Conservation Strategy, which has been better documented in the Final Forest Plan; refer to Forest-wide Standards and Guidelines 6-46 through 6-49.

Comment 40: Page 2-25 of the Draft EIS states that fisheries habitat enhancement for the Preferred Alternative would include both instream and riparian improvements but does not follow up with specifics or indicate where to go in the document to get that information.

72

Response: Chapter 2 of the EIS provides a summary of information for the decision-maker and the reader. Chapter 4 includes a more detailed analysis of the alternatives. Pages 4-96 through 4-98 in the Draft EIS contain a comparison of restoration proposals for the various alternatives.

Comment 41: A stream and riparian restoration plan is needed to help set priorities, target goals and set time frames for achieving specific stream/riparian restoration goals and objectives.

72

Response: The purpose of the Forest Plan is to set forest-wide programmatic direction. More detailed analysis will occur at the landscape/watershed and site levels; refer to pages 4-10 and 11 of the Final Forest Plan. The ecosystem management process at the landscape/watershed scale will collect the resource information (identification of existing conditions, processes and desired conditions) needed to form restoration plans for individual watersheds.

Comment 42: The Salmon River Restoration Council has been identified by the Klamath River Fisheries Task Force as being the lead citizens effort which exists currently on the Salmon River. Their efforts should be identified and incorporated in the discussion on restoration in the Draft EIS and Forest Plan.

302

Response: The Klamath River Fisheries Task Force supports a number of citizen efforts including the Salmon River Restoration Council, the Scott River Coordinated Resource Management Planning group, the Shasta River Coordinated Resource Management Planning group and several environmental education programs in the lower Klamath River area. However, it is not necessary and is outside the scope of the Forest Plan to mention all groups that coordinate with the Forest at other levels of analysis for all resources. These groups could change over time.

On page 4-5 of the Final Forest Plan, Forest-wide Goal "Participative Management" covers the situation. Forest-wide Standard and Guideline 4-2 on page 4-22 also addresses this issue. These statements, in part, recognize all the Forest's partners.

Comment 43: Securing the necessary funding for stream and riparian restoration work is the key to making significant strides in fish population recoveries and therefore should be made a high priority objective of the Forest.

72

Response: Securing funding to implement all parts of the Forest Plan will certainly be a high priority. Funds are allocated to the NFS through Congressional approval. A budget request is usually prepared 2 or more years before the monies are to be received. How the monies received are allocated to various resource areas is determined by the Washington Office and Region 5 and is outside the scope of the Forest Plan. In addition to allocated funds, the Forest works with the CDFG, the Klamath River Basin Task Force, the Ecosystem Restoration Office and other partnerships (private land owners, Coordinated Resource Management Planning groups) to secure other funding for fisheries restoration work.

Comment 44: The role of fish hatcheries must be integrated into ecosystem management in the Forest Plan. Artificial fish propagation is a major cause for the decline of wild anadromous fish in California and a serious impediment for recovery. The Forest Service should not continue to collaborate with the CDFG to mitigate fish declines from logging through fish hatcheries without impact and policy disclosure in a programmatic EIS.

82 197

Response: The Preferred Alternative has been modified to not emphasize the use of hatchery fish in the Final Forest Plan; refer to Standard and Guideline MA10-16. The statement about hatcheries has been removed from the Desired Future Condition description for MA10 on pages 4-136 in the Final Forest Plan.

The Forest Service manages fishery habitat on Federal lands, but does not stock fish. Hatcheries and fish stocking programs are operated by CDFG. The vehicle to identify impacts and policies of hatcheries would be in a State formulated Environmental Impact Report. This is outside the scope of the Forest Plan.

The Forest is supporting work by geneticists to determine the purity and distribution of distinct stocks within the Basin. In addition, the Technical work group of the Klamath River Basin Task Force has been working on determining the effects of the hatcheries on salmon and steelhead on the Klamath River. There is a concern that hatchery fish may be competing with naturally spawned fish for limited food and quality habitat. The hatchery at Iron Gate Dam was intended to mitigate activities generated by the Pacific Power and Light power company. The Forest has not proposed hatcheries as a mitigation measure for Forest Service activities. The Forest Service does not "operate" the Kelsey Spawning channel. Fish are allowed to spawn naturally, no food is supplied artificially to fry and fish exit from the channel at their discretion. The channel is being used to create a refuge type area in case conditions in the Scott River do not support incubating and emerging fish and to assess the potential differences in productivity in varying conditions within the Scott River drainage.

Comment 45: CDFG and National Marine Fisheries Service should be named cooperating agencies in the NEPA decision process to assist in policy development and impact assessment.

82

Response: These agencies do not have any authority in the decision that will be made in the ROD for the Forest Plan EIS and it is, therefore, not appropriate for them to be cooperating agencies. They have been involved as coordinating agencies. They will be involved in analyses at the Basin level; refer to pages 4-10 and 4-11 of the Final Forest Plan. The National Marine Fisheries Service is a key component of project and policy implementation through the ESA and Section 7 consultation procedures.

Resource Management Programs

Visual Resource Management Comments

Comment 1: Draft EIS, page 3-71, Table 3-26 and Draft Forest Plan, page 3-8: These tables would be much more useful if totals of each Class were listed in another column on the right.

1

Response: A column displaying totals has been added to these tables to increase their usefulness.

Comment 2: Draft EIS, page 4-182, Visual Resource Management 4) and 5): The inconsistencies with Modoc National Forest and Lava Beds National Monument are unfortunate flaws in the Forest Plan and should be brought into consistency.

1

Response: These inconsistencies have been addressed by changes to the Forest Plan's VQOs. Refer to the Forest Plan Visual Quality Objective Map to see how scenery goals now offer a gradual transition from Retention areas to Partial Retention and then Modification view zones.

Comment 3: Most views in the Forest should not be labelled as "normal."

236

Response: There is no reference to "normal" views in the Forest in any of the documents. Refer to EIS, Chapter 3, Visual Resource Management for a discussion of the visual system used by the Forest Service. The discussion of Variety Classes does use the terms "distinctive (A)," "common (B)" and "minimal (C)." They are relative terms and not meant to de-value any of these views. The majority of the views are described as "common, yet pleasing," meaning that this type of view can frequently be seen within the Forest.

Comment 4: Forest Plan, page A-2, Table A-1: The criteria of 20 years allowance for recovery prior to initiating any visual resource rehabilitation is unreasonable. Unless there are high costs and complex reasons to delay visual rehabilitation, the time period should be less than 5 years.

1

Response: This table and the Forest-Wide standards and guidelines for Visual Resource Management have been modified to further clarify the Visual Rehabilitation Strategy. The intent of the strategy is to consider rehabilitation for all areas that do not meet the Adopted VQOs within time periods stated in Forest-Wide Standard and Guideline 11-1 (a maximum of 3 years for all VQOs except for Preservation and Maximum Modification, which must be achieved immediately). In such cases, rehabilitation would be considered based upon criteria identified in Forest-wide Standard and Guideline 11-5 in the Final Forest Plan.

Comment 5: Draft EIS, Table 2-4, Visual Quality Index (VQI) for the Preferred Alternative is a point higher than now exists and about 8 points above what was planned in Base Year 1987 and Alternative G(SOHA). The fact that it could move up another 6 points to 87 under Alternative E gives me the impression that there is yet room for improvement in the VQI.

1

Response: The VQI score achieved by the Preferred Alternative is an indicator of scenery conservation intentions blended with many other resource objectives, to achieve a mix of outputs considered desirable by decisionmakers. The VQI score for the Preferred Alternative in the Final EIS is 77, three points less than existing conditions.

Comment 6: Forest Plan, Page 5-10, Table 5-1: The Monitoring chapter allows 10-30% variation from adopted VQOs before further action is required. This is too great.

1 283

Response: The Draft Forest Plan indicated in Table 5-1 that "Further Action" was needed when variation from Adopted VQOs was greater than -10% for High and Moderate Sensitivity Level areas and -33% for other "low sensitivity" areas. The Final Forest Plan reduces this variation for Low Sensitivity areas to -15%, and the variation for High and Moderate Sensitivity areas remain at -10%.

Comment 7: National forests within the same landscape province, specifically the Klamath and Shasta-Trinity, should have similar methodologies for displaying scenic quality in the various alternatives.

257

Response: Collaboration between adjacent forests regarding Scenic Quality analyses did occur and focussed on issues of process and viewshed coordination. Display of these analyses have been coordinated to the degree possible within the resources available.

Comment 8: The public expects a national forest to be primarily a place of "natural scenes." Constituents want and expect to see landscapes that meet the definitions of Preservation, Retention or Partial Retention VQOs when in any portion of a national forest, not just foreground and middleground viewsheds in selected scenic highway corridors or developed recreation sites.

257

Response: The alternatives propose different management strategies that would lead to different amounts of "natural scenes." Alternatives E, C, Preferred, B/B', A, D/D', Current/RPA and G(SOHA) would assign natural-appearing VQOs (Preservation,

Retention or Partial Retention) respectively, to 94%, 86%, 78%, 77%, 74%, 61%, 56% and 56% of the Forest (refer to Table 4-28 in the Final EIS). The Preferred Alternative represents the decision to maintain nearly 4/5 of the forest scenery in "natural", "near-natural" or "natural-appearing" conditions, with the remainder of lands planned for greater degrees of scenery alteration to meet other objectives and outputs considered important to society. To optimize public enjoyment of scenery while still meeting other resource goals, an effort was made to locate activities associated with natural scenery in the areas of greatest public use and of high scenic value (foreground or middleground view zones and selected areas of highly attractive scenery).

Comment 9: Natural-appearing landscapes have restorative and other beneficial properties such as improved physiological well-being, particularly when contrasted to urban environments. The benefits of high-quality scenery are numerous despite the fact that a dollar value is seldom assigned to it.

257

Response: Such positive benefits of natural-appearing landscapes are among the reasons the great majority of landscapes in the Preferred Alternative have natural appearing VQOs assigned to them. Refer to response to Visual Quality Management Comment 8 for information about the degree to which each alternative would achieve natural-appearing landscapes.

Comment 10: Adequate protection of the visual quality of the Forest is necessary especially for views from highways, trails, camps, WSRs, wilderness and other recreation sites. The outstanding and extremely sensitive forest landscape is a primary, essential ingredient of the destination recreation resource. The Preferred Alternative will actually result in a significant decrease in visual quality requirements compared to the current management direction.

10 11 32 33 45 73 197 235 247 260 283

Response: Protection of visual quality is acknowledged as necessary for the important reasons stated. Management Areas and VQOs compatible with natural, or near-natural appearing scenery, are assigned to 78% of the forest. "Current management direction" varies by which definition is applied. The Final EIS considers the Current Alternative as current direction, which is estimated to create a 7% decrease in visual quality overall by the fifth decade, from the baseline 1991 level (refer to Table 4-29 in the Final EIS). The Preferred Alternative however, is predicted to achieve a 3% decrease in visual quality. The 1972 Multiple Use Plan may be another interpretation of current direction. By correlating that direction to VQOs and acres, the 1972 Multiple Use Plan is estimated to achieve a 15% decline in visual quality overall (per visual quality index). Thus, both the Current Alternative and the 1972 Multiple Use Plan result in lower visual quality than the Preferred Alternative. This is because their scenery standards and allocations were less restrictive or quantitative, permitting a larger and more intensive timber management program which would be reallocated to expansive biological and watershed emphasis areas within the Preferred Alternative and Alternatives A through E, with more natural appearing scenery conditions resulting. Refer to Table 4-27 on page 4-94 in the Final EIS for a comparison of VQO acres per alternative.

Comment 11: The Draft EIS understates the impact of implementing the Preferred Alternative by emphasizing average impacts. The Preferred Alternative will not achieve public preferences as predicted by the Visual Quality System. Background views should have more protection.

283

Response: Refer to response to Visual Resource Management Comment 16 regarding understatement and averaging of impacts. Regarding public scenery preferences and background views, the Forest Service Visual Management System suggests the conservation of scenic quality for all acres within the NFS through application of inventoried VQO (IVQO). The strategy is to manage for higher scenic quality in areas visited by the most people, from sensitive viewpoints and in areas of special scenic value. The Preferred Alternative applies this strategy through its adopted VQOs, generally reducing scenery conditions in areas of lesser scenic priority, in order to accommodate other resource objectives.

The areas not meeting estimated public preferences for scenery in the Preferred Alternative were generally assigned scenery conditions classified as ***one VQO level less natural-appearing***. These areas are: about half of the background views (5+ miles away) from High sensitivity viewpoints; Seldom Seen Areas (not visible from High or Moderate sensitivity viewpoints); about 2% of the most Attractive Class "A" landscapes; and Foreground Zones (within 1/2 mile) of most High sensitivity WSR segments of the Scott and Salmon Rivers. Rugged topography makes Forest background views rare from river canyon locations yet plentiful from higher elevations, many of which are in wilderness or on their access routes. The Recreational WSR segments for the rivers mentioned above would be managed to meet Partial Retention rather than Retention. Where the WSR classification changes to Scenic, Retention would apply only to the WSR corridor, maximum 1/2 mile width, rather than the wider foreground view zone, maximum 1 mile width.

Substantial changes from estimated preferences for scenery have also been made to achieve conditions generally ***one VQO level more natural-appearing***, in the Kangaroo Backcountry, RRs, Special Habitat Areas and SIAs (the Visual Management System is being updated nationally in part to identify higher public

value for scenery in such less visited, but expansive and largely unaltered landscapes).

Comment 12: The visual impact of the aggressive road construction programs are not adequately discussed. While it is not possible to model these impacts since new road locations are not known, an adequate Final EIS must discuss in general terms the expected results of increasing road densities. The Final EIS must assess whether proposed VQOs and the level of road building and road density contemplated are consistent.

283

Response: The EIS, Chapter 4, Visual Resource Management explains that visual effects would be highly variable with any alternative and site-specific locations cannot be estimated at the Forest Plan level of analysis. Prior to site disturbing activities, a landscape/watershed analysis and a site-specific project analysis would be conducted. Existing roads would be reviewed and Road Management Objectives would be established in the landscape/watershed analysis. The cumulative effects of the road system on that particular area would be analyzed and new roads would generally not be constructed if they did not meet the visual management objectives of the area.

Comment 13: The Draft EIS does not identify the current management direction for visual resources contained in the Multiple Use Plans. The Final EIS must reference this current legal direction and should translate/interpret that direction in terms of the current visual management system. To fulfill legal requirements the Final EIS must compare alternatives to Multiple Use Plan provisions.

283

Response: The Draft and Final EIS both consider Alternative Current as the current management direction for visual resources. Refer to response to Visual Resource Management Comment 10 for detailed consideration of visual resources and current direction, including references to the 1972 Multiple Use Plan.

Comment 14: The Draft Forest Plan and EIS do not adequately consider the impact on scenery outside wilderness as viewed from inside wilderness. Maintaining "current" visual quality means those ugly views from the wilderness will be maintained.

283

Response: Viewpoints widespread throughout wilderness are fully integrated into the IVQOs, as high sensitivity locations. The consideration of wilderness views into nonwilderness locations is thus automatic with its application. However, some alternatives including the Preferred, did reduce VQOs one level for background views that would detract from wilderness scenery experiences. The Forest Plan's Special Habitat and RR Management Areas would result in more natural appearing viewsheds from perhaps as many as one half of the wilderness views into nonwilderness areas. Refer to the Forest Visual Quality Objective Map in the map packet for spatial relationships between sensitive view areas like wilderness. Regarding "ugly" views, if they do not meet the adopted VQOs of the Forest Plan, they will be considered for visual rehabilitation.

Comment 15: The Draft EIS fails to clearly reveal or describe how and where the publics predicted visual quality preferences will not be met. Specifically, Table 4-28 should contain a line for the Predicted VQO (data layer IVQO-IVQO). The Draft EIS should also display how each alternative will impact Variety Class A (distinctive) scenery and Sensitivity Level 1 (highly sensitive) scenery.

283

Response: The Final EIS contains added information about where and to what degree the estimated public preference levels (IVQOs) would not be totally met for some alternatives (also refer to response to Visual Resource Management Comment 11). Table 4-28 of the Draft EIS does display the "IVQO" baseline of acreages which represents the data layer IVQO-IVQO suggested for inclusion. It also displays predictions for VQOs that would be achieved for all alternatives. Environmental consequences to Variety Class A (distinctive) scenery, High and Moderate Sensitivity viewsheds are addressed in narratives for each alternative in the Draft EIS.

Comment 16: Impacts are understated by using averages. Measurement of average attainment is based on VQI which is a relative not an absolute measure. The Draft EIS itself notes the need to develop a better measure of "cumulative visual impacts" The VQI does not consider how visible the lands are from public use areas, their "sensitivity level" (Draft EIS, page 3-70). The VQI does not consider that the amount of land which currently meets a "Preservation" Objective will be drastically reduced from 44% of the land base to 24% (wilderness only).

283

Response: The Draft EIS displays the effects on scenery by changes in acres of VQOs and the VQI, as well as in narrative discussions of effects upon State Scenic Highways, WSRs and distinctive scenery (Class A landscapes). The VQI, as one of several indicators, presents averaged, cumulative scenery impacts and is most useful as a coarse, relative measure of visual quality. Narrative added to Chapter 4 of the Final EIS further identifies scenery effects viewed from public use areas. The large reduction in the amount of existing Preservation acres is best identified in the VQO table and an expanded narrative in the Final EIS. Management areas with Partial Retention and Retention VQOs that contain landscapes that currently achieve Preservation scenic conditions may retain

their integrity for extended periods due to the limited amount of activities expected to occur there.

Comment 17: Draft EIS, Table 2-16: Although the amount of proposed Maximum Modification VQO assigned to the Preferred Alternative and several others is much lower than previously planned, it should be dropped to zero.

1

Response: A VQO of Maximum Modification was assigned to these low sensitivity areas in the Preferred Alternative to allow for activities such as road construction and the creation or restoration of large scale vegetative patterns. However, the time period allowed for achievement of Maximum Modification has been reduced, from the previous maximum of 5 years, to a requirement for immediate achievement, per Forest-wide Standard and Guideline 11-1 in the Final Forest Plan.

Comment 18: The Draft EIS does not provide a justification for the Preferred Alternative's proposal to allow an exemption for salvage logging from proposed VQOs. If such an exemption is retained in the Final Forest Plan, the Final EIS must explain why salvage and revegetation objectives cannot be met within the framework of proposed VQOs; it must also analyze and display the impact of the exemption in terms of the acres which can be expected to be impacted, and the type, size and duration of the impacts on visual resources.

283

Response: Salvage logging after "extreme catastrophic events" such as large wildfires is treated as an exemption to the achievement of adopted VQOs for several reasons; refer to Forest-wide Standard and Guideline 11-7 in the Final Forest Plan. Such extreme events can create large openings in the forest canopy that may take several years to recover with or without salvage logging. These large openings can expose previously screened contrasts like roads and logging areas, making achievement of adopted VQOs impossible until revegetation occurs and contrasts are reduced. The intent is also to permit a wide range of actions as needed to restore ecological integrity and desired conditions, including some actions that may not meet the VQOs in the short-term. It is difficult to make predictions of the number of acres that might experience these types of events due to the difficulty in forecasting the location, size and intensity of future catastrophic events.

Comment 19: Draft EIS, Tables 4-28 and 4-29 are misleading in that they mask the real and significant differences. These tables should display values by Variety Class.

283

Response: The Forest's most attractive landscapes (Variety Class A lands making up 22% of the forest) were discussed for each alternative in the Draft EIS consequence narratives. The large bulk of remaining lands are "common but pleasing" (Variety Class B) and in combination with Class A and C lands, are addressed in the tables mentioned. With Variety Class A lands discussed in narrative form and the tables addressing acres per VQO per alternative, the real and significant differences are displayed adequately.

Comment 20: Even the inadequate visual standards provided in the Preferred Alternative will not be achieved. Standards and Guidelines for Retention and Partial Retention Areas allow exceptions.

283

Response: It is true that standards and guidelines in the Preferred Alternative allow for not meeting VQOs immediately upon completion of the project for two different reasons. First, a few years of vegetative regrowth is often necessary to achieve VQOs. Second, extreme natural events such as wildfires may make it impossible to achieve the adopted VQO in a management area, even if no salvage activities occur (for example, a large burned opening may expose roads which were previously not visible under the forest canopy). In these cases, restoration of the Visual Quality and other resource objectives may require extended periods of time, perhaps 5-10 years or more. Forest-wide Standard and Guideline 11-1 in the Final Forest Plan states that projects must meet Forest Plan VQOs as soon as possible, immediately for Preservation and Maximum Modification and within less than 3 years for all other VQOs. Purposeful non-achievement of VQOs for forest projects would occur very infrequently, only when other important resource objectives could not be achieved otherwise.

Comment 21: By the fifth decade, 67% of the land base (virtually all the land outside current congressionally designated wilderness) would be noticeably modified: meet either Maximum Modification, Modification or Partial Retention VQO in the Preferred Alternative.

283

Response: In the Preferred Alternative, 23% of the Forest would have a VQO of Preservation, 8% would be Retention and 69% would be noticeably modified, meeting either Partial Retention, Modification and Maximum Modification, assuming all lands achieved their VQOs by the end of the fifth decade. Refer to Table 4-28 and the narrative in Chapter 4 of the Visual Resource Management section in the Final EIS and the Forest VQO map.

Comment 22: The proposed degradation of the Forest's visual quality is even more significant if one considers the scenic resource which the Forest Service proposes to degrade. The Draft EIS admits on page 3-72 that as a result of increases in recreational use "the value of the Forest's scenery will increase in

economic importance to counties and communities within its influence." The Preferred Alternative proposes to "modify" 11,400 acres of about 18 square miles of Class A "distinctive" scenery. This is not acceptable.

283

Response: As stated in the response to Visual Resource Management Comment 8, the alternatives proposed a variety of options to manage the visual resource. In regard to distinctive Class A scenery, some of these landscapes, located either in Background or Seldom Seen areas, are assigned Modification and Maximum Modification VQOs to allow for management flexibility. Changes to the Preferred Alternative due to addition of LSRs results in about 6,600 acres of Variety Class "A" landscapes with Modification or Maximum Modification VQOs. The remaining 98.3% of Distinctive "A" scenery have minimum VQOs of Partial Retention, Retention or Preservation.

Comment 23: The lack of VQO and Recreation Opportunity Spectrum (ROS) Maps in the otherwise excellent map package is a real problem. Those maps are key visual aids.

1

Response: In order to best communicate intentions for Visual Quality, a VQO map has been included in the map packet with the Final Forest Plan. Spatial patterns of ROS goals can be determined from alternative maps by correlating management areas to their assigned ROS classes.

Comment 24: The Draft EIS does not clearly acknowledge that the Preferred Alternative is calling for a significant decrease in visual quality requirements as compared to current management direction. On page 3-70 the Draft EIS refers to "interim standards for management of visual resources" and says these "provide current Forest management guidance until approval of the forest plan." Yet there has never been a decision and certainly not one pursuant to public involvement, environmental assessment and an appealable decision, which adopted "interim standards." This has been confirmed by the Forest's landscape architects.

283

Response: The IVQOs have been used as comprehensive yet optional scenery management guidance since their development in the late seventies. The Forest Plan formally adopts a revised form of these objectives in its standards and guidelines and VQO Map. The Forest Plan's VQOs are one VQO level lower than the IVQOs mostly in areas of lesser scenic value in order to allow for logging, road construction and other forest projects. In a smaller amount of areas, the Forest Plan adopts VQOs higher than the IVQOs such as in Special Habitat and RR Management Areas. The Preferred Alternative, as discussed in the response to Visual Resource Management Comment 10, would not result in a decrease in visual quality requirements over the current "legal direction" embodied in the 1972 Multiple Use Plan and 1984 California Wilderness Act. Refer to the Forest VQO map to obtain an informative forest-wide overview of scenery objectives.

Comment 25: Include a description of what 180-year rotation with area control will mean in terms of visual impacts.

282

Response: The Preferred Alternative in the Final no longer includes 180-year rotation with area control. The rotation age would vary according to forest type and other site-specific conditions.

Comment 26: The Draft EIS fails to consider possible violations of the NFMA requirement that visual quality must be protected. The Draft EIS presents predictions only of aggregate VQO effects rather than effects specific to particular areas. Such predictions provide no assurance as to the maintenance of visual quality in specific settings. The NFMA visual quality requirement was not created to protect average visual quality by allowing its degradation in one place to be balanced by its protection elsewhere. In addition, the sample landscapes which purport to satisfy particular visual quality levels fail to do so. However, VQO picture simulations (numbers 2-4) which purport to "meet[] the partial retention VQO" contain severely cut-over areas whose management activities do not in any way appear subordinate to the characteristic landscape.

154

Response: The pertinent wording of NFMA in 219.21, (f) states: "The visual resource shall be inventoried and evaluated as an integrated part of evaluating alternatives in the forest planning process, addressing both the landscape's visual attractiveness and the public's visual expectation. Management prescriptions for definitive land areas of the forest shall include visual quality objectives." The EIS has complied with all of these requirements. In addressing the "landscape's visual attractiveness and public's visual expectation", the forest's highest scenic value areas (wilderness, viewsheds of public use areas and Distinctive Class A Scenery) rightly receive greater degrees of protection than other areas of the Forest. To protect all scenery to high levels would not allow society to receive other goods and services it demands from public lands. Visual quality within specific settings is best determined from the map for each alternative, correlating management areas with their assigned VQOs (or the Forest VQO Map for the Preferred Alternative). Regarding the simulations, they were created to demonstrate a range of silvicultural and visual effects rather than to pictorially define specific criteria for meeting the Partial Retention VQO. Even experienced scenery managers of the Klamath Mountain Province have varying interpretations of the VQOs these pic-

tures achieve, partly because of the scale and axis of some of the openings portrayed and partly because scenery is best evaluated within the landscape as an event within space and time rather than from a photograph. The intent of Partial Retention is to depict changes that remain slight, subordinate and consistent to the "naturally established" scenic character of a landscape.

Comment 27: The heavy degree of Maximum Modification in the Preferred Alternative for the Callahan Flow Released Roadless Area appears to be entirely out of line with the needs for such high visual impacts.

1

Response: This is correct and was due to errors in the database sort during preparation of the Draft EIS. The intent is for all of Callahan Flow Released Roadless Area to be designated as a SIA. The Preferred Alternative was modified; the VQO for SIAs would be Retention as a minimum. Refer to page 4-119 of the Final Forest Plan. The VQO for the entire Callahan Flow Released Roadless Area is now Retention; refer to page C-13 in the Final EIS.

Comment 28: There is no reason for the Forage Management Area to drop as low as a Modification VQO.

1

Response: The Modification VQO is the minimum VQO allowable on the Forage Management Area. Modification was assigned to allow the ability to create moderate to large scale vegetative changes such as type conversion from juniper trees back to a more native and productive grassland character. In most but not all cases, visual condition would probably be less altered than what the minimum VQO of Modification would allow in these areas.

Comment 29: There is no need for the amount of Modification and Maximum Modification VQOs in the Preferred Alternative for the Orleans Mountain and Siskiyou Released Roadless Areas.

1

Response: In the ecosystem management approach used by the Preferred Alternative, much of these areas are proposed for management which would provide for moderate timber yields, provide for early and middle successional species and allow more intensive treatments to reduce the risk of catastrophic damage such as from wildfire, insects and disease. To achieve these other ecosystem management objectives, dominant modification of the visual condition may be necessary. These areas would have a requirement to retain trees on at least 15% of the area in regeneration units to provide for vegetative structure. In addition, Released Roadless Areas Siskiyou 1, 2, the southern part of 3 and Orleans 1 through 6, are within Key Watersheds where new road construction is prohibited. Visual contrast created by logging largely depends upon opening size and shape, edge and island characteristics, presence of residual vegetation and logging system limitations. It is expected that the visual condition would seldom meet Maximum Modification, even though that amount of flexibility in management activities is possible within much of this area (refer to Forest VQO Map for location of potentially modified scenic conditions).

Comment 30: The Preferred Alternative proposes a VQO of Partial Retention for the corridors along the North Fork and South Fork of the Salmon River. A VQO of Retention is much more appropriate for these highly attractive corridors along a major river.

205

Response: In the Draft EIS, the Preferred Alternative's VQOs for Recreational WSRs was Retention in the 1 mile wide maximum Foreground zone and Partial Retention in the middleground beyond. In the Final EIS, this alternative has been modified to have a VQO of Partial Retention in the WSR Corridor (maximum 1/2 mile wide) and the middleground and in the Recreational segments of the Main Fork of the Salmon River. These reductions in visual quality are still consistent with minimum WSR scenery requirements. Scenic WSR segments on the South and Main Forks of the Salmon River retain VQOs of Retention in the WSR Corridor and Partial Retention in the middleground (however the previously 1 mile-wide maximum Foreground Retention zone has now been reduced to a 1/2 mile wide maximum WSR Retention Corridor). These visual quality changes would also apply to Recreational and Scenic WSR segments of the Scott River (but not to the Klamath River, due to its additional status as an eligible California State Scenic Highway).

Comment 31: Active rehabilitation should be used in the short-term to improve the scenic condition of areas which don't meet the VQO. Rehabilitation is a basic part of scenery management. As such, rehabilitation projects should be systematically identified, prioritized, budgeted and then implemented in a scientific approach. Too much emphasis has been placed on the restorative powers of nature for landscape rehabilitation.

257

Response: Areas not meeting the VQOs of the Forest Plan will be considered for rehabilitation, per Visual Resource Management Standard 11-5 and Monitoring guidelines in the Forest Plan. Scenery rehabilitation is identified as a component of the budget to implement the Preferred Alternative.

Comment 32: SIAs should have a VQO of Retention, rather than Partial Retention in the Preferred Alternative, with the possible exception of areas used for visitor facilities.

205

Response: The Preferred Alternative has been modified to include a VQO of Retention for SIAs.

Recreation Management Comments

Comment 1: Draft EIS, page 3-75, Table 3-28 should have been divided to separate the ROS Class acreages from the Dispersed, Developed and Wilderness acres as the 2 totals are duplicates. It would be clearer if the Current, Year 2000 and Year 2040 columns were labeled "Demand." Totals for the ROS Classes should also equal the totals for the Dispersed, Developed and Wilderness.

1

Response: The numbers in the table have been recalculated and are now consistent with other parts of the documents. The items suggested for clarification have been added.

Comment 2: Draft EIS, page 4-110, Table 4-30: The "*" indicates that currently inventoried semi-primitive non-motorized land in wilderness would be managed as primitive. That may be so but that does not make it Primitive ROS. The Final EIS should analyze and display the existing ROS classes of wilderness and compare availability to current and future recreational demand based on the resulting accurate classifications as well as using the best available demand projections.

1 283

Response: It is true that a sizable portion of wilderness will never fit the Primitive ROS class due to social interactions. The numbers in the table have been corrected. This change does not affect the fact that the recreation supply for all ROS classes and types of use greatly exceeds the current and projected demand; refer to response to Recreation Management Comment 5.

Comment 3: The Forest Plan should refer to the general guidance of the United States Forest Service (USFS) National Recreation Strategy and the Klamath National Forest Recreation Program and Management Strategy and Direction mission.

4

Response: The Draft Forest Plan does this in Chapter 4 under Forest-wide goals for Recreation Management: "Implement the National, Regional and Forest Recreation Strategies." The Klamath National Forest Recreation Program Management Strategy and Direction was not completed until May 18, 1993 after most of the writing for the Draft EIS and Forest Plan were completed. In the Final Forest Plan, the Program Emphasis Goals and Forest-wide Standards and Guidelines for Recreation have been revised to include the key elements of the Forest Recreation Program Management Strategy. In Appendix A of the Final Forest Plan, the Recreation Program Management Strategy and Direction has been added to Table A-2, Existing Plans or Strategies Retained and incorporated by Reference into the Forest Plan.

Comment 4: Develop a brochure for cave use on the forest.

4

Response: The Forest Plan is a programmatic document designed to record decisions on land allocations, management requirements and output levels. Generally, a decision on whether a brochure should be prepared does not need to be included in the Forest Plan. Forest-wide Standard and Guideline 12-3 in Chapter 4 of the Final Forest Plan states that public information is integral to the management of the recreation resource and providing interpretation and information to visitors will be emphasized. Forest-wide Standard and Guideline 2-11 states: "Foster communication and cooperation between the Forest Service caving organizations and recreationists." A brochure on caves would not be inconsistent subject to the other provision of Forest-wide Standard and Guideline 2-11 that states: "Information exchange may not be made public if it could lead to the degradation of sensitive caves."

Comment 5: The Forest Plan has not addressed the needs and opportunities in recreation to it's fullest possibilities. The Preferred Alternative does not meet the enthusiasm and commitment to meeting the growing outdoor recreation needs of the American people or Siskiyou County. As I read through the proposed alternatives for recreation, the picture I received was mostly negative.

4

Response: Recreation needs and opportunities are addressed in the Forest Plan, Chapter 4 under Forest Program Emphasis, Resource Management Programs, Recreation Management as well as under Forest-wide Standards and Guidelines, Resource Program Management, Recreation Management. The goals include offering a wide range of recreational attractions and opportunities, expanding opportunities and implementing Recreation strategies. As explained in EIS, Chapter 3, Recreation, although the projected recreational use on the Forest is expected to increase over time, it is estimated to still be less than half of the current capacity for all recreational uses even when it reaches its greatest demand during the planning period in the fifth decade. As pointed out under Consequences common to All Alternatives for Recreation Management in EIS, Chapter 4; "All alternatives would meet the demand for developed and dispersed recreational opportunities through the fifth decade." All alternatives except Current/RPA and G(SOHA) would request between 100 and 135% increase in recreational funding which would enhance recreational opportunities as discussed in EIS, Chapter 4 under Recreation Management. Various alternatives would emphasis different recreational needs. The intent was

for an unbiased, rather than a negative treatment of alternatives.

Comment 6: What data exists to support the idea that wilderness use and non-motorized recreation will increase on the Forest to cause an economic gain as stated in the President's Plan? Wilderness users which comprise about 1 to 3% of recreational visitors would have to increase very dramatically to be able to produce increases in private sector jobs.

255

Response: For the Klamath National Forest which is relatively remote from population centers and receives little recreational use compared to other forests, the projections for increased wilderness use were only moderate; refer to EIS, Chapter 4, Wilderness Management, Consequences Common to All Alternatives. As displayed in the EIS, Chapter 3 under Recreation Management; wilderness use is projected to range from 19% of maximum practical capacity currently to 30% in the year 2040. All other recreational use projections on the Forest similarly fall far below the available supply. Local conditions lead the Forest to expect to contribute very little to the gain the President's Plan expects for the entire Northwest; refer to EIS, Chapter 4, Economics for contribution of recreational use to benefits and jobs.

Comment 7: Develop a brochure for volcanic areas on the Goosenest Ranger District and mark these areas on the ground.

4

Response: The Forest Plan is a programmatic document designed to record decisions on land allocations, management requirements and output levels. Generally, a decision on whether a brochure should be prepared does not need to be included in the Forest Plan. The development of a brochure for volcanic areas would be consistent with Forest-wide Standard and Guideline 12-3 in the Final Forest Plan which states that public information is integral to the management of the recreation resource and that interpretation and information to visitors should be emphasized. Implementation would be contingent on receiving funding for the project.

Comment 8: In review of the President's Plan there is no specific direction and or discussion concerning the various forms of recreation. Key watersheds are established with road densities predetermined by miles of closed roads without local public process, or even a cursory examination of the road in question as to need, public desire, etc. This is all a recipe for disaster.

255

Response: This is why there are different levels of planning. The President's Plan provides broad direction at a regional scale for late-successional and aquatic species. The Forest Plan and accompanying EIS discuss Recreation Management and Transportation Management at the Forest level. Forest-wide and Management Area standards and guidelines are proposed for a variety of alternatives in the EIS to provide direction for these programs and public involvement occurs; refer to EIS, Appendix A. At the landscape/watershed level, further ecosystem analyses will occur. At the project level, site-specific analysis will occur including additional public involvement before any irreversible or irretrievable commitments of resources are made. In the Final Forest Plan, pages 4-10 and 4-11 explain the levels of analysis.

Comment 9: The Forest is a key recreational area for the large populated areas to the south. Our forests must be maintained with great care to address all interests and not just those of the extraction industries. Recreation is a truly reusable resource with exceptional growth potential. The explosive growth of mountain bicycling is an ideal opportunity.

141 247

Response: A range of alternatives was considered in the EIS. Some alternatives place more emphasis on recreational opportunities, some emphasize commodities and others emphasize wildlife needs; refer to EIS, Chapter 2, Alternatives Considered in Detail. Alternatives which emphasize dispersed recreation and those which extend the existing trail system would likely have more opportunities for mountain bicycling. Alternatives Preferred, B and B' would enhance dispersed opportunities. Alternatives C and E would construct about 120 miles of trails in the first decade. Alternatives Preferred, A, B, B', D and D' would construct about 100 miles of trails in the first decade. Alternatives Current/RPA and G(SOHA) would place little emphasis on trails and dispersed recreation. Currently, the Forest trails are open to mountain bikes except for trails in wilderness and the Pacific Crest Trail (PCT).

Comment 10: Will closed roads become recreational opportunities without "conflict" for the one group of users on the Forest who get all the benefits of massive restrictions with none of the restrictions applied to their uses? Studies are available that show that animal species are affected more by human foot travel than motorized use.

255

Response: Restrictions are not established to favor any group of users over others. Roads would be closed to meet resource objectives such as species viability needs, to prevent resource damage such as excessive sediment delivery to streams or due to lack of money for maintenance (refer to response to Recreation Management Comment 39). Providing additional recreational opportunities to some user groups and reducing the opportunities of other groups may indeed be an indirect consequence of such road closures. Compliance with environmental laws and regulations must take precedence over providing recreational op-

portunities. Different animal species have different requirements and the Forest Plan is required by NFMA to provide for the viability of all species, not just a single group.

Comment 11: Develop and maintain the Forest's recreation resources in a way that complements private sector recreation offerings.

4

Response: This is covered by the Forest-wide Standard and Guideline 12-6 which states: "...Recreation facilities should be developed only where private facilities do not fill the need for the recreational service or facility and where there is no opportunity or interest in the private sector to provide the recreational opportunity. Competition with private enterprise should be avoided."

Comment 12: Even the most primitive recreation use needs access to some point by vehicle and developed facilities for parking.

255

Response: The intent of these alternatives is not to do away with roads entirely, but to protect the resources as required by various environmental laws; refer to response to Recreation Management Comment 10. All alternatives except Current/RPA and G(SOHA) would construct and reconstruct trailheads to meet user expectations. Alternatives Current/RPA and G(SOHA) would put little emphasis on trailhead construction and reconstruction.

Comment 13: Anticipate and respond to demand for winter-sports opportunities in dispersed areas including snow playing, snowmobiling, skiing, alpine and cross country skiing as well as winter mountaineering especially on the Goosenest Ranger District.

4

Response: The Forest Plan does not mention winter sports specifically, but they are certainly included in Forest-wide Standard and Guideline 12-1 which states: "Manage Forest resources to provide a broad range of recreational opportunities that meet changing recreational demands."

Comment 14: Water play recreation, fishing, rafting, kayaking and camping should be promoted in the Preferred Alternative as should recreational gold mining where it is permitted.

4

Response: The Preferred Alternative does not promote any recreational use above the other recreational uses, but strives to achieve a balance; refer to Forest-wide Standard and Guideline 12-1. Forest-wide Standard and Guideline 19-11 would allow recreational mining where it does not conflict with management objectives, withdrawals or the rights of mining claimants.

Comment 15: Diversification beyond wood products should emphasize destination recreation which is already the preeminent growth industry in the area. Actively seek special use applications from proponents when market analyses indicate a viable business opportunity such as the proposed alpine ski area on West Haight Mountain on the Goosenest Ranger District.

4 283

Response: Forest-wide Standard and Guideline 12-18 in the Final Forest Plan covers this. Applications for special use authorizations are made by bid in response to a prospectus. A prospectus may be prepared when there is at least one applicant that submits an application which shows the applicant's ability to satisfy the requirements of the proposed use. This includes financial statements and supporting data. The Forest has not had any such applicant to date.

Comment 16: Additional protection should be afforded spawning areas by adding the following Forest-wide Standard and Guideline under Recreation Management: "Efforts should be made to preclude campsite development or to discourage camping within 300 feet of known anadromous salmonid spawning areas. The Forest will explore ways to redirect interested visitors to informational centers or provide opportunities to the public to view fish spawning activities, receive salmon and steelhead life history information and to showcase fish habitat enhancement projects/activities (e.g., Kelsey Creek/Indian Creek spawning channels, instream structures, riparian plantings, etc.) throughout the Forest."

72

Response: Forest-wide Standard and Guideline 12-10 which discourages camping within 300 feet of critical wildlife and stock watering areas and 12-3 which provides for various types of public information and education adequately cover the situation.

Comment 17: A reference to the Federal governments Trust Responsibility to Indian Tribes and the recognition that formal consultation with Federally recognized Indian Tribes will occur prior to the initial evaluation of any proposed recreational program should be included in each Forest's standards and guidelines.

203

Response: In the Final Forest Plan, a new section entitled Tribal Government Program has been added to the Forest-wide Standards and Guidelines. Forest-wide Standard and Guideline 24-27 states "Consult and coordinate on all projects that have the potential to affect Native American values." This would apply to recreation projects.

Comment 18: It does not make sense to say "Recreation opportunities would be designed to maintain and improve facilities.... etc"? It is not opportunities that are being designed. Would it not be better to say that you

have found that campground and river fishing demand is not being met. Then state how the Plan addresses these points.

5

Response: This quote does not appear in any of the documents. If this comment refers to design of recreational facilities, Forest-wide Standard and Guideline 12-6 states that "recreational sites should be designed to minimize annual maintenance and operating costs." The Forest Service does not design recreation opportunities.

Comment 19: The Alder Creek Divide Recreational proposal would meet the Option 9 criteria of diversification and help in stabilizing the economy through tourism for Siskiyou County. The area is presently classified General Forest use. This area should be considered as a recreational site.

4

Response: There is no land allocation for recreational sites. They can occur in a number of management areas. The land allocation of General Forest is compatible with developed recreation sites. This is stated in the Standards and Guidelines for Management Area 17 under Recreation Management: "Develop recreation sites compatible with the management area objectives."

Comment 20: Under projected demands and opportunities in EIS, Chapter 3, Recreation Management, you state: "Siskiyou County, in particular, should continue to experience a growing need to diversify its economic base by expanding the recreational-services sector." Therefore the statement put in Alternative B about the West Haight Mountain Proposal should be included in the Preferred Alternative: "This alternative would adopt and encourage a proposal for an alpine ski area development at West Haight Mountain. However, the proponent would have to fund the in-depth, environmental analysis required by law."

4

Response: Planning is a multi-stage process and a site-specific EIS funded by the proponent would have to be completed. Until a site-specific detailed proposal with supporting analysis and documentation is submitted, a decision cannot be made as to whether it would be adopted and encouraged. There is nothing in the Preferred Alternative management areas or standards and guidelines that would prohibit the development of a ski area unless the detailed proposal was inconsistent with Forest Plan direction or would cause unacceptable environmental effects.

Comment 21: The winter recreation potential that exists at West Haight Mountain and the winter sports potential of Filson Spring is not adequately addressed in the proposed Forest Plan.

7

Response: The Final EIS, page 3-83, recognizes that there is potential for developing an alpine skiing facility. "Potential" does not imply economic feasibility. To date there has been no proponent or applicant that could satisfy the financial requirements of ski area development.

Comment 22: The Preferred Alternative should establish a forest-wide trail system which accommodates all types of use such as mountain biking and hiking in compatible areas. The portion of the system outside wilderness would ease human pressure on wilderness.

4 9 129 323

Response: Forest-wide Standard and Guideline 12-14 in the Final Forest Plan states "The Forest should manage the use of the existing trail system to serve the needs of recreationists in a condition that protects the resource and meets health and safety standards. Trails should be managed to accommodate all kinds of use such as mountain biking and hiking." The Preferred Alternative would construct or reconstruct trails to meet user needs. About 100 miles of trail would be constructed within the first decade. Overuse of wilderness is not expected to be a problem in the next 50 years; refer to response to Recreation Management Comment 7.

Comment 23: Little consideration has been given to the effect roadless area development will have on the PCT which passes through 7 RARE II roadless areas in the Shasta-Trinity and Klamath National Forests. The Forest Plan fails to disclose that the trail passes through the Forest.

237

Response: The Draft EIS, page 3-74 recognizes that the PCT passes through the Forest and it is mentioned a number of times in Appendix C of the EIS. Any proposed management activities in roadless areas would be analyzed on a site-specific basis and the trail would receive consideration in conformance with 16 USC 1241-1249 (National Trail System Act.)

Comment 24: Has the Forest considered opening now closed or gated roads so as to enhance the recreational opportunities that exist for the majority of the forest users? There are numerous roadless area classifications and current roads that will be abandoned by the Forest Service in the Preferred Alternative. These areas and abandoned roads should be turned into trails.

196 255

Response: All alternatives would review Road Management Objectives for each road during the Landscape Analysis and environmental analysis processes. This would include identifying the short-term and long-term needs. This is described for the Preferred Alternative in the Forest-wide Standards under Transportation and Facilities Management.

Comment 25: A discussion of the impact of Scenic Byway designation is needed. How will these Scenic Byways affect Forest and private land management activities as regards VQOs, privately owned recreational and business facilities, building codes, nuisance abatement, commercial hauling, etc.?

281

Response: Scenic Byway designation affects NFS lands by highlighting information about forest resources and identifying opportunities for recreational and interpretive development along the byways. VQOs were not affected on the Forest lands by designation of Scenic Byways. On private lands, land management activities are not limited by Scenic Byway designation except where landowners choose to adjust their management voluntarily.

Comment 26: The Preferred Alternative should encourage the use of Scenic Byways and develop wildlife viewing areas along these Byways.

4

Response: The Preferred Alternative does not have standards to either encourage or discourage the use of Scenic Byways. However, many joint activities between the Forest and local communities are currently underway to encourage use of the State of Jefferson Scenic Byway. No new Scenic Byways would be recommended in the Preferred Alternative. Proposals for wildlife viewing areas would be analyzed at the project level on a site-specific basis.

Comment 27: Regulations are being violated in the Forest Service's zeal to stop all mining in Humbug, but the plan for OHV recreation use in Humbug will allow all terrain vehicles to tear up the environment including fisheries habitat.

6

Response: There is no effort to stop mining as it is allowed on NFS land by the General Mining Laws of 1872 and the Organic Act of 1987. All alternatives would include standards and guidelines which commit the Forest to preventing unauthorized uses such as any occupancy trespass that might be associated with mining. This is because the Organic Act also authorizes the Secretary of Agriculture to set out rules and regulations to mitigate impacts on the surface resources and to define procedures related to operations authorized by the mining law. OHV use is a valid recreational use of public land that is appropriate in certain areas. Like mining and all other activities on the Forest, it would be subject to certain restrictions to protect the environment in any alternative.

Comment 28: Legitimate opportunities for motorized recreation are the answer to problems of illegal OHV use.

255

Response: All alternatives would try to promote a wide range of recreational opportunities of which OHV use is one. Through incorporation of the Forest Recreation Program Management Strategy which was completed between the Draft and Final EIS, all alternatives would emphasis the development of a OHV recreation area in the Humbug drainage in the future.

Comment 29: All motorized vehicle use including OHVs should be restricted to established roads and designated routes. OHV use causes soil erosion, permanent soil disturbance, introduces diseases and disturbs wildlife. Prohibit OHV entry into Roadless Areas.

45 258 273

Response: None of the alternatives would restrict OHV use to established roads or designated routes. All alternatives would prohibit OHV use in wilderness, on the PCT, on the Boundary and Clear Creek National Recreation Trails and on part of the Kelsey National Recreation Trail. Alternatives Preferred, A, C and E would also prohibit OHV use in Wild River corridors and RNAs. Alternatives Preferred, A and E would prohibit OHV use in the Backcountry Management Area. Alternatives B and B' would close certain trails to OHV use. Alternative C would also restrict OHV use in SIAs. Refer to EIS, Chapter 2, Table 2-16, Trail Management and Road Management sections. All alternatives would also restrict or mitigate OHV use to prevent environmental damage as necessary on a site-specific basis.

Comment 30: The Preferred Alternative should encourage OHV use in areas that are open for such uses.

4

Response: While the Preferred Alternative does not actively encourage OHV use above other uses in areas open to motorized use, neither does it discourage such use. Forest-wide Standard and Guideline 12-11 in the Final Forest Plan would restrict OHV use "to protect key resource values and meet management objectives."

Comment 31: The impact of road construction on our recreation industries should be analyzed.

283

Response: The general effects of roads on recreation are discussed in the Recreation Management section of Chapter 4 of the EIS under Important Interactions. In addition, the Consequences Unique to Each Alternative sections discuss the projected acres and percent of the Forest available for each ROS class by alternative. These opportunities are dependent on the presence or absence of roads. The construction of roads in itself is not the important factor, but rather the number and location of roads determines ROS opportunities.

Comment 32: The Forest Plan should eliminate OHV use, especially in areas where ecological harm is known or suspected to be occurring. OHV use should be restricted to private lands.

9 18 41 57 98 129 316 323 324 337

Response: OHV use is a valid recreational use of public land that is appropriate in certain areas. Refer to response to Recreation Management Comment 29 for the restrictions each alternative would apply to prevent ecological harm. The Forest has no authority over uses on private land.

Comment 33: How are the ROS Classes determined? Where are they going to be? What are the alternatives?

196

Response: As explained in EIS, Chapter 3, Recreation Management; ROS class determination is based on size of area, distance from roads and degree of development. A definition for each class is given in the EIS Glossary under Recreation Opportunity Spectrum. The alternatives considered are described in the EIS, Chapter 2. The number of acres in each ROS class that would result from each alternative is displayed in Table 4-30 of the Final EIS.

Comment 34: Recreation, especially primitive and semi-primitive recreation, is very sensitive to visual quality. The Draft EIS does not adequately assess the economic impact of the proposed failure to meet the predicted public preference for protection of scenic resources. The Final EIS should contain such an analysis including consideration of Recreation as a growth industry, the importance of growth industries and the fact that other forest-using industries are contracting in size and importance.

283

Response: All management areas in the Preferred Alternative have been assigned ROS classes and VQOs to provide more comprehensive guidance on recreation and scenery issues. For management areas with Primitive and Semi-Primitive ROS goals, their VQOs are all either Partial Retention, Retention or Preservation. These near natural appearing and natural appearing scenery conditions are generally compatible with and nearly or completely achieve public preference levels.

Comment 35: In projecting recreational demand the Draft EIS uses national figures (RPA) and ignores state-of-the-art demand studies that have been done by the State of Oregon which project a much greater increase for recreation (40-60% for Southern Oregon National Forests by the year 2000).

283

Response: The best indicator of future demand for the Forest is a local analysis of past and current use and local population growth. Our data agrees with RPA and indicates that recreational use will not grow by more than 10% in the first decade. In fact, it may not even reach a 10% growth rate. The proximity of the Southern Oregon Forests to large population centers is likely the factor that makes projections for those areas inapplicable to the Forest.

Comment 36: How can the local economy diversify if the Forest does not assist attempts to increase recreation attractions?

188

Response: All alternatives except Current/RPA and G(SOHA) propose methods to enhance recreational opportunities as summarized in the EIS, Chapter 2, Table 2-16 under Recreation Management. All alternatives would also have a Rural Development Program to assist communities in stabilizing and revitalizing their economies.

Comment 37: The President's Plan discusses an excess supply of the more developed, motorized forms of recreation and a high and increasing demand for recreation settings with little development, little management activity and no motorized access. All of this flies in the face of the text supplied here. This section either needs to be rewritten to support the President's Plan or the reviewer must admit that this is a politically driven process and facts and figures be dammed.

255

Response: The Final EIS page 3-81, Table 3-28, shows that the greatest increase in recreational use is expected to occur in dispersed areas outside of developed sites. Dispersed recreation involves low density use over broad expanses of land and water where there is little development and management activities.

The President's Plan covers portions of 3 States and is at a different scale than the Forest Plan. Both plans use averages and wide variation exists within the range of each Plan. The Forest can have a relatively low demand for primitive recreational uses, while other Forests that are close to large population centers have very high demand with the result that the average for the Region as a whole would still be a high demand. Because the 2 analyses are at different scales, the information presented is not inconsistent.

Comment 38: The lack of adequate motorized recreation opportunities to meet public demand can and will result in an increase of illegal use and user conflict.

255

Response: Refer to response to Recreation Management Comment 29.

Comment 39: The elimination of access (the decrease in road mileage always included the term "open" denoting that just vehicular use will be eliminated not

the road) on miles of road for the sake of nothing more than to reduce the number of miles is discriminatory and biased against motorized recreation.

255

Response: There are a number of reasons for changing a road's status from open to closed. They are practical, not political or discriminatory. The Forest has a large number of roads that were constructed primarily to provide access to timber. With all alternatives, the timber program would be significantly reduced. Road maintenance has to be planned to keep as many roads open as possible, but there isn't enough funding to maintain all the roads. Road maintenance is managed through a multi-level maintenance strategy. Maintenance level 1 roads are closed to vehicle use. Roads placed in this level are generally timber access roads that are used for a short time and then closed because they won't be needed again for a long time. The only maintenance required on these roads is an annual inspection to make sure no resource damage is occurring. The road surface template is not considered a resource in this case and is expected to need reconstruction when re-entry is required. The resource which benefits would finances the reconstruction.

Comment 40: River rafting should be available to future generations.

314

Response: The Preferred Alternative is likely to reduce opportunities for water-related activities due to the mitigation measures that would be required in Riparian Reserves which may require closing some river access areas. Alternatives A, C, D, D' and E would develop river access areas based on user needs. Alternatives B and B' would develop additional river access areas. Alternative C would emphasis the restoration of existing facilities. Alternatives Current/RPA and G(SOHA) would have little funding available to maintain existing sites.

Comment 41: In the Draft Forest Plan, Forest-wide Standard 12-13 identifies that the loss of trails within the system should be replaced in kind. This guideline should be worded to apply to all causes, user groups and uses.

255

Response: This has been added in the Final Forest Plan.

Comment 42: Perhaps traditional trails used by packers and grazers should be maintained for their exclusive use or marked and separate trails established for backpackers to avoid conflicts.

281

Response: None of the alternatives would use this approach. This type of excessive governmental regulation of use would likely be very unfavorable with the majority of forest users. Meeting various types of users is part of the recreational experience.

Comment 43: Education of recreational and other users of shared trail etiquette (pedestrians make-way) has been an issue voiced by packers and grazers.

281

Response: Management Area 2 (Wilderness) includes a standard which emphasizes the need for visitor information and education programs. Since most of the trails occur in wilderness, it is felt that this concern can be adequately addressed through the wilderness education program.

Comment 44: Trail systems all should afford the differing users the same degree of opportunities. Increased restrictions on access in the Preferred Alternative due to Key Watersheds, RR prescriptions, wildlife management and direction to reduce open road mileage all lead to the conclusion that OHV opportunities/vehicular access will be lost. The cumulative impacts of changing use patterns and massive restrictions on vehicle use and access need to be discussed as they relate to recreation and the availability of multiple-use recreation opportunities.

255

Response: Due to terrain conditions, ecological needs and user demand, this may not be possible. Due to the steeper nature of the westside of the Forest, little of the area is appropriate for motorized trail use. Resource objectives such as species viability needs may also require restrictions on certain trails. Our projections for future recreation supply and demand do not indicate that there will be a shortage of any type of recreational use within the next 50 years. Refer to response to Recreation Management Comment 5.

Comment 45: To provide fair, consistent and equal treatment to all user groups; add the following Forest-wide standard to the Preferred Alternative: "Trail construction will focus on the development of loop systems to provide access, disperse recreation use and add diversity to the OHV recreation experience."

255

Response: Refer to responses to Recreation Management Comments 5 and 44.

Comment 46: Forest Plan Table 4-1: The Base Year 1987 for semi-primitive non-motorized should probably be 8,000 acres rather than 8. This is confusing (even when corrected) as it would give the reader the impression that only 8,000 acres of semi-primitive non-motorized were available in 1987 and it would zoom up to 128,000 acres in Decade 1. The Draft EIS shows that you actually had 340,000 acres of semi-primitive non-motorized.

1

Response: All the Base Year 1987 ROS acres were inaccurate in Table 4-1 of the Forest Plan as were the units. This has been corrected in the Final Forest Pla to be consistent with Table 4-30 of the EIS. EIS Table 4-30 ROS classes for primitive and semi-primitive non-motorized have also been corrected; refer to response to Recreation Management Comment 2. There would be a decrease of 39,000 acres in the semi-primitive non-motorized ROS class in Decade 1 for the Preferred Alternative.

Comment 47: Knowledge and understanding of OHV recreation and the needs of the motorized recreation community is totally lacking and shows in some cases. A review of the literature cited shows a profound lack of up to date literature regarding OHV use. The Off Highway Motor Vehicle Recreation Division of the State Parks and Recreation Department is a good source references.

255

Response: The discussion of the current situation in the EIS, Chapter 3, Recreation Management is believed to be unbiased and adequate. In the EIS, Chapter 4, Recreation Management; OHV opportunities are covered by the discussion of the semi-primitive motorized, roaded natural and rural ROS classes.

Wilderness Comments

Comment 1: All existing roadless areas should be recommended as wilderness for sensitive watershed, wildlife and recreation needs.

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85 100 101 102 103 104 105 106 107
108 109 110 111 113 114 115 116 117
118 119 120 121 122 123 124 125 126
127 129 130 131 132 133 134 135 136
137 138 139 140 141 143 144 149 15
151 155 156 157 158 159 160 161 162
163 164 165 166 172 174 175 176 177
178 179 180 181 182 183 184 185 186
187 189 190 191 197 204 206 207 208
209 210 211 212 213 217 218 219 220
222 223 224 225 226 227 232 234 240
244 245 248 258 266 268 269 270 271
272 274 275 278 279 285 286 288 289
290 291 293 294 295 297 298 299 308
316 324 332 335 337 338 339

Response: While RPA and other reports show an increased demand for wilderness recreation use nationwide, current and projected future use on the Forest is relatively low; refer to EIS, Chapter 3, Recreation. Currently 381,100 acres, 23% of the total Forest, is designated wilderness. Due to the low demand relative to the available supply, no additions to the wilderness system were recommended in any alternative. In all alternatives, land allocations and associated standards and guidelines provide for watershed and wildlife needs as discussed in EIS, Chapter 4, Water and Biological Diversity sections. The existing wilderness system is an integral part of these ecosystem management strategies. Allocating the released roadless areas to other uses is also an integral part of the ecosystem management strategy as provision also need to be made for early and mid-successional species.

Comment 2: Showing 381,100 acres of wilderness contradicts the 407,284 acres reported in FS 383. Also FS 383 does not show Red Butte Wilderness on the Klamath National Forest.

5

Response: Almost all figures relating to the Forest are just estimates as very few areas have been actually measured on the ground; many estimates are taken from aerial photography. Various reports may have used different estimates. For consistency, all acres in the Forest Plan and EIS used acreage estimates from the database even when they were known to differ from the estimates in past reports. Only 5 acres of the Red Butte Wilderness are within the Forest boundaries. FS 383 may not have reported acreage less than 10 or 100 acres.

Comment 3: Wild lands must remain wild for the sake of all wildlife, including man. Wilderness protection should be a key element in both your tactical and strategic plan. These plans fail to properly protect the wilderness areas in these forests.

60 104 140 165

Response: All alternatives would manage wilderness areas in accordance with the 1964 Wilderness Act and the 1984 California Wilderness Act, which is considered adequate protection. Wilderness areas would be a part of the strategy for managing wildlife habitat in all alternatives; refer to EIS, Chapter 4, Biological Diversity and Wildlife sections.

Comment 4: There is a strong discrimination against the U.S. Constitution and Individual Rights as Americans to use the Wilderness Area under the U.S. National Disabilities Act of July 26, 1990; the Roads & Trails Act of October 13, 1964; the National Historic Preservation Act of October 15, 1966; the National Trails System Act of October 2, 1968; the National Trails System Improvements Act of 1988, in "The Principal Laws Relating to Forest Service Activities," USDA - Forest Service 1993 Version.

196

Response: Nothing in the above mentioned acts or laws prohibits people with disabilities, including mobility impaired persons that use wheelchairs, to use wilderness areas. Section 507 (c) of ADA; PL 101-336 addresses the issue of wilderness access and reaffirms that nothing in the Wilderness Act is to be construed as prohibiting the use of a wheelchair in wilderness. However, consistent with the Wilderness Act, no agency is required to provide any form of special treatment or accommodation, to construct any facilities or to modify any conditions of lands within a wilderness area to facilitate such use outside current existing laws pertaining to disability access to Federal agency facilities, programs and activities. The Forest Service is responsible for providing the setting in which recreational activities occur, but the people of all ages and abilities are responsible for obtaining any special equipment necessary to participate.

Comment 5: Congress did not prohibit the Forest Service from considering released roadless areas for wilderness designation. Further, the length of time since the passage of the California Wilderness Act and NFMA raises the issue of whether the Forest is now obliged to reconsider wilderness dedication. The Forest has the legal right to consider a wilderness alternative for any roadless area it chooses and the Forest Plan should honestly concede this point.

45 225 242 291

Response: EIS, Appendix C, Factors Considered in Need for Roadless Areas agrees that additional wilderness consideration is the Forest's choice. In the Final EIS, additional discussion has been added to Appendix C as to why the Forest did not recommend additional wilderness in any alternative. As discussed in Chapter 3, Recreation of the EIS, wilderness use is currently 36% of the maximum practical capacity.

Based on the best available information, wilderness use is projected to increase to only 57% by the fifth decade. With 23% of the total Forest in designated wilderness, there is little need for additional wilderness areas.

Comment 6: The word "discourage" should be replaced with "eliminate" in relation to the use of soap in streams in wilderness. This type of impact must be eliminated or the area closed.

255

Response: The Forest prefers to use indirect techniques such as visitor information and education to gain compliance with low impact use of wilderness. If this fails, then a direct management approach utilizing regulations would be used to prevent the degradation of the wilderness resource.

Comment 7: The concept that use creates impacts, impacts are acceptable and the recreational needs of the specific user group dictate that the use continues should be applied equally to all users of this forest.

255

Response: The Forest Plan does this in Chapter 4 in the Wilderness Management Areas. Standard and Guideline MA 2-23 in the Final Forest Plan states that human use of wilderness will be managed in accordance with the Limits of Acceptable Change established for various opportunity classes. Limits of acceptable change does not differentiate between users, but concentrates on impacts that may be acceptable and not acceptable regardless of who or what caused them.

Comment 8: Aircraft may stock wilderness lakes if the practice was established prior to designation and is approved. This should not be allowed. If wilderness advocates support this concept, it just shows that their recreation is really more important that the concept of an area free of man's intrusions. This concept should be expanded to other motorized uses which were established prior to designation.

255

Response: The Forest cooperates with the State of California in the aerial stocking program and monitors the fish stocking activities in wilderness to make sure that they are planned and carried out in conformance with the Wilderness Act's purpose of securing an "enduring resource of wilderness" for the American people.

Comment 9: The "least possible number" of signs should be the rule in the wilderness.

255

Response: Standard and Guideline MA 2-23 in the Final Forest Plan states that the limits of Acceptable Change will be used to manage human use in wilderness. This process integrates public involvement and will be used to establish the sign policy.

Comment 10: Structures, mining related uses and activities are allowed in wilderness through the Wilderness Act and other legislation. These concerns should be addressed and acknowledged in these documents.

230

Response: The Desired Future Condition for Management Area 2 in Chapter 4 of the Final Forest Plan states: "Some evidence of human influence consistent with the Wilderness Act may be present due to valid mining claims, livestock grazing and recreational use." MA 2-5 acknowledges that some uses and activities are provided for by the establishing wilderness legislation.

Comment 11: Kangaroo Released Roadless Area includes a complete elevational transect from valley to crest. The 3 principal trails provide contrasting experiences. While Backcountry zoning and protected habitat status are welcome, this area should simply be part of the adjoining Red Buttes Wilderness in the Forest Plan.

242

Response: Due to the many multiple use demands and the low demand for wilderness relative to the available supply, no additions to the wilderness system were recommended in any alternative. The Preferred Alternative would allocate the eastern portion of the Kangaroo area to Backcountry which would provide for semi-primitive non-motorized recreational opportunities. The western portion of the Kangaroo area would be allocated as an LSR. While providing many of the same needs as wilderness, Backcountry and LSR designations would allow more flexibility in management. Vegetation management would be permitted after catastrophic events where necessary to recover forest health. There would be no scheduled timber harvest.

Comment 12: Siskiyou Released Roadless Area 3 contains the untouched watershed of Fivemile Creek, Fourmile Creek gorge, lofty ridges, glacial landforms and a 300-foot waterfall. It should be added to the adjacent Siskiyou Wilderness in the Forest Plan.

242

Response: In the Preferred Alternative this area would primarily be General Forest and RRs. The lower two-thirds of the area in the Fivemile and Fourmile drainages would be a Key Watershed. In the Final EIS, the Preferred has been modified to prohibit new road construction in Key Watersheds within released roadless areas. Due to the many demands for multiple use needs and the low demand for wilderness relative to the available supply, this area would not be recommended as a wilderness addition.

Comment 13: Leaving lower Dillon Creek undeveloped, providing a more-or-less roadless corridor down to the Klamath River is welcome in Siskiyou Roadless Area 1. Logging should be prohibited in

upper Dillon Creek. At a minimum, the steep wedge of land between the north and south forks and rising to the crest and the Siskiyou Wilderness boundary, should be left alone. All or most of the roadless land in the Dillon Creek drainage should be added to the adjacent wilderness.

242

Response: In the Final EIS, LSRs in the Preferred Alternative include additional acres in the Dillon area; some critical marbled murrelet habitat was added. There is no longer a special land allocation for furbearers in this area, but habitat for Sensitive species other than furbearers would still be managed as MA 6. The Riparian Reserves now include intermittent streams, many ephemeral streams and unstable areas. In the Preferred Alternative, Dillon Creek would be designated a Key Watershed. No new road construction would be permitted in Key Watersheds within released roadless areas in the Preferred Alternative in the Final EIS. Due to the many demands for multiple use needs and the low demand for wilderness relative to the available supply, this area would not be recommended as a wilderness addition.

Comment 14: It would be desirable to redraw the Trinity Alps Wilderness boundary in the Orleans Mountain Released Roadless Areas 7 and 8 to identifiable landscape features as opposed to cadastral lines in the Forest Plan.

242

Response: The majority of the area would be allocated LSR with some Sensitive species habitat in the Preferred Alternative. Due to the urgent need to recover TE&S species, this allocation was felt to better meet the ecosystem management objectives of the Preferred Alternative than adding additional wilderness at this time.

Comment 15: Released Roadless Areas Orleans 1 and 2 should be removed from General Forest and managed as wilderness in the Forest Plan. They are used for backcountry recreation, provide wildlife corridors and have unstable soils.

128 242

Response: The Preferred Alternative would allocate the majority of the area to General Forest and some to TE&S habitat. However, much of the area has been administratively withdrawn due to economics, harsh sites and access problems. In the Final EIS, unstable areas have been added to RRs for the Preferred Alternative. This area would also be within a Key Watershed and no new road construction would be allowed in roadless areas.

Comment 16: All 3 segments of the Russian Released Roadless Area should be added to the small existing Russian Wilderness in the Forest Plan.

242

Response: The majority of the 3 segments would be allocated to LSRs in the Preferred Alternative. The area would be within a key watershed and no new road construction would be permitted. Due to the many demands for multiple use needs and the low demand for wilderness relative to the available supply, this area would not be recommended as a wilderness addition.

Comment 17: The entire Klamath National Forest should be designated a National Natural Preserve or Wilderness.

9

Response: Due to the many multiple use demands on the Forest and the low demand for wilderness relative to the available supply of 23% of the total Forest, no additional areas would be recommended for wilderness designation in any alternative.

Comment 18: Not 1 acre is recommended for wilderness designation. When changes due to Option 9 are considered, only 7% of the roadless areas will be protected.

237

Response: Current and projected future wilderness use on the Forest is relatively low. Wilderness use is currently 36% of the maximum practical capacity. Wilderness use is projected to increase to only 57% by the fifth decade. Refer to EIS, Chapter 3, Recreation. With 23% of the total Forest in designated wilderness, there is little need for additional wilderness areas. In comparison, demand for other uses such as TE&S species habitat, early and mid-successional species habitat and timber production are extremely high; land allocations attempt to find a balance between all the conflicting demands.

Comment 19: Remove all structures and garbage from wilderness areas.

129

Response: Structures covered by the pre-existing use clause in the 1964 Wilderness Act will be allowed to remain. The "pack it in, pack it out" concept is part of the wilderness experience and the Forest does not have the personnel or funding to provide a garbage service.

Comment 20: Large buffer zones should be established around all designated wilderness areas for eventual inclusion in wilderness and to prevent wilderness from becoming "biological islands."

129 211 323

Response: The FSM states that wilderness areas will not have buffers. As pointed out in the responses to Wilderness Comments 1 and 18, there is currently no need to increase the size of the existing wildernesses. There is little risk of wildernesses becoming biological islands as shown in the Refugia and Connectivity discussion in EIS, Chapter 4, Biological Diversity.

Comment 21: The CDFG currently uses aircraft to conduct research activities and to stock fish within wilderness at elevations below 2000 feet. This standard and guideline should be modified to accommodate those activities.

72

Response: This has been done.

Comment 22: The Forest Service lacks the authority to restrict activities of the CDFG relating to wildlife management. Standard and guideline MA 2-8 in the Draft Forest Plan needs to be clarified.

72

Response: This has been done.

Comment 23: Use fees should be required of equestrian wilderness users.

129

Response: This is outside of Forest Service authority. Congress establishes use fees. The Forest merely collects them.

Comment 24: Eliminate all mining from wilderness on NFS lands.

129

Response: Pre-existing mining rights are provided for by the 1964 Wilderness Act and will continue to be permitted subject to reasonable regulations.

Comment 25: Grazing programs within the wilderness should include the allotment of forage to wildlife. Standard and guideline MA2-72 in the Draft Forest Plan should clearly state that allocations of forage for wildlife would be part of all allotment management plans.

72

Response: Standard and guideline MA2-67 in the Final Forest Plan states that the number of livestock will be based on positive or negative impacts to plant communities, wildlife habitat, water quality and riparian areas.

Comment 26: Over-grazing in wilderness should be eliminated.

274

Response: The utilization standards proposed in the Final Forest Plan should prevent overuse of any allotment, whatever its location. Refer to Forest-wide Standards and Guidelines under Range Management.

Comment 27: The Wilderness Act should be implemented with respect for pre-existing rights and historic use. This should include water use rights secured by stock-watering and preference rights through established use of customary range. The laws of possession upon which grazing preferences are based are superior to claims to use by other individuals, including recreationalists. In addition, it has become the established "custom" in Siskiyou County to utilize these specific land areas for grazing. Public land grazing is part of the ranching "culture" in Siskiyou County and has been recognized through common law by Federal/State taxation and local real estate/banking transactions as a valuable property right included in the valuation of base ranch property.

281

Response: Pre-existing rights such as mining and grazing are provided for by the 1964 Wilderness Act. However, the Act does not mention water use rights as one of the exemptions covered by pre-existing rights. There are no superior claims as stated in your comment. While grazing is a recognized part of the history of Siskiyou County, grazing on Federal lands has always and continues to be a privilege, not a right.

Comment 28: Eliminate all livestock grazing from wilderness on NFS lands.

44 129

Response: Pre-existing grazing rights are provided for by the 1964 Wilderness Act and will continue to be permitted subject to reasonable regulations as long as environmental damage is not occurring.

Comment 29: There are several places in the planning documents where Alternative E is mentioned as not implementable because livestock grazing in wilderness areas is permitted by the 1964 Wilderness Act. The Act does not require grazing in Wilderness. We believe that conflicts with wilderness recreation users and a desire to maintain or restore wilderness ecosystems are legally permissible reasons to exclude commercial livestock from major portions of wilderness areas.

5 198

Response: The Wilderness Act provides that "the grazing of livestock, where established prior to the effective date of this Act, shall be permitted to continue subject to reasonable regulations." While environmental damage might be a reason to require mitigation measures such as excluding grazing from certain fragile areas, it is unlikely to be significant enough to prohibit all grazing in wilderness. Unless the permittees choose to not renew their permits, it is unlikely that grazing would be phased out entirely as many mitigation measures are possible prior to total exclusion; refer to response to Range Management Comment 7. Conflicts with recreational users are not a legally permissible reason to exclude grazing.

Released Roadless Areas Comments

Comment 1: High quality watersheds such as Dillon, Trail, Clear, Grider, Six Mile and Somes Creeks should remain without further logging, road-building or other development.

11 36 56 147 193 197 235 241 243 246 247 249 251 260 292

Response: A range of uses was considered for these areas in the alternatives. Alternative E would allocate the portions of Dillon, Grider, Six Mile and Somes Creeks which are in released roadless areas to Backcountry Management which would allow temporary roads and salvage only in rare cases.

The Preferred Alternative would manage these watersheds for a variety of objectives. A large portion of Dillon, Trail, Grider and Six Mile would be LSRs or TE&S species habitat as would a small part of Somes Creek. Other significant portions of all these watersheds would be managed as RRs or for a VQO of Partial Retention. Smaller portions of these areas would be managed for a Retention VQO or for General Forest. Clear Creek would also have an SIA. The Preferred Alternative would also designate all the above areas as Key Watersheds with the intent for them to serve as refugia for aquatic species. Watershed analysis would be required before any timber harvest was implemented in all Key Watersheds. No new road construction would be allowed in inventoried roadless areas within Key Watersheds which includes the majority of Dillon, Grider, Six Mile and Somes drainages.

The other alternatives would manage the majority of these watersheds for TE&S species habitat needs using various strategies.

Comment 2: An EIS should be required for the first project entry into Roadless Areas.

45

Response: FSH 1909.15, Chapter 20, 20.6, Classes of Actions Requiring EISs includes "Class 3: Proposals that would substantially alter the undeveloped character of an inventoried roadless area of 5,000 acres or more." Proposals for areas smaller in size would require an EIS if the environmental effects were found to be significant.

Comment 3: The Draft EIS fails to adequately analyze the effects of developing released roadless areas, particularly in terms of ecological criteria. Roadless areas are the best remaining blocks of habitat for many Sensitive terrestrial and aquatic species.

44 276 291

Response: Appendix C of the EIS displays the effects of management on each remaining released roadless area in terms of timber regulation class and of VQO. The effects of the proposed action on the released roadless areas in terms of ecological criteria is included in the forest-wide discussion on Biological Diversity in Chapter 4 of the EIS. Because the Forest is moving towards ecosystem management, the overall picture at the Forest Plan level is more valuable and appropriate than trying to estimate the potential impact on any individual part. Refer to Response to Released Roadless Comment 4 also.

Comment 4: There is no sound basis for assuming that logging and/or road building of any released roadless areas will not irreparably harm biological diversity resources and foreclose future options for ensuring their long-term maintenance and restoration. Until thorough, site-specific ecological analyses on affected resources can be completed for released roadless areas, no road-building or timber harvest activities should be allowed to proceed.

42 44 256

Response: Prior to development of any specific area, a landscape/watershed analysis and a project level NEPA analysis will be conducted. These analyses will include appropriate surveys. The NEPA analysis will determine and disclose any irreversible and irretrievable commitments of resources for that particular area based on the actual proposal. As required by NEPA, no site disturbing activities will occur until the effects are analyzed and disclosed. This is explained in Chapter 4 of the EIS under Released Roadless Area Management. At the Forest Plan level, only programmatic decisions on the management objectives and program direction for an area are being made, not site-specific proposals. Effects on species diversity and richness at the forest-wide level are documented in the EIS, Chapter 4, Biological Diversity.

Comment 5: Only part of the Kangaroo roadless area is designated Backcountry and would be protected in the Forest Plan. In total, 93% of the roadless acres are open to some silvicultural activities (including late seral reserves which are open to salvage and thinning) while almost 70% of roadless acres are open to all silvicultural practices.

44 237

Response: The range of alternatives considered a variety of management scenarios for the released roadless areas. Alternative E would designate all released roadless areas to Backcountry. Alternative A would designate 3 to Backcountry. The Preferred would designate 2--part of Kangaroo and Condrey Mountain. The other alternatives would not designate any. Designations for all alternatives would allow specified management activities where appropriate to meet management area objectives; refer to management area standards and guidelines in Forest Plan, Chapter 4 for specified management activities.

Comment 6: The standards and guidelines for Backcountry Management Area 9, in contrast to those for Management Area 5, do not permit new roads or

scheduled timber harvest. These restrictions are appropriate, but the standards and guidelines for Backcountry management need to be made still more protective: the provision allowing salvage logging and construction of temporary roads for salvage logging should be eliminated.

205 237

Response: Neither MA5 or 9 would have a scheduled timber harvest. Both areas would be unregulated. Salvage logging or other vegetative manipulation would be allowed only when it furthered the objective of the area which is to provide for species viability in MA5 and to provide semi-primitive recreation in MA9. Construction of temporary roads in MA5 for salvage purposes would be the exception, rather than the rule.

Comment 7: Roadless areas should be protected from road construction and other development to help maintain biological and genetic diversity, protect aquatic ecosystems, provide for "old growth," serve as a baseline for comparison and as a "repair manual" for damaged ecosystems. There are few largely-intact low-elevation drainages left.

54 82 197 225 237 256 262 276

Response: Refer to response to Released Roadless Comment 5. The mixture of land allocations in each alternative as well as the land allocations plus the ecosystem management approach taken by the Preferred is expected to adequately provide for biological and genetic diversity, "old growth" and aquatic ecosystems; refer to discussions in EIS, Chapter 4 under Biological Diversity and Fisheries. Wilderness, RNAs, SIAs, LSRs/HCAs, RRs/RMZs and Backcountry Management Areas will provide a baseline for comparison and a "repair manual" if necessary as little human disturbance will occur in these areas. Many of the LSRs and HCAs extend into low-elevation drainages. LSRs/HCAs and RRs/RMZs would provide quality habitat in all alternatives.

Comment 8: The Dillon Creek watershed in Siskiyou Released Roadless Area 1 should be designated as Backcountry or otherwise protected in the Preferred Alternative.

205 236 276

Response: In the Final EIS, the Preferred Alternative does not have a special land allocation for furbearers as it did in the Draft EIS. The LSRs in MA5 would include more acres in the Dillon area than it did in the Draft EIS; some critical marbled murrelet habitat would be added. The RRs would now include intermittent and many ephemeral streams. These large filter strips would minimize sediment delivered to streams and thereby reduce the risk of damage to water quality and fisheries resources even more than the low amount estimated in the Draft EIS. The ecosystem approach of managing for groups of wildlife species as opposed to individual species set-asides is expected to provide adequately for all late-successional and "old growth" species needs including connective habitat; refer to discussion in EIS, Chapter 4, Biological Diversity. In the Preferred Alternative, Dillon Creek would be designated a Key Watershed. No new road construction would be permitted in Key Watersheds within released roadless areas in the Preferred Alternative as modified in the Final EIS.

Comment 9: Although Backcountry designation of 12,000 acres of the Kangaroo Roadless Area is welcome in the Preferred Alternative, backcountry management should be expanded to the remainder of the roadless area.

2 205 237

Response: The Preferred Alternative relies on these areas as an integral part of the ecosystem management approach to provide for the viability of TE&S species as required by the ESA and NFMA. Changing them to Backcountry would not fit the overall proposal for this alternative. The standards and guidelines for MA5 would take precedence over those of MA9 where the 2 areas overlap for the same reasons. These areas would be compatible with semi-primitive non-motorized recreation in most cases as road construction and salvage would not be intrusive; refer to response to Released Roadless Comment 6. However, options for future wilderness designation would likely be foregone. About 23% of the total Forest area is currently designated wilderness and the Preferred would designate about 1% of the Forest to Backcountry Management. Although the projected recreational use is expected to increase over time, it is estimated to still be less than half of the current capacity for primitive and semi-primitive uses even when it reaches its greatest demand in the fifth decade as explained in Chapter 3, Recreation of the EIS.

Comment 10: Elk Creek Canyon (Johnson Released Roadless Area) should be Backcountry and ultimately be added to the Marble Mountains Wilderness. Recommending Wild River designation for the segment of Elk Creek upstream from Bear Creek would protect a narrow corridor along Elk Creek from road construction and timber harvest. However, the Preferred Alternative map shows that the portion of Elk Creek Canyon within the roadless area would be allocated to 3 Management Areas: MA5, MA6 and patches of timber management land with Retention VQO along both sides of the canyon. Patches of timber management land would extend downslope to within a few hundred feet of Elk Creek. The patches of timber management land would be available for regulated timber harvest and perhaps road construction and Management Areas 5 and 6 lands would be subject to unregulated harvest. All these proposed activities would severely degrade wilderness values. The high potential for management-associated landsliding in Elk Creek and its tributaries could damage summer steelhead holding habitat.

205

Response: The comment seems to fairly accurately describe the proposed management of the Preferred Alternative for Elk Creek with 3 exceptions. First, RRs would occur along all streams including all intermittents; this is a change from the Draft EIS. Second, the Retention VQO area would be managed primarily for visual quality with minimal scheduled timber yields as a consequence. Third, the area would be within a Key Watershed and no new road construction would occur. This proposed management would likely maintain options for future wilderness designation as well as provide semi-primitive non-motorized recreational opportunities. Alternative E would also maintain options for future wilderness designation.

Comment 11: Grider Creek should be protected by Backcountry management, instead of the less protective MA5 and MA6 prescriptions.

205 236

Response: The Preferred Alternative would manage the Grider drainage as MA5. It is an integral part of the Preferred Alternative's ecosystem management approach to providing for viability of TE&S species. The area would also be within a Key Watershed and no new road construction would be permitted. Semi-primitive non-motorized recreational opportunities are expected to be maintained. RRs and the standards applicable to the Grider area are projected to prevent damage of fish habitat; see EIS, Chapter 4, Biological Diversity and Fisheries. Of the alternatives considered, only Alternative E would allocate the Grider area to Backcountry Management.

Comment 12: Roadless portions of the popular and very scenic Orleans Mountain area should remain roadless, particularly the 7,500 acre portion of Orleans 6 in the Scott River Ranger District. The area is allocated to Management Area 5, which would allow road construction and modified logging. The Draft Forest Plan proposes a VQO of Partial Retention, which would allow additional degradation of aesthetic values.

205

Response: Alternative E would allocate the area to the Backcountry Management Area. The other alternatives would allocate the Orleans area to a variety of uses. The Preferred Alternative would be as described above for Orleans 6, except only about half of the area would be MA5, while about 40% would be managed for visual quality with a VQO of Partial Retention and a small portion would be managed as General Forest. A Partial Retention VQO allows activities that are evident, but subordinate to the landscape. These views are generally considered mostly natural-appearing. In the Preferred the area would be within a Key Watershed and no new road construction would be permitted.

Comment 13: Russian 3 and Snoozer 2 released roadless areas should be designated for Backcountry Management to reflect existing trail use.

205 237

Response: Alternative E would allocate these areas to the Backcountry Management Area. In the Preferred these areas would be within a Key Watershed and no new road construction would be permitted. The other alternatives would allocate them to a variety of uses.

Comment 14: Russian Released Roadless Area 1 has important recreational and ecological values and should be designated as Backcountry and eventually included in the wilderness system. The Preferred Alternative would allocate this area to Management Area 5 which allows unscheduled timber harvest and would recommend WSR designation of South Russian Creek as a Recreational River which allows road construction. Russian 1 and Orleans 6 provide a wild corridor link between the designated Russian Wilderness and the Trinity Alps Wilderness.

205 236 237

Response: In all alternatives except G(SOHA), the majority of the area would be allocated to LSRs. Alternative G(SOHA) would divide the area between SOHAs, Partial Retention VQO, General Forest and Retention VQO. In all alternatives, the ecological values would be emphasized over the recreational values; refer to response to Released Roadless Comment 9. In the Preferred, the area would be within a Key Watershed and no new road construction would be permitted. All alternatives would provide for linkages between the Russian Wilderness and the Trinity Alps Wilderness. Alternatives C and E would provide the widest linkages as well as two possible linkages in this area, while Alternative G(SOHA) would provide the narrowest linkages; refer to EIS, Chapter 4, Biological Diversity, Refugia and Connectivity discussion.

Comment 15: The PCT passes through or abuts the Russian 1, Russian 3, Orleans 6, Grider and Snoozer 2 Released Roadless areas. Because of existing backcountry recreation use, these areas should be preserved under Backcountry designations rather than having timber-oriented prescriptions.

237

Response: Alternative E would allocate these areas to Backcountry Management. The other alternatives, including the Preferred, would allocate the majority of these released roadless areas to prescriptions which would managed for quality habitat for TE&S species; refer to response for Released Roadless Comment 9. In the Preferred, these areas would be within Key Watersheds and no new road construction would be permitted. There would be some areas allocated to timber management in all alternatives but Alternative E.

Comment 16: Extremely fragile roadless areas unsuited to timber production due to unstable slopes and unproductive soils are left in the category of General Forest with no Forest Plan protection except a promise of "limited scheduled harvest." Orleans 1, 2, 3 and 4; Siskiyou 3, 4 and 5; and portions of Portuguese 2 roadless areas are all unsuitable for timber production yet unprotected in the plan.

237

Response: Extremely unstable land has been judged unsuitable for sustained timber production and would be unregulated in all alternatives; refer to EIS, Chapter 2, Alternatives Considered in Detail, Management Requirements. Alternatives Preferred, B, B', C, D, D' and E would also treat unconsolidated inner gorges as unregulated. The Preferred Alternative would also include the extent of unstable and potentially unstable areas in RRs; this is a change from the Draft EIS. In the other alternatives, these unstable areas would be managed for a variety of objectives.

Comment 17: Overall, the Forest should be commended for its detailed evaluation and overview of each roadless area, but at the same time criticized for its failure to implement rational strategies to protect and enhance the resources it has evaluated. Prescriptions for roadless areas are stated in terms of regulation class and VQO index, making it nearly impossible to ascertain the actual management direction for roadless areas. Important areas for backcountry recreation, late seral habitat protection and wilderness protection are noted, then ignored in the plan.

237

Response: In ecosystem management, planning for the broad picture takes precedence over each small piece of the landscape. The information presented in EIS, Appendix C was not ignored, but was used to determine how these areas should be treated to best contribute to the overall theme for each alternative. In any alternative, a particular area may have been allocated for a purpose that was determined to be a high priority in that alternative, but was not a priority in any other alternative.

Comment 18: Roadless areas are very important for the recreational, aesthetic and spiritual resources they provide. In order to meet the growing demand for wilderness and primitive recreation, the Forest Plan should place more roadless acres into the semi-primitive, non-motorized or Backcountry designation. Congress granted the Forests the flexibility to manage roadless areas as de facto wilderness areas in the 1984 California Wilderness Act and instructed the agency to re-evaluate roadless areas for potential wilderness designation at subsequent rounds of forest planning.

237 258 273

Response: About 23% of the total Forest area is currently designated wilderness. The Preferred and Alternative A would designate about 1% of the Forest to Backcountry Management, while Alternative E would allocate about 14% to Backcountry. As explained in the EIS, Chapter 3, Recreation, although the projected recreational use is expected to increase over time, it is estimated to still be less than half of the current capacity for primitive and semi-primitive uses even when it reaches its greatest demand during the planning period in the fifth decade. Opportunities for this type of recreation are not expected to be limiting in any alternative. For these reasons, no wilderness additions were recommended for designation in any alternative. Also, the 1984 California Wilderness Act did not find the qualities of any of the roadless areas on the Forest to be significant enough to justify further study at that time; they were all released to multiple use management.

Comment 19: The Forest Plan would allocate 69% of the land in roadless areas to a designation that would allow all types of silvicultural practices despite a claim that 89% would be in unregulated designations.

237

Response: Approximately 89% of the area would be unregulated in the Preferred Alternative. However, silvicultural and other activities in unregulated areas are appropriate when they lead to the attainment of the management objectives for the area. Unregulated means that the management objectives are not timber management objectives. Since Kangaroo and Condrey Mountain would be in the Backcountry Management Area in the Preferred Alternative, road construction and logging would generally not be allowed, except when salvage was determined necessary to meet the management objectives.

Comment 20: The statement "... debate concerning the best disposition for the remaining roadless areas did not end with the passage of the California Wilderness Act of 1984" needs explanation. Were not these lands released to ***multiple-use*** under the law? All released roadless areas should be managed as the law intended, for multiple-use.

255

Response: As the comments in this section indicate, debate is continuing on this topic because various user groups have different demands for the use of the Forest. As the population increases, resources become more limited and there is not enough to meet the needs of all parties fully. As explained in EIS, Appendix C the 1984 California Wilderness Act did release all the roadless areas on the Forest for multiple use management. It also provided release language that these areas need not be re-evaluated for wilderness potential during the initial phase of forest planning. However, it did not prohibit the Forest from doing this analysis. The Forest assessed the need for additional semi-primitive recreational opportunities which would maintain options for wilderness designation; refer to

EIS, Appendix C. Refer to response to Released Roadless Comment 18 for how alternatives would treat this issue.

Comment 21: All roadless areas including all Semi-Primitive Non-Motorized areas, should be preserved in their roadless and undeveloped condition and protected from all logging, motorized vehicle use and road building. This would provide for late seral wildlife habitat, refugia and corridors, species diversity, watershed protection and avoid the costs of road building.

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286 292 305 317 319 321 323 328

Response: Refer to responses to Released Roadless responses 5, 7 and 24.

Comment 22: The Orleans 4 roadless area remains a high priority for protection because it is bounded by the Trinity Alps Wilderness on 2 sides and contains ecologically valuable "old growth" habitat. The ecological and recreational values are too high for this area to be managed for timber production.

237

Response: Alternative E would allocate the area to Backcountry Management. Alternatives Preferred, B, B', C, D and D' would allocate most of the area to Partial Retention VQO with some TE&S habitat, some RRs, some Wild and some Scenic WSR designations. The Preferred Alternative would also designate it as a Key Watershed and no new road construction would occur. Alternative Current/RPA would allocate it to Partial Retention VQO with RRs. Alternative A would allocate it to TE&S habitat, RRs, General Forest, some Wild and some Scenic WSR designations. Alternative G(SOHA) would allocate the majority to TE&S habitat with some Partial Retention VQO and some RRs.

Comment 23: Roadless areas should be preserved in their pristine state in AMAs. Option 9 gives the Forests the power to plan for AMAs within their borders. Roadless areas as well as late seral stands and riparian areas should be protected in AMAs. These areas would act as controls for evaluating AMA experiments.

237

Response: Only the Preferred Alternative would establish an AMA; the Goosenest AMA. It would have the Mount Hoffman released roadless area within it. The Preferred Alternative proposes to manage about 60% of this area for a Retention VQO, about 27% for a Partial Retention VQO with the remaining 13% managed for an SIA and for TE&S habitat. The Adaptive Management process could change these allocations through a Forest Plan amendment.

Comment 24: The effects of Key Watershed designation and management on roadless areas should be discussed.

282

Response: This has been added to the Final EIS in Appendix C. Grider; Johnson; Siskiyou 1, 2 and the south half of 3; Portuguese; Orleans 1 through 6; Russian 1 through 3; Snoozer 1 and the southern part of 2; and Crapo released roadless areas would be within Key Watersheds in the Preferred Alternative. No new road construction would be permitted in these areas. Watershed analysis would be required prior to the implementation of any timber management activities.

Comment 25: Orleans Mountain roadless areas 1 and 2 are a concern. The excellent ancient forest watersheds in the Orleans Mountain 2 roadless area should be a forest reserve system. The largest ancient forest stand in northern California includes a substantial portion of the Orleans Mountain 2 roadless area plus extends well into the Six Rivers National Forest and down to the heavily forested Tish Tang a Tang and Horse Linto Creek watersheds.

236

Response: The inventories for this area show that the "old growth" and all other stands are fairly small and discontinuous. Examination of photographs from the mid-thirties and of fire data indicates that this condition has existed for some time and is due to natural processes. There is no evidence of any stand extending into the Tish Tang a Tang and Horse Linto Creek Drainages which are about 7 miles away from Orleans 2 at their closest points and on the other side of the Trinity Alps Wilderness.

Alternative C would allocate this area to TE&S habitat and Habitat Linkages. Alternative E would allocate it to Backcountry Management. Alternatives Preferred, A, B, B', D, D' and G(SOHA) would allocate it to a variety of uses with a small portion managed for TE&S habitat.

Comment 26: The Portuguese roadless area especially Portuguese 2 provides the essential link between the Salmon River and the Marble Mountain Wilderness.

236

Response: Alternatives C and E would provide for the largest linkages in this area. Alternative C would allocate this area to TE&S habitat and Habitat Linkages. Alternative E would allocate it to Backcountry Management and TE&S Habitat. Alternatives Preferred, A, B, B', D and D would allocate it to a variety of uses with TE&S Habitat and RRs providing relatively narrow linkages. In the Preferred, the area would be within a Key Watershed and no new road construction would be permitted. Alternative G(SOHA) would provide the narrowest linkages through its RR designation.

Comment 27: The Kelsey released roadless area is essential for "old growth"-dependent species seeking to travel east from the Marble Mountain Wilderness.

236

Response: The area to the east of the Kelsey released roadless area is relatively developed, including the private land outside the Forest boundary. It seems unlikely that "old growth"-dependent species would have any need to move through an area with so little late-successional or "old growth" habitat. Alternative E would allocate the Kelsey area to Backcountry. The other alternatives would allocate it to a variety of uses including some TE&S habitat management.

Comment 28: The Preferred Alternative should incorporate Alternative E's provision to assign all released roadless areas to the Backcountry designation. This is would greatly increase the amount of high quality wildlife habitat which cannot be degraded by other uses and help meet the needs of late seral stage associated species.

254

Response: The Preferred Alternative would allocate the majority of the released roadless areas to MA5 which would be managed to provide quality habitat for late-successional and T&E species; refer to Forest Plan, Chapter 4, MA5 for proposed standards. This management is expected to better meet the above stated objectives than managing for semi-primitive non-motorized recreation as would occur with a Backcountry designation.

Comment 29: The 60-acre parcel in the northern part of Orleans 2 between Butler Creek and Grant Creek mentioned in Appendix C of the Draft EIS is 88 acres and is located directly adjacent to Butler Creek.

305

Response: This has been corrected in the Final EIS.

Wild and Scenic Rivers Comments

Comment 1: To protect and restore "at risk" anadromous fish stocks, all eligible rivers and key watersheds critical for anadromous fish should be designated WSRs.

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337

Response: The purpose of the WSR System is to protect, conserve and highlight "Outstandingly Remarkable" river associated values representative to the Nation. While anadromous fish may be considered an outstandingly remarkable value, their presence does not automatically constitute sufficient suitability for inclusion in the WSR system. The nomination process includes an extensive inventory of many potential river values and a ranking or prioritization of those river segments containing the most significant attributes. The result of this process is the nomination of a set of potential WSRs, then to be approved by the Chief of the Forest Service. Refer to WSR section and Appendix E of the EIS for process details to determine eligibility, highest potential classification and suitability.

The serious decline of anadromous fish populations across watersheds of the Northwest is best addressed more directly, by actions like improving habitat and limiting fishing. The Forest is cooperating with other agencies and groups associated with anadromous fish habitat conservation in these efforts. Each alternative proposes a strategy to address the issue of "at risk" fish stocks; refer to Chapter 4, Fisheries of the EIS. These strategies may include the establishment of RRs or RMZs, the establishment of key watersheds or refugia as well as watershed restoration projects.

The WSR System was not created for, nor could WSR designation further resolve, this specific issue in a timely or fitting manner. In addition, to designate all river segments containing anadromous fish habitat as WSRs would seriously dilute the meaning and relative uniqueness of the rivers within the National WSR System.

Comment 2: The maps in the Draft Forest Plan on pages 4-138 and 4-144 compared to the Preferred Alternative Map show differences in Scenic and Recreational Rivers. It is not clear if this is due to the Preferred Alternative Map indicating the most restrictive management category.

1

Response: The Preferred Alternative Map does indeed indicate the most restrictive management area when several management areas coincide as explained on page 2-18 of the Draft EIS under Land Allocations. This is why segments of WSRs appeared to be segmented rather than continuous, such as on the Recreational Klamath WSR for example.

Comment 3: There are 152 miles of WSRs. Forest Service report 383 lists none. Assume that the influence zone is 2 chains on each side of the rivers, there are 4,864 acres affected by these designations.

5

Response: As shown on page 4-118 and in Table 4-35 of the WSR section of the Draft EIS, there are 201 miles of currently designated WSR corridors within the Forest boundary, including both NFS and private land. The number of acres within the WSR corridors would vary by alternative as discussed in the WSR section of Chapter 4 of the EIS from 254 acres per river mile (about 51,000 acres) in the Preferred Alternative to 480 acres per river mile in Alternatives D and D'. Reports are designed to display only certain information and do not provide a comprehensive picture of everything that occurs in any national forest.

Comment 4: Watershed management plans must protect wild and scenic values outside of the WSR corridor.

13 15 16 17 49 50 51 53 58 59
61 63 64 65 66 68 70 71 86 87
88 89 90 91 93 94 95 152 317 318
321 323 327 328 330 331

Response: The land allocations and associated standards and guidelines proposed for each alternative provide varying degrees of protection for wild and scenic values that are outside WSR corridors. In this sense, the Forest Plan can be considered a watershed management plan. At least, it provides programmatic direction for managing watersheds.

Comment 5: Most of the rivers which have been recommended in the Forest Plan are located in existing wilderness areas, which means that the plans actually provide little additional protection for rivers.

48 50 51 58 61 64 65 66 68 86 87
89 90 318 321 328

Response: Of the 171.3 miles recommended for addition to the WSR system in the Preferred Alternative, 84.1 miles occur within existing wildernesses. For these rivers, the primary benefit of WSR designation would be the formal recognition and emphasis of the Outstandingly Remarkable values for which they were designated and their more fully acknowledged role as ecological benchmarks for observation of these values within a relatively controlled and unaltered ecosystem. For the recommended 87.2 miles of recommended WSRs outside of wilderness, WSR designation may effect them and their values more noticeably as components of actively managed watersheds.

Comment 6: The Forest Service is to be commended for reviewing boundaries and classifications for WSRs. In addition, this review should include potential additional outstandingly remarkable values. The 1983 Nationwide Rivers Inventory identified numerous potential outstanding values for the Klamath, Scott and Salmon Rivers in addition to their anadromous fisheries. Potential outstandingly remarkable values include recreation, scenic, wildlife, archeological and cultural values for the Klamath and Scott Rivers; scenic, recreation and wildlife values for the Salmon River; and scenic and wildlife values for Wooley Creek.

304

Response: For all alternatives, these additional values would generate conservation objectives for the WSR implementation schedules to be completed after approval of the Forest Plan. The WSR Act does not require review of other potential outstandingly remarkable values present within designated WSRs.

Comment 7: An interim management plan that treats eligible WSRs as if they have been designated should be adopted in the Forest Plan.

52

Response: Forest Service Handbook 1909.8.12 does direct that eligible rivers must be treated as if they are designated WSRs. In addition, the Final Forest Plan has been modified to include a standard and guideline that "no irretrievable or irreversible commitment of resources that would preclude options for designation would be allowed for eligible rivers that are being recommended for inclusion into the National WSR System until Congress has signed the designation order for new inclusions recommended in this Plan." With its emphasis on ecosystem management, Forest Plan management activities would automatically focus on protection and conservation of river and ecosystem values. The Forest Plan would do this through requirements such as Watershed Analyses, Visual Quality Objectives, Recreational Guidelines; and Riparian, Watershed and Habitat conservation elements that address protection of WSR values.

Comment 8: Watershed management plans to protect WSR values against activities occurring outside the Forest should be adopted.

62

Response: Activities outside NFS lands are not within the authority of the Forest Service. In these areas, resource protection is at the voluntary discretion of private landowners with exception of meeting state, county and local laws and ordinances. Cooperation and collaboration with private landowners, individuals, groups and agencies is a basic element of ecosystem management.

Comment 9: Discussions on fisheries resource values (page E-28) should include the fact that adult summer steelhead have been observed upstream of Wilderness Falls on Clear Creek indicating the falls are not a complete barrier to adult steelhead. Clear Creek also supports a small remnant spring chinook population.

72

Response: This information has been included as suggested.

Comment 10: The recommendation of the Preferred Alternative to exclude portions of Grider and Kelsey

creeks and a portion of the South Fork of the Salmon River from the WSR System was presented. It is unclear what the reasons for this recommendation were or what criteria were used to make that recommendation.

72 304

Response: The portions of Grider Creek not recommended were largely privately owned land, where authority of the Forest Service is legally restricted. Portions of Kelsey Creek and Salmon River were not recommended in the Preferred Alternative because the achievement of other resource objectives was judged of higher importance in meeting ecosystem management goals. These alternatives were recommended in other alternatives.

Comment 11: The last sentence in the WSRs Management Section for the Preferred Alternative (page 2-26) states that the WSR corridor width would be variable. The range of variability and how it will be determined should be addressed in the document. Outstandingly remarkable values should be afforded the fullest protection allowed under the WSR Act.

72

Response: WSR corridor width in the Preferred Alternative, as discussed on pages 4-118 and 4-119 of the Draft EIS, would vary to include areas needed to protect WSR values occurring along the river and to respond to private property rights. As presented in the EIS, maximum WSR corridor width must not exceed an average of 320 acres per river mile (1/2 mile average width). For the designated WSRs, the Preferred Alternative would include widths that vary widely from over 2.5 miles accommodating scenic views, to just as narrow as the width of the river between high water lines, to provide for expansion of local communities (this information was added to the Final EIS per this comment). Larger widths would generally occur wherever river values would benefit along the WSR corridor. Refer to the Designated WSRs map in the EIS for an overview of corridor widths of designated WSRs across the forest for the Preferred Alternative. Acres of designated WSRs and miles are displayed in Table 4-33 of the Draft EIS for all alternatives. Upon Congressional designation of the recommended WSRs, formal boundaries would be defined. In the Preferred Alternative, this would constitute 171.3 miles of additional WSRs from the uniform 1/2 mile wide interim corridors to variable width configurations to optimize protection of river values and private property rights. With protection of outstandingly remarkable values being a primary objective of WSR designation, standards and guidelines for their protection would be applied throughout all management practices.

Comment 12: Standard and guideline 14-3 in the Draft Forest Plan should be revised to include willing seller acquisition of high priority parcels using Land and Water Conservation Funds or other fund sources.

304

Response: The current wording of the standard and guideline does not exclude the opportunity to acquire high priority parcels or conservation easements. These options are available to conserve river values where private landowners voluntarily agree to do so.

Comment 13: Road building and logging should be prohibited in all roadless areas and key watersheds associated with eligible and recommended WSRs to reduce cumulative watershed impacts on "at risk" stocks in the Forest Plan.

304

Response: Refer to response to WSR Comment 1 regarding impacts to "at risk" fish stocks. The Preferred Alternative has been modified in the Final to prohibit all road construction within inventoried roadless areas that are within key watersheds whether they are associated with WSRs or not. Logging would be permitted in roadless areas if it lead to the achievement of the management objectives of the area.

Comment 14: Anadromous fisheries have been the main "outstandingly remarkable" value for which rivers in the Klamath province have been designated as WSRs. In fact, Option 9 designates many acres as Key Watersheds. The analysis in the Forest Plan underestimates the demand for WSRs rivers by focusing exclusively on recreational use and ignoring the ecological values of WSRs.

237

Response: A wide range of ecological values were fully considered in the WSR analysis to determine if the river segments are worthy additions to the National WSR System and if the range of alternatives significantly change their outstandingly remarkable and other river values. Potential WSR values that were considered included broad, contextual interpretations of cultural/historic, fish, geology, scenery, recreation, vegetation, water quality and wildlife values. Detailed analysis for fisheries is presented in the Fisheries section of the EIS.

A summary of this analysis pertinent to WSRs is presented on page E-106 of Appendix E of the EIS, stating that the alternatives would present no significant changes from the present situation.

Comment 15: Designations of WSRs cannot affect valid and existing rights. The Siskiyou County Interim Land Management Plan specifies coordination and consultation with the county on management of WSRs. This would apply particularly to VQOs that affect private property use and rights, customary local land use and business operations, pre-existing mining claims and grazing allotments. Federal management in the Forest Plan should not replace, preclude or

compete with privately operated public recreational facilities.

281

Response: The WSRs standards and guidelines for Visual Quality apply only to NFS lands. Cooperation in the protection of all WSR values including Scenery by private landowners is welcome yet absolutely voluntary. The County Board of Supervisors were involved throughout the Forest Plan planning process; refer to Chapter 1 and Appendix A of the EIS for a discussion on public involvement. The Forest recreation policy is to cooperate with privately operated public recreational facilities and to compliment privately offered recreational services to achieve a mutually beneficial partnership in providing a desired range of needs of forest visitors and recreationists.

Comment 16: The discussion of environmental consequences in Chapter 4 of the EIS concentrates on visual quality impacts, and even this discussion is limited to reciting the VQO of the alternatives. This section fails to address all the environmental consequences of each alternative on WSRs, particularly impacts on outstandingly remarkable values and therefore fails to meet the requirements of NEPA and the WSR Act.

304

Response: Page 4-118 of the Draft EIS states that "All alternatives would protect the Klamath River, Scott River, Wooley Creek and Salmon River's outstandingly remarkable anadromous fisheries values." The range of alternatives did not substantially alter the conditions of anadromous fisheries in terms of their outstandingly remarkable values status. Visual and Recreational river values did vary substantially in different alternatives, therefore these changes were explicitly discussed.

Comment 17: Management Area Standards and Guidelines MA12-5 and MA13-4 should be revised to prohibit all Federally licensed hydropower facilities as required by the National WSR Act.

304

Response: Forest-wide Standard and Guidelines are created to supplement existing laws only when necessary for clarification or special emphasis. In this case, the WSR Act is sufficiently clear regarding impoundments and hydropower development that further clarification was not considered necessary.

Comment 18: Intermittent and ephemeral streams are very important to watershed systems and should be included in the goals for WSRs, treating Wild portions with complete preservation and striving for and attaining no degradation of water quality.

270

Response: Management direction for Wild segments of WSRs by law includes direction to achieve the objectives for which they were designated such as preservation of the river's values and nondegradation of their high quality waters. To the degree that intermittent and ephemeral streams contribute to the river's values they will be protected to achieve nondegradation of water quality in all alternatives. Such issues will be specifically addressed during ecosystem analysis at the watershed scale to achieve protection of Wild river values.

Comment 19: The Preferred Alternative threatens to violate the WSR Act by impairing the scenic beauty, solitude, high water quality and other outstanding natural amenities of the designated and candidate wild and scenic river segments on the Forest.

154 266

Response: The Preferred Alternative directs management of designated and recommended WSRs consistent with all laws, directives and guidelines. Impairment of river values may be legally sanctioned if conditions would remain within limitations specifically stipulated by such direction.

Comment 20: The EPA has determined that, by virtue of their designation as WSRs, these 201 miles of river have "high quality water" within the meaning of the Federal Antidegradation Policy. Therefore their quality "shall be maintained and protected" under both state and Federal law. As described above, the Draft EIS' analysis of water quality is inadequate to evaluate compliance with these requirements.

154

Response: The "high water quality" within designated WSRs will be "maintained and protected," through implementation of the 1982 USDA-USDI WSR Management guidelines, as stated on page 4-188 of the Draft EIS. The current "high" water quality conditions, according to the summary of the analysis of the alternatives on page E-106 of the Draft EIS Appendix E, would not experience any "significant change from the present situation." Specific water quality information is addressed in the Water Quality section of the EIS at a forest-wide scale. To "maintain and protect" the current "high quality water" of WSRs, all alternatives would only implement activities which are compatible with state and Federal laws.

Comment 21: As recognized in the Draft EIS, the 201 miles of WSR corridors in the Forest were designated in 1981 for their outstandingly remarkable fishery values. The Draft Forest Plan and EIS fail to assure that proposed interim boundaries would protect these values. Draft Forest Plan management prescriptions indicate that logging would be scheduled up to the edge of these interim boundaries. Yet there is no analysis as to whether such logging could impact the very values which must be protected.

154

Response: Logging and other activities would be restricted per WSR Standards and Guidelines as well as requirements for Riparian or other reserves. Ecosystem analysis at the watershed scale and project level analysis would be conducted to assess site-specific effects to fish and other river values. Analysis of the alternatives within the Fisheries section was summarized in the WSR section, concluding that outstandingly remarkable fisheries values would be protected according to WSR Act requirements.

Comment 22: Procedurally, the Draft EIS has failed to address the deficiencies of the Forest's WSR corridor planning process, which we have identified in part in our pending appeal challenging the South Fork Trinity River Management Plan.

154

Response: In regard to WSR corridor determination for currently designated WSRs, the "immediate environment" or corridor, is limited to an average of 320 acres per river mile as stated in the 1988 amendments to the WSR Act. The Draft EIS considered a fully adequate range of WSR corridor widths and configurations (refer to Table 4-33, page 4-119).

Comment 23: The popularity of using our rivers for recreation is growing by leaps and bounds. The few remaining rivers that have miraculously escaped dams, development and exploitation should be protected as jealously as possible for the enjoyment of future generations.

69

Response: Refer to response to Wild and Scenic Rivers Comments 21 and 24.

Comment 24: The Forest Service should be commended for the comprehensive assessment of WSRs, the detailed prescriptions and for recommending many important segments for WSR status.

16 49 51 61 66 67 72 89 94
95 114 152 205 237 291 303 304 307
312 314 317 318 323 325 328 330

Response: Recommendation of these rivers per the National WSR Act is the duty and privilege of involved citizens and public servants of this nation.

Comment 25: The proposed Recreational classification of Dillon Creek Segments 1 and 2 and of North Dillon Creek Segment 1 in the Forest Plan would allow extensive road building and logging in these watersheds, leading to the degradation and probable loss of Port Orford cedar to infestation by root fungus, as well as degradation of water quality and fisheries. This situation would be a violation of the WSR Act mandate to protect outstanding values. Dillon Creek should have a Wild designation and road building and logging should be prohibited in this key watershed and roadless area.

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46 47 49 50 51 52 53 58 59 61
63 64 65 66 67 68 70 72 73 79
86 87 88 89 90 91 93 94 95 128
152 188 192 193 197 205 216 228 235 236
237 243 246 247 239 250 251 260 283 284
292 301 304 317 318 323 328 330 331

Response: Segment 2 of Dillon Creek's highest potential eligibility is Scenic; it does not meet the criteria for a Wild segment. The Preferred Alternative would recommend a Recreational classification for all 3 segments to allow the achievement of other resource objectives. Standards and guidelines relating to Port Orford Cedar, water quality and fisheries would address these resources in accordance with environmental laws. The Preferred Alternative has been modified in the Final EIS to prohibit road construction in inventoried roadless areas within Key Watersheds which would include a portion of the Dillon watershed. The Preferred Alternative would recommend 101.1 miles of other streams in the Forest for a Wild classification in the National WSR System.

Comment 26: The Forest Plan should retain all current WSRs designations on streams and recommend all eligible streams for designation. The recommended streams should be designated at the highest potential classification to provide the maximum protection of the outstandingly remarkable values.

72 327

Response: Refer to Chapter 4 and Appendix E of the EIS for information regarding the recommendations and rationale of the Preferred Alternative regarding WSRs. In addition, designation of all eligible segments would deflate the meaning of National WSRs as not the "best of the best," but as the minimally qualified.

Comment 27: Segment 1 of Antelope Creek should be recommended for WSR designation for its outstanding geological, ecological, recreational and scenic values. It is the only stream eligible in an important transitional area between the Modoc Plateau, Cascades and Klamath provinces.

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Response: Antelope Creek and its river values were not considered to be the "best of the best" within the context of the southern Cascade province, so it was not recommended for WSR designation.

Comment 28: South Russian Creek, Segments 1 and 2 should be recommended for Wild classification in the Forest Plan.

205

Response: South Russian Creek Segment 1 would be recommended for a Wild classification in the Preferred Alternative. Segment 2's highest potential classifica-

tion is Scenic; it would be recommended as Recreational in the Preferred Alternative to allow for the achievement of other resource objectives.

Comment 29: Elk Creek should have the strongest possible protection.

50 52 53 87

Response: Elk Creek has 4 segments whose highest potential classifications are Wild, Scenic, Recreational and Scenic, respectively. The Preferred Alternative would recommend classifications of Wild, Recreational, Recreational and Recreational, respectively. The Recreational classifications would allow the achievement of other resource objectives.

Comment 30: The Forest Plan should recommend Grider Creek Segment 4 for WSR designation as well as proposing the upper segments as Wild. Road building and logging, leading to water quality degradation and continued decline of anadromous fisheries would violate the WSR Act's mandate to protect outstanding values.

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49 50 51 52 53 58 59 61 64 66
67 68 70 73 79 86 87 88 89 90
94 95 152 188 192 193 197 205 216 235
236 237 243 246 247 249 250 251 283 284
292 304 317 318 323 328

Response: The Preferred Alternative would not recommend Grider Segment 4 as a WSR due to private lands within the potential corridor. The highest potential classifications for Grider Segments 1, 2 and 3 are Wild, Scenic and Wild, respectively. The Preferred Alternative would recommend classifications of Wild, Scenic and Scenic. Segment 3 would be recommended as Scenic rather than Wild to allow the achievement of other resource objectives. In accordance with existing laws and policies for WSRs, outstandingly remarkable values such as anadromous fisheries would be protected or enhanced. Therefore any activity, including road building or logging, would be modified or limited to protect outstandingly remarkable values, per the WSR Act.

Comment 31: The Forest Plan should recommend Kelsey Creek Segment 2 for WSR designation. Road building and logging, leading to water quality degradation and continued decline of anadromous fisheries would violate the WSR Act's mandate to protect outstanding values. Designation would also protect the recreational experience of the Kelsey National Historic Trail.

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42 49 51 58 59 61 64 66 67
68 70 73 79 86 88 89 90 94
95 152 192 193 197 216 228 235 236
237 243 246 247 249 250 251 284 292
304 317 318 323 328

Response: Kelsey Creek segment 2 would not be recommended for WSR designation in the Preferred Alternative to allow achievement of other resource objectives. The WSR Act directs that the outstandingly remarkable values of currently undesignated, but eligible rivers like Kelsey Creek, be protected or enhanced. FSH 1909.8.12 further states that this protection be afforded during the process of study and analysis of suitability that includes public and interagency participation. The Forest Plan, through the Regional Forester, makes recommendations and non-recommendations to the Secretary of Agriculture regarding classification and designation for eligible WSR segments. Upon analysis by the Regional Forester including public involvement, a final determination of suitability or unsuitability is made and published in a ROD. At that point in time, per FSH 1909.8.12 guidelines, outstandingly remarkable values within study rivers found to be unsuitable, would no longer be protected by the WSR Act. However, protection of river values like anadromous fisheries and water quality within Kelsey Creek would remain high priority elements of the forest's aquatic conservation strategy.

Comment 32: Kelsey Creek should not be designated as a WSR in the Forest Plan. Tensions and confusions over water allocations, regulatory jurisdiction, instream use for timber, farming, grazing and fisheries needs are being worked out by representatives of environmental and industry organizations, various agencies, private operators and local landowners through the CRMP process. Such a designation at this time would undermine the CRMP process and limit flexibility in cooperative riparian and fisheries restoration efforts.

281

Response: Kelsey Creek Segment 1 which would be recommended for WSR designation with a Wild classification in the Preferred Alternative is entirely within the Marble Mountain Wilderness. Segment 2 would not be recommended for WSR designation in the Preferred Alternative. Diversion of water for any purpose is not currently allowed within wilderness, thus the WSR recommendation would have no effect on water allocations. This recommendation does not restrict collaborative efforts to utilize, restore or protect river associated values within Kelsey Creek.

Comment 33: French Creek should be recommended as a WSR in the Forest Plan. It appears to be the only stream on the forest with a large limestone cave, already acknowledged as an outstanding geologic value and a potential outstanding recreation value.

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246 247 249 250 284 292 304

Response: The Preferred Alternative would not recommend French Creek for WSR designation to allow for greater management flexibility to achieve other resource objectives.

Comment 34: Canyon Creek should be found eligible and recommended for Wild classification from its source in the Marble Mountains Wilderness to the road 43N45 crossing and Scenic classification from the road to the Scott River confluence. Canyon Creek provides the most important steelhead spawning habitat in the Scott River watershed during drought periods. In addition, the upper creek's precipitous cliffs and waterfalls provide an outstanding scenic value.

11 193 197 235 236 243 247 283 292 304

Response: Canyon Creek was evaluated in a forest-wide analysis and determined to be ineligible for WSR consideration. Refer to Chapter 3 of Appendix E in the EIS.

Comment 35: The recommendation to change the current Recreational classification to Scenic for certain segments of the Klamath and Salmon Rivers should be implemented. The 1981 designation was based on criteria contained in the 1970 National WSRs: Guidelines for Eligibility, Classification and Management of River Areas. The existing classifications should be re-evaluated on the basis of the revised 1982 guidelines.

307

Response: Alternatives B, B' and E recommended that certain Recreational segments of the Klamath river be changed to Scenic. Alternative E recommended that Segment 3 of the South Fork of the Salmon be changed to Scenic. The other alternatives would not recommend a classification change. All alternatives would recommend that Segment 2A of the North Fork of the Salmon River be changed to Wild. All river segments evaluated in the Draft EIS were based upon the revised 1982 guidelines.

Comment 36: Protecting free-flowing rivers is important for ecological and aesthetic concerns as well as fisheries and recreational interests. In order to properly protect the important ecological, recreational and aesthetic values of the rivers in the province; all eligible river segments in key watersheds as designated by the FEMAT should be recommended for inclusion in the WSR System.

237 324

Response: A wide range of ecological values within potential WSRs was evaluated in the WSR study process. To designate all eligible segments would dilute the relative uniqueness and meaning of WSRs already in the National system. Protection of ALL important river values within each ecological province is neither the letter nor intent of the WSR Act. A river can be eligible for WSR study if it contains even a single outstandingly remarkable value. Only the "best of the best" rivers with exceptional combinations of outstandingly remarkable river values were recommended for WSR designation.

Comment 37: The 1/2 mile segment of the North Fork Salmon River outside wilderness should not be reclassified from Wild to Recreational. No justification is provided to document the need for additional recreational facilities in this stretch. The more appropriate reclassification for this segment to reflect the current situation is Scenic.

304

Response: North Fork Salmon River segment NS03 includes the river area downstream from the wilderness boundary. This segment was classified as a Recreational segment in 1981. No alternative would recommend a change in classification.

Comment 38: It is evident that the proposed WSR designations are being initiated to acquire additional regulatory control over salmon bearing streams. Small miners now struggle with unmanageable layers of paper work and regulations that in many cases renders the operation marginal.

281

Response: In contrast to the assumption that WSR designation is an attempt for more control over salmon bearing streams, refer to the response to WSR Comment 1 regarding the inappropriateness of solving widespread fisheries problems through WSR designation. The presence of fisheries values does not necessarily constitute cause for WSR designation. WSR status does not increase paperwork for miners. Protection of important river associated resource values will however, continue to be practiced as basic forest stewardship.

Comment 39: Dillon Creek Segment 2, Elk Creek Segments 2 and 4, Kelsey Creek Segment 2, South Russian Creek Segment 2, East Fork South Fork Salmon River Segment 2 and French Creek Segment 2 should be added to Scenic River Management Area 12 in the Forest Plan. In addition, segments of the Klamath River and Salmon River identified as suitable for reclassification as Scenic, including the Klamath River from Seattle Creek to Williams Point and from Ti Bar to the Salmon confluence, and the Salmon River from Cecilville bridge to St. Claire Creek, should be added to this management area.

304

Response: Refer to Table E-4 in the Draft EIS Appendix E, for Preferred Alternative recommendations for these rivers. Refer to response to WSR Comment 35 for information on changing classifications. In general, recommendations other than the most restrictive possible classification were made to allow achievement of other resource objectives.

Comment 40: No new WSRs should be designated in Siskiyou County. Much of the area proposed is the richest historic gold mining territory in the County.

Miners are a valuable cultural element in the social diversity of the County.

281

Response: Mining is prohibited within Wild River segments, however most traditional areas of mining will not be affected by WSR classifications of Recreational and Scenic, per Federal and state law. Therefore, the cultural richness miners add to the diversity of local communities is not substantially threatened by WSR generated guidelines or administrative requirements. Private lands are not affected by WSR designation at all, except when done so voluntarily by landowners themselves. The outstandingly remarkable values which exist today are the results of centuries of longstanding stewardship efforts, now to be perpetuated in cooperation with other agencies, tribes, individuals and groups including miners.

Comment 41: MA12-8 in the Draft Forest Plan should be revised to provide Retention VQO to middleground areas as required by the Federal guidelines which mandate "special emphasis" to scenic quality outside scenic river corridors.

304

Response: "Special Emphasis" was interpreted from Federal guidelines to mean that Scenic WSR middleground view areas should achieve a minimum VQO of Partial Retention, not Retention. If no "special emphasis" for scenery were provided and other special resource direction did not apply, areas with standard logging and road construction activities would often appear as a "modified" scenery condition rather than "near-natural appearing," as Partial Retention represents. Retention is a stronger degree of "special emphasis" than considered necessary to satisfy WSR requirements and offers less opportunity to achieve other resource objectives.

Comment 42: The varying WSR corridor widths in the Preferred Alternative based on resource management and protection considerations, rather than artificially determined uniform corridor widths, are in the best interests of effective WSR management.

307

Response: That is how the designated river corridors were configured for the Preferred Alternative and how the recommended WSR corridors will be configured once they are formally designated if the Preferred Alternative is selected.

Comment 43: The proposed WSR designations in the Forest Plan would negatively impact local community's flexibility in economic diversification and restoration efforts, escalate tensions in communities struggling to overcome the emotional impacts of timber regulations, as well as jeopardize the survival of a remnant population of our historic heritage.

281

Response: Local community economies were considered as a component of the WSR considerations, which is why corridors are very narrow within and adjacent to riverside communities to provide for their future expansion in the Preferred Alternative. Aesthetic and resource qualities protected by WSRs constitute a legacy of environmental quality that will serve as a long term quality of life asset for local residents, recreationists and tourists. Perpetuation of traditional lifestyles, while desirable in itself, is not sustainable at past levels due to National changes regarding environmental quality preferences that are only indirectly related to WSR designation.

Specially Designated Areas Comments

Comment 1: Periodically review RNA and SIA boundaries as well as management plan effectiveness and adjust as necessary to ensure that area goals are being met. Critical issues identified in the RNA Management Plan should be monitored and reported on a schedule identified in the Plan.

256

Response: Any reviews and monitoring would be dependent on funding being allocated from Congress and distributed by the Washington Office and Regional Office ear-marked for those specific purposes to the Forest. Requests for funding for this type of activity would be made, but these activities would not be as high a priority as those which are required by environmental or other laws.

Comment 2: Develop a minimum of 1 Botanical SIA and 1 RNA management plan per year once Botanical SIAs and RNAs are established. Management plans should include desired plant community (seral stage, species composition, trend), permitted and prohibited activities and steps to achieve desired plan community characteristics. Botanical SIA Management Plans should also address approaches to enhancing educational values (interpretive signs, nature trail, brochures etc.) following FSM direction.

156

Response: In all alternatives these types of strategies would be developed as funding allows. Funding is dependent on appropriations from Congress. This applies to Geologic SIAs as well.

Comment 3: Mining, grazing, timber harvest and special products harvest should be prohibited in SIAs and RNAs.

256

Response: Pre-existing rights for mining operations and grazing allotments are protected by law. In all alternatives, special stipulations would be developed to minimize any adverse effects and to rehabilitate any damage which might be caused by these or any other activities that are not consistent with management activities. In Alternative E the 4 RNAs that are within wilderness would not allow grazing; however the law would have to be changed before this portion of this alternative could be implemented. The BLM would be requested to withdraw all RNAs from further mineral entry in all alternatives. Requests to BLM for withdrawals from mineral entry for SIAs would be made on a case by case basis. When determined that it was important to meeting the objectives of the area, removal of trees and special products would be permitted. Plant collections would be permitted only for scientific or educational purposes.

Comment 4: In the Preferred Alternative both RNAs and SIAs are subject to salvage logging and to grazing if existing allotments overlap the area. Both of these activities can significantly alter natural succession processes and can cause damage to soil, vegetation and wildlife.

256

Response: The intent is to allow salvage and other vegetative manipulation only if it would lead to accomplishing the objectives for the area. Current grazing is allowed by law; refer to response to Specially Designated Areas Comment 3. Where grazing is found to be incompatible with area objectives, it will be made consistent.

Comment 5: In Botanical SIAs and RNAs, OHV use should be prohibited where possible or restricted to existing access roads. Where appropriate consider rerouting OHV roads away from sensitive areas.

256

Response: Alternatives Preferred and C would close both RNAs and SIAs to OHV use. Alternatives A and E would close RNAs to OHV use.

Comment 6: Pest and fire control should only be allowed in Botanical SIAs and RNAs if identified in the Management Plan as being essential to maintain the area's unique features.

256

Response: In all alternatives, pest control would be allowed in RNAs only when the values for which the RNAs were established are threatened. In all alternatives, pest control would be allowed in SIAs if it allowed management objectives to be met. In all alternatives, prescribed fire would be allowed in RNAs and SIAs where it was determined to meet the objectives of the area. Management strategies for each individual area would be developed to identify appropriate activities and the sideboards within which they could occur.

Comment 7: Locate high intensity recreational developments away from special areas to minimize recreation-associated damage.

256

Response: All alternatives would prohibit any recreational use that interfered with RNA values. All alternatives would develop recreational use that is compatible with SIA objectives. SIAs would be developed to accommodate any established recreational use in the area.

Comment 8: Develop an RNA which encompasses a study area for anadromous fisheries. One possibility would be to incorporate a portion of the South Fork Salmon River into the Limestone Bluffs RNA. Both spring- and fall-run chinook salmon are known to utilize this area for spawning.

72

Response: Not enough information has been collected to adequately consider the addition of this area as an RNA prior to distributing the Final EIS. However, the Regional RNA committee is currently assessing the need for aquatic ecosystem elements within the RNA system.

Comment 9: The entire Grider Creek drainage should be designated a RNA for the study of natural fire regimes in the Klamath Mountain Province. A natural prescribed fire plan should be developed for the RNA to allow all natural fires which start in the drainage to burn freely without suppression.

283

Response: Not enough information has been collected to adequately consider the addition of this area as an RNA prior to distributing the Final EIS.

Comment 10: No RNAs should be established as they are "de-facto" wilderness designations which benefit only 1 segment of the recreational public. They should be unavailable to all by the elimination of vehicular access or not and this should be stated up front.

255

Response: These areas are for research, not recreation. The information obtained from studying these areas is expected to benefit the entire public by adding to our base of knowledge and helping improve the management of public lands. Any current access routes will be left in their current status unless it is shown that this use is inconsistent with the management objectives of the area. Only about 2,500 acres, 20% of the RNA acreage, are outside wilderness.

Comment 11: The range of alternatives does not address the RNA issue in that all alternatives accept all RNAs as proposed. Maps and data should be supplied to allow the reader to determine where these areas are and how they may affect recreational opportunities.

255

Response: Since the Draft EIS was printed, the Williams Point RNA was dropped as a candidate as a result of the establishment process. All alternatives considered in detail would propose all 9 of the remaining candidate RNAs for establishment because they were in some stage of the administrative establishment process when the Forest Plan planning effort began. The map for Management Area 1 in the Forest Plan shows the general location of each RNA. Data for each RNA can be found in EIS, Chapter 3, Specially Designated Area Management, RNAs.

Comment 12: The establishment of an RNA system should be restricted to land allocations of ROS classed primitive or semi-primitive non-motorized due to the extreme lack of land base available for multiple use allocations and the fact that this designation is used by environmental extremists and many within your organization solely as a means to dictate recreational land uses.

255

Response: The intent of the RNAs is to provide important ecosystems in an unmodified state for research purposes. These conditions can only be found in a few places and that may not always be Primitive and Semi-primitive non-motorized ROS class areas. However, approximately 10,000 acres of the candidate RNAs are within wilderness, 80% of the total RNA acreage.

Comment 13: A Takings Implication Assessment should be completed prior to the establishment of any proposed RNAs due to existing water rights, grazing preferences and mining claims. As the establishment of RNAs will preclude such activities, just compensation must be paid for the fair market value of lost property rights.

281

Response: Pre-existing rights will be protected as required by law; refer to response to Specially Designated Management Comment 3. Any recommendations to effect a change in any existing rights would be done in a site-specific analysis as part of the development of the implementation strategy at a later date and would be in accordance with proper procedures including public involvement. Grazing is not a right, but a privilege; refer to response to General Policy Comment 29 in the General section.

Comment 14: RNAs should not be established where there is motorized access currently. If they are, current access should be mandated and perpetuated to protect recreational uses that now occur.

255

Response: The intent of RNAs is to provide important ecosystems in an unmodified state for research purposes. These conditions are unlikely to be found where there is currently OHV use. In fact, approximately 80% of the proposed acres are within existing wilderness. If the areas outside wilderness were judged appropriate for an RNA despite established motorized access, then the current type of use is generally likely to be consistent with RNA objectives. Uses present at the time of establishment and approved by the Regional RNA committee would be allowed to continue. However, this would be determined on a case by case basis and some restrictions might be necessary.

Comment 15: The Forest should complete selection and designation of RNAs to meet the Regional RNA community type targets during next planning cycle.

256

Response: This intent is to complete the work during this planning cycle. However, work accomplishment is

dependent on funding. Funding is dependent on Congressional appropriations.

Comment 16: Prior to establishment of RNAs, careful assessment should be made of the role that grazing has traditionally played in the existing ecosystem prior to prohibitions from continued activity.

281

Response: Analysis of all existing uses and the condition of each resource, including grazing, occurs during the RNA establishment process. Each resource will be discussed in the RNA Establishment Report. Any recommendations to alter existing use patterns would be analyzed and the decision would be included in the Establishment Report.

Comment 17: Natural spawning of adult salmonids within the Forest provides educational and interpretive opportunities. Kelsey Creek and/or Indian Creek or another suitable stream location should be an SIA.

72

Response: Not enough information has been collected to adequately consider the addition of these areas as SIAs prior to completion of the Final EIS.

Comment 18: All candidate SIAs should be established in the Final Forest Plan not merely the 65% in the current Preferred Alternative. The unique plant and animal species and associations found on the Forest must be protected so that the forest can serve its multiple use functions as a reservoir of biological diversity, source of recreation-based income to surrounding communities and refuge from extinction for Sensitive species. Current management may continue to protect these unique areas without conferring formal special status, but as political climate and economic conditions change, informal protection may no longer be adequate.

256

Response: The Preferred Alternative tries to balance all multiple use needs in its land allocations and management direction. Many of the candidate SIAs would be within LSRs, RRs, roadless areas within Key Watersheds, WSR corridors and other similar designations which confer formal status.

Comment 19: No SIAs should be established as they are "de-facto" wilderness designations which benefit only one segment of the recreation public. The declining land base for multiple-use recreation is exacerbated by the creation of another category of land withdrawal. The dedication of many of these areas appear to have one purpose in mind, that of reducing recreational opportunities.

255

Response: SIAs are designed to provide recreational opportunities where education and interpretation of unique or special natural resource values are emphasized. All alternatives try to provide a wide range of recreational opportunities that will satisfy the needs of as many users as possible. Different alternatives emphasize different recreational opportunities; refer to EIS, Chapter 4, Recreation Management.

Comment 20: It is unclear if the Preferred Alternative would add the Siskiyou Crest Scenic Area as an SIA. If it did not, it should.

1

Response: A table has been added to the EIS indicating which SIAs would be recommended in each alternative. As shown in Table 4-37 of the Final EIS and in Table 4-19 of the Final Forest Plan, the Preferred Alternative would designate 200 acres at Cook and Green Pass, 800 acres at Mount Ashland/Siskiyou Peak, 500 acres at Observation Peak, 400 acres at Red Mountain, 100 acres at White Mountain and 500 acres at Condrey Mountain Blueschist as SIAs. Although the entire 15,000 acre Siskiyou Crest would not be designated as an SIA; the 2,500 acres listed above would be SIAs plus much of the remaining area within the Siskiyou Crest would be designated as LSRs which would have management direction consistent with maintaining the distinctive scenery in the area.

Comment 21: The reader can not determine which alternative accepts or rejects the proposed SIAs. The range of alternatives does not address the SIA issue. There should be maps and data which show where these areas are so the reader can determine how they may affect existing recreational opportunities.

255

Response: A table and a discussion has been added to the EIS indicating which SIAs would be recommended in each alternative. Table 4-37 in the Final EIS displays the range of the alternatives as related to SIA recommendations. Information on each SIA can be found starting on page 3-90 of the Final EIS.

Comment 22: SIAs should not be established where there is motorized access currently. If they are, current access and other pre-existing uses should be mandated and perpetuated.

255

Response: SIAs are established in part as a recreation designation. Many have been established in areas with road access specifically to facilitate visitor use. Pre-existing rights will be protected as required by law; refer to response to Specially Designated Management Comment 3.

Comment 23: While management plans appear to be planned for RNAs, no management plans are promised for SIAs. SIAs often present more complex management challenges than RNAs because their management goals are more diverse.

256

Response: Page 4-112 of the Final EIS state that all alternatives would prepare implementation strategies for each SIA. Standard and Guideline MA7-1 in the Final Forest Plan states: "Project developments within each SIA will be provided in individual implementation strategies which should be completed during this planning period."

Comment 24: Each event regardless of user group must be evaluated in its own right with the same set of criteria. The SIA prescription should be replaced by "New OHV routes will be evaluated on a case by case basis" or removed altogether. It is unfounded in part and biased toward a specific user group.

255

Response: In all alternatives each management area would have a unique set of management objectives. Some management area objectives will be compatible with certain types of recreational use and others will not. When all management areas are taken together, there should be adequate opportunities for all types of uses; refer to analysis in EIS, Chapter 4, Recreation Management. The SIA Management Area 7 would provide recreational opportunities where education and interpretation of unique or special natural resource values are emphasized. OHV use would be prohibited in Alternatives Preferred and C.

Comment 25: Several OHV groups and manufacturers of OHV vehicles should be allowed to pick out representative areas of various terrain and skill levels to set aside as SIAs reserved for OHV use.

255

Response: OHV dealers and members of the Off-Road Vehicle Association have been invited to help develop plans for an OHV recreation area in the Humbug drainage on the Oak Knoll Ranger District. The proposal is for a network of OHV roads and trails, staging areas, a "challenge play area," signs, maps and brochures. This is part of the Forest Recreation Program Management Strategy which was completed after the Draft Forest Plan was published. The Final Forest Plan has been modified to include the Forest Recreation Strategy. This OHV area would not be a SIA as it does not meet the goals of SIAs, but would meet the objectives stated in the comment.

Comment 26: It is apparent that SIAs are proposed by a specific group who do not represent a cross section of the public. Where is the public participation in these choices.

255

Response: Extensive public participation was invited and provided during the development and review of the Forest Plan and EIS; refer to EIS, Chapter 1 and Appendix A.

Comment 27: SIAs featuring limestone or marble formations should be withdrawn from mineral entry to prevent mining damage.

205

Response: In all alternatives, this would be done on a case by case basis as necessary. Generally, recommendations of this type would be made during the development of the implementation strategy for each SIA.

Comment 28: High priority should be given to completing the SIA designations for the French Creek Marble Outcrops, the Hotelling Travertine Spring and the South Fork Matthews Creek Travertine Spring.

205

Response: French Creek Marble Outcrops has been dropped from consideration as an SIA in the Final EIS as all alternatives include it as part of the Limestone Bluffs RNA. Not enough information has been collected to adequately consider the addition of the 2 travertine spring areas as SIAs prior to completion of the Final EIS.

Comment 29: The proposed Sulfur Spring SIA on Elk Creek should be protected from geothermal leasing.

205

Response: Alternatives A, D, D' and E would recommend Sulfur Spring as a Geological SIA. These alternatives would defer the determination as to whether withdrawal from geothermal leasing was necessary to the development of the implementation strategy.

Comment 30: All the comments concerning RNAs and SIAs and their establishment are pertinent to National Natural Landmarks.

255

Response: Evaluation of National Natural Landmarks is deferred while the National Park Service revises its evaluation process; refer to EIS, Chapter 4, Specially Designated Area Management, National Natural Landmarks.

Butte Valley National Grasslands Comments

Comment 1: Butte Valley National Grasslands (BVNG) should have a single prescription which provides for enhancement of wildlife habitat over existing conditions. The prescription provided by Management Area 4 is in conflict with the management direction found in Management Area 16.

72

Response: This was a mapping error and has been corrected in the Final Forest Plan. Only the guidance in Management Area 4 is intended to apply to the BVNG and the goals are to improve existing conditions.

Comment 2: Provide additional details on the proposal to develop additional wetlands in the BVNG as stated on page 3-11 of the Draft Forest Plan.

281

Response: This is identified as an opportunity on page 3-11 of the Draft Forest Plan, not as a proposal. Any proposal would have a site-specific environmental analysis which includes public involvement and disclosure of environmental effects associated with it prior to any decision to proceed being made.

Lands Program Management

Comment 1: The use of the Small Tracts Act within Karuk Ancestral Territory lands is extremely important to the Tribe. All lands within the Karuk Tribe's Ancestral Territory considered for acquisition by the Federal government should be reviewed in consultation with the Karuk Tribe to determine their cultural significance prior to European involvement in the area. Transfer of ownership to Tribal Trust status should be evaluated before transfer of additional land into Forest Service holdings is considered.

203

Response: Based on the government-to-government relationship with all Federally recognized tribes, consultation will take place prior to any land adjustments.

Comment 2: Additional land acquisitions, especially for the purposes stated on Page 4-14 of the Draft Forest Plan, should not be permitted. Acquisition of additional lands should only occur when all resources are benefitted, not just single interests.

264

Response: The statement cited on page 4-14 of the Draft Forest Plan was misleading as it seemed to indicate that land adjustments would be primarily to achieve T&E species habitat objectives. The statement has been rewritten in the Final. The Forest-wide Standards and Guidelines under Lands Program Management describe the Forest's intent regarding land adjustments. They have been modified in the Final to clarify that land adjustments will be pursued only when they are shown to be in the public interest and have strong advocacy on the Forest.

Comment 3: The Draft Forest Plan fails to adequately respond to the issue regarding the negative impacts of Forest Service management and policy upon the small isolated forest communities situated within the boundaries of the Forest. Identify, analyze and minimize negative effects. Identify the different Salmon River isolated forest community needs and negative impacts.

302

Response: The purpose of an EIS is to disclose environmental effects related to the proposed action and its alternatives. Social and economic effects are discussed only as they relate to the environmental effects. The effects on various social groups are analyzed in the Social section of Chapter 4 of the EIS. At the Forest level, the proposed action develops a Forest program and it is impossible to forecast where site-specific effects might occur. Therefore, general discussion regarding effects to communities is more appropriate than trying to estimate impacts to individual communities. As project proposals are developed, additional analysis and public involvement will occur.

Comment 4: The Draft Forest Plan and EIS need to identify and discuss thoroughly the positive impacts which the isolated forest communities and their members/residents have had and will continue to have upon the Forest.

302

Response: The purpose of an EIS is to disclose environmental effects that would occur if a Forest Plan was implemented. It is not intended to discuss the effects of the activities of groups on the Forest, no matter how beneficial those activities might be.

Comment 5: The river communities (Sawyers Bar, Forks, Cecilville, etc.,) face less than 1% of their land base being in private ownership. The Forest Plan should address the best ways to ensure survival of these communities and should get input from the communities themselves.

305

Response: The alternatives in the EIS have explored many ways of maintaining social and economic stability; refer to responses to Economic Comments 22 and 24. During the Forest Plan development process, the Forest has solicited public input at each key point. A massive public involvement effort, the Citizens Participation Plan, was held after the development of the alternatives to explain the small decision space available and request any ideas on how to better design the alternatives to ensure economic stability. Appendix A of the EIS includes a summary of the public involvement activities.

Law Enforcement Comments

Comment 1: There is much documentation that increasing access restrictions to public lands creates the environment whereby the cultivation and or trafficking of marijuana or other illegal drugs is enhanced. The relationship between increased motorized access restrictions and an increase in the ease of illegal cultivation or trafficking should be examined.

255

Response: This relationship has been included in the EIS, Chapter 4, Law Enforcement. However, the effect would not vary significantly between alternatives. Also, a law enforcement presence would likely counteract this trend in all alternatives.

Comment 2: The Forest Plan should include language similar to that in the Shasta-Trinity Forest Plan concerning law enforcement: "According to the U.S. Constitution, the authority and responsibility to protect citizens and their property and the general police power is reserved to the States. Except in specific areas, the States have delegated their general police powers to city police departments or local county sheriffs. While the Forest Service does not assume the sheriff's responsibilities in these matters, it is essential that the agency continue to provide and enforce 36 CFRs which govern public behavior. Specific examples relate to the rights, safety and enjoyment of other users. The Forest Service enforces CFRs in full partnership with local law enforcement agencies."

281

Response: The EIS, Chapter 3, Law Enforcement discusses the law which authorizes the Forest Service to maintain a law enforcement force and our cooperation with local, state and other Federal law enforcement agencies.

Comment 3: The analysis should discuss the forced removal of numerous traditional residencies within isolated forest communities including how many have been removed each year in each community during the past 25 years and how many more are desired to be removed by the Forest Service in the next 25 years. The "Occupancy Resolution Program" needs to be identified and thoroughly discussed. The occupancy issues should be identified as being of national as well as regional and local concern. The Forest Service needs to analyze what the negative impacts have been and will be through the development and implementation of Communities Management Plans which analyze traditions, customs and culture which are not focused on timber output.

302

Response: The removal of structures has occurred only when they were determined to not be in compliance with the regulations established to implement environmental protection laws. The purpose of the Forest Plan is not to record past history or to create future conflict, but to establish program direction to protect resources including surface resources on public land. The number of future removals cannot be estimated as it is impossible to estimate how many structures would not be in compliance with governmental regulations in the future. Forest-wide Standards and Guidelines 19-1 through 19-11 in the Final Forest Plan would provide direction for management of surface resources for the Preferred Alternative. Forest-wide Standards and Guidelines 25-1 through 25-9 and 27-1 through 27-9 in the Final Forest Plan would provide direction for working with communities. Social impacts are analyzed in EIS, Chapter 4, Social. This Forest-wide direction provides the basis for any future strategies that might be developed and for site-specific analyses that might occur. The issue of unauthorized uses has been expanded to include the national level in the Final EIS.

Minerals Management

Comment 1: Under Minerals Management it states that all locatable mineral resource activities will be administered according to 36 CFR 228. These regulations, as mandated by Congress, do not include the authority to approve, deny or terminate occupancy of mining claims.

6

Response: The Forest Service has the authority to regulate all mining-related activities which might disturb surface resources, including occupancy. Part 228 of Title 36 of the Code of Federal Regulations contains the regulations which the Forest Service utilizes to protect and mitigate against environmental impacts related to mining. Termination dates for permits, contracts and plans of operation are within the authority of the Approving Official.

Comment 2: No new mining operations should be permitted and mining should be eliminated from the forest.

9 25 40

Response: Unless withdrawn from mineral entry, all lands on the Forest are open to mineral entry under the Mining Law of 1872, as amended. It is not within the scope of this document to exclude mining from the Forest.

Comment 3: Standards and guidelines for small scale mining operations that encourage customary family style mining within the Forest need to be identified, developed and adopted into the Forest Plan.

302

Response: The mining laws and current regulations do not distinguish between types of mining operations. All operations are assumed to be undertaken for the purpose of development of the mineral resource. Creating a different set of rules for small scale mining operations is outside the scope of this document and would require changes in law and regulation.

Comment 4: Any reference to minerals management should include the clause, "subject to valid existing rights."

230

Response: Addition of this phrase is not necessary as valid existing rights would be protected in all alternatives consistent with existing laws.

Comment 5: The EIS should include guidance on the appropriate environmental analysis which will be the basis for approving proposed mineral-related activities.

282

Response: The EIS analyzes the forest-wide impacts of implementing a range of programmatic alternatives. The appropriate environmental analysis for site-specific projects would be determined based on the scope of the proposed action and alternatives, consistent with NEPA, at the site level.

Comment 6: The Creative and Organic Acts applicable to forest reserves/national forests state specifically that the boundaries of such reserves were to exclude areas chiefly valuable for minerals and non-timber agriculture. There is documentation of riparian areas being continuously mined since 1849.

281

Response: An assessment of mineral values was made prior to designation of the national forests. Those areas "chiefly" valuable for minerals were excluded from the original reservation. Riparian areas have many values beyond minerals - for timber, wildlife habitat, recreation, access and anadromous fish. These areas were included in the national forests. Changes in national forest boundaries are accomplished by an Act of Congress and are outside the scope of this plan.

Comment 7: The EIS should describe and discuss the impacts of President Clinton's forest plan on mineral entry and leasing on the Forest and indicate whether any additional LSRs or RRs will be withdrawn from mineral entry or leasing.

282

Response: The ROD for the FSEIS (President's Plan) does not propose withdrawal of any lands from mineral entry or leasing. Application of the standards and guidelines which are part of the ROD do not directly affect the availability of lands for mining and leasing. However, there may be indirect impacts, such as delays in activity approval, due to increased survey requirements; refer to Final EIS, Chapter 4, Minerals Management.

Comment 8: Since the Forest has eliminated 166 small scale miners with residential occupancy and have only 34 left, the surface disturbance caused in the future should be tolerable.

6

Response: Long-term occupancies of any kind result in a variety of environmental impacts. Forest-wide Standards and Guidelines 19-2 and 19-5 in the Final Forest Plan would require site-specific analysis to determine if the occupancy is reasonably incidental to development of the mining claim, and if resource impacts are acceptable.

Comment 9: The Draft EIS proposes to completely withdraw or place special requirements on forest lands (up to 81%) which may have mineral potential. Some of the special requirements are very restrictive and may impact mineral resources.

281

Response: Currently, 53% of the Forest is withdrawn from mineral entry due to wilderness, WSRs and administrative sites. Under the most restrictive alternative, 28% of the remaining land base would either be withdrawn or have special requirements. The EIS discusses the potential adverse impacts that such withdrawals could have on mineral and energy development in Chapter 4 under Mineral Management and compares alternatives.

Comment 10: The socioeconomic effects resulting from allowing or excluding exploration and/or mining operations needs to be analyzed. This analysis should include specific data regarding the location, types of deposits, and potential resources available on the forest. To accurately evaluate the impact of alternatives, it is crucial that the location and magnitude of mineral resources which may be excluded from development be identified. The exclusion of mineral resources should include both actual or regulated (special requirement) withdrawals.

307

Response: The analysis of social effects in Chapter 4 includes mining-related activities. All available information on type and extent of mineral resources was used in the analysis and is part of the Forest's planning records. However, large portions of the Forest have not been explored and mineral potential in these areas is unknown; refer to EIS, Chapter 3, Minerals Management.

Comment 11: The EIS should show the effects of Key Watershed designation and management on minerals management.

282

Response: Forest-wide Standard and Guideline 6-38 requires a watershed analysis prior to starting management activities in a Key Watershed, so that mining activities which require ground disturbance may be delayed. Delays due to management requirements in the Preferred Alternative are discussed on page 4-122 of the Final Forest Plan. The standards and guidelines do not affect the statutory right to entry and development of the mineral resource.

Comment 12: The wording should be changed on page 2-7 of the Draft Forest Plan regarding Surface-Use Related Activities. The word "considered" is not within the meaning of the law. Surface uses are allowed if they are reasonably necessary or incident or required for the operation.

230

Response: The wording has been changed in the Final Forest Plan and a requirement that environmental effects must be mitigated has also been included.

Comment 13: Mineral extraction and non-native fish efforts should be prohibited in the Kelsey Creek watershed.

236

Response: Unless specifically withdrawn from mineral entry, all lands on the Forest are open to exploration and development under the general mining laws. There is no proposal to withdraw the Kelsey Creek watershed from mineral development in any alternative. Stocking non-native fish would not be emphasized in any alternative, but neither would it be prohibited as there are some site-specific situations where hatchery fish are appropriate.

Transportation and Facilities Comments

Comment 1: The road program impacts are going to be affected by the extent to which less clearcutting is applied. The Summary provides no connective tissue between these related matters.

5

Response: While connectivity between the road program and harvest methods is not directly compared, harvest and road construction and reconstruction is displayed in the comparison of average annual outputs by alternatives for Decades 1 and 5 on page 2-18 of the Draft EIS. Alternatives were developed to look at a variety of ecologically sensitive and sustainable natural resource management strategies. Estimated impacts to the roads program under different harvest intensities explained in the alternative description narratives give adequate impact comparisons.

Comment 2: Eliminate (ban) all dams.

9

Response: There are currently 5 dams on the Forest. They function in support of wildlife, irrigation and recreation. This is consistent with natural resource management. Currently there are no plans to construct additional dams but this could occur if a resource need develops.

Comment 3: Adopt SAT report guideline RF-8 to require road monitoring after major storms in riparian management zones; RF-8 would supplement existing Draft Forest Plan Forest-wide Standard and Guideline 19-3.

82

Response: To a large extent, the Forest has incorporated the SAT RF-8 provisions in their existing road management and maintenance practices. The Forest adapted and has used a multi-level maintenance strategy for many years. Maintenance levels directly relate to the intensity of maintenance. Activity intensity increases from a base level in maintenance level 1 to a maximum at level 5. At level 1, basic custodial maintenance is performed to keep damage to adjacent resources at a minimum.

Emphasis is given to maintaining drainage and runoff patterns. Traffic is eliminated except for annual inspections for resource damage on the roads. The annual inspection mentioned in the statement above is a specific reference to this requirement. With drainage and runoff as a base, as the maintenance level increases, maintenance activities move from the basic responsibility of resource protection to those relating to driver comfort like dust abatement, and litter pick up. With custodial maintenance oriented to drainage and runoff pattern protection, inspection of roads during runoff events with a recurrence interval of 1 year or greater would be very redundant and costly. Performance of annual maintenance to the prescribed maintenance level should minimize resource impact.

A limiting factor for full implementation is funding. However the Forest priority for maintenance is drainage and runoff control. For emergency situations, the Forest does have a Flood Emergency Response Plan. The plan was last issued in December of 1991. It outlines the Forest process for responding to storm and flooding incidents as they occur. It includes predetermined, mapped patrol areas. Areas were identified so they could be patrolled in one day. Additional components of the plan include concerns and priorities for field inspections. The plan includes "during storm" area inspections but this is dependent on the intensity of the event. It is just not feasible to make road inspections during regular events.

Comment 4: Although Alternative D commits to road obliteration, there appears to be no quantification of this for any alternative. Alternative D also includes one of the highest rates of road building. This seems at odds with the narrative description of the transportation system under Alternative D.

303

Response: Alternatives Preferred, D and D' would obliterate roads. This is displayed for the Preferred Alternative by a decrease in road construction miles to provide for closing 1 mile of road for every new mile built within Key Watersheds and not constructing any roads within roadless areas in Key Watersheds. The increase in road miles for Alternatives D and D' in the Draft EIS was an error and has been corrected in Tables 4-43 on page 4-127 and in Tables 2-4 and 2-16 of the Final EIS. The intent in Alternatives D and D' is to restore or close a mile of road for every mile constructed. The other alternatives discuss using a road management planning process for investigating the possibility of road closures and obliteration.

Access and travel management planning is necessary to determine long-term road need. Once determined,

un-needed roads will be identified for obliteration and as funding becomes available, roads will be obliterated. As indicated in the Road Management section of the Draft Forest Plan, if funds are not available, greater portions of the road system will have to be placed in lower maintenance levels and more roads will have to be closed.

Road construction estimates were based on the size of the timber program for each alternative. They are an approximation to allow comparison of alternatives, but should not be viewed as a target for road mile construction. Because Alternative D has one of the largest timber programs, it has a larger road construction program.

Comment 5: The Draft Forest Plan does not mention the laws constraining rights-of-way acquisition across private lands.

281

Response: There are many constraints to acquiring rights-of-ways across private land. That does not eliminate the need for the Forest to pursue those rights when the need arises. The appropriate process is and will be followed in any proposed acquisition.

Comment 6: Road access and motorized trail access should be given key consideration in the implementation of the Forest Plan.

280

Response: This is the intent. Forest-wide Standard and Guideline 20-1 in the Final Forest Plan requires transportation planning to be an integral part of ecosystem analysis at the landscape/watershed level and of environmental analysis at the site level. Access planning will be an integral part of implementation. The key to implementation however is funding and access will be available in direct proportion to funding availability.

Comment 7: Roads should not be closed in the Forest Plan because they are not fulfilling their original intended purpose. This means timber and mining roads could no longer be used for hunting, fishing, wilderness trail heads, viewing scenery, four-wheeling, etc. In these instances it may require a higher level of mitigation, but resource conflicts should not automatically be resolved by closing the road.

255 280

Response: Operation and maintenance of the Forest Development Road system is a major concern on the Forest. Changes in the Forest program of work are decreasing the funding available to maintain the current road system. Each alternative stated that access and travel management planning was a major consideration. Operation and maintenance plans for each road will be reviewed during the management planning. This planning process will be public and open for review.

Comment 8: RS-2477 concerning historic public rights of way that were established prior to NFMA and FLPMA would still appear to be an unresolved issue in Siskiyou County.

281

Response: Resolution of NFMA, FLPMA and RS-2477 are outside the scope of the Forest Plan.

Comment 9: A interdisciplinary review with full public participation (NEPA document) of all roads and vehicle routes should be scheduled. Given the significant level of road closure, obliteration and reclamation needed; the Forest should consider creating a task force of citizens, scientists, private land owners and other interested publics designed to assist the forest with identifying specific roads that should be decommissioned.

44 255 280

Response: Public involvement should be a component of road management decisions. The proposed procedure for planning new facilities and for operating and maintaining existing facilities is described in Forest-wide Standard and Guideline 20-1 in the Final Forest Plan. A key feature of the process is the transportation planning that will be part of the ecosystem analysis at the landscape and watershed level and part of project planning. Road management objectives will be reviewed and modified as resource management needs are re-evaluated. It's important to remember however that analysis is not decisional and that prior to ground disturbing activities, the NEPA process will open results of the analysis to public review and comment.

Comment 10: New roads in the Preferred Alternative will total 200 miles a decade, which, when added to the present total of 5,100 miles would bring the Forest's road network at the end of the fifth decade to more than 6,000 miles. The continued expansion of roads on the Forest is not consistent with ecosystem management, effects on water quality or any strategy to conserve and restore salmonid and wildlife species. No further road construction should be allowed, particularly in remaining roadless areas. The road management program should be directed towards closing, decommissioning and obliterating roads. Make sure sufficient money is in the budget for routine road maintenance and road rehabilitation projects each year. Disclose the procedures and policies to be used in carrying out road closures.

9 10 11 25 32 33 36 40 41
44 54 73 82 98 99 129 132 145
147 184 192 193 197 225 228 235 237
247 260 263 273 283 286 292 305 337

Response: The projected road program was tied directly to the timber program of each alternative. A formula was estimated using our best insight to anticipate new constraints to road construction. The estimated road construction is considered high in light of

the ROD for FSEIS. Prior to the ROD, road construction was permitted in released roadless areas in Key Watershed that had not been entered. Consistent with the ROD, the Preferred Alternative has been modified in the Final EIS and Forest Plan to exclude new road construction in released roadless areas within Key Watersheds. Additionally, new constraints have been added in Key Watersheds that will stop road mileage increases in those areas. The comparison made in the Draft was only intended to provide a relative comparison of alternatives and not to imply a hard target for the road program.

For all practical purposes, the existing road system will be the road system of the future. However, more miles of roads will have to be reconstructed in the future to facilitate timber hauling because the available timber volume will be widely scattered.

The Forest road budget is allocated from the Region which gets its budget from the Washington office. While is would be nice to say that there are always going to be funds to do adequate road maintenance and road rehabilitation, that may not be the case. Funding will be requested, but the Washington and Regional Office decides how funds are allocated to the forests in the Region.

Comment 11: Road density should be decreased in the Preferred Alternative, rather than increasing from the current 3.26 miles per square mile of land to 4.24 miles per square mile. This is a 30% increase, the largest of any alternative.

54 188 241

Response: The Preferred Alternative has been modified to be consistent with the ROD for the FSEIS. First, no new roads would be built in inventoried roadless areas that are unroaded to date and second, outside roadless areas, there would be no net increase in the amount of roads in Key Watersheds. For all practical purposes, the existing road system would be the road system of the future. One change in the road program is that more miles of roads would have to be reconstructed to facilitate timber hauling because more miles of road would have to be traveled to reach the timber sale volume. This does not affect the estimate of road density. Road density estimates apply only to regulated land; this has been clarified in the Final EIS.

Comment 12: The evident Forest Plan direction to maintain the vast majority of road mileage as permanent in the forest transportation system is contradictory to the intent of the NFMA Section 8(b) which was designed and written expressly to minimize active road mileage. NFMA also requires the decommissioning and revegetation of roads.

44 320

Response: NFMA direction provides rational for maintaining permanent roads if there is a "necessity." The philosophy for road management adapted by the Forest Service is that it is more economical both from a resource and financial perspective to manage a developed transportation system using multi-maintenance levels. Roads are maintained in 5 maintenance levels. The maintenance level indicates the intensity of maintenance activity that would occur on each road. Level 1 roads are closed with only a annual inspection to ensure that resource damage is not occurring while Level 5 activities not only respond to travel surface needs but to non-surface needs like brushing, litter pick up and night time signing inspections as well. This system is necessary.

Comment 13: Roads should not be obliterated. Barricades and gates are better; do not spend additional money to destroy previous investments.

264

Response: There are a number of considerations to make when deciding road management strategies for existing roads. A watershed analysis, consistent with direction in the ROD for the FSEIS, is part of ecosystem analysis at the landscape level. One component of the analysis is to review the existing road system and determine its adequacy in relation to land use direction.

While in the past a large component of land was allocated to timber harvest, constraints on timber harvest in all alternatives have paved the way to significantly alter projected long-term use for the current road system. Currently, a multi-maintenance level road management strategy, as described in the response to Transportation Comment 12, is used. Maintenance levels relate directly to maintenance activity. Level 1 roads are closed to vehicle travel. The only activities permitted on these roads are those which prevent resource damage from occurring. The road surface is not considered a resource in this case.

The existing philosophy is to place roads into Level 1 that do not pose a serious resource risk. This strategy is valid as long as there is a planned use for the road in the future. Keeping roads in Level 1 status is preferable to using temporary roads and obliterating them at the end of each project. With the land allocation changes proposed for all alternatives, a number of roads that were constructed with a long-term need identified may not support that long-term need in the future. Because of this, the need to obliterate roads may arise.

In all alternatives, roads would be reviewed and if potential resource damage is minimal the preferred method of obliteration would be to let them grow in and obliterate naturally. When the potential for resource damage is high, a priority of obliteration would be established and those roads would be obliterated as funding becomes available.

Comment 14: The SAT report calls for a pro-active approach for road removal (RF-3). The Draft Forest Plan should include a road removal program directed towards protecting riparian areas. Forest-wide Standard and Guideline 19-1 says that "non-system roads shall be "put to bed," but this term is not defined. The Final Forest Plan should include a formal program and schedule to analyze roads needing closure and rehabilitation.

44 82

Response: The Preferred Alternative has been modified to include Standard and Guideline under MA10-43 in Riparian Reserves MA 10 that is the same as SAT Guideline RF-3. The definition of the term "put to bed" which was in the Glossary of the Draft EIS has been clarified as follows in the Final EIS: "Roads are obliterated or decommissioned and are no longer part of the transportation system." Refer to responses to Transportation Comments 9 and 13 for the program for analyzing road needs.

Comment 15: How many miles of roads have been successfully retired?

25

Response: The definition of "retired roads" for this response is considered to be roads taken out of vehicular use. The comparison of this between alternatives is best displayed in Table 4-43, Road Maintenance Levels By the End of the Decade in Miles of Road on page 4-139 of the Draft EIS. Maintenance level 1 roads are managed for intermittent use and closed to vehicle traffic. When in non-use status the closure period must exceed 1 year. Basic custodial maintenance is performed to minimize damage to adjacent resources. Emphasis is given to monitoring drainage facilities and runoff patterns. Road deterioration does occur and reconstruction is required prior to any future use.

Comment 16: Identify the administrative and fiscal means by which road closures will be accomplished, including any obliteration and revegetation activities.

44

Response: Travel and access planning is part of the ecosystem analysis at the landscape/watershed level and is consistent with watershed analysis requirements in the ROD for the FSEIS. Once updated transportation needs are determined, road management objectives will be modified to reflect new long-term road management strategies. Road maintenance needs, reconstruction needs and scheduled obliteration will be documented. Progress will be made implementing the long-term plan in direct relation to the budget available.

Comment 17: Describe the effects of Key Watershed designation and management on road construction.

282

Response: Key Watershed designation in the Preferred Alternative would not exclude road construction. It would however require no net increase in road mileage within a Key Watershed; for each mile of road constructed a mile of existing road would have to be obliterated. Watershed analysis is also required prior to implementation of activities within a Key Watershed. One component of this analysis is a study of the transportation system needs. Once understood, decisions on road construction, reconstruction, maintenance and obliteration can be made. Implementation will be dependant on levels of funding.

Comment 18: The Forest Plan should analyze the cost-effectiveness of building roads and logging on areas that have not been logged already because they are generally too steep, too unstable or too problematic. Identify who would reap the benefits and who would pay the costs.

305

Response: An attempt to display the anticipated roads program for each alternative was made in the Draft EIS in the comparison of average annual outputs in Table 2-4. The road construction and reconstruction program was estimated as a component of the timber program. It was an approximation to allow comparison of alternatives but was not a target for road mile construction.

The ROD for the FSEIS constrains road construction in inventoried roadless areas within Key Watersheds and requires that a mile of road be obliterated for each new mile constructed in Key Watersheds. These two constraints would significantly reduce the projected miles of road construction in the Preferred Alternative. While not quantified, it is expected that the existing road system would not increase very much under the Preferred Alternative.

Subjective estimates are that there might be up to 5 miles per year of construction in the first decade declining to 1 or 2 in the last decade. It is expected that there would be an increase in the miles of reconstruction with an estimated 20 miles per year in the first decade and as much as 40 per year in the fifth decade. This is due to the need to harvest over more ground than currently to obtain the same volume. More roads would be hauled over requiring more reconstruction.

Comment 19: With deferred maintenance needs now at $57 million and many millions more needed to rehabilitate or close problem roads, new construction should be deferred until present problems are corrected, deferred maintenance completed and a program is in place that assures future maintenance will be done.

225

Response: While the $57 million deferred maintenance need cited is specifically for the Shasta Trinity National Forest, there is a deferred maintenance problem on the Klamath. Funding for road maintenance

comes from 2 sources: an allocation to the Forest of appropriated funds and a spending authority for funds collected on the Forest through road use fees. Over the last several years the allocated maintenance funds coming to the Forest have stayed about the same with the effect of decreasing spending power. The collections from road use fees have decreased because of the significant down turn in timber haul which has been the major contributor to the collected fund accounts. The Forest has a balance of funds carried over but the opportunity for the replacement of those funds is going away.

It stands to reason that with the current miles of road and a projection of increasing those miles, some needed maintenance isn't going to be done. The strategy to resolve this problem is travel and access management planning. A review of existing and proposed roads and their previous and planned future use will be made. With the funding to maintain roads decreasing, the need to minimize additional maintenance obligations becomes more apparent. The Draft EIS includes miles of road construction and reconstruction for each alternative. These miles were developed from a formula that estimated these miles as a component of the timber sale program. An effort was made to modify the miles of road constructed and reconstructed in light of new restrictions that were anticipated but the effects of the restrictions included in the ROD for the FSEIS were significantly more limiting to increasing miles than anticipated. The formula used to estimate miles is now considered to indicate more miles but still felt to be valid for comparison of alternatives.

Comment 20: It is highly relevant that in the last decade 40 new miles of road were built per year, while rebuilding 70 miles per year. That means 64% of the roads used for logging are being rebuilt. There will be both a greater ratio of road rebuilding and a shrinking road program.

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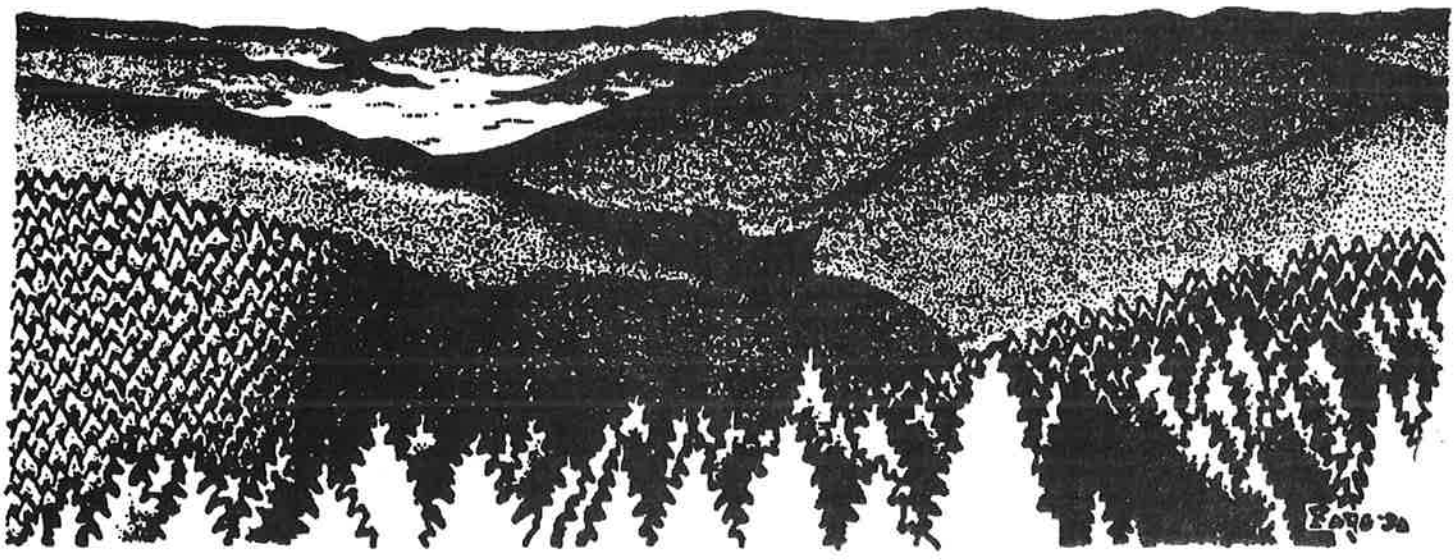
Response: This is correct. The majority of roads were built for resource access, getting to a timber sale. NFMA requires that the only road that can be constructed is the one for the intended need. That means when a timber sale requires a road constructed for access, the only construction that the sale can finance is the construction for timber access. If additional needs are identified that would alter the design, funding from another source has to be applied to the cost of the construction. Because of this, once roads are constructed and the timber sale that is used for the construction funding is hauled out, the road is generally not adequate for additional haul traffic. To use the road again for haul requires reconstruction.

Comment 21: Commercial Use Fees imposed by the Forest Service should not be levied, especially additional fees on trucks with trailers on all Forest Service roads.

196

Response: Forest development roads are not public roads in the same sense as roads that are under the jurisdiction of public road agencies, such as states or counties. Forest Development Roads are not intended to meet the transportation needs of the public at large. Instead, they are authorized only for the administration and utilization of NFS lands. Although generally open and available for public use, their use is at the discretion of the Secretary of Agriculture. Commercial users, permittees or contractors are required to share in the cost of developing, improving and maintaining the road system. All commercial use of the Forest Development Road System requires a permit.



Timber Management

Comment 1: In the amended 1974 Timber Management Plan, the LTSY was 235 MMBF. In 1992 the ASQ was 142 MMBF and in 1993 it dropped to 103 MMBF. The suitable timber land base also decreased during this time. None of these changes are in the Draft EIS.

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Response: The reduced ASQs for 1992 and 1993 represent interim changes in land allocations and standards and guidelines to reflect the interim northern spotted owl network and other management concerns. These were to be interim changes until a recovery plan for the northern spotted owl and a new Forest Plan was completed. LTSYs are also presented for all alternatives considered in detail in Table 4-50 on page 4-139 in the Final EIS. LTSYs are a result of the proposed land allocations and standards and guidelines of each alternative and vary according to the amount of CAS land in each alternative.

Comment 2: The Draft EIS should provide information on timber revenues.

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Response: Total Forest timber receipts for the period 1978 through 1993 have been provided in Table 3-43 on page 3-110 of the Final EIS.

Comment 3: Why is the percentage of the Forest allocated to various regulation classes different for various alternatives?

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Response: Each alternative would allocate land and establish standards and guidelines according to the theme or emphasis of the alternative. Some alternatives place more emphasis on producing timber than others. Sustained yields of timber production are considered suitable in some management areas. The production of timber products is deemed incompatible with management of other management areas. In most alternatives, land allocated for sustained production of timber is further subdivided into 2 or 3 regulation classes. These regulation classes are based on the intensity of timber management to be practiced and reflect the objectives of the management area. The 3 regulation classes represent 3 levels of management intensity and therefore 3 levels of timber yields.

Comment 4: Information about forest site productivity in the proposed management areas would provide insights into the results to be expected. Site productivity for the total forest and for the various management areas should be described.

5

Response: Average forest site class for each forest type is presented on page 3-106 through 3-107 in the Final EIS. Forest site class (an estimate of productivity), is estimated based on measurements made on each forest inventory plot. These measurements allow the estimation of the average site class for each forest vegetation stratum and the calculation of an average site class for each forest type. Use of a geographic information system allows the calculation of the number of acres of a given forest vegetation stratum or of a forest type in any mapped land allocation. Productivity of each land allocation is not presented in the EIS, however, and was not used directly to make land allocation decisions. The calculated yields of timber products indirectly reflect the productivity class of the forest types on the lands allocated for timber production.

Comment 5: Reduction of the land available for production of timber products should not result in a reduction in the average site class of these lands. If this is the case, what are the reasons?

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Response: Lands were not allocated to the various management areas based on site class or productivity per se. However, some allocations are based on forest conditions (well-stocked stands of large trees, for example) that tend to reflect site productivity. Also, lands available for programmed production of timber products tend to be those available after other allocations are made rather than being selected based on site productivity.

Comment 6: The Summary does not provide the number of acres that will be harvested or reforested per year under the various alternatives.

5 282

Response: The Summary was not intended to give a lot of detail. Estimates of acres to be harvested by silvicultural method under each alternative are provided in Table 2-5 of the EIS. Estimates of other silvicultural treatments, including reforestation, timber stand improvement and fuel treatments, are provided in Table 2-4 of the EIS.

Comment 7: The Preferred Alternative represents a large change from past management of the Forest. These changes need to be clearly stated.

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Response: The land allocations, a description of associated standards and guidelines to achieve management objectives as well as expected products from each land allocation are presented for each of the alternatives considered in Chapter 2 of the EIS. The Preferred Alternative is further elaborated in the Forest Plan.

Comment 8: Past harvesting levels were not sustainable and were greater than allowed in past plans.

5 45

Response: ASQs of past Timber Management Plans were sustainable given the land allocations and the

management objectives set by the plans. If less land is allocated for timber production or the level of management intensity on allocated lands is reduced, then ASQs decrease. The amount of timber sold between 1978 and 1993, including the volume salvaged after the fires of 1987, averaged 180.8 MMBF per year. This is less than the 235 MMBF planned in the amended 1974 timber management plan for the Forest. The volume harvested from the Forest averaged 178,300 MMBF per year during the same time period; refer to Table 3-43 on page 3-110 in the Final EIS.

Comment 9: The site class or productivity rating of the lands allocated for regulated timber harvest under the various alternatives is not provided in the Draft EIS.

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Response: The average site class is given for each forest type on pages 3-110 and 3-111 of the Final EIS. Forest inventory data is used to estimate site productivity. The average site class for each vegetation stratum inventoried is developed. These averages are used in turn to calculate average site class for each forest type. Site productivity information for vegetative strata and forest type is used in analysis and the development of LTSY and ASQ. Given the number of alternatives, land management classes, vegetative strata and forest types, the amount of information, even in tabular form is large and was not considered of enough value to the readers of the EIS to print in full. It is included in the planning records. Also, productivity, above the minimum level of 20 cubic feet per acre per year, is not used directly in land allocation decisions.

Comment 10: The terms capable, available and suitable do not require any financial test to determine that timber cutting is cost-effective.

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Response: The terms capable, available and suitable are defined in Chapter 2 and in the Glossary of the EIS. The term capable was inappropriately defined in the Draft EIS Glossary as land that can grow at least 20 cubic feet of commercial wood per acre per year and that can be reforested within 5 years of harvest. Capable means only that the land can grow 20 cubic feet per acre per year; this has been corrected in the Final EIS. One reason land might be classified as unsuitable is that it can not be reforested within 5 years of final harvest. Another reason to classify land as unsuited is that it is uneconomical to manage for timber production under current market conditions. The economics of timber harvest are considered at the Forest level in evaluating alternatives. An economic assessment of each alternative is presented in Chapter 2 and Chapter 4 of the EIS.

Comment 11: It would be useful to show for each management area the acreage in each vegetative cover type.

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Response: The acreage in each vegetative cover type in each management area in each alternative can be displayed. However, the reports tend to be extensive and not of sufficient value to most readers of the EIS to warrant their inclusion.

Comment 12: Explain how roads and timber harvest can lead to a healthy forest.

38 39 145 188 250 253 284

Response: Roads provide access to the Forest which is basic to management or use. Road access makes forest protection, recreation or utilization of forest products (such as mushrooms or timber products) feasible. Timber harvesting is one of the most important silvicultural tools in managing a forest to achieve desired conditions. Timber harvesting is used to remove excessive amounts of dead trees to reduce fire hazard. Timber harvesting is also used to thin stands to reduce competition between trees that can result in slow growth and the risk of extensive losses to insects or disease. Timber harvest is also used to remove stands that have low or negative growth rates so that they may be replaced with young trees. The sustained harvest of timber products also provides for the social and economic needs of people and is one of the mandates of the National Forests.

Comment 13: Reference is made to "genetic improvements" in the EIS. Explain why a genetic improvement program is needed.

98

Response: The forest genetics program for the Pacific Southwest Region is described in the publication "Tree Improvement Master Plan for the California Region" by Jay Kitzmiller. Basically, the program has 3 parts. The first part is designed to ensure that intra-species genetic diversity is maintained. Trees or other plants used to revegetate an area are produced from the seed of plants adapted to local environmental conditions and that represent the intra-species genetic diversity of the plants found in the local area. The second part of the program is designed to provide trees of superior growth and form for reforesting areas allocated to higher levels of timber production. A third component of the program is aimed at finding trees resistant to diseases, especially introduced diseases such as white pine blister rust and Port-Orford-cedar root disease. These programs will provide sugar pine and Port-Orford seedling for reforestation of burns, harvested areas or streamside enhancement that are resistant to the diseases that threaten them.

Comment 14: Timber production should be the least important consideration in the management of the National Forests. Timber management has been for many years an important factor in forest use. There is

need for a recovery period and an emphasis on other forest uses.

5 93 98 250 253

Response: The production of a continuous supply of timber products is one of the mandates for the National Forests. To change this would require Congressional action. The amount or level of timber production and of other resources, however, is one of the basic considerations in the selection of a preferred alternative in the land management planning process. Yields of timber products were sustainable under past management plans, given the land allocations and standards and guidelines established by those plans. Production levels would vary by alternative as differing amounts of land would be allocated to timber production and the intensity of management of the timber resource on allocated lands would vary. Alternatives would also place varying levels of emphasis on ecological recovery; refer to Chapter 2, Individual Alternative Descriptions on pages 2-15 through 2-53.

Comment 15: Logging should be limited to amounts that can be sustained without negative impacts on recreational industries.

66 99 193 263 330

Response: A range of alternatives was analyzed and presented in the EIS. Each represents a different balance between the many uses of the National Forest. Pages 4-97 through 4-102 in the Final EIS provide an analysis of the effects of each alternative on the recreation program. The decision maker may choose any of them or develop an alternative with a mixture of forest uses that is within the range of those in the alternatives presented.

Comment 16: The Forest Plan needs to be revised to include clear management direction for timber harvesting. NFMA ties subsequent timber plan approvals to consistency with completed plans in 16 USC Sec. 1604(i). Thus, a hierarchy is established where later management decisions must conform to Forest Plan requirements.

201

Response: The direction for timber harvesting is included on pages 4-52 through 4-60 of the Final Forest Plan and in the Timber Management section for each management area. Future project plans for timber harvesting and for management of other forest resources will be consistent with direction in the Forest Plan which would describe requirements of the alternative selected for implementation. There will not be separate resource plans in the future. Project plans will be developed to implement the Forest Plan. This is as required by current laws and regulations.

Comment 17: The use of the term "regulated" to mean areas to be managed for timber is confusing. To a regulatory agency, the word "unregulated" implies that there will be no controls on activities in an area.

303

Response: The term regulated is defined in Appendix F and in the Glossary of the EIS. Regulated land means that the harvest levels are controlled or regulated so that the planned or allowable sale quantity can be sustained over time (projections for the Forest Plan are for 160 years). Timber may be harvested from other land allocations, if permitted by the standards and guidelines. The objective of the harvest, however, is not a sustained yield of timber products but the achievement of some other resource objective. The timber harvest from these land allocations is termed unregulated because the intent is not to produce a sustained yield of timber products. Timber harvesting is incidental to the management of other resources. An example would be thinning of young stands in a LSR to grow large trees that provide habitat for late-successional forest species.

Comment 18: Any effort to improve the stocking level, growth and forest health of understocked stands or to reforest lands without trees should be set forth in project level NEPA documents and include project level standards and guidelines. Such site-specific standards and guidelines should be implemented, evaluated and monitored during project activities and after project completion.

5 283

Response: Requirements for NEPA documents are stated in laws and regulations which will be followed in implementing the Forest Plan; refer to pages 4-71 through 4-72 and to 4-10 through 4-11 in the Final Forest Plan. Any change to laws and regulations is beyond the scope of this EIS. Project planning will be consistent with the land allocations and associated standards and guidelines in the Forest Plan. Project level NEPA analysis will not make changes in Forest Plan land allocations or standards and guidelines without a corresponding amendment to the Forest Plan. Project plans will be developed to achieve the management objectives in the Forest Plan. Projects may include monitoring plans at the project level. These project monitoring plans will follow monitoring standards and guidelines established in the Forest Plan.

Comment 19: Forest-wide Standard and Guideline 20-7 and 20-8 may not be appropriate if Alternative 9 in the FSEIS is adopted.

283

Response: The Preferred Alternative has been modified to be consistent with the ROD for the FSEIS. The 2 standards and guidelines cited above are consistent with the ROD and have been retained as Forest-wide Standards and Guidelines 21-7 and 2108, respectively, in the Final Forest Plan. They would not apply in any management area where all timber harvesting was prohibited.

Comment 20: Forest-wide standard and guideline 20-50 should be applied only to lands to be regulated for sustained timber harvest. It may not be appropriate where other ecological objectives are the goal or if Alternative 9 in the FSEIS is adopted; mistletoe is part of the forest ecosystem.

283

Response: The objective is to prevent the **introduction** of noxious or alien weeds, insects or diseases into the Forest. This objective is not incompatible with the ROD for the FSEIS nor with ecological objectives stated in this EIS and has been retained as Forest-wide Standard and Guideline 21-53 in the Final Forest Plan.

Comment 21: The ASQs in the alternatives range from 51 MMBF to 152 MMBF per year. These ASQs seem to be based on several assumptions: 1. the full use of herbicides, 2. a 15-35% increase in Forest Service budget, 3. the continued dependence on clearcutting, 4. no additional reductions in land allocations due to other constraints, 5. no legislated restrictions for ancient forests, 6. no legislation prohibiting deficit sales and 7. full public support. That these conditions will be met is unlikely at best. Below-cost sales should not be offered for sale. Please explain why they are not banned in the EIS.

3 54 204 259 283

Response: The alternatives presented in the EIS represent a variety of land allocations and standards and guidelines with a resultant range of ASQs.

1. With regard to the use of herbicides, the consideration of the various techniques for the control of vegetation was addressed in an EIS for National Forests in Region 5 and was considered beyond the scope of this EIS. The ASQs in the various alternatives assume that the use of herbicides is an option of last resort in reestablishing a forest. The assumption in all alternatives was that land allocated to timber production would not be left unforested and that herbicides would be used following project level NEPA analysis if no other suitable alternative were available. If herbicides were to be used on a programmed basis to promote the growth of trees on timber suitable lands, then the ASQs could be increased.
2. The budget required to implement each alternative is estimated in the EIS, Chapter 2, Comparison of Economic Effects. Budgets for the Forest Service, however, are the responsibility of Congress and beyond the authority of the Agency. If budgets are less than required for full implementation and production, then planned activities will of necessity be reduced, but standards and guidelines will still be followed.
3. Examples of the mixtures of silvicultural treatments that might occur for each alternative are displayed in Table 4-47 on page 4-136 of the Final EIS. None of the alternatives would use the clearcutting method exclusively. Increased use of the technique would increase the ASQ of some alternatives.
4. The constraints to timber production are specified in the standards and guidelines for each alternative. Other constraints would only be imposed following public involvement, NEPA analysis and an amendment or revision of the Forest Plan. The ASQ would be adjusted to reflect the new conditions.
5. The selected Forest Plan will be adjusted as necessary to conform to all laws and regulations. If Congress should enact legislation withdrawing additional lands, then the Forest Plan and ASQ would have to be adjusted.
6. Deficit sales have not historically been a concern for the Forest. Increasing values of timber stumpage should offset increasing costs of timber sale preparation in all alternatives.
7. Full public support of any government plan or action is impossible, and probably undesirable, in a society of free people. What is desired is informed consent and the recognition that compromises must be made to provide a balanced plan that protects the long-term health of the forests and that also provides for the social and economic well being of people. Below-cost sales have not historically been a problem on the Forest. With the increase in timber values expected as a result in the reduction of supply from the Federal forests of the Pacific Northwest within the range of the northern spotted owl, the increased costs of the timber sale program should not result in below-cost sales in the future.

Comment 22: The amount of timber cut from the Forest over the past 10 years is 18% over sold volume; the difference between cut and sold for the past 5 years is 37%. These differences need to be explained.

5

Response: The amount of timber sold and cut is reported in Table 3-43 on page 3-110 in the Final EIS in Table 3-43 which has been updated through 1993. The difference between the amount of timber cut and sold for the period 1978 through 1993 is a little less than 40 MMBF. The 40 MMBF of timber sold but uncut is primarily timber under contract but unharvested at the time of reporting in 1993. Timber is reported as sold in the year that the contract is awarded. The amount of timber reported as harvested in a given year is the amount of timber actually cut that year. Timber sale contracts are of variable term (usually 1 to 3 years) depending on the size and complexity of the sale. Also, a contract time extension may be granted to a purchaser under certain circumstances. An example is an

extension to a contract to harvest green timber so that the purchaser may harvest fire or insect killed timber before it deteriorates. The amount of timber harvested may vary from that sold for another reason. Timber has usually been sold as an estimated volume based on a statistical sample. Timber is paid for, however, and the cut reported, based the scale or measurement, of the logs actually harvested.

If the record for only the last 5 years is considered (1989 through 1993), there has been about 358 MMBF more timber cut than sold. This is because of the cutting of timber sold prior to 1989 during the last 5 years; especially the sales sold to salvage timber killed in the fires of 1987. By 1993, however, the difference between the volume sold and the volume cut had narrowed to less than 40 MMBF as contracts were completed and few new sales were offered.

Comment 23: The ASQ does not reflect the total volume of timber to be removed from the Forest but only that which is scheduled or programmed. Silvicultural prescriptions to achieve management goals on land not suitable for regulated timber harvest will yield volume but the amount is not revealed.

283

Response: The ASQ is calculated based on the productivity of lands that are considered suitable for sustainable production of timber products. Inventory and growth of forests on lands considered unsuited for a sustainable timber harvest are not part of the calculation of the ASQ for the Forest. If some level of harvest can be planned on a sustainable basis, then the land is suitable and a sustainable harvest level can be calculated.

Volume from unsuited lands is not used in calculating the ASQ and sustainable harvests are not planned from such lands. Any harvest volume that does come from such land is considered incidental to the management of that land for other reasons. Traditionally, this volume is highly speculative and estimates have not been made in the past. However, due to the large amount of unregulated land in the Preferred Alternative and the alternative's emphasis on ecosystem health, an estimate has been included for unregulated volume in the Final EIS of 20 MMBF per year. The majority of this volume would likely come from salvage and thinning activities to meet ecosystem health objectives. Environmental consequences for the Preferred Alternative in the Final EIS take into account both the ASQ and this additional projected volume. Table H-3 in Appendix H of the Final EIS has been modified to include this projected timber sale program quantity, rather than just the ASQ.

Comment 24: Are volumes from thinning, normal mortality salvage and biomass removal as well as rotation age cuttings that are planned and scheduled in the Forest Plan part of the ASQ? The Draft EIS does not discuss the effects of biomass harvest in the analysis of the alternatives.

225 240 270 282 283 286

Response: The ASQ is calculated based, in part, on a forest inventory and the current and projected growth of that inventory. If volume harvested is part of the inventory that the ASQ is based on, then it is considered as contributing to the ASQ. Thinning volume from lands classified as suitable for timber production is part of the ASQ.

Biomass from forest logging slash (for example, tree limbs or small hardwood trees broken during harvest) is not counted toward the ASQ because such materials were not a part of the inventory used to calculate the ASQ. At the current time, there is no established market for biomass. Harvesting residues are generally treated using prescribed fire or other silvicultural tools. If a market develops for such biomass, then a reinventory and recalculation of ASQ could be done that would include such materials.

Normal mortality is likewise not included in ASQ. Dead trees or snags are not part of the inventory used to calculate the Forest ASQ. However, in a fire or large insect outbreak that kills trees on regulated land, the volume is counted toward the ASQ because these trees are part of the inventory.

Trees harvested from lands that are not considered as suitable for programmed timber harvest are not counted toward the ASQ as they are not part of the inventory. Any such harvest would occur to achieve resource objectives other than timber and would not be on a planned basis.

Comment 25: Timber harvesting should be concentrated in second-growth forests and near communities.

129 183 245 330

Response: Lands are allocated to various management areas in each of the alternatives with the intent of achieving the desired goals and objectives of the alternative. The allocation of lands into the various management areas reflects many considerations, including, in some cases, the existing forest conditions or structures and their location.

Comment 26: The scheduling of the ASQs in the Draft EIS and Draft Forest Plan and the Proposed Sale Quantities (PSQs) in the SEIS for Alternative 9 need to be integrated and clarified.

237 259

Response: The Final Forest Plan and selected alternative for the Klamath National Forest will be consistent with the selected alternative in the ROD for the FSEIS. The Preferred Alternative in the Final EIS and Forest Plan has been modified to incorporate provisions in the ROD for the FSEIS. The ASQ for the Preferred Alternative, however, is much lower than the

PSQ due to provisions for maintaining visual quality, a conservative approach to maintain watershed health, under-estimation of RRs in the FSEIS and implementability problems due to the scattered nature of the matrix.

Comment 27: Salvage and thinning should be limited to areas that have been previously logged and then only with the approval of independent scientists who have determined that these activities will improve habitat for "old growth"-dependent species.

254

Response: All alternatives would use a variety of silvicultural treatments, including thinning and salvage, on lands suitable for timber production. Forest lands allocated to reserves and other withdrawn areas would provide for late-successional forest structures and the species associated with them and may or may not allow certain types of silvicultural prescriptions depending on the alternative.

Comment 28: Salvage and sanitation harvest should not include live trees. Salvage harvesting should only include those trees that are estimated to die within a year.

11 35 36 57 98 193 197 235 236 258 283 286 305 320 337

Response: By definition, salvage includes only trees that are dead or dying. Published guidelines, based on scientific studies for prediction of mortality, are used to determine which trees are dead or dying but which may still have green needles or otherwise appear alive on casual observation. Sanitation removes live trees that are diseased or damaged.

Comment 29: Salvage and sanitation harvest should not be done within the RRs of intermittent streams.

10 11 32 33 35 73 193 197 235 236 247 286 305

Response: Alternatives Current/RPA, A and G(SOHA) would manage RMZs as Regulation Class 3. All other alternatives would have unregulated RRs/RMZs. Salvage and sanitation would be permitted if it helped achieve the objectives of the area. The Preferred Alternative would have additional requirements: harvesting trees in RRs would not be allowed until a watershed analysis was completed. Also, such projects may be subject to review by the Regional Ecosystem Office. Project plans for actions in riparian areas would be developed according to NEPA processes and would be consistent with the Forest Plan in any alternative.

Comment 30: The definition of sanitation cutting in Appendix F of the Draft EIS (page F-3) would permit the cutting of any trees that have been attacked by insects, that are diseased or that are high risk for other reasons. These trees provide significant ecological values across the landscape.

99 204 225 247 283

Response: Sanitation is considered an intermediate harvest. It is used during the life of a forest stand to remove trees that are diseased or damaged to maintain or produce a healthy forest. Such trees may also represent a risk to other trees in a stand as a source of insects or disease. It is true that such trees provide habitat for some forest species and not all of them are ever taken from the forest. The number removed from a stand will depend on the management objectives of the stand, the standards and guidelines and on a site-specific analysis of forest conditions. Sanitation prevents the accumulation of so many such trees that the stand or forest is at risk of catastrophic loss to fire, insects or disease. The practice also provides timber products to meet the needs of people.

Comment 31: Logging should be used only selectively to remove diseased and damaged trees, enhancing and improving the forest over time.

197 240

Response: The practice of removing diseased and damaged trees is termed sanitation in the EIS and Forest Plan. The practice is compatible with forest management for many values. Sanitation prescriptions can be used to help produce and maintain a healthy forest that is not at risk to catastrophic losses due to fire, insects or disease. However, the practice is not sufficient in itself to maintain and produce healthy forests.

Comment 32: What standards and guidelines are there to insure that salvage harvesting will be done in an way that is in keeping with ecosystem management?

225 282 283

Response: Each alternative represents a decision about what objectives are to be achieved and how best to allocate forest land to achieve them. Standards and guidelines were developed for each alternative to achieve the desired objectives. Salvage provides for the removal of dead or dying trees from the forest for human use, prevents the build up of woody materials and reduces fire hazards. Standards and guidelines in each alternative provide for leaving structural elements; refer to pages 4-48 through 4-49 in the Final EIS. The practice of salvage is compatible with ecosystem management.

Comment 33: The mortality rate on the Forest is over 90 MMBF per year outside wilderness. Why is the ASQ only slightly higher than the average annual mortality rate?

202 264

Response: The ASQ for each alternative is a result of the amount of land that would be allocated to the

production of sustainable levels of timber production and to the standards and guidelines for management of these lands. Land unsuitable for sustained timber production ranges from 48 to 79% in the alternatives and the ASQ ranges from 51 to 152 MMBF per year in the first decade. Inventory, growth and mortality on unsuited lands is not available for sustained timber harvest; refer to response to Timber Management Comment 27.

Comment 34: The average annual ASQ for the Preferred Alternative in the Draft EIS is 83.5 million board feet. If the LTSY is over 200 MMBF per year, why is the ASQ only 83.5 MMBF?

202 264

Response: Timber harvest levels are planned under a sustained, non-declining yield constraint. That is, harvest levels must be scheduled that are equal or increasing over time. Harvest levels cannot be planned that are high early in the planning period and then drop off at some time in the future. The ASQ mentioned in the comment is the harvest level planned for the first decade following adoption of the Forest Plan. It has been re-calculated for the Preferred Alternative and is 51 MMBF in the Final Forest Plan due to modifications based on public comment and on the ROD for the FSEIS. As the land suited for timber comes under management, the age class distribution improves (each age class comes to have approximately equal representation) and the average growth rate increases. This has the effect of increasing the sustainable level of harvest in later decades.

Comment 35: If sale or harvest quantities run below LTSY, the result will be a build up of inventory or biomass. The consequences of such a build up should be evaluated within the planning period.

202 264

Response: The inventory on the Forest on all lands and on lands suited for timber production would accumulate under all alternatives. Harvest rates on suitable lands are below growth rates; harvest is not scheduled for 48 to 79% of the Forest. The accumulation of inventory is expected to result in over-stocked stands that are unhealthy and subject to insects and disease but meet other resource objectives such as those for late-successional or aquatic habitat. The accumulation of dead woody material and the increase in the number of multi-storied stands that provide fuel ladders for ground fires into tree canopies is expected to result in larger and more intense wildfire. This effect would be greatest in the Preferred Alternative; an increased program of prescribed fire is planned to deal with the projected accumulation in inventory and dead woody material.

Comment 36: What will the 180-year rotation with area control mean in terms management requirements and the amount of timber harvested? Will hardwoods be managed under a 100 year rotation?

8 37 237 282 283

Response: The effects of the 180 year rotation with area control on PSQ was discussed in the report by Johnson, et al. (Johnson et.al., 1993). However, in response to public comment, the Scientific Advisory Group for the President's Plan reviewed the 180 year rotation with area control standard and guideline. An analysis of the effects of the constraint on seral stages present on each of the Forests, now and over the next 150 years, with and without the 180-year rotation, was done. The conclusion was that the constraint was not required to provide for late-successional forests nor for connectivity through the matrix. The constraint did have considerable social and economic effects. The Scientific Advisory Group advised that the constraint be removed. The application of a single rotation to all forest types and all management areas has been replaced with a variety of rotations in the ROD for the FSEIS and in the Final EIS And Forest Plan. Rotations are variable by forest type and management objectives of lands suited for production of timber products in the matrix. Also, the 100-year rotation for hardwoods was dropped from the FSEIS.

Comment 37: Are sale quantities in the Preferred Alternative likely to be lower in the next few years than those specified in Option 9 for the 4 Northwestern California Forests? In the near term particularly, a number of factors not addressed in the Forest Plan are likely to reduce timber outputs below decadal averages stated in Forest Plans.

201 259

Response: The ASQ for the Forest Plan would be 51 MMBF which is less than the PSQ specified in the FSEIS; refer to response to Timber Management Comment 26. Refer to Table H-3 in Appendix H for estimates for the other forests.

The timber volume presented as the ASQ is the average annual level of harvest over the first decade. In the first years of the planning period timber sale quantities may be less than the calculated ASQ due to a number of factors:

1. Timber sales in suitable spotted owl habitat cannot be sold until after a 30-day period of notification to the plaintiffs of the *Seattle Audubon Society v. Lyons, Lane County Audubon Society v. Armstrong* and *Portland Audubon Society v. Babbitt* cases to allow them time to decide if further litigation will be pursued. Litigation on timber sale projects or on related biological opinions may cause delays.

2. The Forest will need time to design timber sales that conform to the new land allocations and standards and guidelines of the selected alternative. Forest resources will be strained during this period due to recent reductions in force and efforts to design and include watershed analysis in the relatively new ecosystem analysis process that is still in the development stages. The watershed restoration projects and other non-timber projects will also need to be staffed and may have analyses requirements.
3. Timber sales in Key Watersheds must await the completion of watershed analysis. Timber sales in non-key watershed are restricted in that roads cannot be constructed through RRs until a watershed analysis is completed. Watershed analysis procedures must be refined and agency staff trained.
4. Before timber sales can be designed, the boundaries of RRs and other land allocations must be established.
5. Salvage or thinning in LSRs must be based on an approved plan developed for the LSR.
6. Timber sales offered by the Forest Service must await a 30-day public comment period on the NEPA document, a 45-day appeal period of the timber sale decision and a 45-day appeal processing period.
7. Additional procedures may be required by the ESA for some timber sales. Timber sales may need ESA consultation where they may affect northern spotted owls, marbled murrelets and other listed species. Conferencing may be required for any proposed listing or designation of critical habitat. Timber sales in coastal areas will need to await the completion of surveys for marbled murrelets, which may take three years or more.
8. Required surveys for species listed in Table 4-3 and in other standards and guidelines in Chapter 4 of the Forest Plan.
9. The Preferred Alternative has additional requirements not able to be modelled at the Regional scale in Alternative 9 of the FSEIS which provide for multiple uses such as visual resources, cultural resources that make operability more complex.

Comment 38: There are several issues that may reduce the available timber harvest including the listing of salmonid species as T&E, the designation of critical habitat for the marbled murrelet and potential concerns regarding the management of habitat for the marten and fisher.

10 32 33 73 192 216 259 330

Response: Decisions made in the process of land management planning will be based on the most up-to-date information and analysis available. The resolution of future issues that may affect management on the Forest may require amendment or revision of the Forest Plan.

Comment 39: ASQ is irrelevant if the timber program is litigated.

296

Response: The laws and regulations that govern the appeal and litigation of proposed Forest projects is beyond the scope of this EIS.

Comment 40: Changes to the planned schedule of intermediate cuttings have effects on future yields of timber. Changes should be reflected in the ASQ through plan amendments or revisions.

283

Response: Yields planned from commercial thinning of managed stands in future decades make a significant contribution to LTSYs. Records of harvest are updated yearly and include acres and volume by harvest method. These records are a part of the monitoring of the timber resource. Also, every 10 to 15 years the forest is reinventoried and harvest levels adjusted to reflect current conditions. Significant changes in forest condition or planned programs would initiate the amendment or revision process; refer to EIS, Chapter 1 and Forest Plan, Chapter 1, Forest Plan Amendments and Revisions.

Comment 41: When unplanned or extraordinary events occur such as catastrophic fire, and harvest is accelerated to recover mortality, the ASQ should be revised to reflect this volume of timber as a necessary but unplanned departure from sustained yields.

283

Response: The ASQ, as set in the Forest Plan, is the average annual harvest level for the first decade. If a catastrophic event warrants salvage of timber that was part of the inventory used in the calculation of the ASQ, then that harvest volume is charged against the decadal ASQ and no revision is necessary.

Comment 42: Does the Forest have fire contingency plans that are reflected in the ASQ?

283

Response: The calculation of ASQ is affected by estimates of acreage burned by wildfire. An estimate of the acreage of plantations that will be lost to wildfire each decade is made and used in the calculation of LTSY. Merchantable timber lost to wildfire on suitable land is assumed to be salvaged and is counted against the ASQ. Also, the Forest Plan is programmed to be updated every 10 to 15 years. At each update, the forest is reinventoried and the current conditions are used to make adjustments.

Comment 43: The Preferred Alternative ASQ in the Draft EIS and Forest Plan is so high that it may cause

undesired effects in some watersheds and roadless areas. Planned timber management activities seem contrary to recent directives by the Chief of the Forest Service with regard to ecosystem management and the maintenance of viable populations of forest species.

145 188 235 259 262 276

Response: The Final EIS and Forest Plan for the Forest place emphasis on maintaining healthy forest ecosystems and are consistent with the ROD for the FSEIS. The FEMAT, which produced the report that is the basis of the FSEIS, was led by Jack Ward Thomas, the new Chief of the Forest Service. The effects of timber harvesting on other resources, especially on watersheds and species associated with late-successional forest conditions were analyzed in developing both the Forest Plan and the FSEIS which guides it. The ASQ for the Forest and the acreage allocated to production of timber is considerably less than it has been in the past. The average annual acreage to be harvested under the programmed ASQ is a fraction of 1% of the total acres on the Forest and considered compatible with production of quality water and late-successional forest conditions. Also, an ecosystem approach to forest management must consider all aspects of an ecosystem and provide for biological diversity. All forest successional stages and associated species, as well as human social and economic needs are to be considered. Lands suitable for timber production are managed to provide for early and mid-successional forest conditions and associated species and to increase biological diversity as well as for timber products. In addition, the ASQ was lowered between the Draft and Final EIS based on the results of a disaggregation model that was applied to the Preferred Alternative. This model showed that there would likely be concerns in a number of individual watersheds when the Draft ASQ is allocated at the watershed scale.

Comment 44: The Draft EIS states that even and uneven-aged management will be used. This would seen to mean that whatever prescription is deemed appropriate will be applied.

283

Response: That is correct. The Forest is a very complex and varied forest ecologically. Also, there are many and varied management objectives in each of the alternatives. A silvicultural prescription or system is a method or means to achieve an objective. Given a great variety of forest conditions and management objectives, it is best to leave the choice of methods and means as wide as possible in forest plans. Decisions about how to meet Forest Plan standards and guidelines and achieve Forest Plan objectives is left to project planning. Project plans will be developed with public involvement and in accordance with the NEPA process. Many projects would also have had a landscape/watershed analysis done prior to development of project plans.

Comment 45: The term regeneration with reserves is defined in the glossary of the Draft EIS. Neither the Glossary nor the text show how regeneration with reserves is different from a selection or shelterwood cutting.

5

Response: In the Final EIS and Forest Plan, the term regeneration with reserves has been changed to Green Tree Retention (GTR) to be consistent with the FSEIS and the other 3 Northwestern California Forests who are working on Final Forest Plans. The differences between various cutting methods is explained in Appendix F of the EIS. Chapter 2 of the EIS under Individual Alternative Descriptions explains how each alternative would apply GTR. GTR and shelterwood harvests are both even-aged silvicultural systems. GTR harvest leaves green trees in each harvest unit, either scattered on in small groups, to provide late-successional forest remnants and to improve visual quality. The green trees would be left throughout the life of the new stand and perhaps that of the next stand also. In the shelterwood system, green trees are also left but they are spaced more or less evenly through out the unit. An important function of these trees is to provide shelter to the new stand that is started beneath them. The shelter trees are generally planned for removal, however, after the new stand is established and before the young trees become susceptible to excessive damage from harvesting activities. The selection system is an uneven-aged silvicultural system. The single tree selection system aims at maintaining representatives of all age and size classes of trees on each acre all the time. Criteria for the selection of a system include the silvics of the forest trees to be grown, the frequency and type of disturbance to be expected in the ecosystem (fire history, for example), and the topography and the logging systems available.

Comment 46: The amount of area planned to be cut annually and the expected part of the ASQ that will be obtained under the regeneration with reserves system, as well as each of the other cutting systems should be provided.

5

Response: Regeneration with reserves has been changed to GTR; refer to response to Timber Management comment 45. Chapters 2 and 4 of the EIS provide information on the ASQ and the estimated acres of various silvicultural treatments planned under each alternative; refer to Tables 2-4 and 4-48 in the Final EIS for ASQ by alternative and Tables 2-5 and 4-47 for estimated treatment acreage. The treatments planned under each alternative would be designed to meet the objectives of the alternative while achieving the ASQ. The estimated acres are not standards and guidelines or targets to be met. The actual treatments will be chosen during project planning using site-specific information. The actual acres treated each year, as well as the volume sold and the volume cut, is reported each year as part of the monitoring of the timber

resource. These figures are also used when the Forest Plan is amended, revised or updated.

Comment 47: The Draft EIS states that experience and silvicultural literature support the selection of an even-aged system for forest types in the Klamath Province. Even-aged systems are not proper for uneven aged stands. This statement requires explanation.

5 7 283 296 299

Response: There is some difficulty is defining the boundaries of unmanaged stands on the Forest. Topography, soils and especially past disturbances, have resulted in a mosaic of stands across the landscape. The majority of these stands are well over 3 acres in extent and are generally of one age class. There may be remnant trees from the previous stand, but the majority of the trees are close to the same age. Also, after many years of fire suppression, an understory has become established in many stands. All this adds to the complexity of forest structures across a landscape and results in debate about whether stands are large and uneven-aged or small and even-aged. Given the definition of uneven-aged stands as those that have at least 3 age classes on most every acre or in groups not larger than 2.5 acres, the conclusion is that most stands on the Forest are even aged. The argument about even-aged or uneven-aged is not a productive one. The appropriate method would be determined on a site-specific basis in all alternatives; refer to response to Timber Management Comment 44. Even-aged systems are considered more appropriate for the Forest. In an ecosystem regulated by frequent low intensity fires, uneven-aged stands are uncommon. Trees become established following a fire and remain until the next stand replacing fire occurs. Low intensity fires under an established stand kill new seedlings before another age class can become established. The silvics of the trees on the forest are also a consideration in adopting a silvicultural system.

Comment 48: The statement that it is more economical to clearcut when there is a younger stand in the understory requires clarification.

7

Response: An understory of younger trees that is of acceptable quality and species composition has great economic value. The economic question of whether to save them or not is dependent on the value of the trees in the understory versus the cost of saving them during harvest and post-harvest operations, if possible. The younger trees are also of value as wildlife habitat, for soil protection, visual quality or biological diversity. Expenditures in excess of their monetary value can therefore be made to protect them. There are many stands on the Forest, however, where the understory is composed of small but older, suppressed tress. These trees will not resume growth and become large trees when the overstory is removed. They are of minimal value and are often removed after harvest and replaced with young trees.

Comment 49: The Draft EIS states that even-aged silvicultural systems mimic ecological processes. Some forest scientists contend that silvicultural prescriptions do not mimic the patterns and processes of natural disturbances. The EIS should state that natural ecosystems processes cannot be replicated by human management activities.

44 99 283

Response: There is controversy among scientists about the management of forest ecosystems. Even-aged management does mimic, in many ways, natural processes. The history of the forests of northern California is one of fires followed by even-aged stands followed by fire again. This natural process is simulated by planned, sustainable timber harvest using even-aged silvicultural systems followed by burning and replanting. Also, biological diversity should be considered in the landscape. Even-aged methods lead to early-successional conditions and the multitude of species associated with these seral stages. If all or most of a watershed is in later seral stages, even-aged regeneration harvest can lead to an increase in biological diversity in that landscape. The ecosystem management approach of all alternatives would plan and provide for all species and seral stages, but not on every acre all the time. Monitoring the validity and effectiveness of the standards and guidelines would permit modification as implementation progresses in all alternatives. The Preferred Alternative would also use an adaptive management process which would help identify needed modifications.

Comment 50: The Draft EIS states that if stands are well-managed, tree and stand vigor should be independent of silvicultural systems. This seems questionable given the differing characteristics of forest trees and their responses to the differing microenvironments created by silvicultural systems.

98

Response: The sentence was inconsistent with other statements in Appendix F and has been deleted from the Final EIS. Silvicultural systems do need to be matched with the silvics of the trees and the characteristics of the ecosystem.

Comment 51: Please explain the statement in the Draft EIS that it is difficult to regulate a forest under single-tree selection when large acreage of even-aged stands occur.

98 296

Response: A forest regulated under an even-aged system would be composed of a mosaic of even-aged stands with each age class more or less equally represented on the forest. In contrast, a forest regulated under an uneven-aged single tree selection system would be a forest where each age or size class was

represented on every acre. If a forest is composed of even-aged stands, it will take considerable effort and time to convert it to an uneven-aged forest with all age classes on all acres. Also, the ecosystem processes that produced the natural forest of even-aged stands (in the case of forests in California, an ecosystem with frequent disturbances caused by low intensity fires) may very well defeat the attempt to impose other forest structures.

Comment 52: The Draft EIS states that selectively logged lands pose an unacceptable fire hazard. Would not selectively logged, healthy, well thinned forests resist crown fire more readily than dense, unhealthy stands?

296

Response: The term selection is sometimes used in a general sense to refer to any harvest in which trees are selected for cutting based on some specified criteria. Selection system, however, refers to an uneven-aged silvicultural system in which all ages and sizes of trees are grown on most every acre. The use of an uneven-aged selection system does represent a high fire hazard. A fire burning through the stand is likely to become a crown fire that kills all the trees. The crowns of younger trees provide continuous fuel from the ground up to the crowns of the oldest and largest trees in the stand. In contrast, an even-aged stand, will self prune and a ground fire is much less likely to become a crown fire.

Comment 53: The Draft EIS and Forest Plan are not implementable because they continue to use even-aged management as the primary silvicultural system.

45 57 76 93 98 99 123 129 145
204 236 240 296 307 316 320 324 337

Response: Even-aged management is the silvicultural system that most closely mimics natural processes in the Klamath Province; refer to response to Timber Management comment 47. That is the main reason why all alternatives would use it to manage for timber production on the Forest.

Comment 54: The forests in the matrix are part of the ecosystem. Why are they not managed as part of an ecosystem strategy to provide for late-successional forests?

254 283

Response: The timber suitable lands in the matrix are managed as part of an overall ecosystem strategy. The lands provide for early to mid-successional forest structures and associated species. Ecosystem management provides for all stages of forest succession and biological diversity and not just for late-successional forest structures. Refer to EIS, Chapter 4, Biological Diversity.

Comment 55: Why was uneven-aged management not prescribed for the matrix?

258

Response: The use of uneven-aged management would not be excluded from the matrix, suitable lands. All silvicultural systems would be available for use on suitable lands in all alternatives. Selection would be made based on site-specific analysis. However, even-aged systems would be emphasized because they are the best suited, in general, to forests in the Klamath Province; refer to response to Timber Management Comment 44.

Comment 56: Please explain why the Draft Plans for the 4 Northwestern California Forests are strikingly inconsistent in their management prescriptions for lands in the suitable timber base.

237

Response: The EISs for each of the Forests consider a range of alternatives. The objectives and standards and guidelines to achieve the objectives are provided for each management area. Based on the combination of resource objectives to be achieved, the most likely or most common management prescription to be used are stated. However, the prescription to be selected to manage a given stand is left to project level analysis and decision under the NEPA planning process. Given the variation in ecosystems and the combinations of management objectives to be achieved on suitable lands, the fact that the same solution in terms of a general or most common method of the timber management on suitable lands in the matrix is not the same for the preferred alternative on each Forest is not unexpected. The selection of management prescriptions at the stand or project level is beyond the level of analysis appropriate for a Forest Plan.

Comment 57: The previous Timber Management Plan for the Forest used volume control as a means to achieve a regulated forest. The DSEIS will amend the Forest Plan and attempt to achieve a regulated forest by using area control.

264

Response: The area control constraint on lands suitable for timber production in the matrix was dropped in the FSEIS after review by the Scientific Advisory Group; refer to response to Timber Management Comment 36.

Comment 58: The policy of harvesting understocked stands and stands whose mean annual growth has culminated may be desirable from the standpoint of achieving high long-term timber yields, but can the young, fast-growing trees perform the ecological functions of mature and "old growth" timber? Can they supply wildlife needs?

254

Response: The alternatives would allocate between 48% and 79% of the Forest to reserves and withdrawals to provide for late-successional forests and associated species. Forest land suitable for sustained timber production would be managed on a variety of rotations that average about 110 years in length. These lands, as part of an ecosystem approach, would need to provide for early to mid-successional forests (refer to discussions in EIS, Chapter 4, Biological Diversity and Wildlife). Without these successional stages, not all forest species would be provided for and biological diversity would be reduced. The objective of leave trees on land suitable for timber production is not to provide fully functioning late-successional forest stands but to provide biological legacies and late-successional components that provide connectivity in the matrix; refer to page 4-52 in the Final EIS.

Comment 59: Forests that are outside the reserve system in the Preferred Alternative and are otherwise suitable for timber management should be managed on at least 200-year rotations, implemented on the basis of suitable timber lands and average monetary returns.

129 237

Response: The reserve system in the Preferred Alternative is designed to provide a high likelihood of maintaining and enhancing late-successional forest conditions. The majority of forested lands (79%) would be in reserves or withdrawals. In addition, retention of green trees in cutting units, snags and down logs in the matrix and the location of RRs would provide some elements of late-successional forest structure throughout the Federal forests. Given these and other protective measures, it was not necessary or desirable, to specify extended rotations on non-reserve lands.

Comment 60: Thinning and salvage should only be conducted in areas outside reserves.

237

Response: There is debate among scientists about the benefits of thinning, salvage or other intermediate harvests in producing late-successional forests conditions. However, there is a great deal of information on the effects of thinning on stand structure and growth. The uncertainty lies in the lack of information on the possible effects on other species, not in known, detrimental effects. Also, there is information to predict the effects of not thinning on forest conditions. The known risks of not thinning were considered to be greater than those associated with acting on less than complete knowledge.

Comment 61: How will the 15% GTR requirement in the Preferred Alternative be implemented? The 15% applies to volume. In understocked stands, this may result in the retention of very few trees. How long will retained trees be kept? Will 15% have to be retained in each cutting?

237 283

Response: The standard and guideline for GTR in the Preferred Alternative was modified in the Final EIS and Forest Plan to retain 15% of the **area** in a harvest unit (stand) in the matrix. About 70% of the retained trees are to be in clumps, or groups, that are 2 to 3 acres in size, where possible. The rest would be in scattered trees. The area retained is to contain the largest or oldest trees in the harvest unit and any large snags, if possible. The objective is to provide for late-successional remnants in the matrix and not intact stands. The area retained would be left indefinitely. At the end of the next rotation, the same area might be left if it still contains the oldest and largest trees in the stand. The 15% would be maintained over time but not added to or increased at each rotation. Refer to Forest-wide Standard and Guideline 21-13 in the Final Forest Plan.

Comment 62: Will snags be retained in project areas even if they are a threat to the safety of woods workers?

283

Response: Snags or green trees would not be retained that are a hazard to the safety of the public or to woods workers.

Comment 63: What is the process and criteria that will be used to select stands for timber cutting? How and where will stands be selected for timber cutting?

283

Response: In all alternatives, criteria would be developed for selecting watersheds for analysis. After completion of ecosystem analysis at the landscape/watershed level, project development and selection through the NEPA process would occur. Timber sales would be a part of ecosystem management. Harvest unit selection on timber suitable lands would be based on current stand conditions compared to desired conditions.

Comment 64: Will the Preferred Alternative first select average stands for harvest or those needing rehabilitation to realize their productivity potential and restoration of desired ecosystem function and processes?

237 256

Response: The Preferred Alternative would base stand selection on a comparison of current stand conditions on suitable lands with desired conditions. Those stands that are in the poorest condition compared to desired would be high priority candidates for treatment. The stands selected for harvesting or other treatment in a watershed would likely be a mixture of stands in all conditions, however. It is not practical to select only the poorest or the best for treatment in any one project.

Comment 65: Will forest regulation be on a watershed basis?

283

Response: Forest regulation will be based on the National Forest, as required in NFMA.

Comment 66: When rotations are calculated, they should be derived from yield tables using mean annual increment in board feet and not merchantable cubic feet.

74

Response: Minimum rotations are set at the culmination of mean annual increment as measured in cubic feet as required by regional direction.

Comment 67: Rotations should be set at 100% of the culmination of mean annual increment and not at 95%. Since the graph of mean annual increment and age is a broad curve at the culmination point a small percentage change in mean annual increment equals a big difference in age.

283

Response: Minimum rotations for FORPLAN analysis are set at 95% of the culmination of mean annual increment. The actual rotation calculated for a given forest type in a regulation class under an alternative will vary depending on many other standards and guidelines, forest age structure etc.

Comment 68: Does regulation of a forest mean a simplified forest consisting of a checkerboard of even-aged stands of the same size or only that all age classes are adequately represented and that a more or less even amount of harvest can be sustained over time? Can't the structure and pattern of those age classes be developed to satisfy ecosystem goals and objectives?

225 283

Response: The regulation of a forest for sustained yields of timber products does not imply any given silvicultural system or arrangement of harvesting units or stands over the landscape. The structure and pattern of a stand can be developed to achieve a wide array of objectives in any alternative.

Comment 69: Please grow older forests (180-225 years).

237 286 337

Response: The alternatives would allocate between 48 and 79% of the forest to reserves or withdrawals which would provide for the production and maintenance of late-successional forests. On land suitable for timber production, rotations would vary by forest type in all alternatives; refer to page 4-133 in the Final EIS.

Comment 70: The Draft EIS states that sanitation and salvage harvesting will be a high priority. However mortality on the Forest over the last 5 years of drought is estimated at 404 MMBF with approximately 83% of this mortality being salvageable. Why does the Forest not sell more salvage sales if this is true? Also, the amount of mortality that is now salvable is probably closer to 50 or 60% because of rapid decay that occurs in dead, standing trees.

283

Response: The estimate of 404 MMBF of salvage was based on the 1988-89 reinventory of the Forest. The amount still salvable from this inventory is small due to the rapid rate of decay of standing dead trees. The number was provided for information. Estimates of annual losses have been made for the Forest each year for the past 3 years. The annual loss runs above 100 MMBF outside wilderness. Salvage has been curtailed recently due to court injunctions. The amount of salvage possible would depend on the amount of land allocated to each management area and the associated standards and guidelines for each alternative.

Comment 71: The Forest should take a pro-active approach to salvage by anticipating mortality and maintaining forest health.

296

Response: On lands suited for timber management, a proactive approach to salvage and the maintenance of healthy, fast growing stands would be a part of management direction in Alternative Preferred and A. Management of forest stands on other lands would follow standards and guidelines. LSRs in the Preferred Alternative, for instance, permit some salvage and stand tending (refer to pages 4-104 through 4-105 in the Final Forest Plan) but will rely more on natural processes to provide for desired late-successional forest conditions. The Preferred Alternative would emphasize ecosystem health and anticipates approximately 20 MMBF per year to be generated from unregulated lands to maintain forest health.

Comment 72: The stand maintenance prescription includes sanitation and salvage harvesting. The Draft EIS does not adequately define these prescriptions.

237 283

Response: Sanitation and salvage are termed intermediate harvests and are defined on page F-3 in Appendix F. Stand maintenance is a general term that refers to any intermediate harvest and is also discussed on page F-3 in the Final EIS.

Comment 73: Explain the effect on timber management of the designation of an area as a Key Watershed in the Preferred Alternative.

145 188 282

Response: Designation as a Key Watershed would not preclude regularly scheduled timber harvesting. However, watershed analysis would be required in Key Watersheds before timber harvesting could occur. Also, no new roads would be constructed in the remaining unroaded portions of inventoried roadless areas in Key Watersheds. No net increase in road mileage would be permitted in Key Watersheds. These requirements would increase the time and cost of planning timber sales. Some areas that are unroaded would have fewer options for logging systems which could increase costs and difficulty and may make some proposals unfeasible.

Comment 74: The Forest-wide standards and guidelines for timber management refer to management objectives. However, these objectives are not clearly stated.

283

Response: The management objectives referred to are the Forest-wide Goals and Forest Program Emphasis Goals on pages 4-4 through 4-10 as well as the goals for each management area in Chapter 4 of the Final Forest Plan. The terms goals and objectives are often used interchangeably in the Forest Plan.

Comment 75: Insects and fungi are part of an ecosystem. Management under an ecosystem approach should not try to eliminate this source of tree mortality. The Forest Service should emphasize stand thinning and reintroduce low intensity fires rather than emphasize sanitation and salvage. Thinning from below is an intermediate cutting practice that has been used successfully in many stands.

283

Response: The objective is not to eliminate insects and fungi from the Forest. The objective is to manage forests so that losses to insects and fungi are maintained within acceptable limits. To do this, all acceptable management tools should be considered when developing project plans. Based on site-specific analysis; the methods which include thinning, sanitation, salvage and prescribed fire can be chosen to best achieve desired conditions.

Comment 76: In the Preferred Alternative, explain why stand maintenance prescriptions, including sanitation and salvage, are permitted in fisher and marten habitat, in ceremonial areas sacred to the Karuk Tribe, in areas viewed from WSRs, in designated backcountry areas, in the inner gorges of rivers and in big game and forage management areas.

10 11 32 33 193 197 216 235 236
247 283 292 305

Response: Harvest, or the removal of some trees, would be permitted in these areas to meet established objectives. The notion that no management will lead to desired conditions or acceptable conditions is unlikely in an ecosystem adapted to frequent disturbance by fire.

Comment 77: The Draft EIS does not provide an estimate of the amount of timber which will harvested from unregulated lands.

283

Response: The removal of trees from these lands is incidental to their management and is therefore not planned nor scheduled on a regular basis. However, due to the Preferred Alternative's large amount of unregulated land, the ecosystem approach and emphasis on ecosystem health, the large amount of dead trees currently in the Forest due to the extended drought and the frequent fire history of the Forest; an estimate of 20 MMBF per year was included as an unscheduled yield from unregulated land so the environmental effects could be disclosed in the EIS; refer to page 2-21 in the Final EIS.

Comment 78: Include a table that displays net timber growth, mortality, standing inventory, live cull volume and age class distribution for both the present and the projected future forest by suitable and unsuitable land classifications. Also present the acres by productivity class for both suitable and unsuitable lands.

74

Response: Including this amount of information for all alternatives would greatly increase the size of the documents. The information is available at the Forest Supervisor's Office in Yreka.

Comment 79: How will the growth projections and the yield tables be evaluated to see if they are in line with actual results on the ground?

283 296

Response: Growth projections and yield information are adjusted when the forest is reinventoried and new or revised plans are prepared. Forest inventory provides current stocking and growth over the past decades. Also, research findings are used to update and improve growth and yield models.

Comment 80: All logs should be sold at fair market price; all logging expenses such as road-maintenance should be born by the logger.

98

Response: An appraisal is completed for proposed timber sales that sets the minimum acceptable bid. The work required including road construction and maintenance is included in the calculation. The timber is then sold at public auction to the highest bidder. The price received has generally been considerably higher that the minimum acceptable bid and well above costs.

Comment 81: The domestic demand for timber can be met by harvest on private forest lands alone. An

alternative should be considered that prohibits all timber harvest from Federal forests.

25

Response: The domestic demand for timber products cannot be met by private lands alone. Analysis done for the FSEIS indicated that private forest landowners can be expected to increase harvest levels somewhat as a result of reductions in harvest from Federal forests, but only enough to make up for a fraction of the volume lost. Demand for timber products will be met by imports or by substitute products. Also, timber production is one of the mandates of the Federal forests and changing it would require congressional action.

Comment 82: A ban on the export of logs should be considered in the EIS. Mills can be kept operating by restricting the export of logs.

25

Response: The laws and regulations governing exports is beyond the scope of this EIS and the authority of the Agency.

Comment 83: CASA and CAS are used interchangeably and might cause confusion.

303

Response: The terms appropriate and CASA have been dropped in the Final EIS and Forest Plan.

Comment 84: FSEIS defined the matrix as everything outside of reserves and withdrawals. The area of the matrix available to contribute to the PSQ should only be CAS forest lands in the matrix.

282 283

Response: The ASQs in the EIS and Forest Plan are based only on CAS lands in the matrix. The matrix also includes lands that are non-forest or not capable, water, rock etc.

Comment 85: Port-Orford Cedar is an endemic species of the Klamath-Siskiyou region. It is threatened by an introduced root disease. How is the management of this species considered in the EIS?

82 256 269 283

Response: All alternatives would take measures to limit the introduction of the root rot into the Forest and integrate strategies for reducing the risk of infection into all levels of planning; refer to page 4-143 of Final EIS. Risk analyses would be completed in all watersheds containing Port-Orford-cedar. All known locations of Port-Orford-cedar on the Forest are mapped and a part of the GIS data base. Practices identified from experience, research and the Region 5-Region 6 Port-Orford-cedar Action Plan would be applied on a site-specific or drainage-specific basis to reduce the spread of the disease; refer to Forest-wide Standard and Guideline 21-61 in the Final Forest Plan.

Comment 86: All timber harvesting should be eliminated and natural succession allowed to progress unhindered by the activities of people.

9 18 25 40 41 78 228 250 253 258

Response: The amount of land allocated to the production of timber products and that allocated to reserves and withdrawals varies in the alternatives considered in the EIS. Also, the standards and guidelines for reserves and withdrawals permit varying levels of management to achieve the desired conditions and outputs from these areas. The decision maker may choose any of the alternatives or a combination of the alternatives.

Comment 87: The timber management program should be ended. It provides very little of economic value and funds could be devoted to ecological recovery programs.

38 99 323

Response: The timber management program provides a positive cash return to local and National governments. The timber program also provides money through the KV Act for the management of renewable forest resources. Timber sales have also provided the means to build and maintain roads for the use of recreationists and other forest users. Also, the program provides timber products to meet the needs of the Nation. This is one of the mandates of the National Forests and cannot be changed without Congressional action.

Comment 88: Reforestation should be accomplished using the species mix appropriate to the forest type for that location. Natural reforestation should be the desirable method of reforestation. Trees planted shall have come from seed from the planting site's seed zone.

197 283

Response: A mixture of tree species appropriate to the site would be planted following harvest or wildfire in all alternatives. The actual mixture would be determined at the project level based on site-specific data. Seed is collected from trees within the same seed zone and elevation band as the area to be planted. Natural regeneration is not used more because it is very unreliable. Natural regeneration requires that a combination of seed, site preparation and weather occur in conjunction. This does happen, but the risk of failure is high (approximately 1 in 20 chance of success). Also, the species mix will reflect only those trees producing seed available to the unit when the other conditions are appropriate.

Comment 89: A Forest report states that in the 5 years between 1988-1992 the Forest reforested 64,536 acres. This is more acres than were harvested. Please explain.

5

Response: The acres reforested between 1988 and 1992 included acres planted following wildfires as well as those planted after timber harvest. The fires of 1987 burned plantations, non-stocked lands and natural stands of small, unmerchantable trees. Reforestation of these acres between 1988 and 1992 contributed to the total acres reported.

Comment 90: What is the percentage of acres that were logged in the past 20 years that can be deemed successfully reforested?

25

Response: The acres regenerated following harvest have a success rate that varies a bit by forest type. The success rate in mixed conifer, Douglas-fir and lodgepole pine is better that 98% while success in the true fire type is over 95%.

Comment 91: The Draft Forest Plan (Table C-1) indicates that there will be about 3,505 acres per year of regeneration harvests. The Draft EIS (Table 2-5) shows 4,350 acres in the same category.

74

Response: The error in Table C-1 of the Draft Forest Plan has been corrected. Acres in the two Tables now reflect the modification to the Preferred Alternative as a result of public comment, internal review and the ROD for the FSEIS.

Comment 92: All past harvest areas should be individually surveyed to determine regrowth and mortality.

147

Response: The Forest does survey and keep records on all harvested units. The Forest Service tracks harvested and reforested areas in 2 ways. A record of each area or stand is kept in an electronic data base. Information is available that shows the dates of each management activity, the results of reforestation survival and stocking surveys, whether the area has been certified as reforested, etc. In addition, the Forest is reinventoried about every 10 years. Reinventory is part of the monitoring of past plans and also provides information to be used in revising or producing a new forest plan. A part of the reinventory work is to sample the reforested areas, whether the result of harvest, fire or other disturbance. Information on the stocking, growth and health of the plantations is obtained. This information provides a summary of the current condition of the reforested areas and can also be used to develop or revise growth and yield tables for the various forest types.

Comment 93: All harvested areas should be replanted with diverse species of trees. Even-aged monocultures produces plantations without biological diversity.

204

Response: Forest-wide standards and guidelines for all alternatives would specify that species appropriate to the site be replanted and that minor species be included as well as those most common on the area. Also, in evaluating biological diversity, the scale of analysis must be defined. An even-aged plantation of pine may be considered to lack diversity of tree species when considered at the stand level. If considered in the context of a landscape or a watershed, it may be adding a great deal of diversity to a landscape otherwise dominated by brush or perhaps by even-aged stands of Douglas-fir.

Comment 94: Regeneration harvests should not be scheduled on forest sites in the matrix that are difficult to regenerate. Adaptive Management Projects could then be developed on representative sites to test regeneration success under various experimental cutting prescriptions in the Preferred Alternative.

98

Response: A cooperative research effort on reforestation techniques for southern Oregon and northern California was conducted between 1978 and about 1990. The Forestry Intensified Research Program conducted research and published quarterly reports over the decade plus that it was in operation. In 1992, a book was published that summarized the work (Hobbs, Stephen D. and Steven D. Tesch, Peyton W. Owston, Ronald E. Stewart, John C. Tappeiner II and Gail E. Wells, editors. 1992. Reforestation Practices in Southwest Oregon and Northern California. Oregon State University Forest Research Laboratory). As a result of this cooperative effort, a great deal is known about reforestation techniques in the Klamath Province and on difficult sites in particular.

Comment 95: The Draft EIS is deficient in not indicating if the use of herbicides has caused the amount of timber suitable land to be increased.

79 98 216 283 305 319

Response: The land suitable for timber production was not decreased because herbicides are considered available for use under the Region 5 EIS for Vegetation Management for Reforestation. Selection of vegetation management techniques is beyond the scope of this EIS. Forest-wide Standards and Guidelines 21-54 and 21-55 in the Final Forest Plan would direct the use of herbicides.

Comment 96: Have non-stocked lands where reforestation has been unsuccessful been scheduled for ASQ contributions because of the authorization of the use of herbicides?

283

Response: Unstocked land is not considered as contributing to LTSY until it is certified as reforested by a Region 5 silviculturist. This means that the land is acceptably stocked and will grow into a forest without

further investments. This generally occurs between 3 and 5 years after an area has been planted.

Comment 97: Is the use of herbicides acceptable in ecosystem management? If so, what standards and guidelines are established for their use?

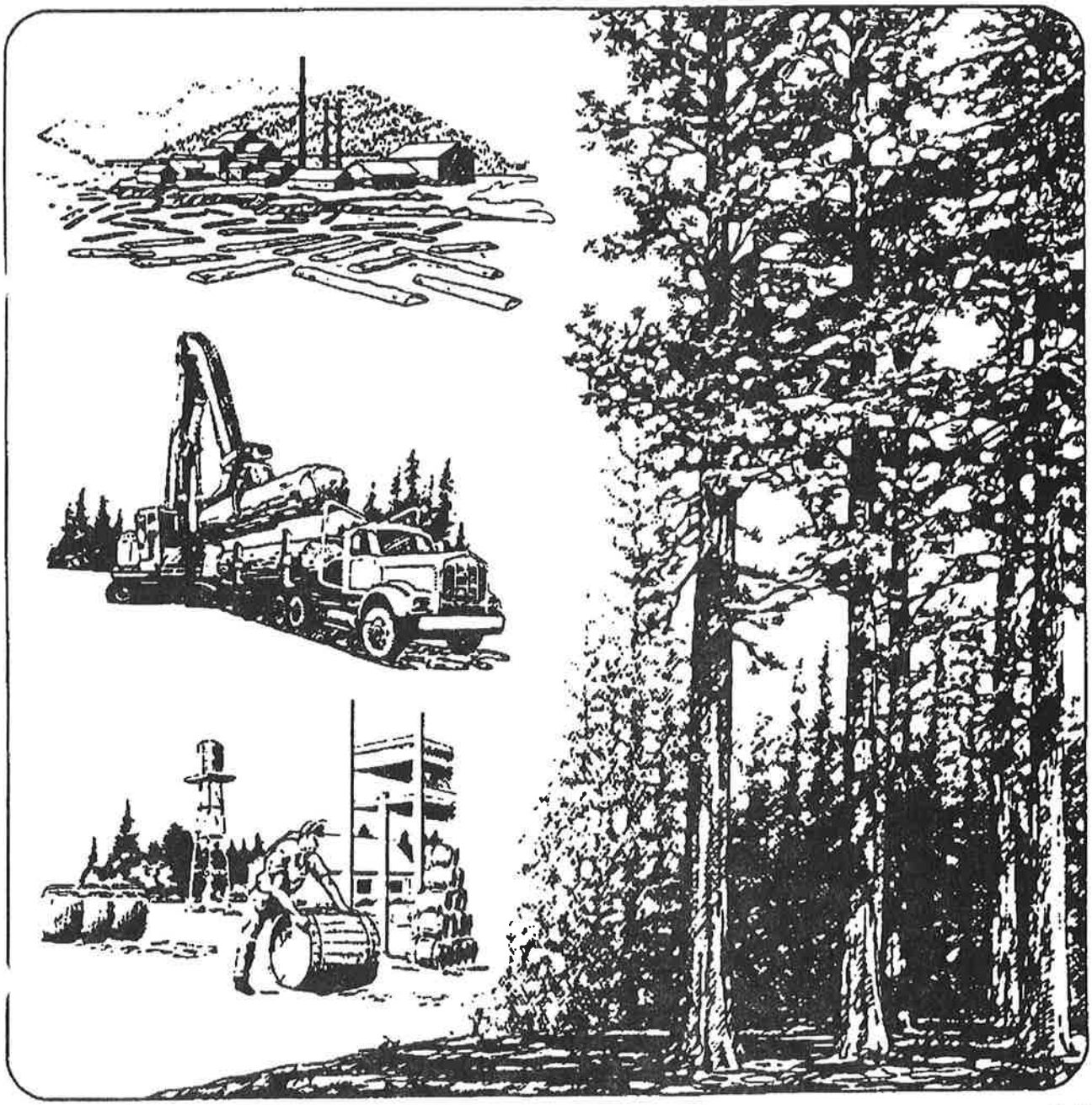
35 38 57 98 99 129 145 147 193 195
197 225 235 236 240 241 247 258 260 283
302 305 306 307 319 337

Response: Ecosystem management is the management of a system of organisms and their environment to achieve desired conditions or objectives. The selection of the tools to achieve the desired conditions are based on site-specific situations and the objectives to be achieved. Ecosystem management does not limit the choice of tools. Project level planning and NEPA analysis would select techniques based on standards and guidelines in the Forest Plan and on the Vegetation Management for Reforestation, Final EIS. The Klamath Forest Plan tiers to this EIS and also adds additional standards and guidelines for the use of herbicides of the Forest; refer to Forest-wide Standards and Guidelines 21-54 and 21-55 in the Final Forest Plan.

Comment 98: The Preferred Alternative presents strategies to manage forest pests. If all herbicide applications are to be conducted under Forest-wide standards and guidelines for vegetation management, this should be clearly stated.

98

Response: The Forest-wide standards and guidelines are intended to apply to all areas and projects on the Forest as stated on page 4-1 of the Forest Plan.



Fire Management Comments

Comment 1: There is no well-articulated history of events during the past Forest Plan and their contribution to the proposed major shift in management emphasis. It makes a difference if the bulk of these fires happened in a couple of years, which of the fires hit the timber base and other "use" bases and the severity of the burn in terms of resource loss and resource degraded in biologic and financial terms. None of this is made clear.

5

Response: The purpose of the EIS is to disclose impacts relating to alternative management strategies. The purpose of the plan is programmatic direction, not to document past events. Chapter 3 of the Draft EIS sets the stage by looking at the past and the present. There is a fairly well-documented history of a significant fire event occurring on the Forest approximately every 10 years at least in the recent past. This is substantiated by the fire records and atlases on file in the Supervisor's Office.

The 1987 event was a 60-year event according to a statistical analysis done by a statistician on the Forest staff. Definitely there was a bulk of the acres burning in one year, 1987. The 1987 burn affected approximately 43,000 acres of plantation and approximately 750 MMBF of timber was damaged. The resource loss outside of the timber base is incalculable. There were significant portions of the Forest that were burned and long-term financial as well as resource losses other than timber are difficult to assess especially since things such as potential soil effects and fisheries are difficult to calculate.

Whether the bulk of the fires occur over a short period of time or not, there is going to be a significant change in the patterns and structure of the wildland. Fires occur frequently. This is an irrefutable fact when one considers the intensity of the lightning storms that visit the Klamath Mountains. When these fire were started before European human intervention, fires were probably low intensity generally because the frequency of fires kept fuel loadings to a minimum. The intensity of the lighting storms has not, in all likelihood, decreased but the quantity of forest vegetation has increased. This is evidenced by looking at old and current photos.

Wildfires now are becoming larger and more intense. This is due in large part to the increased available fuel. The end result is going to be more acres burned at higher intensities, evidence the past 7 fire seasons around California. Fires are larger, hotter and becoming more difficult to control.

Comment 2: These numbers are an example and not from the Forest Plan. It would be better to say, for example, that fuel loads on the uncut and unburned 400,000 acres in the timber management sector are above desired levels on 200,000 acres. Prescribed burns are planned on 100,000 acres considered very high risk. In addition, on 600,000 forested acres not planned for logging, fuel loading will be reduced on 400,000 acres. The goal is to maintain ecologic integrity by mimicking natural fire events and avoiding the catastrophic situation that permitted the 1987 wildfires.

5

Response: This level of detail is not currently available. However, this type of analysis is expected to be completed 12 to 18 months after fuel modeling and fire history data collection is completed and the data entered into a Geographic Information System database. This type of analysis is much more useful at the watershed/landscape and site levels.

Comment 3: The ecological role of fire is understated in the Forest Plan. It appears that fire is felt to be more a tool than a component of the ecosystem. The treatment of the analysis of fire effects as part of the fuels and fire management program tends to support that observation. It is important that the document differentiate between the ecological role that fire plays and its use as a tool to reduce fuels.

72 283

Response: The wording in the Forest Plan may tend to seem that way because the Forest Plan provides direction for management activities. However, fire is recognized as a major force in the ecosystem. Forest-wide Standard and Guideline 22-1 on page 4-60 of the Final Forest Plan clearly states that the desire is to reestablish fire's role in a healthy ecosystem. Standard and Guideline MA2-55 on page 4-85 of the Final Forest Plan states the intent to allow fire to play its ecological role in wilderness. The Forest Program Emphasis Goals for Fire Management on page 4-9 of the Final Forest Plan identify using PNF and management prescribed fire as tools where ecosystems evolved under the influence of fire. Modifications to the Desired Future Condition on pages 4-15 through 4-17 and additional Standards and Guidelines MA5-27 through MA5-29 on page 4-104 as well as MA10-65 through MA10-70 on pages 4-143 and 4-144 in the Final Forest Plan further emphasize the importance of fire's ecological role.

Comment 4: The Draft EIS fails to provide a clearly defined and stated objective about the desired and appropriate role of fire on the Forest. It gives the impression that the chief concern is minimizing the risk of catastrophic fires and the protection of property. A new approach should be taken regarding fire management; one that restores, wherever possible, the natural regime of frequent, low intensity fires. In order to accomplish this goal, the fuel levels must be reduced in many areas, and once reduced, they must be maintained at manageable levels.

44

Response: Reducing the threat from catastrophic fire would be one of the primary concerns in all of the alternatives analyzed in the EIS; however, fire's ecological role is also important. Pages 3-36 and 3-39 through 3-40 discuss how fire operates as an ecosystem regulator. The Fire Management Analysis of the Management Situation, available in the planning records at the Forest Supervisor's Office, contains additional information. A discussion of how alternatives would address fire's ecological role has been added on pages 4-55 through 4-56 of the Final EIS. Also refer to response to Fire Management Comment 3.

A fire history study is being conducted on the Happy Camp Ranger District. The findings to date substantiate that fire has played a very significant role with some return frequencies as common as 8 years. These findings validate the importance of returning fire to the Forest. That is why most alternatives propose extensive fuels treatment programs. All alternatives except Current/RPA, E and G(SOHA) would increase the size of the fuel treatment program from the current situation, predominantly using prescribed fire. The Preferred Alternative proposes the largest increase. The Preferred Alternative has been modified to propose the largest increase in the Suppression Organization; refer to page 4-146 in the Final EIS. Fire protection and the ability to implement the fuel treatment program are also important elements.

Comment 5: The separate analysis of resource management and fire suppression ignores the very basic observation that both are components of ecosystem management. Ideally, the Forest Plan would specify standards and guidelines for Fire Management for all management areas and project the cumulative effect of all management activities on the condition of the ecosystem.

259

Response: All management areas have fire management standards specified in Chapter 4 of the Forest Plan. Analyses throughout Chapter 4 of the EIS consider these requirements. Figure 4-10 on page 4-150 of the Final EIS projects the consequences of each alternative in the fifth decade. It is not a separate analysis. Projections were based on fire history coupled with fuel treatment for each alternative. This information was used as input for analyses throughout Chapter 4 such as sediment production and fish habitat conditions.

Comment 6: The Forest Plan needs to develop fire prescriptions that are intended to generate ecological responses to fires, particularly in those habitat types that are fire-maintained ecosystems. Because early seral stages will be reduced, it is very important that fire be allowed to maintain productivity of remaining fire maintained ecosystems. The introduction of fire into much of the forested landscape needs to be achieved in order to maintain ecosystem function as well as ecosystem management. Prescriptions need to include fire intensities that will not only reduce fuels but generate natural vegetative responses as well. Additionally, fire prescriptions need to be applied at a scale that will result in ecological responses at the landscape level.

72

Response: The purpose of the Forest Plan is to provide broad programmatic direction. It provides direction on what to do and why and leaves details of how to accomplish its goals to project planning. Prescriptions would be developed at the landscape/watershed and site levels (Forest-wide Standard and Guideline 22-12 on page 4-62), in wilderness implementation schedules (MA2-64 on page 4-85) and in Fire Management Plans for LSRs (MA5-36 on page 4-106). The Forest Plan would return fire to the ecosystem as much as practicable within social-political constraints. About 27,000 acres per year would be treated. PNF would be used in LSRs, Backcountry and wilderness; this is unique in the NFS.

Comment 7: Collaborative efforts must be established to access and analyze existing data. More cooperative efforts must be made by state and Federal agencies, and local government to use existing analytical tools such as PROBACRE, the California Fire Economic Simulator and the National Fire Management Analysis System (NFMAS) to model fire at regional levels across ownership boundaries.

259

Response: This type of collaborative work is under way. The California Fire Economic Simulator is a derivative of the NFMAS. There is a discussion of NFMAS in Appendix B of the EIS. PROBACRE was not developed to be used on a large scale. The Forest is currently Beta testing the next generation of PROBACRE on the Upper South Fork Salmon watershed.

Comment 8: Describe what 180-year rotation with area control will mean in terms of fire risk.

282

Response: The Preferred Alternative was modified, consistent with direction in the ROD for the FSEIS, to remove the 180-year rotation with area control requirement. A variety of rotations based on timber type would be used.

Comment 9: The documents are deficient in their analysis and discussion of how fire disturbance regimes relate to ecosystem management and to timber management and silviculture. The risk of different forest types and size classes and seral stages to fire starts or ignitions needs to be presented.

283

Response: A discussion of the emphasis each alternative would place on fire's ecological role has been

added on pages 4-55 through 4-56 of the Final EIS. The effects of fire disturbances are discussed throughout Chapter 4 of the EIS. The Forest is currently testing a model that will look at different seral stages and model fire effects. The model is being tested on the Upper South Fork Salmon project. This information will likely be more useful at the landscape/watershed level and site levels. At the forest level, using forest-wide averages would mask much of the natural variability.

Comment 10: The EIS's continual denial of the relationship between timber management and risk/incidence of catastrophic fire must be overcome and the relationship clearly analyzed to satisfy NEPA requirements. Previously unmanaged areas are much less likely to burn catastrophically as compared to managed areas unless a firestorm which began in the managed lands (typically in logging slash) enters the unmanaged lands.

283

Response: There has been no continual denial on the relationship between management activities and fire severity; as a matter of fact there has been a long held belief by fire managers that just such a relationship existed. Dr. Phil Weatherspoon and Carl Skinner, of the Pacific Southwest Experiment Station, Redding, performed a study on the effects of the 1987 fires, which looked at the relationship of fire severity and different fuels situations. The proposals and many of the requirements for more extensive fuel treatment contained in the various alternatives are a direct result of the findings of the Weatherspoon study. The likelihood of catastrophic burning is highly dependent on individual stand characteristics. Many unmanaged areas have heavy fuel loads. Suppression of fire over the past 50 years has promoted an incursion of shade tolerant tree species that are potentially jeopardizing future stands. So the picture is not as simple as plantations always being at higher risk than unmanaged stands.

Comment 11: It is not clear from the Draft EIS what is meant by fuels treatment, as it is not specified what actions would be acceptable as part of the proposed fuels treatment program, nor where and under what conditions such activities would be allowed to occur.

44

Response: Fuels treatment would be site-specific and determined by the project level NEPA document. Page 3-118 of the Final EIS lists the most common methods. Prescribed fire would be a dominant tool in all alternatives.

Comment 12: Management planning must use the best information available to analyze the causes and composition of the fire situation and to prescribe a management regime which will adequately address conditions which management has created.

283

Response: In the EIS, the alternatives present a range of management strategies for dealing with the fuel situation. The Preferred Alternative would be the most aggressive in dealing with the concerns presented.

Comment 13: The Draft EIS bases its predictions on a level of fuel treatment which will require vastly increased appropriations for fuel treatment and prescribed fire. The Draft EIS fails to analyze the consequences if this funding is not provided.

283

Response: The Preferred Alternative proposes a large increase in its fuel treatment program, followed by Alternatives A, D, D', C, B and B' in decreasing order. The other alternatives would not have much of an increase from the current situation. The requirements set forth in the planning guidelines provide for describing the effects of implementing an alternative. The assumption is that the alternative will be implemented. The Forest cannot guess at what levels it will be funded. This is determined by Congressional appropriations and is outside the scope of the EIS.

Comment 14: All management-generated fuel should be reduced to pre-activity levels at minimum. Natural prescribed fire plans should be prepared for all reserved and roadless lands and for strategic fire breaks and fire control areas emphasizing areas where access currently exists. Funding for activity fuel treatment, either appropriated or project generated, should be a primary constraint on logging activity.

283

Response: The Preferred Alternative comes close to a similar requirement. The intent is to keep fuel loadings within ecological limits. That is the philosophy behind the standards displayed in the Forest Plan. Refer to response to Fire Management Comment 6 for information on what fire plans would be required in the Preferred Alternative.

Comment 15: Proposed fire management in reserves is misguided. Thinning, burning and other fuel-reduction techniques would lead to a direct reduction in "old growth" habitat quality by eliminating multi-storied canopy conditions. Construction of fuel breaks would increase habitat fragmentation and pose increased threat to species that require forest interior habitat. Moreover, use of chain saws and other equipment for purposes of fire-reduction could actually increase the risk of severe fire.

237

Response: The proposal in the Forest Plan is in keeping with the fire history for the Klamath Province and is consistent with the ROD for the FSEIS. Appendix F of the Final EIS on Management for the Northern

Spotted Owl in the National Forests (USDA Forest Service, 1992) points out that the biggest threat to reserves is wildfire. The frequent fire occurrences found by Dr. Alan Taylor and Carl Skinner in the Thompson Ridge study area near Happy Camp does not fit with vast multi-storied stands.

Multi-storied stands carry low intensity fires to the crown thus exposing them to severe heat and ultimately causing loss of the overstory. This is being found over and over again in areas such as the Sequoias where fire never used to reach crowns but now is a big threat to their survival. The 1987 wildfires were also potentially more damaging than would have been, had natural fuel ladders (multi-storied stands) and fuel loadings not been as high as they were. Fire used to be a frequent visitor to the Klamath Mountains Province and this recorded frequency does not substantiate a wide amount of multi-storied stands. A well executed prescribed burning program within the reserves would actually prolong the life of the reserves by making them less susceptible to high intensity, destructive wildfires.

Comment 16: This Forest Plan should include an ambitious 10-year program described in detail of fuel reduction to return the Forest to more natural conditions where fire can be a management tool rather than a catastrophe. These fuel reduction and burning activities should be focused initially within the AMA because this is experimental management and needs to be closely monitored. Although using fire as an ecological tool appears wise, recognition must be given to the fact that very few people know how to use it to accomplish goals without jeopardizing resources.

225 302

Response: The Forest Plan does propose an aggressive fuel reduction program. It would continue throughout the planning period and not just for 10 years. Once the ROD is signed on the Forest Plan, the details for any alternative selected would be staffed out in a Fire Management Action Strategy. In the Preferred Alternative if 27,000 acres can be accomplished each year, a significant amount of the Forest would be treated in a fairly short time. The AMA would be one of the areas targeted for prescribed burning but not the only area. Smoke would be the most difficult factor in implementing the Preferred Alternative. The Forest has a cadre of very skilled people that have a good record on using prescribed fire.

Comment 17: The Forest contemplates increased acreage of prescribed burns. Consideration is not given to the impact of late fall and spring burns on seed banks and small mammals, especially at the lower elevations. Provide data and standards and guidelines on seasonal standards for prescribed burns.

45

Response: Standards and guidelines would be developed on a site-specific basis at the project level. The ecosystems and the associated fire behavior throughout the Forest are too variable for a Forest-wide standard to apply. Pre-European wildfires burned the greatest acreages in the late summer and fall. This is substantiated by the tremendous acreages burned by recent wildfires. The ecosystems in the area are adapted to this type of fire regime. Spring burning possibly occurred in dry years or was used by indigenous peoples. The Forest has documented fires that occurred in the spring that went to several hundreds of acres. Spring burns tend to provide conditions that disperse smoke more easily than fall burns.

Comment 18: Burns should be carefully planned and it should be noted that this is not appropriate for all situations, fuels and fuel build-ups. As traditionally practiced by Native Americans and early grazers, the approach is best utilized in combination with, and not in replacement of, well-timed and managed seasonal grazing.

281

Response: Actual management activities would be determined at the project level based on site-specific conditions after ecosystem analysis at the landscape/watershed level has been completed. Refer to response to Fire Management Comment 17. The fuel treatment program is not expected to replace grazing, but to complement it.

Comment 19: The Salmon River Sub-Basin needs a specific fire management plan to develop a fuel and fire inventory to best reduce the negative impacts that are occurring from catastrophic fire. Communities need to be integrally involved in these plans.

302

Response: All alternatives would continue the ecosystem analysis process at the landscape/watershed level that was developed several years ago; refer to page 4-11 of the Final Forest Plan. The Upper South Fork is currently being analyzed and the lower main stem will be analyzed in the near future.

Comment 20: In the Preferred Alternative the fire suppression organization is smaller than what currently exists. It is unreasonable to assume that over 4 times as many fuels management acres will be treated if the fire organization is reduced. The documents need to justify how they will physically treat more acres while having a decreased fire organization.

302

Response: This Preferred Alternative has been modified to propose an increase in the fire suppression organization; refer to page 4-146 in the Final EIS. In order to accomplish all of the projected prescribed burning and other fuels reduction work specified in the Forest Plan, local hire and/or contract work would also be necessary.

Comment 21: It is unreasonable to assume that the fuels management proposed in the Preferred Alternative will receive adequate funding to achieve the prescribed treatment. Where will these monies realistically come from?

302

Response: The Preferred Alternative in the Final EIS has been modified to propose fuel treatment on approximately 27,000 acres rather than the 30,000 listed in the Draft EIS. A fire-fighting cost analysis has been completed. This information would be used in requesting funding from Congress. By increasing the number of acres treated by prescribed fire, the cost of suppressing future fires should be greatly reduced, an overall cost savings. Low intensity, slow moving fires are easier to contain and or control, thereby reducing the future fire suppression costs. The analysis process is discussed in Appendix B of the EIS.

Comment 22: The new rural residents long for a return to the good old days when natural fire kept the forest healthy. This is an illusion. The Preferred Alternative proposes to burn thousands of acres a year to treat fuels. The public reaction to having Scott Valley filled with smoke has been seriously underestimated. The rural residents want a healthy forest, but not at the expense of their air quality.

296

Response: The concern is recognized. Smoke continues to be an important issue. The fact remains that there will be smoke in Scott Valley. It can be heavy smoke of a long duration as in the 1987 fire event or lighter and of shorter duration during prescribed fire events when weather parameters can be taken advantage of and State and Federal air regulations will be met.

Comment 23: The acreage of fire prescribed to achieve some condition other than fuels management is not displayed.

72

Response: These acres are displayed on page 4-14 of the Forest Plan as well as in Table 2-5 and on page 4-147 of the Final EIS. They include the acres to be burned for wildlife, watershed enhancement, cultural resources, wilderness, grazing, site preparation for timber management as well as for hazard reduction.

Comment 24: How should the forest reduce the current fuel load? Much research now suggests that it is possible, and in many cases even necessary, to use prescribed burning as a means of relieving suppressed stands of excessive fuels. Logically, manual thinning of some ladder fuels and the extraction of heavy ground fuels may be necessary in some particularly fire-prone areas. Subsequently, prescribed burns should be used to reduce fuel loads to levels which favor low-intensity, natural ignition fires.

44

Response: All of these methods would be available. The appropriate treatments would be determined based on site-specific analysis at the project level.

Comment 25: If the use of fire is allowed at the forest level in conjunction with the Option 9 directives, no further action is necessary. If there is any doubt, language should be added to this Forest Plan which clarifies the ability to use fire as an appropriate management tool.

37

Response: The language in the Final Forest Plan has been modified to make this clear. Standards and guidelines that were taken from the ROD for the FSEIS are included in the Final Forest Plan in Chapter 4 and are indicated by an asterisk (*). Pages 4-104 and 4-143 in the Final Forest Plan address the use of fire.

Comment 26: Some activities, such as prescribed burning are appropriate. An increased use of prescribed natural fire or mechanical treatments to achieve a range of natural variability of structure and vegetative types would benefit wildlife while reducing the likelihood of catastrophic events. However, more invasive forms of management, including thinning and salvage, should be more prudently applied to a relatively small percentage of the forest landscape.

44 276 307

Response: All alternatives but Current/RPA and G(SOHA) would increase acres treated for fuel reduction over current levels. The Preferred Alternative has the most progressive proposal for prescribed natural fire and for total fire use. Management that includes more intensive vegetative manipulation would be applied to fewer acres than in the past in all of the alternatives except G(SOHA).

Comment 27: Prescribed burning should be prohibited in National Forests, because of the air pollution this causes and because one of the pollutants, carbon dioxide (not referenced in these documents!), is a major factor in climate destabilization. Burning is harmful to the soil and plants because it creates an impervious layer beneath the surface increasing water runoff, flooding, etc. Burning results in an inorganic ash in contrast to a living biomass which, as it decays, provides nutrients in the form most readily taken up by plants. Burning dries the soil and lowers the water table.

98

Response: There is too much research that refutes most all of the claims in this comment. The air quality issue is the one that will most likely be of the greatest concern. Air quality is discussed on pages 4-35 through 4-37 of the Final EIS, including a discussion

of carbon dioxide and other pollutants. Fire has played an important a role in the development of the Forest in the Klamath Mountains Province. Research is demonstrating that fire was a frequent visitor within many areas burning from every 8 to 20 years. Fire is primary factor in the development of soils in this province also. Fire converts minerals in the soil into a form able to be used by plants. Only with very hot fires is an impermeable layer formed on the soil surface. Prescribed fires are designed to burn with low intensities.

Comment 28: The Preferred Alternative will pursue an aggressive fuel reduction policy which includes prescribed natural fire and planned ignitions. These are drastic means of reducing fuel loading. Since all burning is ecologically destructive to some degree and always involves the hazard of controlled burns turning into wildfire, the question arises whether alternative means (such as manual brush removal) have been sufficiently explored.

254

Response: The Forest's intent is to explore all means of fuel reduction work. Fire historically reduced fuel loading long before European man had a presence in this areas. Fire is not ecologically destructive but rather a primary factor in healthy forests. Refer to pages 3-40 and 4-38 in the Final EIS.

Comment 29: The relationship between fuels treatment and the projected acres of wildfire by 2040 is unclear. Although the Preferred Alternative has the highest acres of fuels treatment, it does not appear to reduce the amount of wildfire compared to other alternatives.

72

Response: The Preferred Alternative is expected to reduce the number of acres burned by high intensity fire. The numbers of fires and total acres burned are not expected to change significantly as lightning is the primary source of ignition on the Forest. Acres burned by low and moderate intensity wildfires should increase as fuels are reduced through allowing fire to burn to natural or constructed fuel breaks. These strategies should also reduce the cost of controlling wildfires. Refer to response to Fire Management Comment 21.

Comment 30: Timber inventory and outputs should be identified as decreasing in the future because of the impacts on the forest by recurring high intensity catastrophic fires. The Preferred Alternative will increase the number of acres to be regenerated. Plantations are highly susceptible to high intensity burning and the existing plantations will be at a high risk of being lost. This risk is increased because many of the existing plantations are stocked heavily with pine trees which are more prone to burning hotter.

302

Response: Refer to responses to Timber Management Comments 24 and 42. When fire salvage is used to replace other areas scheduled for treatment as part of the ASQ, there is no need to reduce the inventory. Areas with restrictions on salvage are unregulated and not part of the timber inventory. Young plantations are highly susceptible, but the strategy to reduce stocking and carefully tend the stands should mitigate some of the concerns of the future.

Comment 31: The Forest Service needs to identify and analyze the positive role isolated forest communities have played in the past, such as reporting fire outbreaks and initially attacking lightning strikes. In analyzing the cost efficiency fire and fuels management activities local community and private efforts need to be extensively included in the formula. Positive as well as negative effects need to be analyzed regarding impacts on fire management resulting from inholdings and intermixed private and public land ownership.

302

Response: The Forest has always used the local communities to support the large fire organizations and there is no plan to remove the local communities from the equation. Initial attack will continue to be primarily from Forest Service employed people, which includes local people employed by the Forest Service, as they are trained for quick, rapid response. The assistance of local communities is invaluable, but is not expected to change under any alternative. This was not discussed as an impact related to alternative implementation in the EIS.

Comment 32: The Draft EIS misses a critical point in its analysis of fire dynamics. As evidenced by the fierce 1987 fires on the Forest, plantation stands can contribute to fire severity by their intense burning.

154

Response: This was an oversight. The premise of the fire analysis to date centers on the fact that the low intensity, innocuous fires of the past are becoming hotter and more severe fires. Chapter 3 of EIS addresses this issue.

Comment 33: Because the acreage of fire intensity varies between alternatives, the reduction in high intensity fires in the Preferred Alternative is assumed to be a result of the increased fuel treatment. There needs to be a clear presentation of the effects of fire on the development of "old growth" reserves and that presentation needs to provide the assumptions of how fire will affect the development of those reserves as well as the retention of those reserves.

72

Response: This is addressed in the Final EIS on page 4-44. Reserves are not singled out, but are included as part of the forest-wide picture. At the forest scale, analyzing the effectiveness of the integrated strategies

proposed for each alternative is more important than focusing on individual pieces.

Comment 34: The Forest Plans may significantly affect the incidence and severity of fire and the fire protection capabilities within the region. The severe decline in the timber programs on the Forests will reduce trained personnel during fire season, will reduce the labor pool for both Federal and mutual aid fires, will reduce the funds available to remediate fire hazards, will reduce the private sector heavy equipment capacity that has historically been used under contract during the fire season. Road closures or reduced maintenance will lengthen response times and reduce the effectiveness of initial attack. Fire size will increase along with resource losses and suppression costs. More in-depth analyses should be done to predict the changes in suppression capabilities under projected personnel reductions by the Forest Service and private industry. These models should be improved and integrated with other spatial information to allow their use in evaluating the effects of fire on forest structure.

259

Response: Staff reductions were modelled and the effects on acres projected to burn are displayed for each alternative on pages 4-146 through 4-147 of the Final EIS. The Forest is aggressively pursuing funds for fuels work. The Forest Plan calls for the treatment of about 27,000 acres per year which is considerably more than has historically been treated. Road closures and reduced maintenance were recognized as potential problems. The Forest has already trained an additional helicopter in rappel to offset road closure problems that would occur in any alternative selected. This provides the Forest with the means to quickly attack fires. Decreasing budgets for all levels of government are likely to occur in the future. For several years, the Forest has been analyzing fire as a primary component in ecosystem analysis at the landscape/watershed level which includes spatial analysis.

Comment 35: Changes in suppression strategies in the Forest Plan on NFS land will affect CDF operations. First, when CDF responds under mutual aid it will face the additional challenge of adapting its tactics to fit the modified suppression prescriptions on certain areas on the Forest. Beyond that, the modified suppression strategy will change the level of protection on private in-holdings which are state responsibility but protected by the Forest. Private landowner desires for full suppression and the equal protection policy of the Board of Forestry may conflict with the service provided by the Forests.

259

Response: Private interests will always receive a high level of suppression action and response. The priorities set cooperatively by the BLM, USFS, CDF and NPS states that the number one priority is the "potential to destroy life, improvements and property." Long-term natural resource loss is second. The Preferred Alternative has been modified to increase rather than reduce the number of suppression personnel in order to meet all its objectives and demands. By mutual agreement, CDF will need to meet the needs of NFS lands under their protection.

Range Comments

Comment 1: The Glossary uses 1,020 pounds for an AUM, but does not specify this is dry weight. Other Forest Service sources use 800 pounds and 1,000 pounds. Chapter 3 uses 1,200 pounds.

5

Response: Ruminant animals, including cattle and sheep, consume 2.5 to 3% of their body weight in dry forage intake per day. For the typical AUM, eg., 1,000 pounds per cow with calf until weaning, this means 25 to 30 lbs/day or 750 to 900 pounds/month. During grazing animals also trample forage and bite off forage which is not swallowed. The higher estimate of 1,200 pounds per AUM is to account for the damaged or removed forage as well as that consumed. The Glossary has been changed to 1,200 to be consistent with Chapter 3.

Comment 2: How much grazing should continue? The cost? The resource impact? No analysis is made of alternatives such as reduced grazing to avoid adverse resource impacts.

5

Response: Most of these questions are outside the scope of the Forest Plan. Congress through law sets policy for sustainable grazing of suitable rangeland on NFS land. During the process of Annual Operating Instructions (AOI) or Rangeland Project Decision documents (RPD) at the site level, necessary adjustments in the quantity of grazing activity will be made as determined appropriate. Rangeland Reform 1994 will set the cost per AUM paid by permittees and therefore indirectly determine the net cost of range permit administration. As more stringent monitoring is becoming the norm, resource impacts will be reduced in virtually all situations. The key is to disallow all irreversible impacts through progressive management and strict adherence to range standards and guides. Implicit within the monitoring and standards and guidelines is the assumption that grazing will be reduced if progress toward desired future conditions is not being made. Shortened grazing seasons, reduced numbers of livestock as well as delayed turn-on dates are tools for managers to use to avoid adverse impacts. The AOIs are the key vehicle to document and communicate to permittees expectations and results of management actions each year.

There is not an alternative specifically developed to address known adverse resource impacts caused by

grazing through reduction in livestock numbers. Alternative E as proposed would reduce AUMs by 5166 by eliminating grazing in wilderness, thus providing a range in AUM numbers. It is unlikely that reduction in numbers alone would achieve desired objectives in terms of reducing impacts and improving conditions unless additional measures were taken to improve livestock distribution away from localized areas and efforts to restore degraded areas were employed. In all alternatives, standards and guidelines would address these issues.

Comment 3: There should be a clarification between stock and equestrian or recreational stock use in your Draft Forest Plan.

196

Response: A discussion has been added to the EIS, Chapter 4, Range Management under Common to All Alternatives about the difference between permitted livestock use and use by commercial pack and saddle stock or recreational user stock.

Comment 4: Include a standard and guideline for the Forest Plan that states "Only native species will be used unless they are unavailable."

198

Response: Native species are emphasized, but non-native species can also have a role in management for other than availability reasons. Provision is made for them in Forest-wide standard and guideline 23-11 in the Final Forest Plan. Native species are frequently extremely expensive and may not have high viability. The use of non-native seeds can allow the development of a nurse crop that protects the site until native species can recolonize it. Native grass species offer more competition to reforested plantations and can choke out trees planted after a fire. The use of native species can also alter the genetic character of existing populations. The native species may be from a different gene pool that would displace the existing stock or compromise it if it were introduced. These are site-specific conditions that require assessment at the project level.

Comment 5: Wilderness Management, Important Interactions: The second to last paragraph in this subsection gives a good description of how improper grazing can affect wilderness ecosystems. Since the same effects occur outside of wilderness, the same effects should be included in the Range Management section.

198

Response: A discussion on the effects of grazing on the range resource has been included under Range Management in Chapter 4 of the Final EIS.

Comment 6: The EIS should fully discuss the effects of Key Watershed designation and management on grazing. Key Watersheds are a major component of the President's Plan,.

282

Response: In the Final Forest Plan, standards and guidelines specific to grazing management consistent with the ROD for the FSEIS have been incorporated under the RR Management Area and the Key Watershed section of the Aquatic Conservation Strategy in the Forest-wide standards and guidelines. The effect of designating Key Watersheds on the range resource cannot be estimated until watershed analyses are completed, which would identify if any site-specific practices are incompatible with the Aquatic Conservation Strategy objectives and need to be adjusted. Ecosystem analysis at the landscape/watershed level which would include a watershed analysis would provide the more detailed analysis of range conditions within these areas. RPDs for site-specific projects will analyze and disclose effects of livestock grazing pursuant to NEPA.

Comment 7: Disclose why improvement in range conditions for the Preferred Alternative will not be accomplished in this planning cycle and the factors considered in making this determination. Thresholds are not identified nor are alternatives compared in terms of thresholds for management action/change in utilization. The EIS should define conditions under which grazing allotments would be suspended or changed.

283

Response: Implementation of the proposed standards and guidelines would result in very small incremental improvements within the first decade and beyond. However, change in overall ecological status is very slow and the change would not be significant in the first decade or two. Additional discussion has been added to Chapter 4 of the EIS under Range Management.

The concept of 'thresholds' in range community responses to management or lack-thereof, is a relatively new idea which is intuitively attractive. The idea is that once an ecosystem passes a threshold, reversal of the damage will take an extraordinarily long time. The overgrazing in Great Basin deserts which led to cheatgrass invasion is probably the largest impact to ever result from the crossing of such a threshold. A primary mechanism causing this threshold is the strong competitive effect of cheatgrass for soil water and the relatively weak seedling vigor of native perennial grasses in comparison to cheatgrass and medusahead. This is why removal of livestock does little to help at this point for this invaded community type. However, following cheatgrass eradication which is close to impossible, management of livestock becomes crucial in the recovery of reintroduced (seeded) native perennials.

Applying the proposed standards and guidelines should avoid the crossing of any additional thresholds.

At a local scale severe trampling disturbance of a mountain meadow causing a 'nick-point' near a drainage can cause serious gullying to take place if not managed. This is an example of where monitoring allotments can locate these relative rare occurrences and steps can be taken to restore the site and arrest the problem before it becomes serious.

Grazing allotments are rarely suspended since the value of the grazing to the permittee is usually so high that virtually all necessary changes in management will be implemented if the change can be shown to be justified. Mitigating measures may include, but are not limited to, altering grazing strategies (rest-rotation, deferment, etc.); eliminating grazing in specifically identified areas of known resource damage through riding, salting, fencing, etc.; or modifying livestock numbers and/or season of use. If the permittee refused to make the needed changes, the permit would be suspended.

Comment 8: Our February 8, 1993 letter listed information necessary to clearly describe proposed rangeland management and necessary for an informed decision to be made. A few of the items in that letter have been clearly addressed in the draft planning documents. The majority of items however were not addressed or were included without the specificity requested.

198

Response: The letter submitted is very thorough relative to range management on the Forest. The Final Forest Plan has been modified to include a prioritization schedule for reviewing allotments and standards and guidelines which provide direction for this process. Much of the information and data requested is too specific for Forest level planning which deals with forest-wide averages and programmatic direction. Site-specific data collection will occur through Forest plan implementation and the use of RPDs. While it is important to have complete and up to date ecological data for all allotments, the current budget will not allow this to occur for many years. Ecosystem analysis and the development of RPDs will identify where current, reliable data exists and provide a process for obtaining better information.

Comment 9: Perennially saturated portions of wetlands are unsuitable range due to the damage that livestock do to soil structure, flora and fauna. Standards and guidelines should allow no (or only light incidental) grazing on perennially saturated portions of wetlands. The forage these areas contain should not be included in calculations of livestock carrying capacity on allotments.

198

Response: Identification of specific unsuitable rangeland will occur through the Ecosystem Analysis process at the landscape/watershed level and through project analysis at the site level. Standards and guidelines have not been added. Livestock don't favor (with a few exceptions) grasslike plants on perennially saturated portions of wetlands since Carex, Scirpus, Eleocharis and Juncus species typically have waxy leaf surfaces, coarse epidermal or cell wall structures which decrease palatability. Many of the perennial saturated portions of wetlands occur on allotments in wilderness where fencing restrictions are more severe than in non-wilderness, often eliminating that option. Temporary electric fencing may be used sparingly in critical areas, however, but maintenance may be logistically difficult or impossible.

Recent studies indicate that 'incidental grazing' in these wet sites tend to increase native plant species diversity and live vegetation cover by reducing shade dominance and increasing litter turnover, respectively, of grasslike plants. Neither of these changes adversely affects these ecosystems. During drought years these wetlands tend to be drier and more prone to plant species shifts to moist-site plants. Attributing such shifts in composition to grazing is incorrect, but during repeated droughts livestock may secondarily be attracted to these sites as more grass species become common. With natural return of wet periods the grasslike plants will again dominate these perennially saturated portions of wetlands.

Comment 10: Domestic livestock and improper range management on the Forest has caused significant soil and water resource damage, loss of important elements of biological diversity, loss of integrity of native plant communities and massive introduction of undesirable non-native plant species. These effects are not just the result of historic rangeland abuse, but may continue under the new Forest Plan unless new direction and emphasis are placed on rangeland ecosystem management. The EIS should explain why aggressive and effective mitigation is not planned. If the proposed standards and guidelines will not produce improvements within 50 years, the Forest should consider changing them. If, on the other hand, the Forest does not anticipate being able to enforce standards and guidelines for 50 years due to staffing and budget problems, this should be stated.

98 198 256

Response: Refer to responses to Range Management Comments 7 and 9. On a local scale, improvements in ecological status would certainly happen during the first decade and thereafter using the more stringent standards and guidelines in the Forest Plan. Damage to natural communities and invasion of non-native species is not now occurring at a 'massive' scale. Except for Kentucky bluegrass increases in abundance in meadow and riparian areas of the Marble Mountain Wilderness, there has been little historical or current plant invasion. The subspecies of Kentucky bluegrass, Poa pratensis agassizensis, may be native according to the new Jepson Manual (1993)

so that even bluegrass increases may not be exotic (this remains to be determined).

Comment 11: A prioritized list of grazing allotments in sensitive areas and/or administrative reserves which need to be phased out should be included along with a schedule of how these changes will be accomplished.

44

Response: A list for prioritizing revisions of allotments as well as standards and guidelines for reviewing allotments have been included in the Final Forest Plan. Sensitive areas and administratively withdrawn areas were 1 of the criteria used in prioritizing allotments. The decision to phase out an allotment would be made at the site level and only if a thorough analysis showed compelling reasons to do so.

Comment 12: After 80 years of "regulated" grazing, 48% of the land grazed rates "unsatisfactory." The data is more than a decade old and no trend data has been gathered. With 62% rated "static or upward", it isn't clear how much is static and also unsatisfactory, as well as unsatisfactory and declining. The EIS should tell how many acres are grazed and the amount of grazing supplied by range, woodland-range and commercial forest areas. The Final EIS should describe how much rangeland is in all categories, based on both condition and trend, by allotment and by ecological type such as dry or wet meadow, transitional range.

5 198 256 283

Response: Acreage information has been added to Chapter 3, but it is limited. Due to the quality of the data, breaking the information down any further does not seem worthwhile.

Condition and trend plots established in the 1950s had a primary focus of rating forage conditions for livestock. Knowledge about the importance of biological diversity did not exist at that time and further, knowledge of plant communities and their ecological potential also was non-existent. While trend data on the eastside of the Forest is meaningful since the community types there are more distinct and well understood, many of the condition and trend transects on the westside of the Forest in mountain meadow communities are not located appropriately for judging ecosystem integrity. For example, no streamside riparian shrub transects are present. Many transects cut across 2 or more community types, making interpretation of the data impossible from a potential natural plant community perspective. The 3/4 inch diameter loop frequency sampling technique provides too limited a sample to rate trend in complex sward communities where only about 0.31 square feet of site is sampled per transect. For these reasons little effort has been expended to reread the condition and trend transects.

Currently, the Forest is developing plant community classifications for all its range plant communities and large plots are being sampled to relate existing vegetation structure and function with potentials for sites. Using Forest Service condition and trend data to criticize monitoring protocol and condition of the range is not productive because the agency puts little faith in this data. Anti-grazing interests will continue to gravitate to using this data as evidence for poor management, but using forage condition for livestock as a measure of ecosystem health is a flawed approach. Ecological typing of plant communities, their inventory and then repeat monitoring of their botanical composition in relation to the potential plant community must be the primary basis for judging ecological status. This effort is underway, but progress is slow since funding limits staffing for range. With Rangeland Reform 1994 there should be some increase in funding for range analysis and development of the these kinds of sensitive measures of range ecosystem integrity.

Comment 13: In Draft Forest-wide Standard and Guideline 22-4, the phrase "balanced ecological status" should be replaced by "good ecological status." The phrase "of any desirable vegetative types" should be replaced by "of native forage plants."

198

Response: 'Balanced ecological status' for range means that the natural range of acreages of early, mid- and late seral stages of plant communities will be used as the yardstick for rating existing deviations from the desired future condition. Late seral stages will not be the assumed target desired future condition since that is not what nature provides and it is impossible to achieve anyway. Using 'good ecological status', for example seeking mid- to high seral status for all plant communities, as a target has already been tried by the range management profession with little improvement in either the resource or the political flak received by managers. The last part of Forest-wide Standard and Guideline 23-5 3) b) has been reworded: "... prevent over utilization of any desirable vegetative types and maintain good livestock distribution."

Comment 14: "Manage rangeland to maintain and restore the composition and function of native plant communities" should be the first Forest-wide goal.

198

Response: This has not been included as a goal, but native species are emphasized in Forest-wide Standard and Guideline 23-11. Native grasses on the Forest are, with very few exceptions, very high quality forage for wildlife and livestock. Potential natural communities are commonly sought from all perspectives. Some range types, like cheatgrass invaded sagebrush/grass cannot be restored, the technology is not available at this time. This is why provision is made for exceptions in the standard and guideline.

Comment 15: Implementation of the proposed Forest Plan should maintain pre-existing rights to water use and access by livestock as well as grazing "preferences" established prior to the forest reserve. Public land grazing in Siskiyou County has been recognized through common law practice by Federal/state taxation and local real estate/banking transactions as a valuable property right included in the valuation of base ranch property. As grazing "permits" are currently considered part of the property value of the base ranch on the market, the exclusion from quality forage in RRs could render allotments unusable and devalue the real property.

281

Response: The Forest Service is not bound by "common law," but must follow existing Federal laws which can supersede county and state regulations. Grazing allotments are considered a privilege, not a right. As stricter and stricter controls are placed on allotments, the value of base property will decline relative to the permit. Other factors which influence private land values may, however, allow land values to continue to increase.

Comment 16: Public land grazing accounts for about 25% of the seasonal grazing in Siskiyou County. The Future of 25% this livestock inventory is dependent upon continued availability of public range. In numbers, this converts to from about $9,000,000 - $14,000,000 in investment in stock that could be impacted by Forest Service planning.

281

Response: The Forest recognizes this and all alternatives include provisions for promoting rural economic stability.

Comment 17: A modest improvement in condition and trend should be expected for Alternatives Preferred, A, B, C and D because many parts of the Forest Plan standards and guidelines can be implemented immediately without waiting for individual allotment management plans to be developed.

198

Response: Incremental improvements would occur for these alternatives, but would be very slow. Refer to response to Range Management Comment 7. The discussion on improvement of range conditions in Chapter 4 of the EIS under Range Management has been expanded. AOIs for grazing permits beginning in spring 1994 contain additional requirements that are consistent with the proposed standards and guidelines for all alternatives in the EIS.

Comment 18: The Draft EIS fails to provide site-specific quantitative data concerning the conditions of rangelands on the forest, thereby making evaluations of current and future conditions difficult.

44

Response: The purpose of a Forest Plan is to analyze conditions at a forest-wide level; forest-wide averages are appropriate. Site-specific analyses will occur at the project level; refer to the Final Forest Plan, Chapter 4 under Ecosystem Approach to Management as well as the Forest-wide Range Management standards and guidelines which relate to RPDs and the response to Range Management Comment 24.

Comment 19: A discussion of the range condition and trend in wilderness is needed.

5

Response: A discussion of range condition extrapolated from a study of meadow/riparian complexes in the Marble Mountain Wilderness has been added to Chapter 3 of the Final EIS under Range Management. There is no historical information that would allow trends to be determined.

Comment 20: Incorporate into the range permit system immediately any mitigation necessary to protect TE&S species that are dependent on riparian habitats and the new utilization standards and guidelines.

82

Response: Prior to the grazing season in 1994, additional requirements, consistent with the range standards and guidelines proposed for all alternatives in the EIS, were included in the AOIs for all allotments.

Comment 21: The SAT report requires prompt adjustment of grazing practices to eliminate adverse effects on riparian resources (GM-10) and the elimination of grazing if adjustment is not effective (GM-1). The Draft Forest Plan first requires livestock utilization monitoring to indicate the need to adjust grazing practices and will not correct adverse impacts in a timely manner.

82

Response: The Final Forest Plan incorporates standards and guidelines from the ROD for the FSEIS which are generally similar to, but not necessarily the same as, the SAT recommendations. In the Final Forest Plan, MAI0-73 requires the adjustment of grazing practices that retard or prevent the attainment of the Aquatic Conservation Strategy objectives and the elimination of grazing if adjustments are not effective. No time frames are established. It would be counterproductive to try to adjust or eliminate practices without knowing if objectives are being met and without determining if there are problems and their source. Ecosystem analysis at the landscape/watershed level, site-specific analysis and RPDs will be used to determine the need for any adjustments. Information on utilization will likely be an important element of the analyses. However, these analyses will take time, especially in cases where a lot of information needs to be collected to make an adequate determination of potential problems.

Comment 22: In the Draft Forest Plan, replace MA 10-63, MA 10-64 and MA 10-65 with GM-1 from the SAT report.

82

Response: The Final Forest Plan incorporates standards and guidelines from the ROD for the FSEIS which are generally similar to, but not necessarily the same as, the SAT recommendations. MA 10-73 in the Final Forest Plan has replaced all 3 of the Draft standards cited above.

Comment 23: In accordance with FSM 2211.6 6, standards and guidelines will specify maximum acceptable disturbance levels for stream banks and vegetation components in grazed riparian areas.

256

Response: Due to the difficulty and controversy of determining maximum acceptable levels, this has not been added to the Final Forest Plan.

Comment 24: AMP development should be more closely monitored than provided for in the monitoring program. Also, the Draft Forest Plan proposes to allow 20% violation of AUM targets for 3 consecutive years before action is taken; a disturbingly casual attitude towards rangeland rehabilitation.

256

Response: The Final Forest Plan has been modified. Individual AMPs will no longer be prepared. Rather, rangeland analysis will be conducted on a larger geographic scale with NEPA analysis at the site scale and disclosure of effects documented in RPDs prior to reissuance of each permit. By grouping allotments to conduct an integrated range analysis within the context of a larger ecosystem analysis at the landscape/watershed level, it will not only provide a more integrated approach, but will facilitate accomplishment in a efficient and timely manner. The agency and the Forest have already begun ecosystem analysis and the process can easily incorporate the traditional range analysis conducted for AMPs in a broader and more interdisciplinary context than was used in the past. In the meantime, before all of the analysis is updated, Forest Plan standards and guidelines will be implemented through AOIs.

The 20% deviation from AUM targets was not intended to allow for grazing violations (eg., trespass or unauthorized use) it merely acknowledges that yearly fluctuations may occur due to administrative decisions related to resource needs (such as drought or favorable forage conditions, transitory range opportunities due to fire or other disturbances which temporarily increase forage production, non-use, etc.). The intent was never to allow for unauthorized use. Fluctuations of AUMs will not affect or limit opportunities to initiate rangeland improvement projects.

Comment 25: Monitoring of condition and trend should be performed biannually and designed to determine if thresholds have been exceeded. All AMPs should be updated at least once each decade and include at minimum an Environmental Assessment. Revising AMPs in wilderness should be a priority (especially where there are conflicts with other uses) as should AMPs with Botanical SIAs, RNAs and/or Sensitive plant species/communities. Wherever possible, grazing allotments should be moved out of reserved areas into the forest matrix. Allotments or portions of allotments within Wooley Creek, Clear Creek, Elk Creek, Dillon Creek and Upper South Fork Salmon (above Cecilville) drainages should be canceled or moved.

283

Response: Condition and trend data may not be the best method for determining rangeland health; refer to response to Range Management Comment 12. If monitoring and inventory methods implemented through the Forest Plan reveal that problems exist, appropriate action will be taken. Monitoring would be reported at least every 5 years to allow enough time to analyze if there are trends. Actual monitoring data for ecological condition and trend would be collected each year on an on-going basis.

Priorities for revising allotment plans would consider several criteria. A priority list has been included in the Final Forest Plan. The fact that an allotment is in wilderness or another specially designated area was a factor, but not by itself the sole determining factor. Other factors included resource conflicts or damage, achievement of desired conditions, permit expiration dates.

With so much of the Forest reserved in all alternatives, it is unlikely that there will be much opportunity to move allotments out of reserved areas. Allotments would not be moved or canceled unless rigorous analysis showed good reason to do so.

Comment 26: Because there is no detailed schedule for review or development of AMPs, allotments along the Siskiyou Crest from Mt. Ashland to Rattlesnake Mountain should be a high priority.

198

Response: A priority list for revising allotments has been included in the Final Forest Plan. Refer to response to Range Management Comment 25 for how prioritization was determined.

Comment 27: The reporting frequency in the monitoring plan for range health and developing AMPs should be annually rather than every 5 years, although it is not necessary that the annual reporting for these items cover the entire Forest. Perform annual monitoring for riparian condition, vegetation cover, soil compaction, plant species composition, utilization, trampling and other key range attributes (FSM 2214.1 and 2214.2)

for all allotments. Monitoring results will be documented and reported annually (FSM 2214.4).

198 256 303

Response: Annual monitoring for utilization, riparian condition and other key attributes is important. Much of this monitoring is on-going and is documented annually. However, allotments cannot be revised on an annual basis and more comprehensive vegetation inventories cannot be completed on all allotments each year given current and anticipated budget and staffing levels.

Comment 28: In Draft Forest Plan Forest-wide Standard and Guideline 22-14, the phrase "using various management strategies, or levels, for grazing" should be clarified or removed.

198

Response: The standard and guideline has been replaced in the Final Forest Plan by utilization guidelines; refer to Table 4-11 in the Final Forest Plan.

Comment 29: The Final Forest Plan should include a map of all allotments, a history of NEPA analyses for all allotments and an allotment-specific schedule for AMP revision. Allotments found to be in poor condition should be withdrawn until they recover. The time frame for evaluating and revising all AMPs on the Forest should be determined, with highest priority placed on those that are in wilderness and proposed reserves, with evaluations to extend no longer than 3 to 5 years.

44 128 256 283

Response: Allotment maps are available in the Supervisor's Office. The purpose of the Forest Plan is to provide programmatic direction, not historical data. A priority list for revising allotments has been included in the Final Forest Plan. Refer to response to Range Management Comment 25.

Comment 30: Range ecosystems play a central role in the health and sustainability of the Forest as a whole and should be managed and monitored accordingly. All allotments should be managed in compliance with FSM 2200, 2210 and 2212.03; NEPA; NFMA; the Multiple Use Sustained Yield Act; the Clean Water Act; ESA; FLPMA; the Taylor Grazing Act; regional policy on riparian TE&S species and other applicable environmental laws.

82 256

Response: A discussion of rangeland ecosystems has been added to Chapter 4 of the Final EIS under Biological Diversity. The proposed standards and guidelines and the Monitoring Plan for all alternatives would be made consistent with current regulations and laws, prior to implementation. The Preferred Alternative as described in the Final Forest Plan is consistent with all direction, including the ROD for the FSEIS.

Comment 31: Grazing in recently burned areas can substantially increase erosion and inhibit regeneration of Sensitive and other native plant species. The Final EIS should evaluate the environmental impacts and disclose the location and magnitude of planned grazing in burned areas.

256

Response: Grazing in burned areas is a project-level decision and would be analyzed at the site level; refer to Final Forest Plan, Chapter 4 Ecosystem Approach to Management. Rarely is additional grazing proposed for burned areas for the exact reason stated in the comment. However, where topography, plant productivity and soil stability conditions can permit additional grazing, that option will be considered.

Comment 32: The Draft EIS raises the possibility of increasing range availability through prescribed burning or "intensive grazing strategies", but does not adequately describe these practices or discuss the environmental impacts.

256

Response: Putting fire processes back in ecosystems is a long-term goal of forest and range managers. Using prescribed fire is one of the best ways to begin to reintroduce the natural role of fire because it can occur when hazards of escape are low. When fire disturbs shrub and tree vegetation, grasses and forbs often increase in abundance. If the burning activity is located in an existing grazing allotment, additional forage production capacity may be a side benefit to range/grazing productivity.

Intensive grazing strategies are a separate topic, although they could be used in combination with prescribed fire. Discussions of intensive grazing strategies have been added to Chapters 3 and 4 of the Final EIS under Range Management.

Comment 33: For each allotment, the Final EIS should include the number of AUMs, the grazing management program (season of use, rotation, etc.), year of last complete formal range analysis including range capability and suitability, current range condition and trend, the date the current AMP was completed; the target date for a new or updated AMP, annual percent forage utilization expressed by range type with a list of the type of plant communities commonly grazed, soil type, list of allotments currently experiencing resource damage, known Sensitive plant species populations, type/level of environmental analysis and management actions needed to bring the allotment into compliance with the Forest Plan.

256 283

Response: A priority list for revising allotments has been included in Chapter 4 of the Final Forest Plan. However, most of the information requested above is site-specific and is not appropriate for a forest-wide analysis. Information at the landscape/watershed and

site levels will be compiled and analyzed during ecosystem analysis and project analysis in RPDs as part of Forest Plan implementation.

Comment 34: The Forest is commended for planning to review and prepare new AMPs for all of allotments in this planning period. NEPA requires that EAs or EISs be conducted for each allotment or grouping of allotments.

82 283

Response: In the Final Forest Plan, references to AMPs have been replaced by AOIs and RPDs. The intent is to reissue permits pursuant to NEPA as they expire. A schedule is included in Chapter 4 of the Final Forest Plan. Analysis on each allotment or group of allotments will be conducted in conjunction with Ecosystem Analysis and project analysis.

Comment 35: Include as a standard and guideline in the Forest Plan: No supplemental nutritional sources such as protein supplements shall be placed in allotments.

256

Response: This was not included as a standard and guideline. Currently, only salt is used to supply sodium chloride to animals. Salt is an excellent tool for permittees to distribute animals more evenly over the range. The quality of forage on the Forest is so high that there is no incentive for permittees to purchase and feed expensive nutritional supplements.

Comment 36: The 4 Northern California forests and eventually the whole region should have a common, and easily understood, standard procedure for measuring range utilization standards.

332

Response: All 4 Northern California Forest's Final Plans have been modified to include consistent utilization standards.

Comment 37: Managing to encourage native plant community re-establishment, particularly in range lands using fire, timed grazing, rest/rotation, or other systems where feasible should be a goal of the Forest Plan. The Forest Plan should outline standards and guidelines for AMPs for controlling exotic plants and restoring natives to the extent possible. Type conversions should be retired where feasible.

256

Response: In determining ecological status of plant communities, native species will always be considered as primary components of the desired future condition; refer to Forest-wide Standard and Guideline 23-11 in the Final Forest Plan. This has not been included as a goal, however. Non-native plants may also fulfill roles and may be too inextricably bound into the functioning of the ecosystem to be removed at this juncture. Grazing systems and fire management are primary tools used to achieve desired future conditions. Type conversions are a thing of the past and will not normally be used in the range management program.

Comment 38: FLPMA specifies "affected interests" in the development of an AMP shall be revised after required review for effectiveness and "careful and considered cooperation and coordination" with specified parties involved.

281

Response: This is our practice. It is also required under NEPA.

Comment 39: All allotments should be managed to meet the objectives of the draft management direction for the 4 northern Forest riparian ecosystems and the Aquatic Conservation Strategy Goals of Alternative 9 of the FEMAT FSEIS.

256

Response: The Preferred Alternative incorporates the Aquatic Conservation Strategy objectives and all other standards and guidelines appropriate to the Forest from the ROD for the FSEIS. This has been clarified in Chapter 4 of the Final EIS and Chapter 4 of the final Forest Plan.

Comment 40: Permittees "leasing" rangeland should only be required to manage for vegetation relative to grazing and not wildlife enhancement, fisheries production, biological diversity corridors, aesthetics of the "wilderness experience," etc.

281

Response: It is the agency's responsibility to manage all resources within rangeland ecosystems to ensure continued ecosystem composition, structure and function. Ecosystem management means considering all components of the ecosystem and how they inter-relate rather than focusing on one aspect at a time. As resource users, permittees have an obligation to comply with the agency mission as well as applicable laws which require an integrated approach (NFMA, ESA, etc.).

Livestock grazing can be an important tool for resource managers to naturally foster nutrient cycling, carbon turnover (decomposition of organic material) and enhancement of foods and habitats for many species. Reducing impacts where they are adversely affecting other components of the ecosystem, is a primary goal of range conservationists. In the case of fisheries, some modifications of grazing practices may be necessary to keep effects on streamside vegetation and soils to a minimum. Well managed grazing programs can be very compatible with multiple uses of the Forest. However, effort is required to ensure that this happens in as many situations as possible.

Comment 41: Representatives of the Forest should work directly with the appointed members of the Sis-

kiyou County Grazing Advisory Board to overcome policy conflicts and develop a coordinated rangeland resource management plan for the rangeland section of the Preferred Alternative.

281

Response: Throughout the planning process, great effort has been made to incorporate interested members of the public; refer to Appendix A of the EIS for a summary of this effort. Forest range staff work closely with grazing permittees on range issues on a regular basis. There is Forest Service representation at Siskiyou County grazing meetings. Under the Federal Advisory Committee Act, it is illegal for the Forest to take the advice of advisory boards unless they follow the procedures of the act.

Comment 42: AMPs should be revised for all allotments within this planning cycle. A minimum of 3 AMPs should be revised per year. All AMPs: a. shall incorporate these standard and guidelines; b. shall re-evaluate the suitability and capability of the allotment for range use and forage production; c. shall be revised on a schedule based on ecological criteria such as need for riparian rehabilitation, threats to Sensitive plants, etc. in accordance with FSM 2211.6 7.; d. shall include extensive monitoring by permittee(s). Permittees shall provide reports of range condition midway and at the close of the grazing period. Permittees may be required to use forms to document soil condition, percent cover, etc. Permittees may be required to photograph representative reference riparian and upland sites to document range condition. The same representative sites will be photographed each time; e. shall use range suitability guidelines from the Toiyabe National Forest to rate the grazing suitability of each allotment. f. shall set proper use criteria based on the limiting factor for each allotment. The limiting factor may be soil condition, trampling, forage utilization, riparian condition. Two standards are to be observed when identifying limiting factors for use criteria: 1. Soil and vegetation are basic resources. Downtrends in condition must immediately be addressed by management changes; 2. After requirements for soil and vegetation resources have been provided, other resources, such as livestock grazing, wildlife and aesthetics can be considered; g. shall set sustainable trampling, soil compaction and soil cover standards; h. shall prescribe long-term trend studies to determine if use criteria are sustainable. i. shall be developed with full NEPA analysis.

256

Response: Much of this is incorporated in the Final Forest Plan Forest-wide Standards and Guidelines 23-4, 23-5 and 23-6. RPDs will incorporate Forest Plan Range Management standards and guidelines. The Forest is already actively pursuing increased permittee participation; refer to response to Range Management Comment 50. The Toiyabe guidelines may not be entirely appropriate as the ecosystem types are so very different. The rate of accomplishment will be determined by the funds available. All items mentioned are important and will be included either directly or indirectly. Staff limitations will limit the breadth and depth of investigation, however.

Comment 43: The Watershed Inventory Needs list and stream surveys done by the Fish and Watershed staff should be part of the AOP.

82

Response: From a multiple resource monitoring perspective this would be great, but it is unlikely that funding would be allocated at a level that allows surveys to be done annually. Watershed and stream inventories will be used in developing RPDs. A key set of these parameters will likely be monitored by range staff, including streamside vegetation condition and indicators of bank erosion.

Comment 44: Using AMPs to determine appropriate stocking and distribution of livestock to achieve optimum utilization and prevent deterioration of the range and other resources risks sending other Sensitive species into the category of T&E.

82

Response: Determining appropriate stocking and distribution would be aimed at preventing adverse effects such as listing species. A Biological Evaluation or Biological Assessment was prepared for all AOPs this year to determine effects of livestock grazing on TE&S species. A no effect determination was made by the USFWS for all Federally listed species. Collecting information on other species where there is little information on livestock interactions is a Forest priority.

Comment 45: There is no estimate of the amount of transitory range or the forage associated with it. There is no estimate of the acres used for grazing or the proportion in key riparian areas. There is no clear definition of primary, secondary and permanent range.

5

Response: Definitions of these terms can be found on page 3-118 of the Draft EIS and in the Glossary. Acreage estimates are provided for primary and secondary rangelands on page 3-118 of the Draft EIS. Acre estimates for suitable rangeland, transitory rangeland and riparian areas within allotments have been added to the Final EIS in Chapter 3.

Comment 46: Locally, cattle drift on allotments adjacent to Oregon forests have been an unresolved problem for almost 100 years.

281

Response: This is outside the scope of the Forest Plan. A strategy to address this problem was developed and is being implemented in the 1994 grazing season. The Forest range staff are working closely with the Rogue River National Forest and permittees to find acceptable solutions. A Forest Service

employee has been assigned to the area full-time for the grazing season to monitor livestock use and distribution and effects on the Siskiyou Crest. Results of this season's monitoring and implementation of the plan will be incorporated into RPDs and AOIs for the allotments involved.

Comment 47: In a presentation by Dr. John Menke of U.C. Davis at a public forum several years ago, Dr. Menke indicated that the native grasses of Siskiyou County are inherently shorter in comparison to other areas. They also have a great capacity for recovery after grazing. Forage standards should be adjusted to take into consideration the forage production capacities of site-specific vegetation.

281

Response: Dr. Menke's statement is taken slightly out of context here. It does not refer to all grasses, but to a select few with a shorter growth form. Specifically, California oatgrass and pull-up muhly are short statured, native perennial and annual grasses, respectively. While neither are technically sod-forming species, with repeated grazing by cattle and/or horses and mules they tend to form a rather complete sod giving almost complete soil coverage. This is an example where large herbivore grazing can cause a range plant community to develop which is very resistant to soil erosion and is very tolerant of repeated grazing at rather high levels of utilization. The point was made by Dr. Menke because to the lay public, this plant community could appear to be overgrazed since it is so short statured. Utilization of 40, for example, will often result in a stubble height of less than 2.5 to 3 inches on the vegetative growth (not inflorescences). To the lay public, using a 12-16 inch tall grass as an ungrazed reference point, would indicate severe overgrazing. The point is that these two species only produce a 5- to 6-inch growth each year and a 2.5- to 3-inch stubble height after grazing is not severe.

Comment 48: Ecological site inventories are proper only to determine ecological status (early, mid, late seral, or potential natural community.) Ecological inventories should not be used to determine forage production or carrying capacity.

281

Response: It is very difficult to determine carrying capacity for livestock by inventorying forage producing areas and multiplying productivity by area of each unit and summing over a range allotment. When setting up a new allotment where no grazing data exists, this may be necessary. Virtually all allotments on the Forest have extensive livestock stocking history, and in these cases monitoring of utilization and shifts in ecological status is a much preferred and more accurate way of determining appropriate level of stocking. Thus, monitoring of ecological status is one of the best ways of determining whether objectives are being met, eg., is the natural range of acreages of range units by state of ecological status present or is the system out of balance? For example, if the proportion of late seral communities is below the natural range of variability, greater reductions in livestock grazing disturbance will be necessary.

Comment 49: Since the Forest does not propose to decrease AUM production, increased impacts to upland ecosystems are probable as grazing use shifts away from the preferred riparian areas. The Final EIS should contain a discussion of potential impacts to the various upland ecosystems such as chaparral including the monitoring and mitigation measures that are planned to prevent upland damage by grazing.

256

Response: A discussion has been included in Chapter 4 of the EIS under Range Management.

Comment 50: Given the proposed new standards and guidelines for the Preferred Alternative, AUMs will likely be considerably less than the other alternatives due to riparian restrictions and the decrease in transitory range due to timber harvest decline. Undoubtedly the Forest is hoping that improved distribution of livestock and other improvements will allow AUM outputs to remain at this high level. It is probably unrealistic to expect distribution to be dramatically improved given the desire of cattle to remain on gentle ground with lush forage and water, expected low range administration and improvement dollars and the economics of more intensive herding, particularly on the westside of the Forest. Also, there is a tendency for some public and the Forest Service to The EIS should describe the more proactive approach to range management and disclose the effects of changing grazing management. The Draft EIS does not detail the measures by which the Forest plans to implement the new riparian protections.

198 256

Response: Implementation of the proposed Forest Plan is expected to result in better livestock management including improved distribution as well as increased permittee participation in monitoring, implementing standards and guidelines, identification of areas not meeting objectives and implementation of mitigating measures. Decreasing AUMs alone will not resolve resource problems without employing some of the these strategies. The Draft EIS does state that AUMs may decrease due to restrictions on grazing in riparian areas and a decline in transitory range as a result of timber harvest (although this may be compensated for by wildfire acres depending on where they occur) for some alternatives. Draft EIS references related to expansion of the program due to utilization of transitory range resulting from management activities or wildfire. Use of transitory range resulting from better livestock distribution could alleviate problems in more sensitive areas. Proper livestock management in transitory range has been successfully employed on

this Forest to reduce competition for moisture in establishing and releasing plantations, thus meeting several resource objectives at one time. AUMs are not a target that must be met. The proactive approach is described in Chapter 4 of the Final EIS. The purpose of a Forest Plan is to provide programmatic direction, basically the what and why of forest management, not the details of how to accomplish objectives. Leeway is left, so employees can tailor implementation of projects to the specific site conditions.

Comment 51: FLPMA provides for just compensation to the grazing permittee for the elimination of any permanent improvement. Any plan for removal of improvements no longer utilized or claimed by grazers should first be coordinated with Siskiyou County for review of historic value and desirability of upgrading structures for use by packers and recreational horsemen.

281

Response: Any decisions to remove structures will be made pursuant to applicable Federal laws such as the Wilderness Act and NEPA. Siskiyou County has been and will continue to be involved in that process.

Comment 52: The utilization table by condition class in the Forest-wide Standards and Guidelines is valuable, but should be required rather than merely suggested. "Existing condition class" should be clarified to mean ecological condition rather than forage condition.

198

Response: The table has been modified. Ecological condition is used rather than condition class and more detail is provided. However, these guidelines are still just suggestions as actual utilization standards will vary depending on site conditions. These utilization levels will be refined as more information is collected. Meeting Forest goals is the primary criterion for management.

Comment 53: A 60% utilization as proposed for wet meadows in good condition is too high except on seasonally moist meadows, after they have dried, in good condition, under a rest/rotation system. Qualifiers should be included.

198

Response: The standards and guidelines relating to utilization have been combined into a table which is based on ecological condition and rangeland types. A range of utilization values is suggested for each combination. Utilization levels from 45-60% are suggested for wet meadows in good condition. The strongest scientific literature says that rest/rotation per se has done little for improvement in grazing effects. Improvements in range condition have occurred because of the improved distribution of livestock due to the required infrastructure that comes with a rest/rotation system. Periodically utilizing a good to excellent condition wet meadow at 60% should not be the limiting factor in implementing a stricter riparian management program as proposed.

Comment 54: Livestock grazing should be eliminated from all established botanical areas and Botanical SIAs.

44

Response: If livestock are compromising the values of the area, appropriate action would be taken to avoid it. However in some cases (eg., mountain mahogany) livestock would have little or no impact on the values of the area. There may even be cases where livestock are maintaining a given site.

Ecological compatibility of livestock grazing with special plant species is little understood. The Nature Conservancy chose to continue sheep grazing at Jepson Prairie in the Sacramento Valley following their purchasing of the property because it had occurred for nearly the last century and many rare plants were thriving. They felt there was greater risk in change than maintaining moderate livestock grazing practices. Grasslands including meadows evolved with large herbivores and to a some extent livestock can serve as surrogates for those former grazers as well as a mitigating force for our fire exclusion practices. Excluding livestock from an area normally requires extensive fencing and maintenance cost. Under current multiple use policy of the Forest Service, it would be difficult to justify categorical exclusion of grazing until an environmental analysis for each individual case is completed.

Comment 55: Grazing should be phased out or eliminated over most of the Forest. Introduction of a seasonal forager greatly reduces the available food supply for native species. The very tiny economic benefits derived from grazing are overwhelmed by the many negative environmental consequences of this practice. Particularly in higher elevation areas where food supplies are lower and conflicts with recreation are greater.

9 18 25 40 41 57 258 273 286 316 319 323 324 337

Response: Livestock grazing is a permitted use compatible with the Forest Service mission which addresses providing forage for grazing animals as one of the agency objectives. Altering this mission is outside the scope of the Forest Plan and would be a decision for Congress or the Secretary of Agriculture or Interior to make. Until this mission is changed, livestock grazing will be permitted.

Forage allocation is an important part of range management. Utilization Standards and Guidelines allow 0 to 60% utilization of key species of plants depending on ecological condition of a community type. This scaling of use based on condition is designed to keep the full functionality of the ecosys-

tem, that is allocating 40 to 100% of key forage species to native species.

Your 'very tiny economic benefits' may be an individual permittee's whole livelihood. Most, if not all, of the allotments on the Forest provide forage during spring, summer and/or early fall that is complemented by hay production from a base property produced while the livestock are away. This makes these production systems feasible by providing a year-round forage for their agriculture.

Food supply is not necessarily lower at high elevation. Both plants and animals have evolved mechanisms to deal with short growing seasons and other limitations so long as abusive grazing is not allowed (refer to forage allocation above). Some of the attributes actually make the environment less limiting at higher elevation, for example, precipitation may range up to 70 inches in the Marble Mountains while Scott Valley may receive a mean maximum of less than 18 inches. Finally, multiple use has always had conflicting aspects because people have different values.

Comment 56: Grazing practices have played a significant role in diminishing the natural diversity of forest and grassland ecosystems in northern California through damage to riparian areas, elimination of natural predators, trampling, water quality degradation and invasion of non-native plants. For all of these reasons, grazing is inconsistent with the establishment of habitat reserves, (including LS/OG, RRs and Key Watersheds in the Clinton Forest Plan) and should be prohibited within them. Continuance of grazing practices within reserves and areas managed for the maintenance of biological diversity, including wilderness, is scientifically unjustifiable.

44

Response: This determination needs to made on a case by case basis dependent upon site-specific circumstances. The standards and guidelines from the ROD for the FSEIS (Clinton Plan) which are incorporated in the Preferred Alternative do not specifically exclude grazing from specially designated areas. It is more appropriate to determine whether objectives for each area are being met, and if they are not, take actions to correct the situation.

Refer to response to Range Management Comment 55. While the best evidence on changes in forest and grassland ecosystems can partially support the first statement, much of this occurred prior to the recognition that this was undesirable. Especially since the 1960s when many grazing allotments were reduced in stocking rates, much more sensitive stewardship of the land has been practiced. More needs to be done, but the quality and strictness in carrying out grazing management policy is ever increasing. Recent evidence suggests that moderate levels of grazing will increase native plant species diversity in wet meadow ecosystems which is counter to the generality that natural diversity is continuing to be diminished. Total exclusion grazing from RRs could only be accomplished by fencing and the cost would be prohibitive. This would effectively eliminate livestock grazing on much of the suitable range and is a decision for Congress or the Secretary of Agriculture or Interior and outside the scope of this Forest Plan.

Comment 57: It is important to recognize that grazing is highly subsidized and there are large costs not covered by fees.

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Response: Grazing fees are set at the national level and are outside the scope of this Forest Plan. Range Reform 1994 as proposed has addressed the issue of grazing fees at length. The Forest will use whatever fee structure is established at the national level. Cost efficiency is a consideration for program management, but is not the sole factor in determining how the range program or any other program such as recreation or wildlife fits into overall goals and objectives for the Forest.

The vast majority of permittees are family ranching enterprises. Grazing on public lands was originally justified to serve as a complement to hay or other animal foodstuff production on deeded land. Because so many permittee livelihoods are wrapped up in these grazing privilege arrangements, and a long precedent exists, it is difficult to consider termination of the agreements. For most allotments, however, the effective subsidy is small when consideration is given to logistics of management on large, complex, often steep and inaccessible terrain. Whole rural communities would be displaced or terminated if alternative agricultural options were not substituted. Grazing of large herbivores over landscapes with dispersed forage sources is a very specialized activity for which few, if any, alternative enterprises exist.

Comment 58: As the document states, many conflicts with other activities exist. The amount livestock owners must pay for grazing on NFS lands should be increased to cover all the costs of such grazing, including damage to the land and any construction made necessary. Owners should also pay private land owners whose land, through no fault or desire of their own, is accidently grazed by wandering animals.

98

Response: Both issues raised here are beyond the scope of this Forest Plan. Refer to response to Range Management Comment 57. Siskiyou county is an "open range" county where by law it is incumbent upon private landowners to fence livestock out of their property. It is not the intent for private lands to be utilized as part of National Forest grazing allotments, and where it is a problem it will be addressed in individual AOIs and RPDs.

Comment 59: The Desired Future Condition of the Forest should include a statement about rangeland expressed in ecological terms.

198

Response: The Forest Desired Future Condition has been modified to include a statement about rangeland conditions.

Comment 60: The Forest Plan is grossly inadequate. Measurable, state of the art range standards and guidelines should be developed that are adapted to the specific ecosystems of the Forest.

256 320 332

Response: Measurable utilization guidelines have been included in the Final Forest Plan based on ecological condition and community type. Suggested utilization standards and guidelines are expressed in both percent removal of current year's growth and in residual stubble height (where appropriate). Provision is also made for refining these guidelines as better information is collected.

Comment 61: Include a standard and guideline in the Forest Plan that new water developments and salt licks will be located at least 1/4 mile away from riparian areas, highly erodible areas and Sensitive plant populations. Old water developments should be moved away from such areas as AMPs are revised.

256

Response: This standard and guideline has not been included. The Final Forest Plan standards and guidelines for the RR Management Area under Range Management address livestock handling and management. Practices that retard or prevent attainment of the Aquatic Conservation Strategy objectives will be adjusted. AOIs and RPDs will address these issues on an individual basis as necessary.

Comment 62: Include a standard and guideline in the Forest Plan that vegetation reference plots will be placed in riparian and upland areas of each watershed to demonstrate potential vegetation condition and species composition as four northern forest riparian area management direction specifies.

256

Response: RR Management Area 10 includes a standard and guideline under Range Management that encourages the use of vegetation reference areas, but does not specify their placement in all watersheds as the installation and maintenance costs would be prohibitive.

Comment 63: Crested wheat-grass and other "non-native plant species" have provided quality forage to the benefit of livestock and wildlife on many ranges. Many non-native grasses, particularly of eastern European origin, have been established in the west for over a century and have become dominant and stabilized in relation to the current ecosystem.

281

Response: While the Forest Plan emphasizes native species, the role of non-native species is also recognized; refer to Forest-wide Standard and Guideline 23-11 in the Final Forest Plan.

Comment 64: Consensus on general approaches will take time, patience, open dialogue and respect. This must begin from the basic agreement that grazing has an important place on public lands and can beneficially contribute to the environment.

281

Response: For those who are highly critical of agricultural activity on public land, specifically grazing of livestock, this 'basic agreement' will be difficult to reach. Many points made in previous responses to public comments have been an attempt to get the facts on the table for further discussion. Your statement could present a good point of departure.

Comment 65: Include a standard and guideline in the Forest Plan that grazing in burned areas will be deferred for 3 years following wild or controlled fire in chaparral. Grazing in other burned areas will be allowed only when a team including the Forest Botanist and/or Ecologist determines that grazing will not accelerate erosion or adversely affect Sensitive species.

256

Response: This has not been included as a standard and guideline. Whether grazing will be allowed on burned areas will be determined on a case by case basis using an ID Team to determine potential effects and appropriate mitigation measures.

Comment 66: Include a standard and guideline in the Forest Plan that maximum forage utilization standards will be developed and followed in accordance with FSM direction. In the interim, while forage utilization standards are being developed, utilization guidelines will be used. After utilization allowances have been met each year, animals will be removed from the allotment.

256

Response: The Preferred Alternative has been modified in the Final Forest Plan to include Forest-wide Standard and Guideline 23-15 which provides guidelines for utilization by ecological condition and rangeland type. Forest-wide standard and guideline 23-17 has been added which provides for the utilization guidelines to be refined as data becomes available.

Comment 67: Inventory all range allotments in satisfactory, fair and unsatisfactory condition with 1 year.

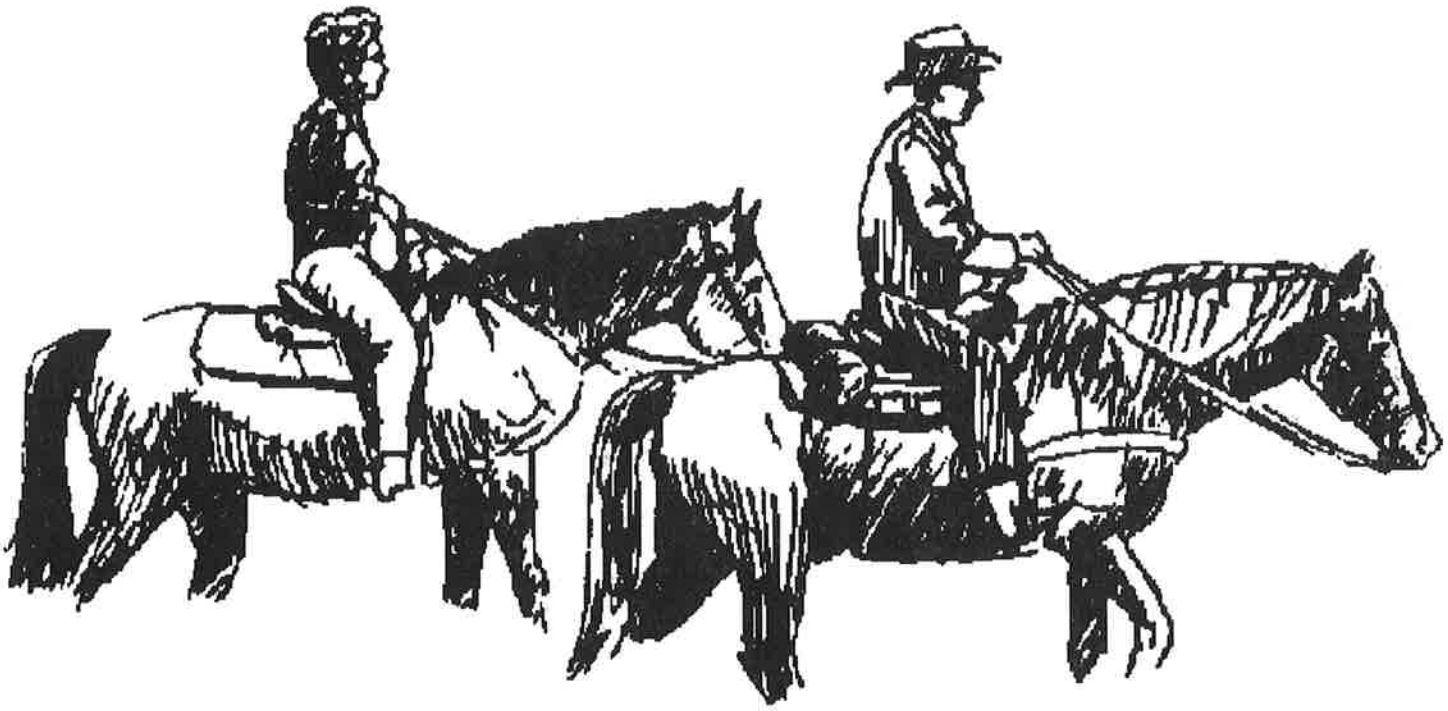
256

Response: This would be great if the funding and staff were available, but current funding allocations do not

provide for these. Utilization is monitored annually on each allotment and ecological data is being collected at the rate of about 3 allotments per year. A priority list for RPD revisions for all allotments which would include inventory of all permanent rangeland has been developed and is included in Final Forest Plan Standard and Guideline 23-6.

Comment 68: Include a standard and guideline in the Forest Plan that following NFMA direction, recovery plans will be developed for range that is in unsatisfactory or fair condition or does not meet soil, riparian, Sensitive species or other applicable standards and guidelines or Forest goals within 1 year of documentation. These areas should show stable upward trend within 2 years. If a stable positive trend is not documented within 2 years then use shall be reduced or stopped.
256

Response: The wording of this proposed standard and guideline was not adopted. However, Final Forest Plan Forest-wide Standard and Guidelines 23-1, 23-3, 23-4, 23-5 and 23-6 all provide guidance for meeting Forest Plan goals, including rehabilitation needs. The Forest Plan does not establish a single rule with time constraints for when use should be terminated. This would be determined on a case-by-case basis. Certain range types, such as sagebrush-grass, that are in fair condition may not respond to reductions or termination of grazing. Studies on the Snake River Plains show that these systems don't change much with complete protection from grazing. Cheatgrass replacement of native perennials seems to be irreversible. Little justification for stopping grazing of these sites can be made since they are stable with grazing.



Cultural Resources Comments

Comment 1: A significant portion of Forest funds should be focused on completion of an archeological research design or contextual plan.

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Response: A new Forest Overview will be completed within 2 years of the Forest Plan's approval. It will be a revised contextual history.

Comment 2: The academic community should be enlisted in archeological programs and field operations.

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Response: There are no academic institutions with sound archaeological programs that would benefit the Forest within this area.

Comment 3: Archeological monitoring is a poorly-financed minimal effort. Provide data on the type of monitoring that can be achieved for $1,000. Indicate funds allotted for monitoring where allocations are not specified.

45

Response: Funding for monitoring is requested annually. Funding for monitoring has not been received to date.

Comment 4: The impacts on cultural resources of livestock use and proposed mitigation measures should be analyzed. Provide 106 review of issuance, reissuance and extension of grazing permits.

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Response: The potential impacts are discussed in Chapter 4, Cultural Resources Management in the EIS. A 106 compliance review is completed on fencing, water development and all other ground altering activities within range allotments.

Comment 5: Provide some detail on archeological research and technical planning needs. Specify costs, study completion dates and personnel responsible for the studies. Develop an aggregate research and technical needs program for the 4 Northwestern California Forests.

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Response: Technical planning needs are presented in Appendix B of the Forest Plan. Funding of $10,000 has been requested to develop integrated plans with those of the State of California. The cost of the overview that will be updated 2 years after the Final Forest Plan is estimated as $20,000. At this time, research is conducted if a site will be impacted or has been impacted; the costs vary from $6,000 to $35,000. There are currently no plans for an aggregate plan between the 4 forests.

Comment 6: Indicate the level of expansion of cultural survey and evaluation beyond the project level and the level of funding for cultural resources program under various alternatives. Calculate when Forest-wide inventory and evaluation will be completed under various alternatives. Evaluate the adequacy of methods used to inventory sites.

45

Response: The EIS, Chapter 4, Cultural Resource Management contains information on funding and program levels each alternative. Acres surveyed on the Forest Plan are not tied to projects. Completion of inventory and evaluation would be dependent on receiving funding in all alternatives. Site inventory is done to State level professional standards.

Comment 7: The Klamath and Six Rivers National Forests should provide consistent language in their Forest Plan documents in reference to the Federal government's trust responsibilities to Federally recognized Indian Tribes.

203

Response: In the Final Forest Plan, the Government-to-Government agreement with the Karuk Tribe has been used to establish standard language. Both forests have signed this agreement with the Karuk Tribe.

Comment 8: The find-flag-avoid tactic fails on at least 4 counts. 1) Only a small portion of the prehistoric sites are found by traditional inventory, particularly in a forest setting. 2) Flagging and the islands of trees left at archeological sites alert vandals and attract campers, cattle and cars and may not prevent dirty timber operations. 3) Although sites often are not avoided, the avoidance tactic avoids compliance with 106 requirements by failure to evaluate sites. 4) Section 106 review is aborted by the avoidance tactic.

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Response: 1) Without data to support it, this remains an unverified assumption. 2) This could be true, but again quantitative proof is needed. 3) Funding is requested in all alternatives but Alternatives Current/RPA and G(SOHA) to allow for more in-depth evaluations. 4) Section 106 compliance is required, even if cultural sites are buffered. Consultation and protection of sites is standard practice.

Comment 9: Analyze the ineffectiveness of the find-flag-avoid tactic that constitutes the archeological policy of the Forest in violation of Section 106 requirements through a literature review and a workshop of scientists. Renegotiate the illegal Memorandums of Understanding (MOUs).

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Response: Section 106 is complied with as funding allows. Consultation and protection of sites is standard practice. Nomination of sites is done as funding allows.

A literature search of the flag and avoid strategy is unlikely to be very useful as the Southwest is very different from Northern California. There is very little comparability. There are no MOUs dealing with the State Historic Preservation Officer or the Advisory Council on Historic Preservation.

Comment 10: Although the Forest has recognized the importance of Inam and Katamin, the actual land area needs to be expanded through consultation to include both sides of the Klamath River.

203

Response: Following Government-to Government procedures, the Karuk Tribe and Forest Service representatives met to discuss expansion of these areas. A process was proposed and further meetings scheduled. Consultation will be on-going. The Karuk Tribe has change the spelling of Katamin to Cottimien; this has been changed throughout the documents.

Comment 11: Federally recognized Native American tribes should be supported in asserting stewardship and management responsibilities within their aboriginal and/or historical territories. Full management responsibility by the Karuk Tribe within defined and mapped ceremonial areas of Inam and Katimin as well as on mapped village sites and on other sacred sites once these are mapped and corroborated by informants and archaeologists should be permitted.

283

Response: Management of these areas would be coordinated with the Karuk Tribe in all alternatives according to the Government-to-Government Agreement. The agency cannot give up its decision-making authority relating to NFS lands to another entity.

Comment 12: Cultural inventories of tribal cultural resources within Ancestral Territory should be conducted by the Tribe. Cultural inventories rely on common knowledge and landscape analysis principles while Forest Service inventories are focused primarily on archeological sites. A reliance on Forest Service staff to perform these inventory responsibilities in the past has often led to conflicts that could have been avoided if Tribal participation in the actual surveys was recognized as a legitimate requirement for project success.

203

Response: The Forest would welcome a joint survey strategy and implementation of survey with the Karuk Tribe. This partnership would prove invaluable to both parties. The focus on material remains and archaeological sites has shifted over the last decade to include sacred areas and use areas. This is a dynamic program of inventory and treatment that is continually growing.

Comment 13: The Forest has reduced their cultural resource staff and focused cultural resource surveys on meeting archaeological survey requirements for proposed timber sales. To avoid future conflicts, surveys of Karuk cultural resources should be developed through a formal consultation process. Since the Tribal Employment Rights Ordinances require that Indian people are provided available employment rights, future cultural surveys should provide for tribal people to work with Forest Service staff.

203

Response: The Forest would welcome a partnership approach to surveys and management. The Forest has employed tribal members to survey in the past and hope to work more closely with the Tribe in the future through partnership and education.

Comment 14: Tribal Involvement should be articulated throughout the Forest Plan documents. References to Federally recognized Indian Tribes should be included along with Private, State and Federal entities. For example, refer to the multi-million dollar programs and services that the Tribe provides in Siskiyou County on pages 3-21 and 3-22 in the Draft Forest Plan.

203

Response: This has been included on page 3-135 in the Final EIS and on page 3-22 in the Final Forest Plan.

Comment 15: There is a tendency to imply that cultural resource protection is limited to Native American contemporary use areas, cultural areas or project related surveys. Although protection of specific cultural resources are obviously important, the Tribe was placed here by the Creator as steward of all cultural and natural resources within our Ancestral Territory. Therefore, reference to Tribal involvement should be included in all resource categories within the Forest Plan.

203

Response: The Preferred Alternative has been modified to include this perspective. Refer to Forest-wide Standard and Guideline 24-27 on page 4-70 of the Final Forest Plan.

Comment 16: In order for the Karuk Tribe to successfully work cooperatively with the Forest; opportunities for training, technical assistance, participation in planning and management and technology transfer need to be provided by the Forest Service to establish a mutual and beneficial partnership. These opportunities need to be articulated in the Forest Plan. Forest Service policy states that the Forest Service will: Maintain a governmental relationship with Federally recognized governments. Implement our programs and activities honoring Indian rights and fulfill legally mandated trust responsibilities. Administer programs and activities to address and be sensitive to traditional religious beliefs and practices. Provide research, transfer of technology, and technical assistance to Indian governments.

This language should be included in your Forest Plan documents.

203

Response: The Preferred Alternative has been modified to include a section on the Tribal Government Program which covers these issues. Refer to Forest-wide Standards and Guidelines 24-26 and 24-27 in the Final Forest Plan.

Comment 17: The Forest fails to meet the 106 requirements of the National Historic Preservation Act. Very few recorded sites have been evaluated for National Register eligibility. The Forest's cultural resources program must evolve beyond its current project-dependent state to be responsive to the local Indians and meet the intent of the law.

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Response: Evaluation for the National Register is completed as limited funding and staff allows. There is no time limit established in the law. Coordinating efforts with local Native American groups, including the Government-to-Government Agreement show that the program is evolving, not static.

Social and Economic Environment

Social Comments

Comment 1: A Civil Rights Impact Analysis must be completed for any "major action" as a part of any natural resource action. The brief Social Impact Analysis in Chapter 3 is deplorably inadequate and serves rather to de-value the cultural contribution of the distinct lifestyle categories and minority groups.

281

Response: Forest Service direction states, "A civil rights impact analysis for environmental or natural resource actions is part of the social impact analysis package in a necessary environmental impact statement (FSH 1709.11). The civil rights impact analysis is presented in the Social section of Chapters 3 and 4 of the Final EIS on pages 3-130 through 3-134 and 4-159 through 4-162. "Civil rights" is defined as "the legal rights of United States citizens to guaranteed equal protection under the law." (FSM 1705). Because no actual or projected violation of legal rights to equal protection is foreseen, no civil rights impacts are reported in the Final EIS. The social analysis assesses the social consequences to communities and people resulting from implementation of the alternatives. The social and economic impact analyses, are consistent with NEPA and agency direction.

Comment 2: Recreation and the availability of all forms of it are a social issue. It is a given that no single community is comprised of individuals who enjoy the same type of activities. So it is with the users of the National Forest. The drastic reductions of the land base available to access the public lands constitutes a social impact which must be explored for the consequences and cumulative impacts.

255

Response: The Alternatives present a range of recreational opportunities; refer to response to Recreation Management Comment 9. Reductions in one type of opportunity are accompanied by increases in another type. The Social section discusses the effects on various social groups, recreation and access are a part of these effects. The public will have an opportunity to become involved in site-specific analysis as part of implementing management direction for recreation on the Forest. Impacts, including social will be included in each site specific analysis.

Comment 3: Chapter 3 of the Draft EIS discusses the increase in population during the next decade in Siskiyou County and adjoining areas, not to mention the increase in population throughout California. Where will building products needed to house the increased population come from if the National Forest of the West do not provide their share of the raw material base?

264

Response: Chapter 3 of the Draft EIS states that population growth in the area of influence has not been rapid. Population projections show a slow continued growth over the next 10 years. It is anticipated that building products will not become an issue due to population growth in the local area.

Comment 4: The long-term residents were completely ignored in the preparation of these documents.

296

Response: The long-term residents are addressed in the Social section of Chapters 3 and 4 of the Final EIS. Considerable effort was made to involve all members of the public throughout the planning process; refer to Appendix A.

Comment 5: Decisions concerning forest use will have a direct impact on both the human and non-human communities of Siskiyou County. Management consideration for valuing and protecting the viability, diversity and uniqueness of local human communities and cultural lifestyles should be commensurate with that given to the non-human communities of the Forest.

281

Response: The Social section in Chapter 4 of the EIS analyzes the social consequences within the Forest's 7-county area resulting from implementation of the alternatives. The diversity and uniqueness of the social groups and lifestyles within the local area is an important component of the social analysis in the EIS. The alternatives provide for economic and social needs

while addressing the explicit requirements of laws to protect the environment.

Comment 6: The rapidly growing wise-use movement should be addressed in the Social section.

255

Response: The Social section is not intended to describe various movements or beliefs; its purpose is to display the consequences of the proposed alternatives.

Comment 7: The cumulative impacts of massive alterations in use patterns and massive restrictions on vehicle use and access should be discussed as they relate to the economics and social setting.

255

Response: Massive alterations in land use patterns and massive restrictions on vehicle use are not a predicted outcome and therefore do not need cumulative impact analysis.

Comment 8: Miners, ranchers, loggers and millworkers have been lumped together in the category of "long-term residents" and have been dismissed in importance by their numbers. These groups have significantly impacted both the physical and cultural fabric of Siskiyou County's communities and surrounds.

281

Response: No grouping considered in the Social analysis in the EIS has been dismissed in importance due to their numbers or for any other reason. All are considered important. As discussed in Chapter 3, lifestyles of the residents within the 7-county area are diverse and those lifestyles are linked to the land and natural resources. The intent of the analysis in Chapter 4 of the EIS is to discuss the effects of the proposed alternatives on the groups, not to discuss the group's effects on the local communities.

Economics Comments

Comment 1: There should be a realistic financial discussion that recognizes that the activities that produce receipts are actually subsidized. The Draft EIS says "Returns to the U.S. Treasury are the estimated payments by consumers of Federal outputs collected by the Federal Government." This confuses "returns" with "receipts." By including timber assets traded for roads, a non-monetary transaction, it implies that the U.S. Treasury received something it will never get. There are other earmarked receipts, as well as traded assets. Brush Disposal and Logging Road Maintenance reduce the timber receipts by trading timber for service. These 2 activities result in a deduction in the price of the timber to cover costs the purchaser bears to do some of this work, and payments to the Forest Service to cover work it will do. A continuation of a subsidized timber program may be warranted, but there is no recognition that this condition prevails.

5

Response: Pages B-18 through B-20 in Appendix B of the Final EIS discuss the policy of providing most Forest outputs at no charge or at a reduced charge. Table B-9 shows actual receipts for the various outputs. These values were used to estimate returns to the U.S. Treasury. They can be compared with costs on pages 2-76 through 2-87 of the Final EIS. Under generally accepted accounting principles and the bookkeeping system used by the U.S. Government, both cash payments and payments in kind (asset exchanges) are counted as receipts or returns. A continuation of a subsidized timber program may be warranted, but there is no recognition that this condition prevails. Under generally accepted accounting rules, "earmarked receipts" as well as "traded assets" are both counted as receipts. As long as costs are also accounted for as they are in the EIS and in Timber Sale Program Information Reporting System (TSPIRS) (refer to response to Economics Comment 2), receipts and costs can still be properly compared.

Comment 2: The Summary claims at page 15: "The Klamath has traditionally produced net revenue from timber harvest." No solid evidence is presented to support this claim. In fact it is controverted by examining the cash posture of the agency for the 10 years, 1983-1987, "Net Revenue" to those familiar with business operations, is the equivalent of "Income," which means the residual after costs have been deducted for business receipts.

5

Response: A detailed accounting of timber revenues and costs is contained in the annual report from the TSPIRS. TSPIRS reports for the Klamath National Forest are the basis for the statement. TSPIRS applies generally accepted accounting principles developed with the US General Accounting Office at the direction of Congress to the timber sale program.

Comment 3: Given the operating concepts the Draft EIS embraces and the lower cut, all signs seem to point to a continuation of heavily subsidized timber sales. Table 2-20 at 2-74 confirms this, although it follows the traditional "stairway to heaven" approach that promises a better future if we will endure a grim present. Negative net cash flow (for example, income), shrinks and Present Net Value in the form of "Non-Cash Benefits" rise.

5

Response: Table 2-20 compares the total costs of managing the Forest to total returns from all resource outputs. Net cash flow is negative because of the policy of charging less than full value for outputs other than timber. For a comparison of only timber costs and receipts, refer to the annual TSPIRS report mentioned in the response to Economics Comment 2 or the

discounted costs and benefits by resource shown on page 2-81 of the Final EIS.

Comment 4: Jobs are in restoring the forest, restoring the watersheds and stream banks.

180 253

Response: EIS, Chapter 4, Water and Fisheries sections discuss the restoration programs proposed by each alternative. These kind of jobs are included in the total jobs projected for each alternative that are displayed in the EIS, Chapters 2 and 4, Economics.

Comment 5: Jobs should be created through light recreation by closing and revegetating problem roads and by substituting manual conifer release for planned spraying of toxic herbicides.

243

Response: As the supply for all types of recreation in the Forest exceeds the current demand and is expected to do so for at least 50 years into the future, this is unlikely to stimulate recreational use; refer to responses to Recreation Management Comments 5 and 6. The alternatives would use a variety of methods for conifer release. The Preferred Alternative would likely use this method more than the other alternatives if funding permitted, as herbicides would be used only when essential to meet Forest Plan objectives. Jobs associated with recreation and forest management activities are included in the employment effects shown in the EIS economic sections of Chapters 2 and 4.

Comment 6: With the decline in the harvest on the National Forest the cost of lumber has soared to unbelievable prices. Men have been put out of work, the counties have received less funding and construction costs have raised outrageously.

239

Response: These effects are driven primarily by changes in national and regional markets, not just by the Forest. Refer to Appendix H and the Social and Economic sections of Chapter 4 of the EIS.

Comment 7: Tables 2-19 and 2-20 ignore the other resources and costs.

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Response: Costs and values for other resources are included in Tables 2-19 and 2-20. Refer to the narrative that accompanies the tables on pages 2-79 through 2-82 as well as pages B-17 through B-20 in Appendix B of the Final EIS.

Comment 8: Even if the current Preferred Alternative is the most logical, a better analysis would show a realistic cost picture. It might also lead to tighter analysis of actions with high costs relative to receipts for such receipt generating activities, as well as for non-receipt activities. One alternative is to avoid an action that loses amounts above a set limit.

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Response: Refer to page 2-1 of the Final EIS. The NFMA regulations direct the use of net public benefits rather than the use of only financial criteria. Refer to responses to Economics Comments 1, 2, 3 and 7.

Comment 9: The Draft EIS contains no historical perspective and considers none of the pertinent information which is essential to understanding socio-economic impacts. These deficiencies must be corrected in the Final EIS to satisfy NEPA responsibilities. Research makes it clear that the post-war emphasis of public forest management on production of timber has produced neither prosperity nor stability for forest communities.

283

Response: Pages 3-134 through 3-136 in the Final EIS contain a description of how local economies have changed over time, the relationship of the local economy to management of the Forest and unemployment related to dependence on timber. The purpose of an EIS is to disclose effects related to the proposed alternatives, not to present historical data.

Comment 10: The PNV forecasting model uses a discount rate of 4%. This is wholly inadequate. Indeed there is clear evidence that the present net value (PNV) method undervalues natural resources. In this regard please refer to and utilize studies by the World Resources Institute.

283

Response: The basis for the discount rate is described on pages B-17 and B-18 in Appendix B in the Final EIS. The use of PNV is called for by the NFMA regulations at 36 CFR 219.12(e). That PNV does not fully account for all resource values is recognized by the use of the net public benefits concept as required by the NFMA regulations at 36 CFR 219.1(a). Refer to Appendix D in the Final EIS for a discussion of how net public benefits is used in the analysis.

Comment 11: The Preferred Alternative has the largest budget. Clinton's plan has a larger budget, but produces less.

296

Response: The Preferred Alternative does have the largest budget because it would require more planning, analysis, inventory, monitoring, mitigation measures, and have more rehabilitation projects than the other alternatives. All of these cost money. The benefits associated with this type of activity can not usually be assigned a dollar value that can be compared to costs.

Comment 12: Timber benefits are projected to increase much more rapidly than non-cash benefits with

total costs remaining stagnant. History and common sense indicate the contrary. Though the value of timber is likely to increase substantially, so will the cost of accessing that timber. The lion's share of the Forest Service budget relates to logging. The alternatives with the greatest amount of logging should display the greatest increase in total costs. However, this is not reflected in the projected costs of the alternatives.

276

Response: Refer to page B-17 in Appendix B in the Final EIS. The 1990 Resources Planning Act (RPA) analysis is the basis for the price trends used. That analysis is based upon the historical record. Figure E-1 on page E-3, Appendix E in the Final Forest Plan shows the proportion of the budget related to timber management and other purposes. Refer to Tables 2-18 and 2-19 and the accompanying narrative in the Final EIS. By far, the largest non-cash benefit is the value of the water that flows from the Forest. Total flows are affected very little by the alternatives. The very large water values that change little between alternatives are the reason that non-cash benefits change little.

Comment 13: The Draft EIS does not fully address state and county administrative costs associated with changes in private land management and Federal fire protection capabilities.

259

Response: Only effects that are reasonably connected to the direction contained in the alternatives for the management of the Forest lands should be addressed in the EIS. It is not clear how direction within the scope of the alternatives will affect state and county administrative costs associated with private land management and Federal fire protection capabilities under the alternatives.

Comment 14: The reductions in timber harvest volume likely to result from Option 9 are greater than anticipated in the Draft EIS, calling into question the accuracy of the Draft EIS's economic impact assessments.

259

Response: The economic impact assessment for the Preferred Alternative has been revised to reflect changes in the Final Preferred Alternative. One of the purposes of obtaining public comment on a draft EIS before preparing a final EIS is to improve alternatives and analyses based on public comment.

Comment 15: Economic analysis of all forest plans and Option 9 fails to consider the regional impacts of forest decisions. The fish user days (FUDs) are the only indices of regional economic impacts and are useless in describing the local economy. Clearly such statistics ignore the impact of a revived commercial fishing industry in a region plagued by reliance on an extractive timber economy. Fish are a renewable resource, which, if properly managed, could help diversify the regional economy.

201

Response: Commercial, recreational, and subsistence harvest of fish are discussed on pages 3-67 through 3-68, and 4-98 to 4-99 of the Draft EIS. FUDs are an appropriate measure of recreational use. Spending by recreationists is an important component of regional income and employment effects in the 7-county area (refer to pages 4-177 through 4-180 of the Draft EIS). The effect of habitat improvement on fish production and commercial, recreational, and subsistence harvest levels is a long-term proposition, with the result that economic effects in the first decade are relatively modest. An improvement in fish habitat in the Forest does not necessarily generate a revival of the commercial fishing industry as many other factors are also involved such as availability of food, number of predators, quality of habitat in the ocean, ocean fishing, fishing in streams, level of stream flow and climate. Refer to responses to Fisheries Comments 1 and 8. The commercial catch estimated for the alternatives is between 215,300 and 252,500 pounds annually (Draft EIS page 4-99), a variation of 37,200 pounds between the alternatives. At current wholesale prices, this amounts to a value of between $430,600 and $505,000, a variation of less than $75,000. When multiplier effects in the regional economy are considered this translates into total employment effects of less than 20 jobs for all alternatives.

Comment 16: For all areas in which an activity level is budget dependent and also is necessary to comply with applicable laws and regulations, the Final EIS must provide an analysis which considers what will happen if the projected level of funding is not appropriated, or at minimum identify the dependence on budget. The Draft Forest Plan does give us a rational for this lack of analysis. It argues that standards and guidelines and management requirements will protect resources and meet legal obligations, and that therefore failure of Congress to appropriate the requested (projected) budgets will only impact outputs and not compliance with legal requirements. This is an error.

37 283

Response: Refer to Final Forest Plan, Appendix E for a discussion of the relationship between the Forest Plan and budgets. A discussion about what happens when funding is less than what is needed to fully implement the Forest Plan is included. Also see the discussion and tabular display of the effects of Alternative LBU on page 2-9 of the Final EIS. The budget affects the number of projects that can be implemented in a given year, not whether or not standards and guidelines are followed. Where project actions are needed to meet legal requirements, the budget affects the pace at which legal requirements are achieved.

Comment 17: National Forest decisionmaking has failed to recognize or provide a viable economic future for commercial fishing. A restored commercial fisheries is vital to the regional economic health.

201

Response: The alternatives are analyzed as to the quality of fish habitat which would be provided within the Forest. All alternatives would improve habitat from the existing condition. However, an improvement in fish habitat with in the Forest boundaries does not necessarily generate a revival of the commercial fishing industry as many other factors are also involved which are outside the control of the agency. They include the availability of food, number of predators, quality of habitat in the ocean and in streams outside the Forest boundary, ocean fishing, fishing in streams, level of stream flow, climate. Refer to response to Economics Comment 15.

Comment 18: The socio-economic analysis of alternatives should consider current understanding of rural economics including identification of capital flows, growth limiting factors, "engines" of growth including the role of lead industries, commodity economies, etc. The Draft EIS is grossly inadequate in violation not only of NEPA but also of the Forest Service's coordination responsibilities.

283

Response: Pages 3-134 through 3-136 of the Final EIS contain a description of how local economies have changed over time and the relationship of the local economy to management of the Forest. The historic but declining importance of resource commodities and the growing importance of tourism, settlement of retirees, and the general growth of the trade, government, and services sectors is discussed along with the generally high unemployment rates in local Counties.

One of the reasons the response coefficients used to estimate local employment effects of the alternatives (Final EIS page 4-163) are relatively low is because much of the potential income that could result from local spending leaks out of the local economy. There are many reasons for this leakage - consumers spending their incomes with non-local vendors, lack of a fully diversified local economy, spending patterns of national and multinational firms, and the taxing and spending patterns of the State and Federal governments.

Comment 19: The Draft EIS appears to ignore several costs. The price of timber is reduced to cover the payments of money by the purchaser to private scaling bureaus to measure the cut timber. This is the basis for the stumpage payments to the Forest Service. This cost runs in the $3.00 per thousand board feet (MBF) range. Further, California has a yield tax, which is in lieu of the ad valorem property tax on timber. It also is the "possessory" type. It is levied on the one who possesses the timber after it is cut. Thus it is levied on Forest Service timber. In California Forest Service timber is "double taxed" compared to private timber. This can run to as much as $10 per MBF because it is based on timber species.

5

Response: Purchasers must pay the scaling costs for scaled timber sales. This was true under the historical method of making payments directly to scaling bureaus or under the current method of paying the Forest Service to arrange scaling services. There is a movement away from scaled sales to tree measurement sales (which do not require scaling). California's yield tax applies to both public and privately owned timber. County yield tax revenues for the alternatives are shown on Final EIS page 2-78. It is not clear how payment for scaling services and yield taxes which make their way back to counties to fund general government services amount to "double taxation."

Comment 20: A cash accounting should show the total cash receipts, the earmarked receipts, and the balance that is unencumbered. If "Return to the Treasury" is to be shown it should be after appropriated and 25% costs.

35

Response: Net cash flow is shown in Table 2-20 on page 2-83 of the Final EIS and explained in the accompanying narrative. The 25% receipt shares have not been deducted in Table 2-20, but are shown in Table 2-17 on page 2-68, so simple subtraction would provide a measure close to what is suggested in the comment. The detailed accounting and definition of "earmarked" funds is beyond the scope of the EIS.

Comment 21: At 2-17 under "Returns to the Treasury," the claim is that for Base year FY 1987, the amount was $23,000,000. Where this comes from is a mystery. The Cash position (NFF + KV), the position when non-cash PC is added, or the Cash position when 25% costs are included equal the $23,000,000 claimed in Table 2-17. These are the "rosy scenario" numbers. The 2-17 claim is "Returns to the U.S. Treasury," which implies the net after deducting [a] receipt earmarks, [b] taxes, and [c] appropriations.

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Response: Refer to response to Economics Comment 1. In the accounting system used by the Forest Service, returns to the Treasury are "gross" rather than "net" returns.

Comment 22: The Final Forest Plan should work for social and economic stability for our communities by encouraging economic diversification and limiting resource extraction to levels that can be sustained without having negative impacts on recreation or biological diversity. Design new industries that will furnish substitute jobs, profits and building materials. Actively promote industries which can lead or "fuel" economic growth. Make a variety of products available to firms of all sizes and provide technical assistance to

entrepreneurs who want to develop new products, new uses of products and especially secondary processing facilities.

11 235 236 247 283 336

Response: The alternatives present different management scenarios; each makes a contribution to the maintenance of social and economic stability as well as maintenance of biological diversity and providing recreational opportunities. Each alternative would provide for different levels of outputs. Many approaches were explored to try to find creative ways of providing for all the conflicting demands on the Forest. Members of the public helped develop alternatives and a Citizens's Participation Program open to all interested parties was used to review the alternatives; refer to EIS, Chapter 1 and Appendix A. As demonstrated in the EIS, Chapter 2, Direction Common to All Alternatives; the space for making decisions is very constrained after complying with laws and regulations designed to protect the environment. All alternatives would establish a Rural Development Program to assist local communities in stabilizing and revitalizing their economies; refer to Forest-wide standards and guidelines for Rural Development in Forest Plan, Chapter 4. All alternatives would make a variety of forest products available; refer to pages 4-143 through 4-144 in the Final EIS. The Preferred Alternative emphasizes forest products in Forest-wide Standards and Guidelines 21-44 through 21-51 on page 4-58 of the Final EIS.

Comment 23: An Indian Tribe can claim they are partial owners of areas or stop a mine from operating by having the many governmental agencies impose unfair costs/fines associated with, so called, cultural finds or perhaps the mine may never be developed because of litigation.

153

Response: This comment is outside the scope of the Forest Plan. The complete letter deals with enforcement of cultural resource protection measures on an individual mining permittee. How laws and regulations concerning cultural resource protection and permit conditions are enforced is an implementation issue that can not be dealt with at the Forest Plan level. The Forest Plan and its EIS are based on the premise that standards and guidelines, laws and regulations will be enforced. Refer to response to Economics Comment 22 concerning use of the Rural Development Program to try to alleviate the unemployment problems.

Comment 24: The citizens of the local communities are dependent upon the harvest levels from the Forest for their income and the very way of life for their families. This low level of harvest will adversely affect many of the communities of Siskiyou County.

202

Response: Effects on individuals, social groups, and communities are recognized in the EIS; refer to the social and economic sections of Chapters 2, 3 and 4. Many approaches were explored to try to find creative ways of providing for all the conflicting demands on the Forest. Members of the public helped develop alternatives and a large citizens's participation program was used to review the alternatives; refer to EIS, Chapter 1 and Appendix A. As demonstrated in the EIS, Chapter 2, Direction Common to All Alternatives; the space for making decisions was very constrained after providing for all the environmental laws and regulations. All alternatives would use a Rural Development Program to help the local communities; refer to response to Economics Comment 22.

Comment 25: The Forest Plan "contributes to the local economy." A few words must be added to honestly describe that contribution, decline of.

255

Response: The social and economic analyses in the EIS - Chapters 2 and 4 -disclose the effects of the alternatives. Context for those effects is described in the social and economic section of EIS Chapter 3. Refer to response to Economics Comment 24.

Comment 26: A more comprehensive examination of the economic environment for the Preferred Alternative should be undertaken, especially to consider the supposed fact that increases in non-motorized recreation will be realized and that they will benefit said economics. Also that the severe reduction in the land base available for developed and multiple-use recreation will not cause economic hardship on the communities involved.

255

Response: Increases in non-motorized recreational use are not expected to be larger than increases in any other recreational use; refer to response to Recreation Management Comment 37. The economic analysis for the Preferred has been adjusted to incorporate the changes in the alternative. Effects of changes in recreational use (motorized and non-motorized) on income, employment, benefits, and costs are included in the social and economic effects described in EIS Chapters 2 and 4.

Comment 27: The economies of the affected area are also affected by the availability of recreational opportunities. Developed recreation sites that provide for access to both motorized and non-motorized recreation opportunities do affect the surrounding communities economic and social well being.

255

Response: The alternatives provide a range of recreational opportunities. However, the economic benefits related to recreation are not expected to vary significantly between alternatives as stated in the EIS, Chapter 4, Economics. Recreation effects on the local economy are included in the income and employment effects of the alternatives disclosed in the economics

sections of chapters 2 and 4. The growing importance of recreation in the local economy is described in the economics section of EIS Chapter 3.

Comment 28: Forests need to be managed for the best interests of the environment and the American people, not for the greed of the lumber companies. For the last 12 years and probably much longer, the lumber industry has been trying to tell us that if they prosper, people will have jobs. Where are the jobs?

35

Response: The alternatives provide a range of land allocations and management requirements with varying outputs for both commercial and environmental concerns. All try to balance the various conflicting demands for resources and provide for multiple uses as mandated by the Multiple Use Act and NFMA. The timber outputs in all alternatives are lower than in the past due to recent laws and regulations which were developed to protect the environment. The result of decreasing timber outputs is a decrease in jobs due to both direct and indirect effects. Refer to Social and Economic sections of EIS Chapters 2, 3 and 4 for how the alternatives affect jobs and the historical employment situation.

Comment 29: Establish user fees to offset the losses in payments to counties from declining logging receipts with some form of reduced rates for residents of communities surrounded by the Forest.

247

Response: Pages B-18 through B-19 in Appendix B of the Final EIS discuss the National policy of providing most Forest outputs free or at a reduced charge and compare current charges with estimated willingness to pay values. Changing these policies has been proposed by the current and recent Administrations, but generally requires changing legislation. Congress establishes user fees, the Forest merely collects them.

Comment 30: The economic impacts (and concomitant social impacts) to forest communities will be much more severe in reality than the picture painted in the Draft EIS. The EIS for Option 9 and individual forest plans should reflect the economic and social cumulative impacts of the drastic reductions in USFS harvesting that have occurred over the past decade.

259

Response: The timber, economic and social sections in Chapter 4 of the Final EIS have been updated to reflect modification to the Preferred Alternative based on incorporating the provisions of the ROD for the FSEIS and on public comment. Timber, employment and county payment data for more than the past decade is shown in the timber and economics sections of EIS chapter 3.

Comment 31: The need for local employment, community well-being, respect for workers rights including occupational safety, fair compensation and the right of workers to collectively bargain should be addressed. The importance of recreation and tourism on the local economy should be discussed.

38 98 255 263

Response: The alternatives present different scenarios; each with the intent of maintaining social and economic stability; refer to EIS, Chapters 3 and 4, Social and Economic sections. All alternatives would also establish a Rural Development Program to assist local communities in stabilizing and revitalizing their economies; refer to Forest-wide standards and guidelines for Rural Development in Forest Plan, Chapter 4. The economic contribution of recreation is covered in the economics sections of EIS Chapters 3 and 4. The purpose of an EIS is to disclose the effects of the various proposed actions. How occupational safety and collective bargaining rules are implemented in the local economy is beyond the scope of this EIS.

Comment 32: From an economic standpoint, fishery values can often equal or exceed the value of commercial Douglas-fir left in even a 100 foot-wide streamside buffer strip.

38 245

Response: The alternatives present different scenarios for managing aquatic habitat including varying stream buffer widths. Refer to response to Economics Comment 15 concerning fisheries values.

Comment 33: The economic benefit of recreational access needs to be viewed as an asset, particularly in the light of the trend to reduced resource based economic activities such as timber harvesting, domestic livestock grazing and mining.

280

Response: The growing importance of recreation and tourism in the local economy is recognized in the economics section of EIS Chapter 3. The contribution of recreation is included in the income and employment effects, and the benefits and costs described in the economic sections of EIS Chapters 2 and 4.

Comment 34: Studies show that increasing wilderness designations was found to be costly in terms of dollars spent by the wilderness visitor versus the dollars spent by the more numerous multiple-use visitors. An RPA report noted that OHV dollars spent in an average year is 488 million versus the wilderness "industry" which brought the business of that state a total of 17 million dollars.

255

Response: OHV use has been recognized as a valid recreational opportunity and the alternatives provide for different levels of use. In all alternatives, there are adequate opportunities to meet the existing and

projected demand as there are for all recreational uses on the Forest. The contribution of recreation is included in the income, employment, benefit, and cost effects shown in EIS Chapters 2 and 4.

Comment 35: The Forest should distinguish between communities which exist within the Forest boundaries and those which are located outside the Forest boundary, making special provisions for the former. In order to keep funds circulating within the communities to the maximum extent possible and in order to fuel economic development, stewardship contracts should only be developed with companies, native american tribal organizations, non-profit and other organizations, and in some cases with individuals which are headquartered (or, in the case of individuals who reside) within the communities. Contracting with large national and multi-national corporations is opposed because these companies have consistently taken their profits outside local forest communities and there is no legal mechanism available to prevent this from happening in the future.

283

Response: Alternative A would emphasize the use of stewardship contracts. All alternatives would use them as deemed appropriate as the Forest has in the past. This could be part of the Rural Development Program or for other resource activities. As acknowledged in the comment, it is not legal to show favoritism to any group in awarding contracts, which generally must be offered and awarded on a competitive basis. This proposal is outside the scope of the Forest Plan and would require changing regulations regarding government contracts.

Comment 36: There is a minimum floor for available timber below which any timber does not help the industry survive. The Forest Service is presiding over the destruction of the Siskiyou County wood products industry. Is this forestry leadership?

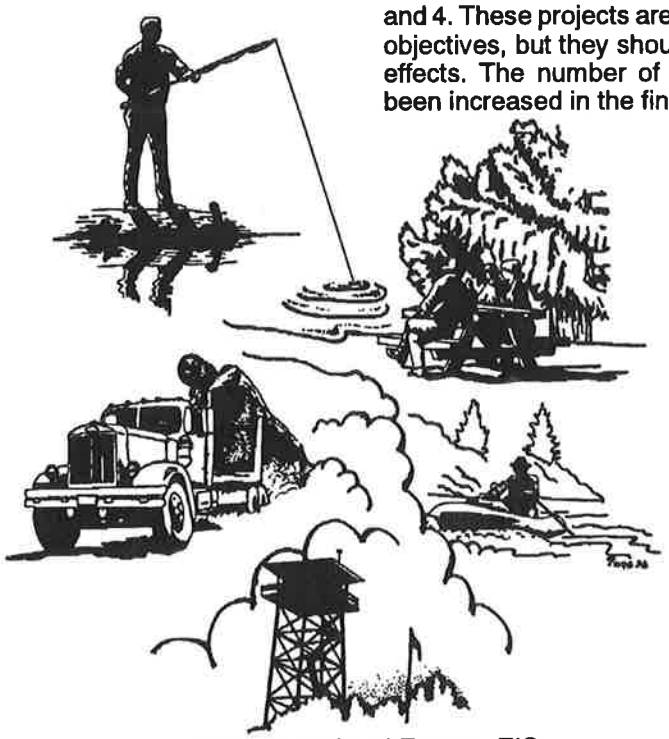
3

Response: The alternatives provide a range of timber outputs. All timber outputs are lower than in the past due to laws and regulations as explained at the Citizens Participation Program during January and February of 1992 when 233 individuals reviewed the alternatives and gave input that was used to identify the Preferred Alternative for the Draft EIS. No one was able to find any creative solutions which could alleviate the timber flow problems. Refer also to EIS, Chapter 2, Common to All Alternatives for a discussion which illustrates how the land base for timber has decreased over time. The economic and social sections of the EIS disclose the effects.

Comment 37: Active management of forest landscapes and systematic identification, prioritization, budgeting and implementation of landscape restoration and rehabilitation projects on a grand scale can create a healthier economy and greater employment in the Final Forest Plan. Landscape architects, working in concert with other scientists, can produce high-quality and realistic plans for restoration and rehabilitation of landscapes.

257

Response: Rehabilitation of scenery would be one of the components analyzed through ecosystem analysis at the landscape/watershed scale and through site analysis; refer to page 4-11 and to Forest-wide Standard and Guideline 11-5 on page 4-44 in the Final Forest Plan. The Preferred Alternative would also require a large number of mitigation, rehabilitation and restoration projects to be fully implemented. Refer to response to Economics Comment 11. Cost, income, and employment effects of these projects are included in the economic effects described in EIS chapters 2 and 4. These projects are driven primarily by biological objectives, but they should have some positive visual effects. The number of these kinds of projects has been increased in the final Preferred Alternative.



General Comments

General Policy

Comment 1: What are the management regimens for the 75% of the Forest that would not be managed for timber production? Fuzziness is rampant through all volumes. Summary page 4-5 pledges "integration," saying in some areas selected uses will be "emphasized." In the next breath it is declared that lands won't be limited to "single uses."

5

Response: The summary is merely a summary and only gives the highlights of the documents. Chapter 4 of the Forest Plan goes into considerable detail on how each section will be managed, including the 79% of the Forest in the Final EIS that would be unregulated; refer to pages 4-74 to 4-144 in the Final Forest Plan. This information was included on pages 16 to 24 of the Draft Summary; the direction for unregulated land is on pages 21 and 22 of the Draft Summary. Some areas would be managed for selected uses in all alternatives consistent with applicable laws. The Forest as a whole (all lands taken together) would provide for multiple uses.

Comment 2: The Forest Service has completely abdicated any forestry leadership or professionalism in favor of being a weather vane blown in whichever direction the winds of political correctness are blowing.

3

Response: Politics are and always have been a large part of forest management for the national forests. Politics help determine what is currently viewed as the public good.

Comment 3: The prescriptions should have numbers and show how and why it is expected the prescribed approach will improve results. This is not to say that things are known with certainty. The goal is to provide future managers with a "map" showing where the Forest Plan intends to go and why. It is up to them to follow it, or modify it if the prescriptions have flaws or events require a change.

5

Response: The Desired Future Condition and the Goals are the "map" of where the Forest Plan intends to go. The direction for each management area is the prescription and the management areas are numbered. The monitoring plan in Chapter 5 of the Forest Plan presents some of the tools that will used to assess the success of the management activities.

Comment 4: Clearly the lands and waters in the Forest are not in good shape. The land has been stripped of timber and fisheries, wildlife and biological diversity have suffered as well as Native American people.

36 40 75

Response: The Forest Plan intends to do the best job of managing the Forest possible given the multitude of laws, uses and conflicting public demands that must be considered. Sustainability is the first Forest-wide goal. The second is environmental health and community stability. The net growth of timber is 4 to 5 times greater than timber harvesting levels and the inventory of timber on the Forest is greater than under prehistoric conditions. The water quality from the Forest is also very good as reflected in the refugia that are present for the fish populations despite unfavorable oceanic conditions and high fish harvesting rates.

Comment 5: Forests are dynamic resources and require dynamic management. Inflexible planning and management practices create undesirable results.

37

Response: The Preferred Alternative would adopt an adaptive management approach to management which allow such flexibility; refer to page 4-12 of the Final Forest Plan. The Forest Plan is also designed to adapt to change through its revision and amendment processes (refer to Chapters 1 and 5 of the Forest Plan). However, compliance with environmental laws must occur. The Forest Plan focuses on goals and desired conditions rather than on prescriptive guidance that is inflexible.

Comment 6: The 4 Northern California Forest Draft Plans and EISs, published concurrently, take an aggregate approach to the northern spotted owl issue but neglect the opportunity for aggregate planning and lack substantive coordination on all other common issues of the province. One comprehensive, carefully researched province set would do. Management strategies need to be developed that transcend ownership boundaries and establish a framework for inter and intra-agency coordination, as required for an effective ecosystem management program.

44 45 237 256 269

Response: NFMA requires that a plan be prepared for each unit of the NFS. Substantial differences occur between forests and variation in approach and results is appropriate where issues differ due to biological, physical and human/political factors. Substantial coordination has occurred between forests for issues such as viability of TE&S species and riparian management where there is considerable overlap between Forests. An integrated regional approach to biological diversity, late-successional species viability and aquatic species viability was taken in the FSEIS which covers the entire northern spotted owl region. The Preferred Alternative has been modified to be consistent with the ROD for the FSEIS. The hierarchy contained in the ROD for the FSEIS would be used to resolve conflicts within the region. The need to address conflicts will always be there due to changing conditions. Extensive coordination with adjacent forests and other agencies has occurred during the planning process; refer to Appen-

dix A of the EIS. The Forest Plan contains standards and guidelines for coordinating with other forests and other agencies at the landscape/watershed and site levels. Coordination at higher levels is outside the scope of the Forest Plan and is covered at the regional level by the ROD for the FSEIS.

Comment 7: Refugia for at-risk fish must be established in the Forest Plan if the anadromous salmonids of the Pacific coast are to avoid extinction. Riparian protection requires buffers of a recommended width and ecosystem management must replace single species and commodity production management. The Forest Plan fails to bring these topics forward as the driving issues. Using the word "amenities" to describe the "necessities of life," such as ecosystem processes and functions is archaic. Why does this Forest Plan still propose "multiple uses" and "amenities" in this day of ecosystem management? It is necessary to come to an agreement with your publics on what ecosystem management is and what it should do.

44 48 54 72 74 243 258 269 283

Response: The Forest Plan does bring forth the protection of species as a driving issue. The issues are listed and/or addressed in all chapters of the EIS and include the fisheries issues mentioned. Refugia, called Key Watersheds are proposed in the Preferred Alternatives as part of the Aquatic Conservation Strategy (an ecosystem approach); refer to page 4-34 of the Final Forest Plan and to Analysis Watersheds Map in the map packet. Multiple use is required by the Multiple Use/Sustained Yield Act of 1960. Ecosystem management is emphasized consistently throughout the Forest Plan. Public issues identified throughout the planning process are embodied in the forest-wide goals; refer to page 4-4 of the Final Forest Plan. Public interaction will continue at all levels of analysis; refer to page 4-10 and 4-11 of the Final Forest Plan.

Comment 8: The science of the past few years has provided a fresh new view, but there is nothing innovative or exciting about the Forest Plan.

54 96 283

Response: The group of scientists that have contributed to the production of the Forest Plan and EIS is long and impressive. The Forest has set standards for many actions that have been incorporated into other planning documents for several other agencies. The Forest Plan analyzes and portrays information on ecological elements that should be considered at this scale of planning. Aggressive strategies for using fire to protect and restore biological richness are proposed. The Ecosystem Approach to Management on page 4-10 and the Adaptive Management Approach on page 4-12 of the Final Forest Plan are innovative. The multi-species approach of LSRs and the Aquatic Conservation Strategy are new.

Comment 9: Scenic Shoreline requests that its comments on the 1990 Six Rivers and 1990 Shasta-Trinity Draft Forest Plans and EISs be included.

45

Response: It would be difficult, highly speculative and very unproductive to try to relate comments on previously issued drafts from other forests to the current proposed alternatives for the Forest. Comments on subjects which may or may not be related do not help improve the analyses or discussions on the proposed action and its alternatives, nor help the decision-maker.

Comment 10: The Forest Plan should have as much protection as possible to prevent endangering hundreds of species.

38 73 76 80 83 97 99 129 145 147
164 172 210 214 279 316 321 324 326 339

Response: Protection of forest resources is difficult. The forest and its resources change constantly and are subject to diverse forms of disturbance. All known factors that relate to the Forest have been considered at an appropriate scale and intensity. The alternatives propose various strategies for managing the Forest. The Forest Plan has multiple measures to ensure the maintenance of biological diversity.

Comment 11: Sacrificing our government lands for economic gains is a no-win situation. The final effects of our past shortsighted logging, road building, mining and grazing policies have already resulted in ruining our watersheds and exterminating much of the aquatic and animal life.

60 73 247

Response: The effects of natural disturbances far exceed the scale of that undertaken by proposed actions. Timber harvesting levels are greatly reduced from historic levels in all alternatives. Programs such as the Aquatic Conservation Strategy in the Preferred Alternative are proposed that were designed to maintain and restore the watersheds of the Forest. Alternatives were developed to be consistent with the Multiple Use/Sustained Yield Act and NFMA. Far more than economic gain was considered in the developing alternatives; net public benefit was the primary criteria for identifying a Preferred Alternative.

Comment 12: The Forest Plan relies on the President's Plan which needs improvement and remains to be finalized. Contrary to NEPA, the FEMAT report is incorporated. FEMAT assigned Option 9 only a 65% likelihood of maintaining viable salmon populations, which does not meet the legal requirement of NFMA. A detailed analysis of fragile lands, roads and

aquatic species viability is needed in a draft supplemental EISs once a final regional plan is approved.

45 101 105 109 117 134 137 141 154
172 175 177 184 185 217 271 237 306

Response: Several modifications were made to the FSEIS (President's Plan) through its ROD. These modifications have been incorporated into the Final Forest Plan. The report of the Forest Ecosystem Management Assessment Team (FEMAT) is Appendix A of the FSEIS and was used in that analysis. FEMAT is not contrary to NEPA, although it has been alleged to violate the Federal Advisory Committee Act; the truth of this allegation will be determined in court. In the development of the Forest Plan and EIS, the FEMAT analysis was considered along with many other similar reports and recommendations by noted scientists, but did not unduly influence the results.

Additional management requirements that provide for healthy resilient fish habitat have been added to the Final Forest Plan including RRs for intermittent streams (which include some ephemerals) and for unstable and potentially unstable areas. The Forest Plan would also propose extensive additions to the WSR system which would provide additional protection for aquatic habitat. Many of the factors affecting anadromous fish viability are outside the scope of the Forest Plan; refer to response to Fisheries Comments 1 and 8. In addition, the analysis in the FSEIS is an average for the entire northern spotted owl region. The Forest Plan EIS analyzes the situation at the forest-wide scale and adequate quality habitat is expected to be available. The analyses in Chapter 4 of the Forest Plan EIS are believed to be adequate for fragile lands, roads and aquatic species and supplementary documentation is not necessary.

Comment 13: More study and public input is needed on the status of fisheries, roadless areas and the impact of planned logging.

173

Response: Implementation of the Forest Plan will include analysis at other scales; refer to pages 4-10 and 4-22 of the Final Forest Plan. Site-specific analysis is used to determine whether any specific action will be undertaken.

Comment 14: Until the President's Plan is completed, no resource extractions or road building should take place.

231

Response: The President's Plan was completed with the signing of the ROD on April 13, 1994. The Forest Plan was modified to be consistent with it. Resource extractions and road construction proposals will have site-specific analyses as a part of the decision making process; refer to pages 4-10 and 4-11 of the Final Forest Plan. Monitoring of programs that cause extraction is also a part of the Forest Plan.

Comment 15: Planning and management for the protection of biological diversity is a technical and labor-intensive process, particularly where data is incomplete or inaccurate. Functioning ecosystems and viable populations must be maintained and the problem seriously confronted if the agency is to restore its credibility.

44

Response: The Forest Plan and EIS illustrate the emphasis on biological diversity. The Forest Plan would provide a framework for managing biological diversity at the forest level. The ROD for the FSEIS provides a framework at the regional level. An adaptive management approach would be used to continually improve knowledge and management of these vital issues.

Comment 16: The layer upon layer of management areas and their associated prescriptions, assumptions and emphasis produce confusion. Proposed trail or facility development for a politically incorrect use could not possibly be built as there is somewhere within this maze of bureaucratic gobble-de-gook a reason for not doing so.

255

Response: The management areas are not layered as described, but some guidance is overlapping. This is routine in land management and a rule of reason will be used for overlapping standards and guidelines. Where an unreasonable conflict is identified at the site level, it may be resolved with a Forest Plan amendment or the proposal will be dropped or modified; refer to Chapter 1 of the EIS and Chapters 1 and 5 of the Forest Plan.

Comment 17: NFMA requires that land planning be coordinated with state and local governments and other Federal agencies. The coordination requirement is substantive, not merely procedural.

44

Response: The coordination requirement has been implemented with procedural and substantive coordination efforts throughout the planning process. The Aquatic Conservation Strategy in the regional ROD and FSEIS adopted many of its features from efforts coordinated on the 4 Northwestern California Forests within the range of the Northern Spotted Owl. A great deal of effort centered on working with governments and private land owners to ensure that plans complemented each other. The standards and guidelines reflect this coordination and call for its continuation.

Comment 18: Option 9 ascribes more acres to the "Administratively withdrawn" category than the Forest Plan. This contradicts the assumption in Option 9 that lands administratively withdrawn are derived from the

draft plans. This should be clarified and maps provided.

237

Response: The Preferred Alternative Land Allocations Map in the Final Forest Plan clarifies the relationship between the land allocations of the Forest Plan and those of the ROD for the FSEIS. There are still differences in acres, however. For instance, acres mapped as RRs in the Draft Forest Plan EIS are accounted for in the FSEIS as administratively withdrawn. The Final Forest Plan includes those mapped RR acres under RRs, but also includes in RRs mapped unstable lands and an estimate for unmapped intermittents, neither of which are included in the FSEIS estimate. Part of the lands shown as administratively withdrawn for the Forest in the FSEIS were identified as harsh sites and were deferred from the timber calculations, but were not a land allocation in the Draft Forest Plan. This was an inadvertent difference and in the Final Forest Plan, these lands are treated as a land allocation and are counted under the administratively withdrawn acreage; refer to Table 2-6 on page 2-20 of the Final EIS. These lands need further study at the landscape/watershed and site levels to determine if they were mapped correctly and if administrative withdrawal was appropriate.

Comment 19: Planning has come a long way towards meeting the needs and desires of the public. Combined with the President's Plan and its technical appendix (the FEMAT report), the documents add to the public's and the agency's understanding of the complexity and importance of the Forest.

1 237 242 282

Response: The relationship of these documents has been clarified on pages 1-1, 4-10 and 4-11 of the Final Forest Plan.

Comment 20: National Forest management should focus on maintaining a healthy productive forest, developing water storage facilities, providing grazing areas at a reasonable cost, encouraging mining operations and recreation for the general public. The proposal that provides the most timber harvest, grazing area and water development should be selected.

239

Response: The alternatives present a range of alternatives. The decision-maker can select any one or a combination of several for implementation. Alternatives Current/RPA, A, D, D' and G(SOHA) have the most emphasis on timber management. The Forest would be managed for the collective health of all resources in any alternative. The development of water storage facilities is not emphasized due to the needs of downstream users for the water and the many proposals for WSR designation which require a free flowing nature. Small facilities will be constructed where appropriate to store water for livestock and wildlife.

Comment 21: If you can't measure the differences between this and what has been, omit it.

7

Response: Even where there is little fluctuation between alternatives, potential effects need to be disclosed. Some important effects that cannot be measured are discussed qualitatively in a narrative.

Comment 22: The Forest Plan should be properly analyzed.

189

Response: Chapter 4 of the EIS contains an analysis of effects for all alternatives considered in detail, including the Preferred Alternative which is the Forest Plan. The analysis is consistent with NFMA and NEPA requirements.

Comment 23: State jurisdiction encompasses the legislative power to regulate, control and govern the real and personal property, individuals and enterprises within its territorial boundaries. The Organic Act recognized that the states retained both civil and criminal jurisdiction in the administration of the Forests (16 USC, Section 480.) Federal jurisdiction results only from a specific conveyance of jurisdiction by the state to the Federal government for land owned or otherwise possessed by the Federal government. There is no Federal jurisdiction if there is no express grant or cession of jurisdiction by the State to the Federal government.

281

Response: The property clause of the U. S. Constitution grants the Federal government the right to make laws concerning property, including real property, of the United States. This has been upheld in numerous court cases.

Comment 24: Retain and expand the National Forest as a precious resource.

278

Response: The intent is to manage all resources within the Forest for the greatest net public benefit. This will not require an expansion of the Forest, but some consolidation may occur to better allow fulfillment of the agency mission.

Comment 25: Dumping the forest plans on forest activists during the review of the Option 9/FEMAT package hardly seems consistent with the new more moral, ethical and truthful Forest Service envisioned by Chief Jack Ward Thomas. Evaluation of the plans through an addendum, along with the highly variable quality of the plans makes reasonable analysis impossible.

269

Response: The Forest Plan is of the highest quality possible within the constraints of available resources and existing knowledge. The process of producing a

Forest Plan is not quick or easy. New issues continually arise and must be addressed using the best available information. A great amount of effort was made to involve the public at key points throughout the planning process; refer to Appendix A of the EIS. The entire process has taken many years due to the complexity and dynamic nature of issues and of the Forest. The intermediate steps were released as soon as possible. Because the President's Plan provided direction for the Forest Plan, it was logical to release the Draft Forest Plan and EIS shortly after the release of the President's Plan so reviewers could see how the various levels of planning would fit together and support each other. Understanding how the President's Plan would be implemented at the forest level, allowed for more detailed and specific comments on both plans than if their release had been far removed in time. Refer also to response to General Policy Comment 42.

Comment 26: Forest Service management discretion should be limited to lands in the matrix for the planning period. Discretion in future planning periods could then be based on performance demonstrated in this planning period in the matrix.

283

Response: None of the alternatives would limit management activities solely to the matrix (regulated lands). Management of non-matrix lands in any alternative would be to achieve the goals and desired conditions of the area. Some management, such as regulating visitor use, is necessary to achieve certain provisions of the Wilderness Act, WSR Act and ESA.

Comment 27: The analysis doesn't include much information before 1945.

296

Response: There is little data available about the Forest prior to 1945. The management of the forest was largely custodial prior to that date. The purpose of the Forest Plan is to provide direction for managing the Forest. The purpose of the EIS is to disclose effects of various alternatives considered. Historical data is used only to set the background for these purposes.

Comment 28: The Forest Service is deeply fragmented by competing disciplines.

296

Response: The historic compartmentalization of the budget has contributed to that situation as has lobbying for specific components of forest management by the public. This situation may improve with the ecosystem management approach described in the ROD for the FSEIS and the Final Forest Plan.

Comment 29: The Fifth Amendment to the United States Constitution provides that private property shall not be taken for public use without just compensation. Areas where "takings" implications should be assessed by the Forest would include, but are not necessarily be limited to: a) Mandatory imposition of BMPs upon agricultural practices; b) Cattle exclusion from riparian areas and wetlands; c) Imposing restrictions as result of "nuisance" impacts on other values; d) Assertion of Federal ownership over unrecorded pre-1914 water developments secured by customary use of the range; e) Reassignment of use or loss of a grazing allotment in disregard of the preference property interest in customary range that existed prior to creation of the Forest; f) Loss or loss of use of private investments in improvements such as corrals, roads, fencing, stock handling facilities and water developments; g) Substantive changes in existing leases as contractual obligations for which valuable consideration has been made; h) Impact on investment backed expectations and base land real property values where the value of the preference right to range is included in the value of the ranch.

281

Response: The nature of takings is based on property rights, grazing is a privilege agreed to in the Escrow waiver of term Grazing Permit Privileges, form FS2200-13 executed at the time of permit acquisition. This form specifically describes the permit as the extension of a privilege at the total discretion of the Chief of the Forest Service. The water rights mentioned are subject to state law and have been tested in the State of Nevada and found to have no weight for compensation on the basis of their vested standing under law. The improvements on the grazing allotment are covered by terms of the permit and are generally part of the government property if the Federal government participated in their construction to any degree. In the circumstances where improvements are the property of the permittee, they would be subject to the permit terms agreed to by both parties and would not be "taken."

Comment 30: Prepare a Draft EIS for each national forest.

285

Response: The Draft EIS for the Forest was circulated in September 1993 and is supposedly the subject of these comments.

Comment 31: Forest type, stocking and size are all susceptible to change, whether from natural or human causes. Basing the divisions upon fixed physical attributes may be more compatible with Ecosystem Management concepts of an evolving land base. These may include such factors as elevation, aspect, slope and (perhaps most important) soil type. These factors will allow for not only an assessment of site, but site of each particular species.

265

Response: National Forest Planning Regulations require the agency to use the best data available. Vegetation data is used heavily in the Forest Plan and

EIS, but most vegetative typing is based on soil type, aspect, elevation and slope differences. An ecological inventory is currently underway. Assessment at the site level would occur during project planning in all alternatives; refer to page 4-11 of the Final Forest Plan.

Comment 32: Cost-efficiency requires more intensive sampling in areas of higher value. As these values vary with each particular resource, so should the stratification. It is unlikely that any one division strategy will apply to all resources. The timber classifications do not apply to most resources and are insufficient for future timber needs.

265

Response: The best available data was used. Timber classifications were not used for all resources, nor were they the sole analysis for any one resource; refer to Methodology sections of Chapter 4 of the EIS. Other distinct inventories such as geology were used as well. An ecological inventory is currently underway.

Comment 33: Maximizing forest resource values means making the proper modifications to their condition. Knowledge of their condition is essential. The Forest has embraced ecosystem management toward that end. If its aim is true, site-specific (geographically-centered) information will surely result. Nothing else will suffice.

265

Response: Geographically centered information at the forest-wide scale is used in the Forest Plan. This information is statistically valid for this application. Site-specific information would be obtained for project level analysis as appropriate for the proposed actions; refer to page 4-11 of the Final Forest Plan.

Comment 34: The Draft EIS Addendum implies that the Preferred Alternative will be adopted regardless of public input. Also how large is the large part of the Forest Plan that is unaffected by the President's Plan?

255

Response: The public involvement in the Forest Plan has been continuous since the planning process was initiated with a notice of intent. It has been the basis of generating alternatives in the Forest Plan and the FSEIS (President's Plan). The 2 documents explore much of the same decision space available. The ROD for the FSEIS is an amendment to the overall regional guide that provides direction to the Final Forest Plan and had its own extensive public involvement process. The FSEIS and ROD had a number of changes based on public comments on the draft. The FSEIS primarily addressed late-successional and riparian species which admittedly influence most other programs indirectly. However, the rest of the Forest Plan including programs such as recreation, wilderness, specially designated areas, minerals and range have many facets that are not a part of the ROD for the FSEIS. The ROD covered 4 of the 18 issues considered in the Forest Plan.

Comment 35: The Draft Forest Plan fails to incorporate the most up-to-date scientific information from the relevant disciplines of conservation biology, landscape ecology and forest ecosystem research. Emerging ecosystem analysis tools, such as the regional and sub-regional ecological assessments conducted in Region 6.

44

Response: Landscape ecology principles have been applied and a number of leading conservation biologists provided input during the planning process. Their individual recommendations were considered by the ID Team, used where appropriate and adjusted as necessary to put them into a proper management framework. The work described in the comment does not apply to the forest scale of analysis that is dealt with in the Forest Plan. Ecosystem analysis at the landscape/watershed level is the appropriate level for many of the tools mentioned; refer to page 4-11 of the Final Forest Plan.

Comment 36: Ecosystem management is not clearly defined in the Draft EIS and there is no discussion of the primary goals and objectives of this new program, nor how it will be implemented.

44

Response: The Forest Plan establishes a framework for ecosystem management. The adopted Forest Plan will be the ecosystem management strategy for the Forest. If approved by the decision-maker, the Forest-wide Goals starting on page 4-4 of the Final Forest Plan will be the ecosystem management goals. Better documentation has been included in Chapter 4 of the Final Forest Plan to clarify how ecosystem management fits in. Part of this is ecosystem analysis at the landscape/watershed scale which uses a number of steps to derive a list of opportunities based on achieving the desired condition of the landscape consistent with the Forest Plan; refer to pages 4-10 and 4-11 of the Final Forest Plan. Another part of ecosystem management is the multi-species approach embodied in the establishment of LSRs and RRs and the Aquatic Conservation Strategy. Another part is the Adaptive Management Approach; refer to page 4-12 of the Final Forest Plan.

Comment 37: Thank you for your good work on the Forest Plan and for protecting the last remnants of our beautiful outdoors.

12 91 235 237 241 256 269 282 320

Response: The Forest is beautiful, but it is not a remnant. Its broad expanse is a part of the legacy of National Forest management since the early 1900s.

Comment 38: The Forest Plan would be enhanced by better defining successes and shortcomings over the past plan period. The revision is an admission of what has been learned from past reality. The Summary, which should highlight major events, fails to do so and the reader is not told why there is a reduction in ASQ.

5

Response: As this will be the first Forest Plan for the Klamath National Forest under NFMA not a revision, there is no past plan period. The 1972 Multiple Use Plans are the last guidance providing programmatic direction. However, environmental concerns and opportunities are depicted in Chapter 3 of the EIS, the Affected Environment, for each resource. Chapter 2 of the EIS provides a discussion of why the decision space is so limited, which is why the ASQ has decreased so dramatically from past levels in all alternatives. The Summary is only a summary and cannot provide the level of detail available in the complete set of documents.

Comment 39: Start adhering to your own regulations as Congress mandated.

6

Response: Any alternative selected for implementation would be consistent (or made consistent) with existing laws and regulations.

Comment 40: The districts should consolidate along watershed lines. It seems that the Forest Plan would be the proper place for this discussion.

305

Response: The administrative studies that examine ranger district boundaries include the option of management along watershed boundaries. Many considerations drive that process but the process itself is not a part of the Forest Planning process mandated in the NFMA or its implementing regulations.

Comment 41: Extend the public comment period on the President's Plan.

82 173

Response: This is outside the scope of the Forest Plan and was addressed in the FSEIS.

Comment 42: What forest areas will have their prescriptions and land allocations changed due to Option 9 implementation considerations? Option 9's effects are clearly too extensive and complex to be adequately described in a 7-page addendum. More importantly, Option 9 is not finalized. In fact, serious scientific challenges have been made to Option 9 which may require substantive revision of the Option 9 plan.

72 74 127 154 177 229 233 237 255
256 258 264 280 282 283 307

Response: The areas affected by the FSEIS (President's Plan) can be identified by comparing the Preferred Alternative Land Allocation Map in the Final EIS with the Preferred Alternative Land Use Map from the Draft EIS. In Chapter 4 of the Forest Plan, an "*" indicates which standards and guidelines were incorporated from the ROD for the FSEIS. The Draft President's Plan was referred to in the Draft EIS and both were made available to the public. The Draft EIS Addendum described the relationship to the draft President's Plan. The relationship between the Forest Plan and the President's Plan was described at public meetings and briefings held on both plans.

The President's Plan was finalized by the signing of a ROD for the FSEIS on April 13, 1994. Changes made between the draft and final President's Plan were described in the FSEIS and the ROD for the FSEIS as was the relationship between the 2 plans. The changes to the FSEIS were relatively minor and did not warrant another supplemental EIS on the President's Plan.

Legal challenges to the ROD for the FSEIS are outside the scope of the Forest Plan. The ROD does provide regional direction for the Final Forest Plan (FSEIS ROD pages 11, 12, A-2). The Forest Plan is a product of an EIS which considers a broad range of alternatives. The planners and management of the Forest coordinated frequently with the team preparing the FSEIS and ROD and much of our direction co-evolved with the regional planning effort, which is one of the reasons the plans were distributed within a short time of each other. The ROD mentions that it is based on the California forest draft plans in several places and links the documents together. The cosmetic differences that existed in the 2 drafts have been reconciled in the Final Forest Plan and EIS. The documents have been improved in the final versions to clearly show details adopted from the President's Plan. Changes based on the ROD for the FSEIS and on public comments have also been incorporated.

Comment 43: Table 2-15 on page 2-62 of the Draft EIS shows that the May 1993 Preferred Alternative would have fewer acres within RMZs than many of the other alternatives, but the text states that it would manage the most acres in RMZs. The Forest Service repeatedly refers to insufficiencies and forecasting difficulties in the Draft EIS. This alleged lack of knowledge is directly contradicted by the FEMAT report for which, despite its own analytical defects, scientists estimated viability likelihoods for hundreds of species in all biological families.

154 282

Response: As explained in the document, Table 2-15 displays acres that are constraint stacked. If acres fall in more than one category, they will appear in the category nearest the top of the list, the most restrictive category. In addition, riparian area acres were estimated using mapped inner gorge areas, so only those areas are included in the acre estimates shown. The Preferred Alternative would include intermittent streams and some ephemerals in RRs and none of

these areas are mapped, so are not included in the acre estimates in this table. In the Final Forest Plan, MA10 shows an estimate for these intermittent streams as well as unstacked estimates of mapped RR acres to remedy this problem.

The regional scale which is analyzed in the FSEIS and its FEMAT appendix is appropriate to consider viability of wide ranging species such as the northern spotted owl. The Forest Plan addresses the forest scale, not the site scale; refer to pages 4-10 and 4-11 of the Final Forest Plan. The Forest Plan sets programmatic direction. The planning regulations require the use of the best available information. This has been done. Inventories were updated and quality control procedures applied. The ability or inability to forecast information is frequently an expression of the randomness of natural disturbances. Fire burns an average of 120,000 acres per decade, but the location of these areas is not predictable. Forecasts have been made where appropriate to the accuracy of models and the predictability of events.

Comment 44: The EIS should describe the specific management prescriptions which will be modified and implemented to ensure consistency with the President's Plan.

282

Response: The documentation has been improved in the Final EIS. The Preferred Alternative Land Allocation Map shows which Forest Plan land allocations would fall into each of the President's Plan categories. The Forest Plan indicates with an "*" which standards and guidelines are incorporated from the ROD for the FSEIS (President's Plan).

Comment 45: Please preserve the very last of the ancient and wild places for the future generations to enjoy, remember and respect.

9 97 102 120 139 147 189 206 209
219 241 253 291 295 327 340

Response: The desires of society to manage NFS lands to provide a sustained flow of renewable resources, as set out in the agency mission on page 4-3 of the Final Forest Plan, would guide the Forest's management policy in any alternative selected for implementation. The possibility of preserving a dynamic ecosystem without any human interaction is quite remote. The fire regime and climatic fluctuation that led to the 1987 fires that burned over a quarter million acres of Forest must be provided for in administering the Forest. The Karuk Tribe has occupied the river canyons for as long as 10,000 years and actively renewed the forest with fire and other management practices. Natural selection and the disappearance of species from the landscape continues to occur. Douglas-fir trees for example have been here in large numbers less time than the Karuk Tribe.

Comment 46: Please review Alan Thein Durning's recent report entitled "Saving the Forests, What Will it Take?"

313

Response: The alternatives considered propose a variety of management strategies which were designed to incorporate the latest scientific information as well as some older strategies. Durning's analysis is not necessarily focused on the Klamath National Forest and is not believed to address localized conditions any better than any of the alternatives proposed for consideration.

Comment 47: Prohibit all surface-subsurface activities and developments.

9

Response: The activities of the National Forest shall be in accordance with laws and regulations. The intent of Congress is for wise use to provide resources to achieve the greatest net public benefit. Providing resources often requires some types of disturbance. For example, exploration and development for mineral resources is permitted within NFS land, where not explicitly withdrawn, by the General Mining Laws.

Comment 48: Ban herbicides, mining, off-road vehicles, livestock grazing, dams, as well as logging and road building.

9

Response: The activities mentioned in this comment are authorized by various laws and regulations where appropriate without irreparable harm to resources. The Nation has a need for minerals, red meat, water, wood and recreation. The National Forests were established to protect the resources and foster their wise use; refer to Forest Service Mission on page 4-3 of the Final Forest Plan.

Comment 49: Overemphasis on resource extraction, especially intensive logging and road building, has placed many forest resources at risk. The Draft Forest Plan does not make the needed changes. Instead every effort is made to keep up the cut and continue outdated policies. For example, it would allow salvage and sanitation logging to degrade wildlife and cultural values. Water quality and fisheries would also be unacceptably degraded by the great amount of logging and road building. In fact, the level of road building envisioned by the plan is excessive and could cause unacceptable environmental damage.

11 39 48 80 145 147 162 175 180
181 193 204 206 219 237 241 243 247
292 295 305 312 313 315 318 319 334 336

Response: The Preferred Alternative, upon which the Forest Plan is based, emphasizes maintaining and restoring ecosystem health, particularly providing habitat for late-successional and aquatic species. It was modified to be consistent with the ROD for the

FSEIS. Refer to pages 2-20 through 2-25 of the Final EIS for a summary of its unique features. The ASQ in the Preferred Alternative would be more than 100 MMBF below historic levels. Salvage and sanitation prescriptions would be designed to contribute towards the maintenance of ecosystem health. Salvage removes a great amount of fuel that has historically precipitated large intense wildfires throughout the Western U.S. and specifically on the Forest. Many provisions are proposed to provide for species diversity, maintenance of water quality and cultural values; refer to Chapter 4 of the Final Forest Plan. The estimates for road construction and reconstruction have been reduced based on the modifications made to the Preferred Alternative; refer to page 4-124 in the Final EIS.

The largest threat to fisheries and water quality is uncontrolled wildfire. This produces 7 to 13 times as much sediment as logging and road building. The aggressive fuel treatment program as well as the timber program would focus on reducing fuel loadings which would reduce the risk of intense wildfires.

Comment 50: For the Forest which is recognized as one of the most biologically diverse in the Nation, it is fortunate that there is now a shift away from the emphasis of the recent past on intensive timber management and disregard for other concerns, the overall effect of which has been to lessen that diversity.

254 303

Response: The alternatives propose a number of options for providing for biological diversity; refer to pages 4-38 through 4-56 in the Final EIS.

Comment 51: The Forest has been a "working forest" since 1849. It is not a park, refuge or preserve. Perception of the "casual Forest visitor" superficially concerned with landscape aesthetics can be educated to appreciate the value of a "working forest" - to understand the larger cycles of life and the place that man has in working with the forest to manage productivity for the benefit of both.

281

Response: The alternatives present a range for visual quality management; refer to pages 4-92 through 4-97 of the Final EIS. Alternatives B and B' would emphasize visual quality. Most alternatives emphasize pleasing appearances as the alternative development groups believed that society holds this to be an important element of forest management. Alternatives Preferred, A, B and B' propose visitor information programs that emphasize forest activities and interpretation.

Comment 52: Forest, fisheries and recreation resources should be conserved. Conservation is management in a fully sustainable and improving manner.

183 188 241 274

Response: The Forest Goal for Sustainability on page 4-4 of the Final Forest Plan covers this. The standards and guidelines are designed to achieve this and the other Forest Goals.

Adequacy of Documents

Comment 1: The Draft EIS violates NEPA in that it contains inpermissibly conclusory and contradictory analysis, fails to consider the cumulative impacts of proposed activities, fails to present sufficient scientific data, fails to consider the Preferred Alternative's compliance with applicable laws, fails to present an adequate range of alternatives for management of roadless areas.

154 237 255 266 283

Response: The errors alleged in this comment are not believed to be present in the EIS. Failing specific complaints they cannot be answered in detail. The analysis including cumulative effects has been disclosed in Chapter 4 of the EIS with additional details available in the planning records. The complexity of analysis is such that the decision maker must weigh conflicting indications in reaching a decision. The sufficiency of the scientific data must in reasonable measure be judged by the agency. The courts have recognized this as a necessity because some interests would assert that there is never enough information to make a decision that appears to conflict with their values. The agency has a mandate to manage the Forest and must take the action necessary to do so. The Preferred Alternative is consistent with all applicable laws and regulations; refer to response to Adequacy of Documents Comment 5. A range of alternatives for released roadless areas was considered. Alternative E would maintain all in roadless character, while Alternatives Preferred and A would maintain some areas and the other alternatives would allocate them to a variety of land uses. Every attempt has been made to keep the public informed throughout the planning process; refer to Appendix A of the EIS.

Comment 2: A Draft Supplemental EIS should be prepared, describing the impacts of the President's Plan to avoid violating NEPA. The public must have an opportunity to learn and comment on the actual Forest Plan. It must address cumulative impacts. An alternative which includes the President's Plan must be included.

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Response: The ROD for the FSEIS (President's Plan) used Draft Forest Plan EIS information in its development. Several coordination sessions and staff exchanges were used to ensure that the ROD for the FSEIS and the Forest Plan were compatible in analysis and direction. The Final Forest Plan fully integrates the ROD for the FSEIS. Cumulative effects have been analyzed in Chapter 4 of the EIS for each resource. Some cumulative effects analyses may not include effects that are impossible to predict such as when and where wildfire will occur or actions that occur outside the country.

Comment 3: The EIS should clearly describe the stages and decision points where NEPA documents will be drafted or the process used to determine these decision points.

282

Response: The NEPA documents prepared for projects are triggered by a process described in the Environmental Coordination Handbook. FSH 1909.15. These are adjusted to meet the changing regulatory network with other agencies and are subject to Federal rule making processes. The inclusion of the process is not required by the Planning Regulations in 36 CFR 219. However, a discussion of the various levels of analysis has been added on pages 4-10 and 4-11 of the Final Forest Plan.

Comment 4: Make the Forest Plan scientifically credible and legally defensible; not based on presumptuous timber computer models.

147

Response: The FORPLAN model which projects timber growth and yield over time is only one of many models and analysis techniques used in the EIS; refer to Chapter 4 and Appendices B, H and I of the EIS. FORPLAN uses Forest data and is adjusted to show the effects of fire on plantations. The model is the best available for forest-wide land allocations.

Comment 5: The EIS should examine the consistency of the Preferred Alternative with the Creative Act, Organic Administration Act, the Taylor Grazing Act of 1934, the Multiple Use/Sustained Yield Act of 1960, the Forest and Rangeland Renewable Resources Planning Act of 1974, NFMA, the Federal Land and Management Act, Clean Water Act, ESA and WSR Act and other applicable laws.

154 266 281

Response: The EIS examines the effects of compliance with the above mentioned laws as well as dozens of others but does not cite them in the analysis. The intent of the Forest Plan and its EIS is to prepare an environmental analysis not a legal analysis.

Comment 6: Management has asserted other "values" and resources in overwhelming derogation of the original stated purposes of the Forest. In 1903 when Siskiyou County's Forest Reserve Committee assembled a proposal and lobbied agents of the Bureau of Forestry for the creation of the Klamath Forest, it was with the clear understanding that forest resources would be managed to the sustained economic benefit of the citizens of Siskiyou County and for "the continue prosperity of agriculture, lumbering, mining and livestock interests." Only 40% of the lands would fulfill the purpose for which the Forest was established so far as insuring "a continuous supply of timber for the use and necessities of United States citizens."

281

Response: The emphasis on other values has paralleled the social evolution of the Nation and is a reflection of legislation that has become the law of the land since 1903. The purposes for which the County of Siskiyou lobbied in 1903 are only part of the legal framework that exists for the forest today. The Wilderness Act and the California Wilderness Act have had a significant role in setting aside lands for purposes that exclude timber harvesting and limit other activities. The WSR Act and several acts that relate to forest management have had a large impact on land allocations. The ESA is perhaps the largest factor in restricting other activities. An environmentally responsible and sustainable timber harvesting level has been proposed that in combination with private lands and other Federal holdings would benefit the Siskiyou County area.

Comment 7: Currently, Forest Service management often fails to be based upon the data, analysis and monitoring essential for making ecosystem-based management decisions. Standards and guidelines often lack specific timelines or quantifiable goals that can be measured or met. Monitoring requirements are often inadequate, under-funded and go unaccomplished.

256

Response: The Forest Plan is all about change. It takes a new direction that amounts to a major paradigm shift in management. The process includes additional analysis, inventory and monitoring requirements. Of course, funding for any part of the program is still subject to the national priorities imposed by Congress.

Comment 8: The bulk of Forest issues appear to be driven by environmental versus conservation/recreation communities. The environmental health of the Forest cannot be protected by purposefully neglecting the multiple-uses that occur and the issues surrounding needs for and benefits of these types of use. Unless human recreation in all its forms is considered, our

natural resources cannot and will not be conserved and protected as required in NFMA.

255

Response: The alternatives would provide various mixtures of recreational opportunities. All have been modified to incorporate the Forest Recreation Strategy. This integrated strategy recognizes a value to the use of the Forest and its resources by humans in consumptive and non-consumptive forms of recreation.

Comment 9: In areas where the 4 Northern California Forest Plans are generally consistent with each other such as RMZs, the proposed management direction is often contrary to the recommendations of the Forest Service's own scientists.

237

Response: This statement is difficult to reconcile with the fact that the plans were developed using input from Forest Service scientists on subjects such as biological diversity and riparian protection. Some standards for the Preferred Alternative, such as those for RRs, have changed considerably during the planning process, based on new recommendations by scientists and on public comment.

Comment 10: The Draft Forest Plan is legally inadequate in that it fails to protect the biological diversity for which our area is well-known. It continues failed policies and practices which are well-known to have created the present environmental degradation problems.

56 75 76 84 103 118 124 128 139
157 178 182 184 187 188 205 208 211
222 223 227 234 245 248 260 279 335

Response: The Forest Plan would not continue past policies. It is designed to provide for biological diversity; refer to response to Diversity Comment 3 in the Biological Diversity section. Analyses in Chapter 4 of the EIS demonstrate that the Preferred Alternative would preserve biological diversity at several scales, based on the best information and science available.

Comment 11: Information is insufficient for cumulative impacts, connectivity, treatment of "old growth" forest located in nonrestricted areas, incorporation and coordination with non-Federal lands and air quality conformity.

282

Response: Clarifying information has been added to the Final EIS in these areas.

Comment 12: Delay the official release of your Forest Plan until the President's Plan is officially adopted.

4 104 121 133 134 221

Response: The Final Forest Plan direction is consistent with the ROD for the FSEIS (President's Plan) which was signed on April 13, 1994.

Comment 13: The comment period should be delayed 90 days so that a supplement setting forth the specific implementation of draft Option 9 on each National Forest can be prepared.

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245 248 255 258 264 266 271 272 274
275 278 279 282 283 285 286 288 289
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332 335

Response: Opportunity for public comment was provided on both the Draft SEIS (President's Plan) and the Draft Forest Plan; refer to response to General Policy Comment 42 earlier in this section. Changes made as a result of comment on the Draft Forest Plan and as a result of the ROD for the FSEIS were relatively minor and do not warrant an additional opportunity for formal public comment. Issuance of a ROD simultaneously with the Final EIS for the Forest Plan is permitted by the Council on Environmental Quality regulations at 40 CFR 1506.19b when there is an established appeal process. The ROD for the Forest Plan EIS is appealable under 36 CFR 217.

Comment 14: The options presented in the EIS, besides being legally inadequate "straw men" alternatives clustered around the predetermined target, are an environmental and economic disaster.

3

Response: The alternatives considered in the EIS display as wide a range as possible within the decision space available. Chapter 2 of the EIS under Direction Common to all alternatives describes the requirements and constraints applied to all alternatives. These requirements and constraints are generated by environmental laws which were designed to protect environmental quality. Additional requirements continue to be added based on new interpretations of laws and new direction from the Administration.

Comment 15: The Draft Forest Plan fails to present a sufficiently wide range of alternatives in terms of roads, as all alternatives provide for excessive vehicle usage. The Preferred Alternative would result in the greatest increase in total road miles and road density.

44

Response: The Transportation and Facilities Management section of Chapter 4 of the EIS displays that the alternatives do display a range for road densities, construction and reconstruction miles and total miles. Road densities are estimates of what might be needed to implement each alternative. Road densities estimates in the EIS apply only to regulated land which

is less than half of the Forest in all alternatives and only 21% in the Preferred Alternative; this has been clarified in the Final EIS. The estimates for road construction in the Preferred Alternative have been modified due to modifications which limit road construction in Key Watersheds, 41% of the Forest and prohibiting road construction within roadless areas in Key Watersheds. Alternative C would limit road density in Habitat Linkage Management Areas to less than 1 mile per square mile. Alternatives D and D' would close 1 mile of road for each new mile built.

Comment 16: With the advent of ecosystem management, there should be a fresh look at the development of alternatives. The desired forest condition should be key to the process. It should be presented as a goal, not a fall-out result of implementing prescriptions and should be developed through thorough local public involvement and input. All affected parties should agree to the desired condition prior to the development of alternatives. Then an array of alternatives, any one of which will result in the desired condition, should be developed. This is a radical departure from the current approach to land management planning and would probably require some regulatory reform. However, there is no other way to work toward a stable future-condition goal and involve public input.

74

Response: The development of alternatives and the desired future conditions were developed with as much public participation as possible. Input from various members of the public was included in the development of alternatives, including desired future conditions; refer to Appendix A. The possibility of all interested parties coming to a consensus on the desired future condition is very remote. The process suggested would require legislation to change the Federal Advisory Committee Act and possibly NFMA. Implementation of the Forest Plan would entail the development of alternatives that achieve the goals and desired future conditions at the site level; however, consensus building is not a part of this process.

Comment 17: Several of the alternatives in the EIS could not be accepted as a preferred alternative under the President's Plan. Therefore the range of alternatives in this document is inadequate.

255

Response: The ROD for the FSEIS states "Amendments of forest or district plans that would modify the standards and guidelines or land use allocations established by this Record of Decision will be coordinated through the Regional Interagency Executive Committee and the Regional Ecosystem Office ... Although decisions concerning implementation or modification of these standards and guidelines are subject to review by these interagency groups, the Memorandum of Understanding for Forest Ecosystem Management acknowledges the line authorities of individual agencies" (USDA Forest Service and USDI BLM, 1994, page 58). Furthermore, 40 CFR 1502.14 states that agencies shall "Include reasonable alternatives not within the jurisdiction of the lead agency."

Any alternative considered could be selected for implementation, but would have to either be made consistent with the direction in the ROD for the FSEIS or be coordinated through the Regional Interagency Executive Committee and the Regional Ecosystem Office; refer to page 2-13 in the Final EIS. The disclosure of alternatives that do not exactly match the direction in the President's Plan broadens, rather than narrows the range of alternatives considered.

The President's Plan affects only portions of the Forest Plan alternative(s) as it only makes changes to portions of underlying Forest Plans; refer to response to General Policy Comment 34 earlier in this section. The portions of the alternative(s) which are not covered by the ROD for the FSEIS could be combined with management requirements in the ROD for the FSEIS (as described and analyzed in the Final EIS Preferred Alternative) to make whole implementable alternative(s).

Comment 18: The great diversity of proposals for treatment of resource elements among the alternatives results in a lot of trade-offs in selecting a preferred alternative. It would assist the reviewer if resource elements that are identical or largely similar to other alternatives were noted as such.

303

Response: The section in Chapter 2 of the EIS, Direction Common to All Alternatives, was included for just this purpose. The Descriptions of Individual Alternatives in Chapter 2 present only the elements for each alternative that are not included in the Direction Common to All Alternatives section. The Common to All Alternatives sections in Chapter 4 of the EIS also highlight commonalities in projected effects. However, some alternative features that seem to be similar may have key differences that are valuable to the environment and need to be considered separately.

Comment 19: The Karuk Tribe of California has invested a great deal of time and money in preparing an Ancestral Lands Forest Management Plan. There is no discussion of the in-depth Karuk management plan.

203 305

Response: The Karuk plan is mentioned in Appendix A under Consultation With Others. A discussion has also been added in Chapter 2 of the Final EIS under Alternatives Eliminated From Further Detailed Study. The proposal was discussed at length with the Karuk Tribal leadership and their contractor to ensure that the critical features were considered in other alternatives. The ceremonial areas identified have proposals for special management in all alternatives considered in detail. The proposal for conserving fishery resources

is well taken care of by Alternatives Preferred, D and D'. Several other features of the Karuk plan could not be implemented due to existing laws and regulations. The largest block of "old growth" timber which was recommended for intensive timber management has been identified by several groups of scientists as necessary for the conservation of late-successional species.

Comment 20: Table 2-4 is useful but should list miles of road restored under each alternative in addition to the narrative.

303

Response: The narrative shows the intent of each alternative's program. Estimates of actual road miles to be restored were not made. This would be determined at the landscape/watershed and site levels based on site-specific data.

Comment 21: The EIS should analyze the impact of fire and fire management on ecosystem conditions, the effect of management prescriptions on forest conditions within management areas and across landscapes and the effect of public policy on private management decisions and the cumulative economic and biological decisions and the cumulative economic and biological impacts in various regions.

259

Response: The impact of fire and fuel management on ecosystem conditions is addressed in the various resources sections in Chapter 4 of the EIS. Additional analyses have been included on pages 4-44 and 4-55 through 4-56 in the Final EIS. The effects of prescriptions on forest conditions at the forest level is also included throughout Chapter 4. Effects at the landscape level would be addressed in ecosystem analysis at the landscape/watershed level; refer to page 4-11 in the Final Forest Plan. The effects of public policy on private management decisions were addressed within the limited range of known decisions. These are shown in a cumulative fashion for the Forest for each alternative. Analysis of effects on regions is outside the scope of the EIS.

Comment 22: The 7 page addendum is appropriate. The percent of the area reserved from timber management rises from 65% to 75%, but it is virtually impossible to find which acres are reserved. There isn't a good statement on acres assigned to various uses. Forest acreage is displayed as 1,680,000 acres, including the BVNG. This contradicts other Forest Service reports. Summary tables that show various land designations would help readers.

5

Response: The acres added by the addendum are largely located in unmapped RRs calculated from sample maps and figured into the analysis as a factor applied to all lands; refer to page 4-133 in the Final Forest Plan. Other acres are additions to LSRs within 35 miles of the ocean to accommodate the needs of the marbled murrelets. Refer to the Preferred Alternative Land Allocations Map in the map packet. Tables 2-6 through 2-15 in Chapter 2 of the Final EIS and the Tables in Chapter 4 of the Final Forest Plan provide acre estimates for the various proposed land uses in the alternatives. The data used is from the Forest planning data base. Other reports may have used other estimates. The exact acreage of the Forest also can change over time due to land exchanges and other adjustments. The accuracy and basis of acreage for the Forest in other publications is outside the scope of the EIS. The actual acreage is difficult to estimate as some townships have had surveys canceled due to inaccuracies.

Alternatives

Comment 1: The Draft Forest Plan and Option 9 are a sham. They make no sense biologically or economically and are simply political appeasement. Preservation does not work. Abandon this plan and the entire planning process, disband the USDA Forest Service and either privatize the land or turn it over to the National Park Service for permanent preservation. The agency is, quite simply, not doing its job.

3

Response: The Forest Plan and the ROD for the FSEIS (President's Plan) are based on the best data and scientific information currently available, information that was not available years ago. Both will continue to be adjusted as new information becomes available through the adaptive management process.

Comment 2: Conifer growth on NFS lands exceeds timber harvesting by 30%. The annual mortality on the Forest if harvested before it rots could run several mills. Clearly, there is no timber shortage, but a leadership in government shortage.

296

Response: There is no shortage of wood fiber. There are limitations on harvesting it and delivering it to the mills as national laws have identified that it has a greater value for other uses. Large trees in particular are important for the viability of late-successional species. Smaller trees, which are generally more available may not be economical to harvest and mill under existing conditions.

Comment 3: Strategies from the draft SEIS such as standards and guidelines for RR would appear to have a great impact on grazing.

281

Response: The impacts on grazing would likely be more significant if deteriorated riparian conditions existed on the forest as a result of grazing.

Comment 4: There do not seem to be any laws or regulations prohibiting Alternative G(SOHA) from being implemented, only a conclusory statement in the ISC report to the effect that the SOHA strategy is a formula for northern spotted owl extinction. No convincing data is presented to support that statement. To the contrary, results of studies done on managed industrial forest lands lead to the belief that owls prosper as well or better on managed lands than on "pristine" lands.

74

Response: The discussion of Consequences Unique to Alternative G(SOHA) on pages 4-66 and 4-67 of the Final EIS explain why SOHAs are believed to have a low likelihood of maintaining population viability for the northern spotted owl. The agency considers new information as it becomes available. Should the viability assessments change, an amendment or revision of the Forest Plan is possible.

Comment 5: Draft EIS Table 2-4 confirms the thought that the SOHA strategy is not a sure formula for northern spotted owl extinction. If the population were not viable, it would not be able to increase over a five-decade period.

74

Response: Table 2-4 shows estimates of the owl numbers that could be supported by projected available habitat, but does not guarantee that owls will be there to occupy the habitat. The Final EIS has been corrected to display habitat acres only, not projections of owls pairs which are highly speculative and dependent on other conditions than just habitat alone. The discussion of Consequences Unique to Alternative G(SOHA) on pages 4-66 and 4-67 of the Final EIS explain why SOHAs are believed to have a low likelihood of maintaining population viability for the northern spotted owl.

Adaptive Management Area

Comment 1: The use of AMAs is an example of how flexible management can provide for new and different solutions to old problems. This willingness to provide for creative management should be extended to all areas of the Forest, including RRs to allow true problem-solving and increased forest productivity.

37

Response: An adaptive management approach would be used throughout the Forest in the Preferred Alternative, however only the Goosenest Area would be specifically designated as an AMA; refer to page 4-12 in the Final Forest Plan.

Comment 2: The Goosenest AMA includes areas of several management prescriptions. The Forest Plan needs to project the effects of the AMA on prescriptions presented in this document as well as display how it will affect wildlife habitat.

72

Response: The effects of the prescriptions for the Goosenest AMA are analyzed in the EIS at the forest-wide level. Further site analyses will occur using the adaptive management process to develop an AMA Plan. The prescriptions in the Forest Plan would only provide a starting point for the AMA; many will likely be modified through project level amendments to the Forest Plan based on the site-specific analyses for the AMA.

Comment 3: The adaptive management scheme of Option 9 is a pointed violation of NEPA and NFMA because management guidelines for these areas are deferred to future "trust us" planning. It contains 2 candidate species for Federal listing which have not been considered in the Draft EIS. Ferruginous hawk and loggerhead shrike are not specifically addressed by any standards and guidelines (Draft EIS at page 4-69). The most sensible time to consider habitat needs of Sensitive species is during programmatic forest planning.

154

Response: NEPA requires site-specific analysis prior to implementation of site disturbing activities. This is a 2 stage decision-making process. Broad, programmatic direction is set at the Forest Plan level and site-specific direction is developed at the project level. The Final Forest Plan has been modified to include loggerhead shrike as an indicator species in the Grassland/Shrub-Steppe Association; refer to page 4-41 in the Final Forest Plan. Refer also to response to Wildlife Comment 41.

Comment 4: The Forest Plan does not specify how it can be altered in the event of large catastrophic fires. A regional or provincial review group would need to approve any deviations from Option 9 guidelines. Thus the Forest Plan is severely limited as adaptive management tools in a region where catastrophic fires are certain to occur.

259

Response: The Forest Plan could be amended or revised if conditions warranted; refer to Chapter 1 of the EIS and to Chapters 1 and 5 of the Forest Plan. However, enough flexibility has been provided in the proposed Forest Plan that revisions should not be necessary solely due to catastrophic events. More likely, revisions and amendments would be generated by new information. Fire recovery guidelines are included in the Forest Plan. Any deviations from the ROD for the FSEIS would need to be coordinated through the Regional Interagency Executive Committee and the Regional Ecosystem Offices. Although subject to review by these interagency groups, the line authority of the agency is recognized (USDA Forest Service and USDI BLM, 1994, page 58).

Comment 5: Criteria should be described on how specific locations will be targeted for the development and testing of innovative forest management approaches. Although AMAs are provided for such research, it is unclear whether this research would be restricted to AMAs or what the potential criteria are for selecting test sites.

282

Response: The Forest Plan does not describe specific locations nor establish criteria for selecting them. The needs for administrative studies and research would be developed on an on-going basis. Too much direction could limit the innovation that is hoped for in these areas. The Forest Plan has been modified to make it clear that an adaptive management approach would apply to the entire Forest, not just the Goosenest AMA; refer to page 4-12 of the Final Forest Plan.

Comment 6: AMAs should represent the full range of biological diversity present in the region. Analyses beyond the initial ones developed by CDF should be done across the region. The establishment of AMAs should also take advantage of local management or economic opportunities, and local recommendations on management alternatives. Standards and practices should be evaluated by interagency/public groups on an on-going basis.

259

Response: The needs analysis for AMAs was conducted for the northern spotted owl region during preparation of the FSEIS and is outside the scope of the EIS. Local participation and the identification of economic opportunities would be emphasized in the AMA. The Regional Interagency Executive Committee would provide initial direction and continuing review. This has been clarified; refer to pages 4-181 through 4-186 in the Final Forest Plan.

Comment 7: AMAs should not be adopted, recommended or advocated in the Forest Plan. However, adaptive management as a process should be implemented on all ranger districts. All communities (so called "communities of interest" and "communities of place") should be afforded full and equal opportunity to participate in adaptive management projects. Each district should have at least one adaptive management project at all times. Inventory and monitoring funds should be prioritized for these projects and funds requested and reserved to complete this monitoring.

283

Response: Establishment of the Goosenest AMA is part of the ROD for the FSEIS and constitutes direction for the Final Forest Plan. The Preferred Alternative would use an adaptive management approach on all projects. This has been clarified on page 4-12 of the Final Forest Plan. Individuals are encouraged to participate in forest planning at all levels; refer to pages 4-10 through 4-11 and pages 4-71 through 4-72 in the Final Forest Plan. Funding would be requested to allow full implementation of all planned projects including associated inventory and monitoring needs.

Comment 8: Additional interagency cooperation will be needed to ensure adaptive ecosystem management. Federal and state agencies must resolve existing policy and regulatory conflicts that impede ecosystem management.

259

Response: The framework for additional cooperation at the Federal level was established by the ROD for the FSEIS. Coordination with state and local agencies will proceed under the requirements of several Federal laws. Federal objectives cannot be imposed on state and local agencies, but coordination and cooperation in pursuing areas of mutual interest and to resolve differences would be emphasized; refer to Participative Management Goal on page 4-5 of the Final Forest Plan.

Comment 9: The latest information on AMA guidance from the Interagency Implementation Team in Portland states that AMAs are not to be set up to achieve consensus but to receive information from individuals with expertise. If this guidance continues, AMAs, where conflict resolution groups have started, could fail from this alone.

283

Response: The work to resolve conflict is not mutually exclusive of achieving a consensus of non-Federal parties. The law prevents the agency from allowing a group not chartered under the provisions of the Federal Advisory Committee Act to advise them on a recurrent basis and prevents the agency from participating in such a consensus group. However, consensus groups can operate without the Forest Service and make recommendations. These recommendations would be considered along with any input from those who did not participate in the consensus group.

Comment 10: Adequate resources must be provided and appropriate processes established to ensure adaptive management planning. The establishment of trust and the provision of adequate data are critical to this process.

259

Response: This is true, but receiving adequate funding to ensure adaptive management is outside the scope of the Forest Plan. Funding is governed by Congressional allocations. Processes would be established through the adaptive management process. The Forest Plan provides general guidance and leaves maximum flexibility; refer to pages 4-181 through 4-186 in the Final Forest Plan.

Comment 11: Eliminate the AMA category from the plans and add all ecologically significant "old growth" in those areas to the forest reserve system.

237

Response: Establishment of the Goosenest AMA is part of the ROD for the FSEIS and constitutes direction for the Final Forest Plan. However, the area covered by the Goosenest AMA has very little "old growth." This is why the specific goal for the AMA would be to manage for maintenance of late-successional forest; refer to page 4-182 of the Final Forest Plan.

Comment 12: Do not drop standards for AMAs.

147

Response: The standards for the AMA are included on pages 4-181 through 4-186 of the Final Forest Plan.

Standards and Guidelines

Comment 1: Standards and guidelines need to provide direction that develops local information and utilizes that information in the management of the Forest. This includes compiling data, developing data standards, establishing Geographic Information Systems and the subsequent utilization of those databases.

72 259

Response: Forest Plan direction is intended to be broad based and programmatic; it provides direction on what to do and why. The specific details of how to do things is left to the implementation stage. One reason is that technological improvements may make the most advanced methods today obsolete tomorrow. The intent is to maintain flexibility to adapt to technological advancements. Another reason is that what works in one situation may not be the most efficient design for another. The design for a wildlife database or road inventory may not be the most appropriate for a integrated database at the Forest level.

Comment 2: Universal standards and guidelines repress innovation, eliminate diversity and perpetuate the system of "prescriptions" that has a demonstrated historic track record of failure and degradation of habitat. Leave it to the managers on the ground to achieve Forest Plan objectives with various tools.

281

Response: The Forest Plan is designed to provide programmatic direction. Goals and desired future conditions are emphasized. Standards and guidelines generally state management requirements necessary to provide for healthy, resilient ecosystems. The tools and "how to" direction are left to site analysis; refer to responses to Standards and Guidelines Comment 1 in this section and Sensitive Plants Comment 8.

Comment 3: It is stated repeatedly in the EIS that the desired future condition of the Forest is a pleasing appearance. A pleasing appearance can be a valuable indicator but structure such as downed woody material, snags and material in streams is also important.

303

Response: Aesthetic considerations would be only a part of the desired future condition in any alternative. All alternatives would provide for structural elements; refer to pages 4-48 through 4-49 and 4-85 through 4-87 in the Final EIS.

Comment 4: The Community Action Plans and Rural Development Strategies should identify the various types of communities and the needs of isolated communities. Rural Development strategies should heavily focus on alternatives for providing communities new ways of finding economic opportunities such as partnerships, stewardship, labor service contract and others.

302

Response: The needs vary for each community and are best identified by the community. Categorizing communities into types does not seem productive as the specific, individual needs may be the critical element. The Forest's intent is to facilitate achieving community goals using a full range of tools including those suggested.

Comment 5: Under management plans and strategies the Coordinated Resource Management Plan will only coordinate grazing use of the Forest and privately owned lands primarily within the BVNG. The Forest Service needs to list other existing Coordinated Resource Management Plan groups. The Community Action Plans for communities which exist within the Forest should each be identified as needing specific Coordinated Resource Management Plans. Communities need to be encouraged and intimately involved in these processes.

302

Response: Forest-wide Standard and Guideline 25-9 on page 4-72 of the Final Forest Plan encourages the development of Coordinated Resource Management Plans and other cooperative agreements. It is not limited to the BVNG. It applies to all such efforts, whether they are listed or not. The Forest cannot require land owners or communities to develop Coordinated Resource Management Plans. As much flexibility as possible is left in the development of community action plans to encourage new, innovative ideas.

Comment 6: The Forest Service is obligated to provide for community stability and to preserve important historic, cultural and natural aspects of our national heritage. Under the 1944 Sustained Yield Forest Management Act, a sustained yield unit may be formally declared.

281

Response: All alternatives were bound by the timber constraints for sustained yield, non-declining flow to provide for community stability; refer to page 2-11 of the Final EIS. All alternatives would provide for community stability, but at much lower levels of timber yields than in the past. The preservation of cultural and historic aspects of our national heritage relates to archeological and historic resources (Heritage Resources) which are addressed in the Cultural Resources Management section of Chapter 4 of the EIS, not social impacts.

There is an existing competitive market for timber in the Forest's area of influence. Sustained yield units are designed to guarantee timber industry that if they locate in an area, there will be adequate timber volumes offered for them to regain their investment with a reasonable return. With the existing mill capacity in the 7-county area, there is no need to encourage new mills.

Comment 7: The Forest Service should discuss potential procedures for assuring non-Federal lands are considered in Forest Plan implementation, province planning and project level assessments.

282

Response: The Forest Plan establishes objectives to work with others; refer to page 4-10 in the Final Forest Plan. Forest Plan direction does not extend to private land. Estimates of the effects of activities on non-Federal land would be included in analyses at the landscape/watershed and site levels; refer to page 4-11 in the Final Forest Plan.

Comment 8: A standard is a principle requiring a specific level of attainment, a rule to measure against. A guideline is an indication or outline of policy or conduct.

283

Response: Policy and case law have held the two concepts to be equal and they are treated as such in the Final Forest Plan and EIS.

Comment 9: The Big Game Habitat Management Zone fails to discuss the most abundant and important resource, timber.

7

Response: The boundaries of this area were re-defined to include the area identified by CDFG as important mule deer and pronghorn habitat. The name was changed to Winter Range. The area is no longer regulated; it would not be managed for timber production; this area would not contribute anything to the ASQ. Vegetation management is covered by Standards and Guidelines MA14-13 through MA14-19 on pages 4-164 and 4-165 in the Final Forest Plan.

Comment 10: Include a matrix which displays individual management area overlaps in order to better understand the allocations that are being made. Any conflicting prescription specific standards and guidelines in areas where overlap occurs need to be resolved.

72

Response: Exception sections have been added to a few of the management areas to explain which standards and guidelines take precedence when there is overlap. In all other cases, the most constraining standards and guidelines for any given resource would take precedence. A matrix was not created because the situation is not simple. Judgement based on site-specific conditions may be necessary to determine which standards are most constraining in some cases.

Comment 11: It is our understanding that in areas where conflicting management strategies exist as with the overlap of riparian reserves with WSRs designation stream corridors, that the more restrictive prescriptions will apply. This will help ensure that the highest degree of riparian and stream protection will be afforded many of the most important summer steelhead and spring chinook streams within the Forest.

72

Response: This is indeed the case.

Comment 12: It is difficult to "track" management area prescription acreage because of the geographic overlap between prescriptions. Thus it is difficult to determine how effective the prescriptions are and if in fact the management direction provided by the standards and guidelines is being implemented or if a different management area/prescription is being used as a surrogate. The overlap concept is somewhat confusing and as a result it is difficult to aggregate acreages of suitable lands from one area to the next.

72 74

Response: The management area overlap column was removed from the Final Forest Plan as it proved to be more confusing than helpful. In the Final Forest Plan, estimates of total acres are shown displayed for all management areas. Due to the overlap, the sum of all management areas will exceed the Forest total, but it should be easier to determine prescription effectiveness. Stacked acres with no double-counting are still displayed in Table 2-6 on page 2-20 of the Final EIS for those who wish to see that display.

Comment 13: Obviously, the reason timber outputs are so much lower than potential yields is due to the fact that so many forested acres have been zoned out of timber production in the Forest Plan. Most likely no entries are planned in Key Watersheds, roadless areas or true "old growth" stands. The Forest should re-evaluate the standards and guidelines as they apply to the different management areas. Should inconsistencies arise between the Regional Standards and Guidelines and what is the best for the land, then the Forest should pursue changes at the regional level.

264

Response: The Final Forest Plan has been modified to be consistent with the regional standards and guidelines that accompanied the ROD for the FSEIS. Entries would be planned in the portions of Key Watersheds, released roadless areas and in "old growth" stands that occur on regulated land. However, if "old growth" is limited in a watershed, it would be retained under Forest-wide Standard and Guideline 6-4 on page 4-23 of the Final Forest Plan.

Modelling

Comment 1: FORPLAN is not a model which can be used effectively as a basis for assessing ecosystem management plans. This is inherent in its linear nature as well as numerous assumptions. While FORPLAN must be used for some projections reliance on it as a basis for management decisions is inappropriate and contrary to ecosystem management direction.

283

Response: FORPLAN is only one of many tools used to analyze alternatives. It is well suited for estimating certain quantitative outputs over time based on varying land allocations. Habitat models, sediment models and fisheries models were also used. FORPLAN provided input data for these models and is a good tool for comparing alternatives.

Comment 2: The Draft EIS does not adequately reveal assumptions used in models or their basis in applicable real-life research. It also does not perform sensitivity analysis on models employed in order to reveal to decision makers and the public the extent of possible deviation or error from modeled results.

These deficiencies must be corrected in the Final EIS to satisfy the requirements of NEPA.

283

Response: The key assumptions are summarized in Appendix B of the EIS and the Methodology sections for each resource in Chapter 4. Additional information is contained in the process records, including sensitivity analyses. This information is extensive and not of sufficient value to most readers to warrant their inclusion in the EIS.

Comment 3: FORPLAN does not have the ability to locate cutting units. Location and priority of management activities shall be identified by a watershed assessment conducted on the ground. How will field projects and their results be compared and evaluated against the schedule of outputs derived from the FORPLAN model? The models and tables constructed from data and information do not seem adequate to give enough direction to Forests to be able to realize timber outputs and comply with sustained yield requirements under the law.

283

Response: The location of individual timber units will be a product of project analysis at the site scale that will be used to implement the programmatic direction in the Forest Plan; refer to page 4-11 of the Final Forest Plan. The models and tables in the EIS are not intended to provide direction, but to display projected effects of various alternatives.

Comment 4: Much site-specific, local data has not been incorporated because the 1987 fires caused such a back-up. Field tested locally-produced data should be compared with the aerial work done for the Forest Plan database.

305

Response: This comparison will occur at the implementation stage and will be fed back into the Forest Plan as a part of the monitoring and evaluation process; refer to Chapter 5 of the Forest Plan.

Comment 5: Page B-13 in Appendix B implies that wildfires have been factored into FORPLAN and all pertinent FORPLAN outputs. The Forest needs to adequately discuss this issue specifically.

283

Response: FORPLAN included estimates for the number of plantations that would burn in the future, based on historical data as explained on page B-15 in the Final EIS. FORPLAN does not include estimates of future wildfire for any other type of stand as explained on page 4-40 of the Final EIS. There is no accurate way to predict how many acres of which timber strata would burn in what decade. The effects of fire are partially portrayed in FORPLAN as part of the mortality function, however.

Public Involvement

Comment 1: Will the Forest Service choose to disregard most public comments on the California draft plans? The agency has already hinted that it will only utilize comments on matters that are not covered by the President's Plan. In a December 22, 1993 letter, Regional Forester Ron Stewart stated: "We will use the comments received to decide what changes to make in our draft Forest plans in those areas where we have decision-making discretion."

237

Response: The decision-making process for the Forest is taken very seriously and public input has consistently been used to broaden and improve the analyses and as a source of new information; refer to Chapter 1 and Appendix A of the EIS. The ROD for the FSEIS constitutes direction for the Final Forest Plan; refer to page 1-2 of the Final EIS. The FSEIS had its own public comment period. However, if circumstances warrant, the Forest could propose changes to the direction in the ROD for the FSEIS through the appropriate process which is coordination with the Regional Interagency Executive Committee and the Regional Ecosystem Office (USDA Forest Service and USDI BLM, 1994, page 5).

Comment 2: The Karuk Tribal Council has been unable to adequately discuss the ramifications of your Forest Plan and EIS documents. The Karuk Tribe formally requests consultation as the Final Forest Plans are being prepared and implemented. There are issues which are perhaps not apparent that could cause future conflicts between the Forest Service and the Karuk Tribe.

203

Response: The Final Forest Plan has been modified to include a section on the Tribal Government Program that emphasizes the intent to follow the Government-to-Government protocol and to consult and coordinate on all projects that have the potential to affect Native American values; refer to page 4-70. The Government-to-Government Agreement provides a process for this type of consultation. Forest Plan provisions such as how to provide for ceremonial area values and special products needs have been discussed at a number of meetings since the agreement was signed and future meetings are planned.

Comment 3: The Forest Plan cannot be commented on intelligently until the final Clinton Plan is available for review. We reserve the right to provide additional comments, both written and through consultation, once we have had adequate time to review the President's Final Plan. Hold open public hearings to explain the Forest Plan.

74 112 202 203 231 240

Response: Scoping and public involvement are continuous processes. The opportunity to influence the management of the Forest by providing information necessary to make the best reasoned decisions for the land, resources and people exists all the time, not just during periods legally prescribed by NEPA. However, comments made prior to the decision on the Forest Plan will be more effective as far as influencing that particular decision is concerned. Open houses and briefings were held throughout Siskiyou County to provide information on the draft documents and to gather information from the public; refer to Appendix A, pages A-3 and A-4.

Comment 4: Planning should take advantage of local and regional groups established to foster stewardship of watersheds and natural resources. Goal development, management planning, data collection and analysis must include private industry, local landowners and the public. These groups should be involved in planning, implementation, monitoring and evaluation of Forest Plans.

112 259

Response: The use of these type of groups is limited by the Federal Advisory Committee Act. They cannot make decisions about NFS land or provide advice to the Forest Service as a recurrent or primary source on what course to take if they are not chartered under the Federal Advisory Committee Act. However, they can be invaluable in providing input on resources, public desires and analysis tools. They can make recommendations like any other individual or group. The Forest Plan includes a goal of Participative Management; refer to page 4-5 in the Final Forest Plan. The Forest would be grateful for all public participation in planning, implementing, monitoring and evaluation of the Forest Plan.

Comment 5: The EIS should provide for processes that will result in cooperative conservation strategies with neighboring landowners. Incentives and benefits could be provided to ensure the cooperation of private landowners such as inexpensive or free access to data and analytical tools, training in data analysis and data development. The Forest Service should delay activities in mixed ownership watersheds until a Coordinated Resource Management Plan is in place. An on-going dialogue between CDF, Region 5 of the Forest Service and individual forests constitutes an important means of implementing the Agreement on Biological Diversity of which both CDF and the Forest Service are signatories. Cooperation on the aforementioned analyses could significantly improve the Final Forest Plan and EIS.

259 283

Response: The Forest strives to obtain the best information available and to encourage stewardship on lands within NFS boundaries. The Forest has not been able to form Coordinated Resource Management Plans everywhere and has had variable amounts of success with the existing ones. Management must be on-going, with or without a Coordinated Resource Management Plan. Land owner willingness to share data and harvest plans is increasing rapidly. The provision for a 10 year harvest plan by CDF will facilitate coordination with inholders and adjacent lands.

Comment 6: Using Coordinated Resource Management Plans to solve management concerns is a good idea, but no one with an economic interest should be allowed to participate.

82

Response: It would be impossible and illegal to exclude people with an economic interest from the planning processes. The Federal government is bound by several laws and regulations that mandate participation by all affected parties on a equal basis. The fact is that everyone has an interest in the management of national forests and these interests have economic elements.

Comment 7: The President's Plan was initially proposed as a "timber management plan," so many eventually affected publics did not have the opportunity to comment as this plan was mis-represented. It is clear that the Forest Plan development did not include all user groups and that shows throughout this document. The environmental consequences section is woefully inadequate and biased against motorized recreation.

255

Response: Procedural questions regarding the President's Plan are outside the scope of this EIS and should have been addressed to the group that prepared it. The Forest Plan planning process made every attempt to involve all interested parties; refer to Chapter 1 and Appendix A of the EIS. It is unclear what is meant by an inadequate environmental consequences section since no examples are given. The treatment is not biased against motorized recreation. Many of your specific examples in your comments do not appear to apply to the Klamath Forest Plan and EIS.

Comment 8: We were not notified or asked to be a part of your Task Force regarding our knowledge and/or expertise.

196

Response: Multiple notices of public meetings, open houses and other planning activities were issued; refer to Chapter 1 and Appendix A of the EIS.

Comment 9: Siskiyou County has in place an Interim Land Management Plan to serve as a guide in consideration of customary land use patterns and practices, community values and factors affecting economic stability in our county. The County requires

coordination of Federal and state land and wildlife and fishery management and enforcement agencies with the Siskiyou County Fish and Game Commission. The EIS must identify and address any conflicts the proposed action will have with the Siskiyou County plans, policies or environmental protection laws.

281

Response: Coordination meetings were held with elected County officials and County administrators on numerous occasions. The County Interim Land Management Plan was considered in the development of the EIS and Forest Plan. However, the Siskiyou County Interim Land Management Plan is a resolution and has not gone through the process required under the California Environmental Quality Act for implementation as an official county plan.

Comment 10: The Forest should contact appropriate CDFG units during, not after, the development of Final Forest Plan so issues can be dealt with prior to the issuance of a final document.

72

Response: Coordination has occurred with representatives of CDFG between the draft and final documents. Modifications to the Winter Range and Forage Management Areas in the Preferred Alternative have been made based on their input.

Comment 11: The "coordination" process is to ensure that the interest of concurrent jurisdiction among Federal, state, local and tribal governments are respected and given due and proper consideration through joint planning efforts. The word "coordinate" means "equal, of the same rank, order, degree or importance; not subordinate" [Black's Law Dictionary, 303 (5th Ed. 1979)]. It anticipates concurrent jurisdictional interests of Federal, state, local and tribal governments on the public lands and promotes establishment of a joint planning process.

281

Response: The level of information sharing that occurred during the planning process has been on an equal basis. The U.S. Constitution does not, however, allow Federal officials the authority to delegate or share decision making authority. This is well documented in case law on the subject. Black's Law Dictionary is necessarily subordinate to the Constitution and Federal regulations.

Comment 12: We have not been adequately included in the planning process. Information previously offered on customs, culture and historical patterns for isolated forest communities has not been used.

302

Response: The purpose of the Forest Plan EIS is to analyze information at the forest-wide scale. Some of the information offered has been made use of in the cultural resource and social assessments. However, most of your information is more appropriate at the landscape/watershed or site levels. The social analysis reflects the effects of management on various social groups.

Comment 13: The County of Siskiyou has an ordinance which prohibits agricultural activities, operations or facilities maintained for commercial purposes in a manner consistent with County code from becoming a nuisance after it has been in operation for more than three years, if it was not a nuisance when it began. The ordinance would apply to Forest management policies.

281

Response: The use of the term nuisance by a County Ordinance cannot negate the effect of Congress in establishing a legal framework for management of National Forests. The visual constraints on timber harvest result in large measure from the County direction to the State of California and the subsequent development of a Scenic Highways System. The Forest has adopted that system through a memorandum of understanding with the State. There are no aesthetic limitations imposed on grazing as a result of the planning process at this point. In the future, range improvement projects could be subject to modifications to accommodate the adopted VQOs. These guidelines would apply on all lands including those associated with WSRs. The adoption of BMPs results from a process that clearly links control of pollution with a management practice. The treatments require evaluation to demonstrate their effectiveness and reliability.

Comment 14: Opportunities for agriculture on Federal land shall be continued at levels consistent with historical custom and culture and the protection of equitable property rights and sound management practices. Federal governments shall not obstruct agricultural opportunities on their respective lands.

281

Response: All Alternatives, except Alternative E, would continue grazing at current levels. The decline of grazing on NFS land has been largely due to the lack of a permittee to assume a grazing permit when one lapses. Management direction for the Forest does not apply to private land.

Monitoring

Comment 1: Issues of trust argue for monitoring to be independent of the Forest Service. Other agencies, universities and private consultants should be used. Provide funding for independent monitoring to ensure that the Forest Plan is properly implemented.

57 225 270 283 286 337

Response: Other agencies, universities and private consultants are currently part of Forest monitoring and

will be in the future. However, funding will not be provided for duplicative monitoring by outside entities. Trust issues can be resolved if parties are willing to work towards resolution.

Comment 2: The Forest Plan monitoring plan is inadequate to meet the challenge of ecosystem management and fails to heed the recommendation presented in the FEMAT report.

72

Response: The Monitoring Plan in Chapter 5 has been modified to include a Monitoring Framework from the FSEIS designed especially to monitor biological diversity and ecosystem management; refer to pages 5-3 through 5-8 in the Final Forest Plan.

Comment 3: Forest-wide standards and guidelines that deal with monitoring tend not to provide direction but rather focus on quality control.

72

Response: The monitoring plan is not intended to provide details of how surveys would be completed. Flexibility is maintained so that new technologies and processes can be used as they become available.

Comment 4: Forest-wide Standard and Guideline 6-5 provides a standard to monitor biological diversity at the forest level but defers to a guideline for monitoring of biological diversity at the landscape, watershed and project levels. Unless the monitoring plan and subsequent monitoring activities deal with biological diversity and ecosystem management at all levels, monitoring of ecosystem management will be inadequate.

72

Response: Forest-wide Standard and Guideline 6-5 is intended to provide direction for monitoring at the project and watershed levels. The monitoring plan at the Forest level is intended to monitor the Forest Plan, including biologic diversity. These multi-level monitoring methods taken together allow for complete tracking of issues that require monitoring.

Comment 5: The monitoring program presented fails to provide compliance assessments for many standards and guidelines. For example, many forest-wide standards and guidelines include acreage minimums within given distances along with particular habitat quality minimums. The monitoring program presented in the Forest Plan will not measure those types of situations and will compromise compliance monitoring as well as monitoring of ecological conditions.

72

Response: The intent is not to monitor every single standard and guideline, as the cost would be prohibitive. Key items have been selected for monitoring. Some monitoring requirements track Forest Plan implementation in Table 5-1 of the Forest Plan. Others are designed to measure the effectiveness, whether activities implemented are meeting the intent of the Forest Plan. Others are for validation monitoring, whether the initial assumptions and coefficients used in Forest Plan analyses are appropriate.

Comment 6: The type of monitoring required by an ecosystem approach includes a database that inventories ecological condition and vegetative types on a bioregional or provincial basis. Further that database needs to be of suitable scale for project or stand level effects as well as overall trends of ecosystem management on fish and wildlife resources. The utilization of geographic information system to determine ecological conditions and relate them to fish and wildlife needs has already occurred on large parts of the Forest.

72 265

Response: The intent is to make use of the geographic information system database in planning and monitoring Forest Plan implementation at several scales and to integrate feedback at all scales.

Comment 7: If realistic ecosystem management is to be implemented on the Forest, monitoring needs to be conducted as an ongoing process at all levels of management. Ultimately, a monitoring program should provide effectiveness and compliance assessment but more importantly should provide information of the range of variability as well as ecological capability of the Forest. Some of this information exists and has not been incorporated into this Forest Plan and additional information needs to be developed.

72

Response: The ecosystem management approach of the Preferred Alternative is accompanied by an adaptive management approach that emphasizes interactive planning and monitoring. Refer to pages 4-12 and 5-3 through 5-4 in the Final Forest Plan.

Comment 8: Historically, the first thing to be cut in times of budget constraints is the monitoring of BMPs effectiveness. Until recently the Region has not had a program looking into the effectiveness of monitoring on the National Forests. Until this new BMP process is validated, no new management activities should occur without complete funding available to complete the mitigation called for in the EA or EIS.

82

Response: Monitoring of BMP effectiveness has not been removed from Forest programs. BMP monitoring has continued in the midst of a downward budget trend. Mitigation measures identified in environmental documents are considered an integral part of project design and must be funded or the project does not proceed.

Comment 9: Funding and personnel must be ensured for the collection, analysis and dissemination of

monitoring data. The availability of this information is critical to adaptive planning and management. Where monitoring cannot or has not been performed, no disturbance creating activities should take place. The Forest should commit to an annual budgetary analysis of their ability to comply with standards and guidelines and monitoring requirements.

256 259 307 320

Response: The forests are required to complete an annual report on Forest Plan implementation. This would include a statement of monitoring progress and the program budget emphasis. A requirement that all monitoring should be completed prior to any other use of the Forest will not be added. It would be counterproductive to the Forest Service mission and to achieving Forest Plan goals. The needs for monitoring identified in project environmental documents will also be part of the Forest's overall monitoring. These monitoring items will be in addition to the Forest Plan Monitoring Program described in Chapter 5.

Comment 10: Because monitoring and evaluation is so critical to the process, it is good that implementation monitoring is largely built into current workloads and budgets. Including it as an overhead cost will ensure that the funding for each monitoring effort is secure, which has been a problem in the past. It is unclear whether effectiveness monitoring is also equally integral to workload and budget. One without the other is largely ineffective. Categorizing by resource in the Plan is an effective way of summarizing the monitoring effort.

303

Response: Effectiveness and validation monitoring are included as explained in Chapter 5 of the Forest Plan. These will all be integrated in annual reports on forest plan implementation.

Comment 11: The EIS should summarize Forest Service Region 5's program for conducting implementation, effectiveness and validation monitoring of BMPs. Include a description of the results achieved and current effectiveness of the program. Findings that point to the need for revising current BMPs or monitoring activities should be addressed.

282

Response: It is outside the scope of the EIS to consider a regional program of monitoring. This request should be addressed to the Regional Office.

Comment 12: Ecosystem management requires that monitoring comes first, not last. A common flaw in the way monitoring is being applied is that the current degraded conditions are often used as the "baseline" upon which further degradation is measured. With respect to anadromous fish, habitat conditions and wild populations that existed in 1940 ought to be the baseline. Monitoring is the only tool that tracks implementation of Forest Plans and Forest Service compliance with environmental law. Monitoring of the effects of past and current management activities is also essential to gathering the scientific information necessary to make correct management decisions in the future.

82 225 240 256 305

Response: The re-creation of habitat conditions of the 1940s would not be desirable because many of the forest streams had been severely impacted by placer mining for the preceding decades. Also, very little data exists on habitat for those streams during that time period. Wild fish populations are unlikely to ever return to 1940s levels due to conditions outside Forest Service control; refer to Fisheries Comment 1. The Forest's approach is to concentrate on identifying and achieving habitat conditions that are beneficial to fish. Some level of disturbance is natural and necessary to recruit CWD and gravels to the stream channel. Information from monitoring of past and current management activities is used in making management decisions. This is part of the adaptive management approach which emphasizes monitoring; refer to page 4-12 of the Final Forest Plan.

Comment 13: Information from monitoring is useless unless it is acted upon. The Draft Forest Plan fails to describe methods to be used and what results would trigger a change in management.

225 307

Response: This is discussed on pages 5-1 through 5-2 of the Final Forest Plan. Table 5-1 displays what variation from a standard would call for further action for each monitoring item.

Other

Comment 1: This voluminous document is obtusely written.

5

Response: The documents have the same organization throughout to aid understanding. It is difficult to make technical documents user-friendly to the general public. Technical concepts and terms must be used or the meaning is completely changed. Every attempt was made to be clear and concise. The documents were evaluated using editorial software. They rated well with respect to text clarity and sentence construction. An extensive Glossary is provided in both the Final EIS and the Forest Plan to aid in understanding the terminology.

Comment 2: The 3 volumes lack numbers and good inter-volume cross-tie references. This complicates finding supporting information. The assumption is that readers know the relation of the volume labeled "Plan" to the EIS on the Plan and the EIS appendices. The Summary should show where one can find the Glos-

sary and Definitions and treatment of various issues. How about an index?

5 305

Response: An index has been added to the Final EIS. The volumes are clearly labeled and the relationship between the documents is defined on pages 1-1 and 1-4 of the Final EIS. The Summary is written to briefly convey information that spans nearly 1,000 pages. All volumes should be examined for a detailed understanding. The Summary is not meant to repeat information available in the Table of Contents or to be a guide to the other volumes. Table 2-16 on pages 2-58 through 2-75 of the Final EIS provides a good summary of how issues were treated.

Comment 3: The Summary, in plain english, should give an overview of the area covered by the Forest Plan, discuss key events that shape proposed changes and cite the significant actions preferred, the core reason why each is preferred and list the pages in the Draft EIS where one can get more detail.

5

Response: The Summary is intended to summarize the information in the documents and does this. Refer to response to General Policy Comment 38. The ROD will include information on why the alternative selected for implementation was chosen; the EIS provides equal treatment of all alternatives. The Index and Table of Contents in the EIS provide page references.

Comment 4: The timber emphasis in the Summary should be changed to a broader stewardship-use discussion.

5

Response: The Summary has been modified to better reflect the broader discussions found in the EIS and Forest Plan.

Comment 5: Primitive, semi-primitive, riparian, watershed and RNAs are not adequately defined in the Draft EIS.

196

Response: Primitive and semi-primitive are defined on page 17 of the Final EIS Glossary under Recreation Opportunity Spectrum. Riparian is defined on page 3-41 of the Final EIS. Watershed is defined on page 24 of the Final EIS Glossary and the types of watersheds used in the planning process are discussed on pages 4-1 through 4-2 of the Final EIS. RNAs are defined on page 3-89 and on page 18 of the Glossary in the Final EIS.

Comment 6: All buzz words should be omitted. If terms are used, such as "Ecosystem Management" then they should be defined or explained somewhere.

7

Response: Terms in common usage were used whenever possible. However, the use of many technical terms is unavoidable given the nature and complexity of the subject. The Glossaries are provided to define many terms. A definition of Ecosystem Management has been added to page 6 of the Final EIS Glossary and to page 5 of the Final Forest Plan Glossary.

Comment 7: Some land use designations act as limits the agency can't change, while others are limits created by agency actions. The volumes do a poor job of displaying the sorts of designations that affect use.

5

Response: This information is covered in detail in Chapter 2 of the Final EIS on pages 2-10 through 2-15 for all alternatives. The individual alternative descriptions on pages 2-15 through 2-57 provide more of this information.

Comment 8: The maps do very little to detail any of the text. It is impossible to see existing routes, facilities, OHV routes, hiking trails, etc. It is impossible to compare the ROS classes with the affected areas or to determine RNA and SIA locations.

255

Response: The maps are of a small scale and intended to show information necessary for making decisions on land allocations and management direction. Other maps showing recreational information are available from the Forest at a nominal charge. Maps of ROS classes, RNAs and SIAs are available in the planning records. The value to most readers of providing these maps for all 10 alternatives does not warrant inclusion.

Comment 9: A map of the juxtaposition of roadless areas, key and non-key watersheds, reserves and matrix areas would be helpful.

282

Response: The Final EIS map packet includes an Analysis Watersheds Map which shows Key Watersheds as proposed in the Preferred Alternative. This map can overlay the Final Preferred Alternative Land Allocations Map which includes categories showing reserves, matrix and the other categories used in the FSEIS.

Comment 10: The comparison tables and charts provided in the Draft EIS are very helpful. They should be expanded to include the alternative which fully incorporates President Clinton's forest plan.

282

Response: The Preferred Alternative in the Final EIS fully incorporates the direction from the ROD for the FSEIS. The tables and analysis throughout the Final EIS have been modified to include changes due to the Presidents Plan and to public comment.

Comment Letters from Public Agencies and Elected Officials

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

January 5, 1994

Ms. Barbara Holder
Forest Supervisor
Klamath National Forest
1312 Fairlane Road
Yreka, Ca. 96097

Dear Ms. Holder:

The Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the project entitled **Klamath National Forest Proposed Land and Resource Management Plan (LRMP), Siskiyou County, California.** Our review is pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

The Forest Service proposes a forest-wide plan which will provide a long-term strategic approach to forest management. The Forest Plan will provide a vision, overall guidance and policy. Under this umbrella, implementation of resource management decisions will be coordinated. This plan provides for multiple use and sustained yield of goods and services from National Forest Service lands in a way that maximizes long-term net public benefits in an environmentally sound manner.

The Preferred Alternative described in the DEIS (May 1993 Preferred Alternative) provides for multiple use with an emphasis on amenity values. Major features include an aggressive fuel reduction program to minimize the risk of future catastrophic fires, salvage and restoration after catastrophic events, riparian management zones, and regeneration with reserves harvest methods. Timber harvest would not occur on 64% of the Forest, while 11% would be managed with an emphasis on timber. The Allowable Sale Quantity (ASQ) is 83.5 million board feet (MMBF) per year.

The May 1993 Preferred Alternative will be modified to be consistent with President Clinton's forest plan for the management of habitat for old growth related species within the range of the northern spotted owl. The President's forest plan was first formulated in the Forest Ecosystem Management: An Ecological, Economic and Social Assessment (FEMAT Report) and is represented by Alternative 9 in the Draft SEIS Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl. Changes to the Klamath National Forest LRMP will include an increase in the area reserved from timber management, a requirement for a 180-year rotation in non-reserved areas, watershed analysis, and adaptive management areas where development and testing of innovative forest management approaches can take place.

We commend the Forest Service for their efforts to complete the Klamath National Forest Land and Resources Management Plan (LRMP) and to provide explicit direction for managers on the Forest. Many of the proposed management strategies such as management on a landscape basis and increased funding for watershed restoration and land ownership adjustments are to be applauded. We agree that such action is necessary and long overdue. However, we also believe that it is very important to provide other agencies and the public meaningful opportunity to review and comment on the actual LRMP which is likely to be implemented.

Although the Addendum included in your DEIS is an admirable attempt at incorporating the requirements of President Clinton's forest plan, we do not believe it provides sufficient information to allow a comparative evaluation of alternatives as mandated by the National Environmental Policy Act. Given the complexity of the LRMP, the absence of the President's forest plan as a detailed alternative in the DEIS, and the delayed publication of the Spotted Owl Final SEIS; it is virtually impossible for agencies and the public to determine exactly how the LRMP will be changed by the President's forest plan, as stated in the Spotted Owl Final SEIS and ROD. The significance of these changes also remain undetermined. We believe it is crucial that the LRMP and EIS describe how the Klamath National Forest will <u>specifically</u> implement President Clinton's forest plan. Ideally, the description should be as detailed as the present alternatives in order to allow adequate comparison and the determination of what provisions of the LRMP are different than the President's forest plan.

As stated in our earlier correspondence with Ms. Kathy Clement, Director of Land Management Planning US Forest Service Region 5, of December 7, 1993, we recommend that the Forest Service address the problem of insufficient opportunity for the public and other agencies to determine what specific measures will be provided for in management of the Klamath National Forest. We urge the Forest Service to provide an expanded opportunity for the public to become involved and to comment on the Klamath National Forest LRMP and relevant related documents. We believe such an action could significantly prevent further delays caused by public confusion and uncertainty.

Our specific concerns with the Klamath National Forest LRMP include issues related to: cumulative impacts, connectivity, treatment of old-growth forest located in nonrestricted areas, incorporation and coordination with non-Federal lands, and air quality conformity. Based upon our review of the DEIS, we have

SUMMARY OF RATING DEFINITIONS AND FOLLOW-UP ACTION

Environmental Impact of the Action

LO-Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC-Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO-Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU-Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of environmental quality, public health or welfare. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommend for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1-Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2-Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3-Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From: EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

classified this document as category EC-2, Environmental Concerns - Insufficient Information (see attached "Summary of the EPA Rating System").

We appreciate the opportunity to review this DEIS. Please send three copies of future environmental documentation to this office at the same time it is officially filed with our Washington D.C. Office. If you have any questions, please call me at (415) 744-1574, or Laura Fujii, of my staff, at (415) 744-1579.

Sincerely,

David J. Farrel, Chief
Environmental Review Section
Office of Federal Activities

Enclosure: (5 pages)

93-388
MI001483
Filename: Klamathd.eis

cc: Ronald E. Stewart, Regional Forester, Region 5
Jack Gipsman, Office of General Counsel, Region 5
Mr. Jim Anderson, Forest Planner, Klamath NF
US Fish & Wildlife Service, Sacramento, CA.
US EPA Region 10, Seattle, WA.
CA Dept. of Fish & Game, Region 1, Redding, CA.
CRWQCB, Region 1, Santa Rosa, CA.
CRWQCB, Region 5, Redding, CA.
Siskiyou County APCD,
Mr. Bob Brown, CA Department of Forestry

COMMENTS

General Comments

1. The EIS should describe the specific management prescriptions (e.g., roadless areas, timber management, riparian management zones, visual resources), land allocations, key watershed designations, and standards and guidelines which will be modified and implemented to ensure consistency with President Clinton's forest plan. The designation and management of Key Watersheds is a major component of the President's forest plan. The EIS should fully discuss the effects of Key Watershed designation and management on grazing, road construction, timber management, vegetation management, roadless areas, and mining management. A map of the juxtaposition of roadless areas, key and non-key watersheds, reserves, and matrix areas would be helpful.

2. EPA remains very concerned with the role of non-federal lands in forest planning. Due to the frequent checkerboard land ownership on Forest Service land, non-federal lands may have a significant affect on cumulative impacts, watershed restoration, and ecosystem management. We recommend the EIS discuss the methods which will be used to assess the cumulative impacts of its own and non-federal activities on species viability, riparian habitat, watershed conditions, and the forest ecosystem. We also recommend the Forest Service consider discussing potential procedures for assuring non-federal lands are considered in forest plan implementation, ecosystem management, province planning, and project level assessments.

3. Although the management plan provides for riparian management zones, key watersheds, and refugia; the linkages between these blocks of land appear fairly small in certain areas. For instance, the linkage between the Marble Mountain and Red Butte Wilderness Areas, as described in the DEIS (pg. 4-54), would be less than 1/4 mile wide at its narrowest point. The EIS should describe potential mechanisms to improve linkages and connectivity between refugia. Include a discussion of the role of non-reserved areas (matrix) in providing potential connectivity and the type of monitoring and evaluation which will be implemented to ensure connectivity is retained.

4. We commend the Forest Service for their awareness of potential conflicts between sensitive habitats and development of mineral resources. We believe the proposed restriction of leasable mineral exploration and development within all riparian management zones (RMZs) and requested withdrawals of Research Natural Areas (RNAs) and Wild segments of Wild & Scenic Rivers from mineral entry (pgs. 4-131, 4-133) will reduce direct and

EPA DEIS COMMENTS, AFS, KLAMATH NATIONAL FOREST LRMP, DECEMBER 1993

cumulative impacts to these vulnerable habitats. However, the EIS should describe and discuss the impacts of President Clinton's forest plan on mineral entry and leasing on the Klamath National Forest and indicate whether any additional late-successional or riparian reserve areas will be withdrawn from mineral entry or leasing.

5. President Clinton's proposed forest plan is based upon an ecosystem management approach which relies upon extensive interagency coordination and cooperation. The EIS should discuss the ecosystem management approach, the proposed interagency coordination framework, and how it will be incorporated into forest planning and implemented by the Klamath National Forest. The discussion should evaluate potential mechanisms for assuring adequate interagency coordination. EPA also recommends that the EIS clearly describe the stages and decision points where NEPA documents will be drafted or the process used to determine these decision points.

6. Implementation of the 180-year rotation for conifers and 100-year rotation for hardwoods should be fully evaluated in the EIS. Describe the advantages and disadvantages of these rotation periods given the role of fire in the Klamath National Forest. We also recommend a description of what 180-year rotation with area control will mean in terms of visual impacts, the amount of timber harvesting, management requirements, and fire risk.

7. The EIS should describe the distribution of late-successional forest within non-reserved (matrix) areas and adaptive management areas. Discuss how these areas will be managed and monitored and the potential impacts to significant ecosystem values.

8. The EIS should describe the contribution of stand maintenance, salvage sales and sanitation harvests to the estimated Allowable Sale Quantity. If possible, indicate the potential acreage on non-CASA (capable, available, suitable and appropriate) land which would potentially be treated with the above management practices.

9. Criteria should be described on how specific locations will be targeted for the development and testing of innovative forest management approaches. Although adaptive management areas (AMAs) are provided for such research, it is unclear whether this research would be restricted to AMAs or what the potential criteria are for selecting test sites.

10. We believe it is important to recognize the role disease, pests, fire, and natural processes have in a dynamic forest ecosystem. The EIS should describe how forest management will

work with and mimic natural processes in achieving desired future conditions.

11. The comparison tables and charts provided in the DEIS are very helpful. We recommend these be expanded to include the alternative which fully incorporates President Clinton's forest plan.

Water Quality

1. Although the May 1993 Preferred Alternative will result in 41% less soil erosion associated with timber harvests (pg. 4-23), the level of cumulative watershed effects (CWE) will remain approximately the same due to increased fuel management practices and a 35% increase in new road construction (pgs. 4-23, 4-33). We understand the need for an aggressive fuels management program and the increase in new roads resulting from the use of a regeneration with reserve harvest prescription. However, we remain concerned with the CWE level and recommend the EIS explore ways to reduce the cumulative watershed effects.

Furthermore, the LRMP states that salvage and sanitation harvesting shall be a high priority and pursued aggressively (LRMP pg. 4-42). The EIS should clearly describe the contribution of salvage and sanitation harvesting to the CWE and soil erosion values and provide information on possible mechanisms to minimize these impacts. Additional specific standards and guidelines may need to be developed to ensure the potential increase in salvage and sanitation harvesting will not increase cumulative watershed effects or soil erosion.

2. The EIS appears to contain little discussion on the potential adverse impacts of mining on water quality and beneficial uses. For example, although the Klamath River is being dredged by "recreational dredgers" for gold, there is little discussion of the affect these activities may have on salmonid spawning or other uses. We recommend the EIS discuss the potential impacts to water quality from projected mining activities. In addition, we suggest the EIS include guidance on the appropriate environmental analysis which will be the basis for approving proposed mineral-related activities.

3. We commend the Forest Service for their commitment to an aggressive watershed restoration program (pg. Summary-8). We recommend the Forest Service describe the criteria to be used to prioritize specific watershed restoration projects.

Monitoring

The EIS should summarize Forest Service Region 5's program

for conducting implementation, effectiveness, and validation monitoring of Best Management Practices (BMPs). Include a description of the results achieved and current effectiveness of the program. Findings that point to the need for revising current BMPs or monitoring activities should be addressed.

Air Quality

One of the key management strategies of the Klamath National Forest LRMP is aggressive fuels management utilizing prescribed fire and other techniques. Reliance is placed on current air quality regulations and the regulating agencies to ensure activities do not negatively affect air quality. Inability to meet air quality requirements is excepted only on rare occasions.

We understand and support the need for aggressive fuels management. However, we are concerned with the potential implications of increased use of prescribed fire and underburning on long-term maintenance of national ambient air quality standards (NAAQS), prevention of significant deterioration (PSD), and visibility protection. The EIS should describe in detail the increase in acres over existing fuels management and prescribed fire practices, the potential increase in particulate matter (PM10), and potential impacts to visibility criteria. A format similar to Table 4-2 within the Mendocino LRMP DEIS, would be helpful.

The EIS should provide a detailed discussion on the status of air quality planning for the area and indicate if there is an approved air quality implementation plan. We recommend the Forest Service consult and coordinate with the Siskiyou County Air Pollution Control District to ensure the proposed action conforms with existing efforts to maintain and improve air quality. The newly released General Conformity Regulations can be found in 40 CFR Parts 6, 51, and 93 (58 Federal Register 63214, November 30, 1993). These regulations should be examined for applicability to the proposed action.

Specific Comments

1. Pages 2-62, Table 2-15. Table 2-15, Comparison of Land Use in Thousands of Acres, does not appear to be consistent with the text. For example, Table 2-15 shows that the May 1993 Preferred Alternative would have fewer acres within riparian management zones then many of the other alternatives, but the text on page 2-64 states that this alternative would manage the most acres in the riparian management zone management area.

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
600 Harrison Street, Suite 515
San Francisco, CA 94107-1376

ER 93/815

January 21, 1994

Barbara Holder, Forest Supervisor
Klamath National Forest
1312 Fairlane Road
Yreka, California 96097

Dear Ms. Holder:

The Department of the Interior (Department) has reviewed the Draft Environmental Impact Statement (DEIS) for the Klamath National Forest Land and Resource Management Plan, Siskiyou County, California and Jackson County, Oregon. The following comments are provided for your use and information when preparing the final documents.

LRMP and the Owl

It is not clear what impact the President's Plan will have on your alternative. It is difficult to envision what the changes in the Preferred Alternative will be to bring it in line with the President's plan. These should be specified, as appropriate, in the final documents.

It is understood that the President's plan has yet to be finalized, but without such analysis and changes, the Preferred Alternative as it stands may not be complete.

Reduction of Potential for Catastrophic Fire - The increased emphasis for managing large contiguous reserves of late seral timber stands has led to decadence, multiple canopy layers, and increased amounts of coarse woody debris. Coupled with poor access and a history of fire suppression, the resulting conditions may have increased the probability of stand-replacing fires.

The Department recommends an increase in the use of prescribed natural fire or mechanical treatments to achieve a range of natural variability of structure and vegetative types. This would benefit wildlife while reducing the likelihood of catastrophic events.

Candidate Species - The Department also recommends that the Forest conduct surveys for Federal category 2 candidate species to determine their status and distribution. Standards and guidelines should be developed for their protection. The Fish

and Wildlife Service (FWS) is available to provide guidance to the Forest on survey protocol, methods, and data interpretation.

Timber

The Department recommends minimizing clearcutting whenever possible. When no alternative silvicultural prescription is possible, the Department recommends reducing the size of openings and increasing contiguity of wildlife habitat.

Wild and Scenic Rivers

The Exhibit E: Wild and Scenic River Study is comprehensive, and the National Park Service (NPS) supports the recommendations for designation under the preferred alternative. Addition of most of the recommended streams would enhance the prior 1981 designation of the several portions of the Klamath River System on this national forest.

The NPS is pleased with the recommendation to change the current "recreational" classification to "scenic" for certain segments of the Klamath and Salmon Rivers. As the 1981 designation was based on criteria contained in the 1970 National Wild and Scenic Rivers: Guidelines for Eligibility, Classification, and Management of River Areas, the Department recommends that the existing classifications be re-evaluated on the basis of the revised 1982 guidelines.

We also support the varying river management corridor widths as set forth under the preferred alternative. We believe corridors based on resource management and protection considerations, rather than artificially determined uniform corridor widths, are in the best interests of effective wild and scenic river management.

Vegetation Management and Herbicide Use

The Preferred Alternative presents strategies to manage forest pests. If all herbicide applications are conducted under Vegetation Management Plan guidelines, this should be clearly stated. The Department further recommends that this discussion include the following: 1) timing and methods of herbicide applications; 2) effects on sensitive plant populations; 3) proposed mitigation strategies, if adverse effects are possible.

The Department has concerns that aerial applications, at certain herbicide concentrations, could potentially contaminate surface waters and adversely affect fish, wildlife, and other biota unless provisions are made to protect the health of these resources.

Mineral Resources

The DEIS proposes to completely withdraw or place special requirements on forest lands (up to 81 percent) which may have

mineral potential. Some of the special requirements are very restrictive. Past and present exploration and mining activity indicate that the acreage presented in table 4-39 of the DEIS may be areas of potential mineral discovery.

Placing special requirements on 20 to 43 percent of the remaining 77 percent of forest lands not already withdrawn from mineral entry may impact mineral resources. Between 43 to more than 66 percent of all forest lands considered here could be placed under restricted access for mineral development.

The Department recommends providing estimates of mineral resources which would be impacted by the proposed action. The socioeconomic effects resulting from allowing or excluding exploration and/or mining operations also needs to analyzed. This analysis should include specific data regarding the location, types of deposits, and potential resources available on the forest.

To accurately evaluate the impact of alternatives, it is crucial that the location and magnitude of mineral resources which may be excluded from development be identified. The exclusion of mineral resources should include both actual or regulated (special requirement) withdrawals.

The Bureau of Mines (BM) is available to provide assistance in evaluating mineral resource information and developing analyses. The BM may be contacted for assistance through Mr. Burt Gosling at 509/353-2700.

Specific Comments

Page 4-64. Bald Eagle/Peregrine Falcon Species - The proposed forest plan tiers bald eagle and Peregrine falcon management to the recovery plans for these species. The recovery plans for the bald eagle and Peregrine falcon are necessarily general for some recommendations and conservative for others.

Therefore, the FWS recommends that the Forest develop specific management objectives (protection zones, the number of territories that will be managed, monitoring goals, etc.) that are applicable on the Forest for these species. These specific management criteria could be included the Habitat Capability Models in the Forest Plan.

In addition, the monitoring plan for bald eagle and Peregrine falcon identifies annual monitoring and reporting frequency. We recommend that annual monitoring plans include several visits to the nest site to determine occupancy or nesting attempts early in the season as well the reproductive success later in the season.

Pages 4-57 to 58. Sensitive Plants - The Forest's sensitive plant species list should be reviewed and updated at least annually in coordination with the FWS and other knowledgeable agencies, organizations, academics, and individuals.

Pages 4-69 to 72. Goshawks - The goshawk management guidelines on nest stand size and distribution are inadequate to provide for the long term habitat needs of the species. The guidelines, as outlined in the LRMP and DEIS, should be improved in the final documents. Management of single, static nest territories may involve territories which remain unoccupied over the life of the planning period.

The strategy of applying silvicultural methods that will provide suitable nest sites, post-fledgling family areas, and foraging territory characteristics on a landscape basis is a preferred management strategy. The northern goshawk management strategies recommended in the Southwest Region (USDA 1992) should be followed.

Page 4-79. Willow Flycatcher - The standards and guidelines for managing willow flycatchers should be improved. We recommend that maintenance of nest site integrity include measures to improve habitat as well as elimination of actions that degrade nesting opportunities for this species.

In addition, we recommend that monitoring precision/reliability be improved to a high level. If annual monitoring of a moderately reliability determines a 20 percent decline in a localized population of flycatchers, then it may not be possible to implement timely management strategies that would increase or stabilize the population. Therefore, monitoring must be reliable enough to detect smaller changes in population size.

It is particularly important that the results of planned actions, mitigations, and monitoring actually be used. Knowing what works and what doesn't must lead to adaptive management, i.e., using this information and knowledge to appropriately continue or change what you are doing to manage the resources.

The final documents should discuss in some detail the mechanisms you have devised to identify and commit budgetary and organizational resources to both the monitoring and adaptive management of the Klamath National Forest. We would be happy to assist you in this process if you so desire.

We have appreciated the opportunity to comment.

Sincerely,

Patricia Sanderson Port
Regional Environmental Officer

cc: Director, OEPC w/original incoming
Regional Director, FWS, Portland
Regional Director, NPS, WR
Regional Director, BoM, Spokane

Reference

USDA, Forest Service. 1992. Management recommendations for the northern goshawk in the southwestern United States. Rocky Mountain Forest and Range Experiment Station, Fort Collins Colorado, General Technical Report RM-217. 90p.

The Resources Agency

Pete Wilson
Governor

Douglas P. Wheeler
Secretary

of California

California Conservation Corps • Department of Boating & Waterways • Department of Conservation
Department of Fish & Game • Department of Forestry & Fire Protection • Department of Parks & Recreation • Department of Water Resources

January 6, 1994

Barbara Holder, Forest Supervisor
Klamath National Forest
U. S. Forest Service
1312 Fairlane Road
Yreka, California 96097

Dear Ms. Holder:

The State has reviewed the Draft Environmental Impact Statement, Proposed Land and Resource Managment Plan, Klamath National Forest, Siskiyou County, submitted through the Office of Planning and Research.

We coordinated review of this document with the North Coast Regional Water Quality Control Board, the State Lands Commission, and the Departments of Conservation, Fish and Game, Forestry and Fire Protection, Toxic Substances Control, Transportation, and Water Resources.

None of the above-listed reviewers has provided a comment regarding this document. Consequently, the State will have no comments or recommendations to offer.

Thank you for providing an opportunity to review this project.

Sincerely,

for William G. Shafroth
Assistant Secretary,
Land and Coastal Resources

cc: Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814
(SCH 93092112)

The Resources Building Sacramento, CA 95814 (916) 653-5656 FAX (916) 653-8102

STATE OF CALIFORNIA - CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY PETE WILSON, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
NORTH COAST REGION
5550 SKYLANE BLVD. SUITE A
SANTA ROSA, CA 95403
PHONE: (707) 576-2220

January 10, 1994

Ms. Barbara Holder, Forest Supervisor
Klamath National Forest
1312 Fairlane Road
Yreka, CA 96097

Dear Ms. Holder:

Thank you for providing us the opportunity to comment on the Draft Forest Plan. It is encouraging to see the evolution of the agency's approach: from a commodity-based approach where water quality is another output to be mitigated for, to a landscape and watershed-based approach where water quality is a natural result of good land stewardship. In combination with the adherence to Best Management Practices (BMPs) on the hillslopes, the preferred alternative will result in the maintenance of all the beneficial uses of the Forest's water.

General Recommendations

The use of the term "regulated" to mean areas to be managed for timber is confusing. To a regulatory agency, the word "unregulated" implies that there will be no controls on activities in an area (an RMZ, for example).

The great diversity of proposals for treatment of Resource Elements among the alternatives results in a lot of trade-offs in selecting a preferred alternative. This results in a "menu" approach, whereby the preferred alternative would combine proposals from different alternatives. It would assist the reviewer in reading the report if resource elements that are identical or largely similar to other alternatives were noted as such.

Table 2-4 is a useful feature, but it should list miles of road restored under each alternative. A narrative description of such activities is included in many alternatives, but no estimation of mileage.

CASA and CSA are used interchangeably and might cause confusion.

Forest Plan

The Forest-wide Standards and Guidelines appear to be a good summation of the proper management of the Forest. Our few comments are:

- "Naturally-occurring" sedimentation will most likely not be cost-effective to address. Because it is naturally-occurring, the hydrologic system has evolved with that kind of sediment input. It is that sediment resulting from management activities that is usually more cost-effective to remediate and, preferably, to avoid.

- The use of the word "should" in the case of the key watershed concept is probably not strong enough. "Justifiable" reasons not to do so could be put forth, even though we believe this concept is integral to protecting the beneficial uses of the Forest waters.

- There should be a schedule of revision of range allotment plans specifically shown in the plan. With the admission that about half of the range resource on the Forest is in less than satisfactory condition, such revision should be a high priority. It is good to see sufficient attention to the resource in the plan.

- Wild and Scenic River issues are also an important resource, because these reaches are usually areas of high quality water whose beneficial uses can be protected and enhanced by such designation.

Because monitoring and evaluation is so critical to the process, it is good that implementation monitoring is largely built into current workloads and budgets. Including it as an overhead cost will ensure that the funding for each monitoring effort is secure, which has been a problem in the past. It is unclear whether effectiveness monitoring is also equally integral to workload and budget. One without the other is largely ineffective. Categorizing by resource in the Plan is an effective way of summarizing the monitoring effort.

Environmental Impact Statement

As stated above, the great diversity of proposals for treatment of Resource Elements among the alternatives makes it unlikely that one alternative meets most needs. Alternative D (hereafter "D") holds the most promise of protecting water quality, but other alternatives contain worthwhile aspects. Among the strong points of "D" are:

- Management activities would be measured by the potential cumulative impacts.

- A much higher priority is put on watershed restoration, and activities on upland areas would be guided by water quality objectives.

- The riparian area management measures are a little weaker than some of the other alternatives, but they appear to be protective of beneficial uses.

- The Transportation Plan is by far the best at limiting impacts from roads, which are generally agreed to contribute the largest amount of sediment to the aquatic system. The explicit quantification of road obliteration is good, although this is apparently the only alternative that contains such language. The proposal for erosion control plans and aggressive road maintenance is welcome.

- Range will be managed for livestock, wildlife, and water quality, not timber production (which would probably be limited at best anyway). Allotment plans would be aggressively managed and reviewed.

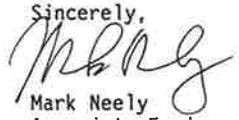
Although "D" commits to road obliteration, there appears to be no quantification of this for any alternative. This makes evaluation difficult. According to Table 2-4, even for "D" there will be an increase of road maintenance miles of 908 miles over 50 years, an annual increase of 18 miles. It is unclear if this results from increased road miles, or simply more aggressive maintenance of existing roads. "D" also includes one of the highest rates of road building. This seems at odds with the narrative description of the transportation system under "D".

It is stated repeatedly in the EIS that the desired future condition of the Forest is a pleasing appearance. This seems to say that "aesthetics manifests ecologic". Certainly a pleasing appearance can be a valuable indicator. But consider a forest with a "park-like" setting that looks good but lacks downed woody material or snags, or a stream free of blockages and jams that lacks good structure. Because "beauty is in the eye of the beholder", it depends on the viewpoint of the person who's viewing it.

Obviously,there is more to a National Forest than just maintaining water quality and we recognize that fact. However we request that, whatever alternative is ultimately devised, it include the attention to water quality impacts that "D" contains.

We look forward to receiving the Final Forest Plan, and hope that it addresses our comments and concerns. If we can be of further assistance with either preparation of the plan or with the future administration of the Forest, please do not hesitate to call.

Sincerely,



Mark Neely
Associate Engineering Geologist
CEG #1582

NKN:lmf/knflrmp.ltr

cc: Laura Fujii, U.S. EPA, 75 Hawthorne Street, San Francisco, CA 94105

STATE OF CALIFORNIA—THE RESOURCES AGENCY PETE WILSON, Governor

DEPARTMENT OF FISH AND GAME
601 LOCUST STREET
REDDING, CA 96001
(916) 225-2300

December 23, 1993

Ms. Barbara Holder, Forest Supervisor
Klamath National Forest
1312 Fairlane Road
Yreka, California 96097

Dear Ms. Holder:

SCH 93092112 - Draft Environmental Impact Statement (DEIS) and Land and Resource Management Plan (LMP), Klamath National Forest (KNF), Siskiyou County

The Department of Fish and Game (DFG) has reviewed the subject LMP and DEIS. The LMP identifies the preferred alternative for managing lands and resources within the KNF.

Our comments related to these two documents are attached. For the most part, this LMP incorporates the changes outlined in President Clinton's proposed forest plan (Option 9) of the Report of the Forest Ecosystem Management Assessment Team (FEMAT). The LMP itself is a broadly based collection of forestwide management goals and objectives for the next 10 to 15 years.

Option 9 envisions the development of ecosystem management, rather than the commodity output type of forest management common in the past. Although the addendum found in the DEIS indicates that the LMP closely complies with Option 9 direction, standards and guidelines as well as outputs presented in the draft LMP indicate that the LMP is still output oriented. The final LMP should provide the framework for developing and implementing ecosystem management.

Because not all of the changes to the preferred alternative of the LMP that are brought about by Option 9 of the FEMAT report are evident in the LMP, we are concerned that review of this document may well be a review of alternatives and analysis that cannot be implemented. We have previously indicated our concern with the process of reviewing a draft document that has a major part of its direction set by another document that has yet to be finalized. Further, it has been our experience that it is not very efficient to comment on a draft document and then await and respond to a final document without communicating during the development of the final document. Because of that experience, we are very concerned that the process we are currently involved in will be even more ineffective. For that reason we feel it is very important that the US Forest Service (USFS) contact appropriate departmental units during (not after) the development of final LMPs so that issues and concerns can be dealt with prior to the issuance of a final document.

If you have any questions regarding our comments, please contact Mr. Don Koch. His phone number is (916) 225-2305.

Sincerely,

Richard L. Elliott

Richard L. Elliott
Regional Manager

cc: Mr. Don Koch
Department of Fish and Game
Redding, California

Mr. John Turner
Department of Fish and Game
Environmental Services Division
Sacramento, California

Mr. Terry Mansfield
Department of Fish and Game
Wildlife Management Division
Sacramento, California

Mr. Tim Farley
Department of Fish and Game
Inland Fisheries Division
Sacramento, California

Ms. Susan Cochrane
Department of Fish and Game
Natural Heritage Division
Sacramento, California

GENERAL COMMENTS

Issue - Key Watersheds.

Comment - Regardless of what changes, if any, are made to the President's forest plan preferred alternative (Option 9), we believe it imperative that all objectives, standards, guidelines, and components proposed for the "Aquatic Conservation Strategy" be retained. Specifically, we endorse provisions for riparian reserves on all fish bearing streams, nonfish bearing streams, and intermittent streams; and the establishment of "Key Watersheds". These Key Watersheds are necessary to reverse the serious decline of anadromous salmonids and to begin recovery of salmonid habitats degraded by past management practices.

Issue - Monitoring.

Comment - Chapter 5 of the LMP presents a monitoring plan that may provide minimum compliance with the National Forest Management Act (NFMA) regulations. The monitoring plan presented in the LMP is, however, inadequate to meet the challenge of ecosystem management and fails to heed the recommendation presented in the FEMAT report. Forestwide standards and guidelines that deal with monitoring tend not to provide direction but rather focus on quality control. As an example, item 6-5 (page 4-21, LMP) provides a standard to monitor biodiversity at the forest level but defers to a guideline for monitoring of biodiversity at the landscape, watershed and project levels. Unless the monitoring plan and subsequent monitoring activities deal with biodiversity and ecosystem management at all levels, monitoring of ecosystem management will be inadequate.

The monitoring program presented fails to provide compliance assessments for many standards and guidelines. For example, many forestwide standards and guidelines include acreage minimums within given distances along with particular habitat quality minimums. The monitoring program presented in the LMP will not measure those types of situations and will compromise compliance monitoring as well as monitoring of ecological conditions.

Recommendation - Monitoring is crucial and may well be the most important aspect of the LMP. The FEMAT report indicated that monitoring was a significant aspect of land management because of the uncertainty of the predictions that were made for ecosystem management. The FEMAT report (page VIII-21) recommended "The federal agencies through the interagency coordination effort, should develop a multiorganizational resource monitoring system. Standards and guidelines that address design and quality control should be included. The agencies should strive to ensure monitoring activities are adequately funded and that organizational roles and responsibilities are clearly defined."

Standards and guidelines in the LMP need to develop direction to monitor biodiversity and the aspects of ecosystem management at least at the levels recommended in the FEMAT report. Forestwide standard and guideline 6-2 (page 4-21) indicates that biodiversity will be managed at the stand level; the level of monitoring presented in Table 5-1 is not adequate to assure that biodiversity or even stand level management will be monitored. Along with monitoring vegetation by seral stages, other attributes used to assess diversity such as stand size, juxtaposition and structural components need to be monitored. The LMP (chapter 3) identifies the elements and components of biodiversity but the monitoring plan (chapter 5) does not address those previously identified components and elements. The type of monitoring required by an ecosystem approach includes a database that inventories ecological condition and vegetative types on a bioregional or provincial basis. Further that database needs to be of suitable scale to assess and infer project or stand level effects as well as overall trends of ecosystem management on fish and wildlife resources. Current technology enables the development and maintenance of those types of data. The utilization of geographic information system (GIS) to determine ecological conditions and relate them to fish and wildlife needs has already occurred on large parts of the KNF. Some of those projects have been funded by the DFG. The DFG is very interested in and is available to cooperatively develop databases, common definitions of ecological conditions and the subsequent application of that information to monitor biodiversity and ecosystem management.

If realistic ecosystem management is to be implemented on the KNF, monitoring needs to be conducted as an ongoing process at all levels of management. Ultimately, a monitoring program should provide effectiveness and compliance assessment but more importantly should provide information of the range of variability as well as ecological capability of the KNF. Some of this information exists and has not been incorporated into this plan and additional information needs to be developed. The development and utilization of these types of data are fundamental to the management of the KNF on an ecosystem basis.

COMMENTS RELATED TO TERRESTRIAL RESOURCES

Issue - Fire and Fuels.

Comment - A frequently expressed concern with the implementation of Option 9 in the Klamath Province is that it does not realistically deal with the ecological role of fire in the province. Because so much of the direction of this LMP is provided by the FEMAT report as well as the DEIS on Management of Habitat for Late Successional and Old-Growth Forest Related

Species Within the Range of the Northern Spotted Owl, we are concerned that the same problem dealing with the role of fire in the Klamath Province has occurred in this document.

The ecological role of fire is understated in the LMP. It appears that fire is felt to be more a tool than a component of the ecosystem. The treatment of the analysis of fire effects as part of the fuels and fire management program tends to support that observation. It is important that the document differentiate between the ecological role that fire plays and its use as a tool to reduce fuels. If ecosystem management is in fact going to be developed, it is necessary to recognize the role of fire. The LMP and DEIS both fail to display the acreage of fire prescribed to achieve some condition other than fuels management.

Recommendation - We are unable to find an analysis that indicates how fire will affect the development of late successional reserves as directed by the preferred alternative. The relationship between fuels treatment and the projected acres of wildfire by 2040 is unclear. Although the preferred alternative has the highest acres of fuels treatment, it does not appear to reduce the amount of wildfire (that we assume will require control) compared to other alternatives (DEIS Table 2-4). Because the acreage of fire intensity varies between alternatives, we assume that the reduction in high intensity fires with the preferred alternative is a result of the increased fuel treatment. There needs to be a clear presentation of the effects of fire on the development of old-growth reserves and that presentation needs to provide the assumptions of how fire will affect the development of those reserves as well as the retention of those reserves.

The LMP needs to develop fire prescriptions that are intended to generate ecological responses to fires, particularly in those habitat types that are fire maintained ecosystems such as hardwood and chaparral types. Because early seral stages will be reduced over the KNF, it is very important that fire be allowed to maintain productivity of remaining fire maintained ecosystems. The introduction of fire into much of the forested landscape needs to be achieved in order to maintain ecosystem function as well as ecosystem management. Prescriptions need to include fire intensities that will not only reduce fuels but generate natural vegetative responses as well. Additionally, fire prescriptions need to be applied at a scale that will result in ecological responses at the landscape level.

Issue - Forestwide Goals and Emphasis.

Comment - The forestwide goals and emphasis do not provide a realistic ecological direction to this LMP. The goals and emphasis largely fail to deal with wildlife populations but

rather focus on a few species in an unrealistic manner. Table 4-1 presents the outputs resulting from the implementation of the stated goals and objectives. The expression of numerical target for individual species and not ecological condition indicates the failure of this LMP to provide direction from which ecosystem management can develop. Most species of wildlife, particularly early and mid seral species are largely ignored. Most game species that are absent from Table 4-1 and the one species included, deer, are projected to suffer a 23 percent decline over the planning period. This is unacceptable and contrary to population goals the KNF has agreed to in deer herd management plans.

Recommendation - Goals and emphasis as well as outputs need to be restructured to provide better balance to the LMP. Goals and emphasis for wildlife and wildlife habitat need to provide for early and mid seral species as well as those species associated with old-growth conditions. Goals need to be developed for maintenance of mid and early seral habitats that are distributed in a manner that optimizes biological diversity. Goals that deal with ecological conditions that provide appropriate levels of habitat suitability for early and mid seral species need to be included. We are available to assist in the development of those goals.

Issue - Forestwide Standards and Guidelines.

Comment - The Forestwide Standards and Guidelines are generally directed at individual programs and not integrated into a direction that provides for accommodation of ecosystem management and the variability that occurs on the KNF. The standards and guidelines presented also tend to direct for compliance with a minimum management requirement (6-4) or a protocol.

Given the monitoring plan presented in chapter 5, the use of management indicator species or guilds to monitor wildlife and wildlife habitat over the landscape will probably not be sensitive enough to determine effectiveness of, or compliance to, standards and guidelines.

Recommendation - Standards and guidelines need to provide direction that develops local information and utilizes that information in the management of the KNF. This includes the development of databases and subsequent utilization of those data in the management of the KNF. Additionally, standards and guidelines that are directed at the maintenance of habitat suitability for the range of seral stages at the landscape and project level may better serve as indicators.

MANAGEMENT AREA PRESCRIPTIONS

Issue - Presentation of Management Area Prescriptions.

Comment - It is difficult to "track" management area prescription acreage because of the geographic overlap between prescriptions. As an example, apparently most of the acreage of Management Area 6 is overlapped by other management area prescriptions. Thus it is difficult to determine how effective the prescriptions are and if in fact the management direction provided by the standards and guidelines is being implemented or if a different management area/prescription is being used as a surrogate.

Recommendation - We recommend that this section include a matrix which displays individual management area overlaps in order to better understand the allocations that are being made. Any conflicting prescription specific standards and guidelines in areas where overlap occurs need to be resolved.

Issue - Adaptive Management Area.

Comment - The Goosenest adaptive management area (AMA) includes areas of several management prescriptions.

Recommendation - The LMP needs to project the effects of the AMA on prescriptions presented in this document as well as display how it will affect wildlife habitat.

Management Area 2.

Issue - Clarification of standards and guidelines for wilderness management.

Comment - Currently, the DFG utilizes aircraft to conduct research activities and to stock fish within wilderness. Often these flights are at elevations below 2000 feet above ground level.

Recommendation - This standard and guideline should be modified and presented to accommodate those activities.

Issue - Intent of Management Area 2-8.

Comment - It is assumed that this standard and guideline refers to the manipulation of habitat or other enhancement activities. The USFS lacks the authority to restrict activities of the DFG to monitor populations and conduct activities which are necessary for the management of wildlife populations, regardless of the species' status.

Recommendation - This standard and guideline should clarify the activities that are addressed.

Issue - Management Area 2-18 (MA2-18).

Comment - We are encouraged by the provision to utilize prescribed fire in the wilderness (MA2-18); we look forward to cooperative efforts to reintroduce fire back into the wilderness.

Issue - Wilderness grazing.

Comment - Grazing programs within the wilderness need to include the allotment of forage to wildlife.

Recommendation - Standard Management Area 2-72 should clearly state that allocations of forage for wildlife would be part of all allotment management plans.

Management Area 4.

Issue - Conflicting prescriptions.

Comment - As indicated by the associated maps for management areas 4 and 16, this area is proposed to have two prescriptions; the prescription provided by Management Area 4 indicates that livestock will be used as a management tool to meet a variety of resource needs (Management Area 4-9 [MA4-9]). Management goals indicate that habitat for wetland and grassland wildlife species will be maintained and enhanced. Goals and management direction found in Management Area 16 (MA16) are also applied to this area. Goals for MA16 only provide for existing wildlife populations while increasing forage production and distribution of cattle. This obvious conflict is an example of the problem with prescription overlap we previously discussed. The conflict between management area prescriptions makes it very difficult to develop comments on this LMP and affect management direction for areas we are concerned with.

Recommendation - The "National Grasslands" needs to have a single prescription applied, additionally that prescription needs to provide for enhancement of wildlife habitat over existing conditions. We are available to work with the KNF in developing a single appropriate prescription for the National Grasslands.

Management Area 5.

Issue - Fire management within Habitat Conservation Areas (HCAs).

Comment - Fire management within HCA's confuses the ecological role of fire and biomass utilization (Management Area 5-20 [MA5-20]). It is unclear if the intent is to utilize fire as an ecological process or to reduce fuels. Biomass utilization is effective for fuels reduction; it does not function as an ecological surrogate for fire.

Recommendation - This standard and guideline needs to better define the intent and expectations of these types of treatments within HCA's.

Management Area 6.

Issue - State-listed species.

Comment - This prescription fails to include State-listed species, many of which are endemic to the Klamath Province.

Recommendation - The management area/prescription needs to be expanded to include species such as the Siskiyou Mountain salamander (Plethodon stormi) and Yreka phlox (Phlox hirsuta). The DFG is available to help modify this prescription to better accommodate sensitive species on the KNF and in the Klamath Province.

Issue - Management Area 6-4.

Comment - Because the management area is so small, we suggest that livestock use be excluded rather than "discouraged".

Management Area 14.

Issue - Big game habitat.

Comment - This management area is incomplete and fails to recognize most of the big game habitat on the KNF. There is no accommodation of big game values on the west side of the KNF. Even the areas that are designated on the Goosenest Ranger District are incomplete and do not include much of the high value big game habitat that occurs on that district. Even though forestwide standards and guidelines provide some accommodation of big game values, that accommodation is not carried through in management area prescriptions. The failure to identify areas of value, even though called for in standards and guidelines 8-53 and 8-57, results in inadequate accommodation for big game species. This is particularly a concern when long-term management of the KNF will result in reductions of early seral stages.

The KNF was provided detailed information regarding big game values during the development of this LMP. That information has not been incorporated into this LMP. We are available to provide that information again in order to have these values accommodated and managed for when the LMP is implemented.

Recommendation - Because this management area fails to accommodate big game on the KNF, the standards and guidelines presented are inadequate and need to be modified to address other big game species as well as other areas on the KNF.

Issue - Management Area 14-4 (MA14-4).

Comment - MA14-4 should deal with age classes of browse stands rather than seral stages.

Issue - Management Area 14-5.

Comment - Water developments should be constructed to minimize disease transmission problems. The development of a water source every two miles should be reconsidered and may be unnecessary for wildlife needs.

Issue - Management Area 14-13 and 14 (MA14-13 and 14).

Comment - MA14-13 and 14 need to be standards, rather than guidelines.

Issue - Management Area 14-16.

Comment - If reforestation is a priority in this area, it must be modified to accommodate and feature big game values.

The range management section of this prescription needs to direct AMP's to provide a forage allocation for big game.

Management Area 16.

Issue - Forage management area prescription.

Comment - The forage management area prescription fails to accommodate much of the wildlife values of the area. The area includes some of the most crucial big game habitat on the east side of the KNF but fails to recognize those values. The emphasis of livestock over wildlife is inconsistent with the values of the area as well as the needs identified in the McCloud Flats Deer Herd Plan. We previously provided the KNF with information that identifies much of this area as high value habitat for wildlife.

Recommendation - The goals and standards and guidelines of this management prescription need to be changed to better accommodate wildlife values. We are again available to provide that information and work with the KNF to develop a prescription that is more in keeping with those values.

COMMENTS RELATED TO AQUATIC RESOURCES

Issue - Restoration and enhancement.

Comment - The LMP falls short in aggressively pursuing restoration and enhancement opportunities, particularly when it comes to streamflows. For example, the KNF has an adjudicated

water right for the lower Scott River to "...maintain an adequate fishery". Specified minimum flows have not been attained for the most part in many years resulting in reduced habitat availability for the lower 21 miles of the Scott River. The lives of juvenile salmonids escaping small tributary streams in Scott Valley that dry up each summer depend on the Scott River for their survival.

Recommendation - In addition to exercising appropriated water rights, the KNF should be monitoring the effects of irrigation use on stream habitat loss, water quality, and fish populations. The KNF could use this information to help develop a water-use plan which would be beneficial to the agricultural community, as well as for fisheries maintenance. The Scott River Coordinated Resource Management Plan (SRCRMP), of which the KNF is already a participating member, may be the perfect vehicle for co-developing this LMP. An aggressive public education program should be developed within the fisheries program which would encourage participation in various water conservation strategies, as well as allow for the dissemination of important information relative to other fishery issues.

Issue - Soil resources.

Comment -The draft LMP indicates that the existing road system is the primary source of nonpoint pollution on the KNF (page 3-2). The FEMAT report also notes that failing and eroding roads, road construction, and culvert failures are major sources of sediment and a primary cause of salmonid habitat loss. Spring chinook salmon and summer steelhead have been significantly affected by increased sedimentation loads in streams. Pool habitat is necessary for these fish to oversummer. Diminished pool depth and frequency, caused by increased sedimentation, appear to be correlated with reduced abundance of these races. For these reasons, we are very pleased with the proposal that no new roads be constructed in inventoried roadless areas within key watersheds, and that a watershed analysis will be completed for all watersheds that contain a roadless area, prior to management activities occurring in the roadless area. Also, we concur with the FEMAT report's recommendation that existing road mileage within key watersheds be reduced with priority given to removing roads that pose the greatest risks to riparian and aquatic ecosystems.

According to the FEMAT report Table V-II, Option or Alternative 9 will achieve a 65 percent likelihood of obtaining Outcome A (the most desired outcome for fish habitat of all races/species/groups) for salmon, steelhead and cutthroat trout, compared to 80 percent for Alternatives 1 and 4. On page 3 and 4-100 of the DSEIS on "Management of Habitat for Late Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl", it is suggested that the likelihood of Alternative 9 achieving Outcome A could be

increased to 80 percent or greater by: (1) using the Riparian 1 scenario instead of the Riparian Reserve 2 scenario, thus providing greater protection for fish habitat in nonkey watersheds, particularly those with large areas of unstable land; and (2) providing greater protection for key watersheds by removing them from areas available for timber harvest.

Recommendation - We strongly urge the KNF to adopt both mitigation measures for the KNF's LMP. Another option might be to designate as key watersheds all roadless areas outside of currently proposed key watersheds.

Issue - Dillon Creek.

Comment - Dillon Creek is the third most important stream in the KNF for summer steelhead. The late successional reserves proposed by the preferred alternative of the LMP for the north fork and mainstem Dillon Creek would provide much needed protection against logging and road building on the very steep and unstable slopes adjacent to the stream. We are concerned, however, that these corridors may be deleted from the LMP because of language in Option 9 of the President's Forest Plan which puts furbearer migration corridors back into the timber management matrix. In addition, the proposed designation of Dillon Creek as "recreational" rather than "wild" under the proposed wild and scenic river system (WSRS) would further reduce protection of Dillon Creek by allowing logging and associated road building to occur.

Generally, we concur with the KNF's nomination of streams selected for possible inclusion into the WSRS. It is our understanding that in areas where conflicting management strategies exist as with the overlap of riparian reserves (RMZs) with WSRS designation stream corridors, that the more restrictive prescriptions will apply (i.e., WSRS stream corridor prescriptions and limitations supersede RMZ prescriptions and limitations). This will help ensure that the highest degree of riparian and stream protection will be afforded many of the most important summer steelhead and spring chinook streams within the KNF.

Recommendation - The evaluation in Appendix E (page E-88) of the DEIS notes that Dillon Creek is eligible for "wild" designation. We recommend that corridors along Dillon Creek and its north fork remain in reserve status as part of the preferred alternative or be classified as unsuitable for timber management. If this does not occur, then we strongly recommend a "wild" rather than "recreational" designation for Dillon Creek. Wild river or reserve corridors will not only provide improved protection of summer steelhead in Dillon Creek but will also provide a connective link between both the Siskiyou and Marble Mountain

wilderness areas for a number of late successional wildlife species. Proposed bridge sites could be accommodated with short reaches of recreational river designations, if necessary.

We understand that the key watershed provisions of the Aquatic Conservation Strategy (ACS) as prescribed by Option 9 would limit logging in roadless portions of the Dillon Creek watershed to helicopter yarding. Because of the preponderance of steep and very unstable slopes throughout the drainage, we urge that all logging in unstable portions of the drainage be limited to helicopter yarding.

Issue - Forestwide standards and guidelines.

Comment - We recommend the addition of a fourth item to 9-1, page 4-28, as follows: "Provide educational opportunities regarding the needs of resident and anadromous fisheries to private individuals residing along inventoried streams."

Issue - Key Watershed designation - Clear Creek.

Comment - Clear Creek is one of the most important summer steelhead streams within the Klamath River Basin and the most productive summer steelhead stream within the KNF.

Recommendation - The entire stream (mouth to headwaters) should be put under "Key Watershed" designation and not only from Five-Mile Creek upstream as is currently proposed. Although most adult summer steelhead may hold in Clear Creek upstream of Five-Mile Creek, both adult and juvenile summer steelhead, utilize the lower creek during portions of their existence (i.e., during adult immigration and juvenile and adult emigration). In addition, small numbers of adult spring chinook hold over during summer months and likely spawn during the early fall in the lower one or two miles of Clear Creek. Standard and Guideline 9-5, page 4-29, should be changed to reflect those values.

Issue - Key Watershed designation - Scott River.

Comment - Key Watershed designation should include mainstem Scott River or its tributary streams identified as critically important for the maintenance, recovery or enhancement of selected anadromous fish populations. Providing increased protection on Scott River drainage streams within USFS boundaries is becoming increasingly important as increased development and water usage within the Scott Valley and Quartz Valley area exacerbates already insufficient streamflow quantities for fish. This problem is particularly bad during the mid to latter part of the irrigation season (July-October 15).

Currently the entire Scott River drainage is omitted from any Key Watershed designation. Many fisheries scientists believe that the chinook salmon population of the Scott River drainage is a genetically distinct stock group within the Klamath River Basin.

Recommendation - We believe all identified major stock groups of chinook or any other anadromous salmonid populations that are genetically or behaviorally distinct or unique be maintained and therefore be provided the added protection offered by Key Watershed designation.

We feel that additional protection should be afforded spawning areas and suggest the following standard and guideline be incorporated in the Recreation Management section (page 4-31). "Efforts should be made to preclude campsite development or to discourage camping within 300 feet of known anadromous salmonid spawning areas. The KNF will explore ways to redirect interested visitors to informational centers or provide opportunities to the public to view fish spawning activities, receive salmon and steelhead life history information and to showcase fish habitat enhancement projects/activities (e.g., Kelsey Creek/Indian Creek spawning channels, instream structures, riparian plantings, etc.) throughout the KNF."

Mangement Area Prescriptions

Management Area 1

Comment - Consideration should be given to developing an RNA which encompasses a study area for anadromous fisheries. One possibility would be to incorporate a portion of the South Fork Salmon River into the Limestone Bluffs RNA. Both spring and fall-run chinook salmon are known to utilize this area for spawning.

Management Area 7

Comment - Natural spawning of adult salmonids within the KNF provides educational and interpretive opportunities. Consideration should be given to adding Kelsey Creek and/or Indian Creek for their salmon/steelhead spawning channels or other suitable stream location(s) to the list of SIAs in Table 4-20.

Management Area 10

Comment - In the "Desired Future Condition" segment, the following statement is made at the end: "Small local hatcheries are present within some of the riparian zones to raise fish that maintain the local genetics of fish populations from that particular stream." This statement does not reflect the reality

of recent past small hatchery rearing programs within the KNF. Most of the small rearing projects to date have served merely to augment fish production in the Klamath system. They have not been designed nor operated to do as the draft states. Instead, in most cases, eggs/fish from Iron Gate Hatchery have been used in these small hatchery programs. At present, in the Klamath system, the trend is toward decreasing hatchery emphasis. Besides, if the proposed LMP is adopted and properly implemented, these small hatcheries may not be needed.

Issue - Management Area 10-1 (MA10-1).

Comment/Recommendation - Because it is important that riparian values be protected, we suggest that this item be changed to a standard that requires riparian resource objectives be met rather than addressed.

Issue - Management Area 10-6 (MA10-6).

Comment - Add sentence, "Future watershed and stream habitat improvement projects should increase the amount of area meeting these criteria".

Issue - Management Area 10-7 (MA10-7).

Comment - Add to end of first sentence, "...or during periods of migration, spawning or egg incubation of anadromous fish".

Issue - Management Area 10-18 (MA10-18).

Comment - Insert the word "healthy" between "maintain" and "riparian" in the middle of the first line.

Issue - Management Area 10-29 (MA10-29).

Comment - Add "and settling ponds" after the words "waste dumps".

Issue - Management Area 10-38 (MA10-38).

Comment - Add after first sentence: "These areas should be configured for long-term drainage and stability".

Management Areas 12 and 13

Issue - Conflicting guidelines.

Comment - Conflicting guidelines are apparent between these management areas and Management Area 10. For example, Management Area 12-18 (MA12-18) provides for a programmed timber harvest from scenic river areas, MA13-15 provides for fully regulated timber harvest from recreational rivers, while MA10-46 precludes scheduled timber harvest from RMZ1 areas.

Recommendation - There needs to be resolution of conflicting management prescriptions contained within specific management areas.

DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

The alternatives including the preferred alternative section (page 2-25 DEIS) state that fisheries habitat enhancement under the preferred alternative will include both instream and riparian improvements but does not follow up with specifics or indicate where to go in the document to get that information. Although specific fisheries habitat criteria are listed in Table 4-23 of the DEIS and information regarding specific stream habitat conditions on a limited number of streams are found in Table 3-15, what is needed is a stream and riparian restoration plan to help set priorities, target goals and set time frames for achieving specific stream/riparian restoration goals and objectives. This will demonstrate a commitment to being proactive when it comes to restoring degraded streams and their associated riparian areas for the benefit of fish and wildlife. Securing the necessary funding for stream and riparian restoration work is the key to making significant strides in fish population recoveries and therefore should be made a high priority objective of the KNF.

The last sentence in the WSRS Management Section (page 2-26) states that the WSRS corridor width under the preferred alternative will be variable. The range of variability and how it will be determined should be addressed in the document. If outstandingly remarkable values exist and the protection and preservation of those outstandingly remarkable values is paramount and is the reason for WSRS designation in the first place, then those values should be afforded the fullest protection allowed under the WSRS Act (i.e., 320 acres per mile of stream or one-quarter mile wide corridor on each side of the stream).

The RMZ width designation for the preferred alternative (page 2-25 of DEIS) is wider than stated for "Alternative C" (page 2-44 of DEIS), yet Table 2-15 (page 2-62) shows total RMZ acreage that is 135 percent higher for Alternate C (173,200 acres) than for the preferred alternative (73,800 acres). How is that possible or are values shown in Table 2-15 in error?

Compared to all other developed alternatives, the preferred alternative would reduce the miles of current "wild" stream classification on the KNF by one-half mile (page 2-62 DEIS). Eliminating the most protective corridor classification from any stream would not be prudent or desirable particularly in light of current drastic declines in anadromous fish runs and the threat of listing on at least three anadromous fish stocks or races occurring within the KNF (i.e., summer steelhead, spring chinook

and coho salmon). We would urge the KNF to retain all current WSRS designations on streams within the KNF and to include all streams currently being recommended under the preferred alternative. The recommended streams should be designated at the highest classification they are eligible for to provide the maximum protection of the outstandingly remarkable values that qualified them for WSRS designation in the first place.

The discussion of the effects of water temperature on salmonids (Chapter 3, page 3-59 DEIS) needs to be expanded. Temperatures above 60°F are known to begin to adversely affect every life stage of salmonids. The length of exposure to elevated (or depressed) water temperatures also affects survival of salmonids. The potential exists for the "uninformed" to use 78°F as a minimum temperature tolerance instead of a maximum (for short-term exposure). The temperature column in Table 3-15 needs to state whether temperatures shown are either daily means, monthly averages, or whatever they represent.

The discussion on fish populations (page 3-63) points out that off-forest factors (i.e., harvest, ocean conditions, streamflows, ambient air temperatures, etc.) influence adult spawner escapement of anadromous salmonids. Because not all of these off-forest factors are controllable, the quality of adult holding, spawning and rearing habitat on streams within KNF land boundaries become even more valuable for the continued existence of the fisheries. Opportunities to improve water quality and physical habitat conditions of streams within Federal lands may not exist in adjacent areas in private ownership.

Some of the discussion regarding management indicator species needs clarification; for example, the section "Fall Chinook Salmon" (page 3-65), the first paragraph should clarify "run". Does this refer to "total in-river run" or "spawner escapement"? The definition of escapement in the next paragraph should read "...the number of grilse and adult salmon surviving to spawn". The third paragraph refers to Figure 3-8. Salmon and Scott River escapements are not included in the figure. They should be. Is the next-to-last paragraph in this section referring to fish production when it mentions off-forest constraints?

On page E-5 of Appendix E, the recommendation to exclude portions of Grider and Kelsey creeks and a portion of the south fork of the Salmon River from the WSRS was presented. It is unclear what the reasons for this recommendation were or what criteria were used to make that recommendation. The reasoning for this recommendation and criteria used need to be presented in the DEIS.

Discussions on fisheries resource values (page E-28) should include the fact that adult summer steelhead have been observed upstream of Wilderness Falls on Clear Creek indicating the falls are not a complete barrier to adult steelhead. Clear Creek also supports a small remnant spring chinook population.

Although Threshold of Concern (TOC) (page G-10) and Equivalent Roaded Acre (ERA) calculations have been used for years on the KNF to assess watershed conditions and project trends in sedimentation delivery to streams, neither has received proper monitoring to validate either predictive model. Intensive and extensive monitoring of selected streams or watersheds are needed to make validation possible. Such monitoring is needed in a long-term monitoring plan to more accurately predict cumulative watershed effects based on more reliable results using a more refined ERA and TOC modeling capability.

STATE OF CALIFORNIA—THE RESOURCES AGENCY PETE WILSON, Governor

DEPARTMENT OF FORESTRY AND FIRE PROTECTION
P. O. Box 944246
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SP4

JAN 6 1994

Ms. Barbara Holder
Forest Supervisor
Klamath National Forest
1312 Fairlane Road
Yreka, California 96097

Dear Ms. Holder:

Please find enclosed comments by the California Department of Forestry and Fire Protection (CDF) on the Land and Resource Management Plans and the associated Draft Environmental Impact Statements for the Six Rivers, Klamath, Shasta-Trinity, and Mendocino National Forests. Since both state and federal policy initiatives consider northwestern California as a region, this document assesses the cumulative impact of all forest plans within the regional context but also draws distinctions between individual forests when merited.

CDF is vitally interested in the impacts of these plans on the environment and economy of northwestern California, on CDF's ability to fulfill fire protection and resource management mandates, and on the conduct of future state-federal resource planning efforts. The Department is committed to providing rigorous, substantive, and constructive comments.

CDF has several analyses in progress and will provide their results before the forests finalize the EISs. Additional analysis of impacts across the region will require longer term commitments by CDF, the Forest Service and others. Therefore, we identify institutional needs that must be addressed to accomplish long-term forest planning and management.

The Department finds that an on-going dialogue between the Department, the Region V of the Forest Service, and individual forests constitutes an important means of implementing the Agreement on Biological Diversity of which both CDF and the Forest Service are signatories. Cooperation on the aforementioned analyses could significantly improve the final plans and EISs to address both CDF and Forest Service concerns. We welcome your comments on these proposals and look forward to collaboration between the Forest Service and the Department.

Sincerely,

Richard A. Wilson
Director

cbc

Attachment

California Department of Forestry
and Fire Protection

A
Review of
the Four Northern Forest Plans

6 January 1994

The mission of the Department of Forestry and Fire Protection (CDF) is to protect and enhance the range, forest and watershed resources in the State of California. The action of the largest single landowner in northwestern California, the United States Forest Service, has numerous impacts on these resources. In a recent review of Option 9 (An Evaluation of Option 9 of the Federal Forest Plan as it Relates to Northwestern California) CDF developed an analytical framework with which to assess the contribution of proposed actions and policy to ecosystem integrity and sustainable economic development. This document applies that framework to the National Forest Land Management Plans (LMPs) of the Six Rivers, Klamath, Shasta-Trinity and Mendocino National Forests (NFs) to determine the cumulative impact of these four Plans on the resources and people of northwestern California.

THE IMPACT OF THE PLANS ON THE RESOURCE SYSTEMS OF THE REGION: WILL THEY ACHIEVE ECOSYSTEM MANAGEMENT AND PROTECTION?

Forestry issues have changed significantly since the original scoping period of the Plans. These changes cloud the relevance of the Plans to the current situation in northwestern California. The extent of this problem varies across the four Forests. Both the Six Rivers NF and the Klamath NF LMPs respond better to current concerns. The Klamath NF LMP recognizes biodiversity as a critical issue and uses more advanced analytical approaches. The Six Rivers NF LMP aims toward the establishment of adaptive management on the Forest. However, the Mendocino NF scoped issues fifteen years ago and has consequently produced a Plan that addresses individual commodity values with little integration under the ecosystem paradigm. The Shasta-Trinity NF LMP does not reflect the change in issues even though those changes form the basis for ongoing and planned activities within the National Forest. For example, on the Hayfork Ranger District, the Forest has organized a grass-roots effort to

evaluate ecosystem management and define appropriate desired future conditions, though the LMP does not use those concepts.

While two of the LMPs (the Six Rivers NF and the Klamath NF) have elements related to ecosystem management, the two remaining Forests (the Mendocino NF and Shasta-Trinity NF) do not adequately address this paradigm. The measures of environmental consequences employed in all the DEISs to evaluate different alternatives include some pertinent to ecosystems but are, by and large, individual resource, economic or social concerns poorly related to ecological integrity. Thus, at a most fundamental level, the Plans fail to establish benchmarks for ecosystem integrity and health. In the absence of these benchmarks, it is unclear if the desired future conditions of the Plans are consistent with ecosystem integrity. The impacts of the preferred alternatives on the integrity of the ecosystems of northwestern California remain therefore unanalyzed.

Certain Plans employed some of the concepts usually associated with ecosystem management: desired future conditions, range of natural variability, adaptive management and consideration of adjacent lands. For the Klamath NF, teams with representation from a range of interests, including private landowners, developed the alternatives examined in the DEIS. The Forest also consulted specialists to define issues and key indicators of social impact and biological diversity across ownership boundaries. The Plan's desired future condition statements refer to individual management areas and provide more useful management guidance than condition statements that refer to the entire Forest. Finally, the Forest established a policy to mimic the landscape patterns created by natural disturbance regimes.

The Six Rivers NF used a vocabulary similar but not as developed as that of the Klamath NF. The Forest recognized the need to mimic natural processes and disturbance rates, and similarly established desired future condition statements for management areas. The avowed strategy of the preferred alternative is to use active adaptive management to test different methods of achieving ecosystem management.

Neither the Shasta-Trinity NF nor the Mendocino NF addressed ecosystem management. The vocabulary of ecosystem management is generally absent in both Plans, though the Shasta-Trinity NF does establish desired future conditions for management areas. Certain Ranger Districts on the Shasta-Trinity NF have begun to embrace ecosystem management as seen in their commitment to public education and outreach, but nonetheless the governing document of the Forest lags far behind and therefore cannot guide operations. The Mendocino NF uses individual species as indicators rather than overall ecosystem conditions to guide

management. The Plan does not consider such issues as biological diversity, connectivity of habitats, or ecosystem management.

Most DEISs indicates that the Plans will induce more harvest on adjacent private lands but do not adequately assess the cumulative impact on the entire landscape. It is at least plausible that the four Plans will together lead to a regional landscape with a very pronounced contrast between private and public lands, with neither emulating pre-management conditions. This cumulative effect may not be optimal for either biological or social values in northwestern California.

CDF recognizes that existing law forces management to respond to a few select species. While the Six Rivers and the Klamath NFs have taken the first step toward ecosystem management in this constrained environment, the Shasta-Trinity and the Mendocino NFs lag far behind in adopting components of ecosystem management.

Even assuming that the desired future conditions are congruent with ecosystem integrity, the Plans do not clearly show how standards and guidelines will lead to desired future conditions. The management area direction is not sufficiently precise to project the location and nature of management activities. Therefore their ultimate impact on ecosystem conditions is unknown. Without such a projection methodology, the public cannot be certain that the Plan directs management in a manner consistent with the Plan's objectives for management areas.

The development of this analysis is central to any realistic ecosystem planning. In theory, if the Forest establishes desired future condition statements sufficient to ensure ecological integrity, then the public might well be indifferent to the means employed by the Forest to achieve those conditions. With a good understanding of ecosystem structure and function, Forest staff could devise management activities with a high probability of achieving the desired future condition. A well-designed monitoring program that quantified performance would detect <u>a posteriori</u> deviations from the desired future conditions and in many ways replace the <u>a priori</u> regulatory or consultation processes employed currently. Given, however, the current poor understanding of how management affects future conditions, and how those conditions contribute to ecological integrity, prudence requires that the link between management, that proximate objective and ultimate goals be clearly demonstrated. As managers and scientists gain more experience with managing ecosystems, assessment and monitoring methodologies improve, and public renews its trust of resource managers, this requirement may be further relaxed.

The Plans do not portray existing ecosystem conditions in sufficient detail to determine if proposed management will move the system toward or away from the desired future condition. Analysis of the impacts of management requires a starting point of current ecosystem composition, structure and pattern.

Several additional factors hamper the projection of management impacts on ecosystem conditions. First, the Addendum attached to each DEIS fails to clarify the relationship between the zoning proposed in the Plans and that of Option 9. The essence of each Plan is a zoning scheme with management guidance for each zone. Since Option 9 will change that zoning to an unknown extent, the true impact of management is unpredictable. Second, the Plans do not analyze the role of both fire and fire management in structuring ecosystems. Preliminary analysis by CDF with PROBACRE indicates a strong likelihood that stand-replacement fires in reserve areas are sufficiently common that they swamp the influence of the reserve itself on the extent of late successional forest. In a similar manner, without a quantitative analysis of the effects of fire suppression and prescribed fire on ecosystem structure and function, the Plans cannot integrate these major programs into ecosystem management. Finally, in most cases the Plans consider ecological impacts primarily on federal lands even though the Plans induce changes on adjacent ownerships. The appropriate reference environment for ecological analysis should encompass all lands affected, even if they fall outside the federal land base. This larger reference area is particularly important for terrestrial and aquatic species whose range extends beyond the National Forests, for landscape patterns important for biodiversity, and for water and air quality.

While the Plans mention diversity, they appear to underestimate the technical requirements of the concept. Since the Plans do not portray current ecosystem conditions, they do not confront the difficulties of distinguishing appropriate habitat types and structure classes needed to characterize responses to disturbance. Beyond that, the Plans do not consistently integrate diversity into forest management. The Klamath NF LMP discusses ecosystem health in terms of the diversity of forest structure classes. However, timber and silviculture elements consider forest health in terms of young actively growing conifer trees, a small subset of all structural classes. Similarly, thinning operations for the enhancement of late successional forest may greatly limit the extent of the early seral stage brush component of the forest ecosystem.

The Plans affect the management actions of private land owners in ways not recognized in the DEISs. Reductions in salvage

on NF land may put trees on adjacent private lands at risk. CDF Resource Management staff have already noticed a significant increase in harvesting above historic levels on private lands. Many marginal areas that would not have been considered for harvest in the past are now being logged. The reduction in available timber supply from public lands has already been blamed for significant increases in timber and lumber prices. In the last two years, the price of Douglas-fir logs has doubled in areas around the Six Rivers NF. The high prices have led to a record number of harvests without Timber Harvest Plans under a three acre exemption in the California Forest Practices Program. Each of these impacts has potential repercussions for ecological integrity.

The Plans may significantly affect the incidence and severity of fire, and the fire protection capabilities within the region. The severe decline in the timber programs on the Forests will have a number of negative effects. First, the loss of timber staff will reduce trained personnel during fire season. Since 1988 the Mendocino NF has reduced staffing in all programs for 260 to 200 persons. More staff reductions will result from consolidating Districts and Forests and will reduce the labor pool for both federal and mutual aid fires. For instance, on the Six Rivers NF, the reductions in the timber program may eliminate up to 12 Incident Command support staff and 20 Type 2 handcrew members. Because of these reductions, CDF expects an increase in its participation on federal fires with no reciprocal help on state fires. Second, the loss of timber revenues will reduce the funds available to remediate fire hazards created by previous harvests, the recent drought and associated insect kills. Third, the decline in harvest will reduce the private sector heavy equipment capacity that has historically been used under contract during fire season. Fourth, road closures or reduced maintenance will lengthen response times and reduce the effectiveness of initial attack. Fire size will increase along with resource losses and suppression costs.

In addition, changes in suppression strategies on NF land will affect CDF's operations. First, when CDF responds under mutual aid it will face the additional challenge of adapting its tactics to fit the modified suppression prescriptions on certain areas on the Forests. Beyond that, the modified suppression strategy will change the level of protection on private in-holdings which are state responsibility but protected by the Forest. Private landowner desires for full suppression and the equal protection policy of the Board of Forestry may conflict with the service provided by the Forests.

Once again, the Plans consider fire suppression as a stand-alone activity and usually do not specify fire management policy in a manner analogous to land management standards and

guidelines. Yet the continued separate analysis of resource management and fire suppression ignores the very basic observation that both are components of ecosystem management. Ideally, the Plans would specify standards and guidelines for fire and fuels management for all management areas. In order to assess the impact of these standards and guidelines on ecosystem integrity, the Plans should project the cumulative effect of all management activities on the condition of the ecosystem.

The Plans do not specify how they can be altered in the event of large catastrophic fires. USFS personnel on the Shasta-Trinity NF indicate that a regional or provincial review group would need to approve any deviations from Option 9 guidelines. Thus the Plans are severely limited as adaptive management tools in a region where catastrophic fires are certain to occur.

Limited resources may preclude adequate Plan implementation. Recent history shows a persistent decline in the human and financial resources committed to NF management. The scarcity of funds has severely limited monitoring in the past, and is clearly insufficient for the intensity of monitoring proposed in the Plans. Thus without a drastic shift in funding priorities, the Plans may never lead to effective adaptive management.

Even though CDF is continually assured that funding for fire management will be maintained or increased, it appears unlikely that given the loss of timber revenues the federal government will continue to subsidize NF forestry for the decades needed to achieve true ecosystem management. Unless the Forests can convert into revenue the non-timber values that are driving forest policy, the move to ecosystem management will always be at risk.

THE IMPACT OF THE PLANS ON LOCAL AND REGIONAL ECONOMIES: IS THE ANALYSIS ADEQUATE?

Realistic sale quantities will probably be lower than those specified in Option 9 and carried over into the four Forest plans. In the near term particularly, a number of factors not addressed in the four Forest plans are highly likely to reduce timber outputs below those specified in the plans. These factors include:

- the constraints of watershed analyses and other Option 9 planning and operation requirements, some of which have not yet been developed at the operational level;
- completion of surveys for listed species such as the northern spotted owl and marbled murrelet which may take up to two years and require extensive consultation with the Fish and Wildlife Service;
- difficulties inherent in catching up with shifting program priorities;
- losses of personnel and decreases in funding, resulting in fewer personnel and other resources to process timber sales.

Implementation of Option 9 will reduce the Shasta-Trinity NF Preferred Alternative harvest level by almost 30%, from 87 MMBF/year to 60 MMBF/yr. It is doubtful that even this sharply reduced harvest level can be met within 3 to 5 years. Local Forest Service personnel indicate that the likely target for 1994 is around 30 MMBF for the entire Shasta-Trinity NF.

Under the President's Option 9 strategy and the respective DEIS, harvest on the Six Rivers NF would be cut by 55 percent, from the 45 MMBF/year proposed in the original Forest Preferred Alternative to the 20 MMBF/year under the current DEIS. This change represents a reduction of 86 percent from the annual average sale quantities of the last decade.

For the Klamath NF, CDF staff expect that the most optimistic output will be 50 MMBF/year instead of a projected 60 MMBF/year.

On the Mendocino NF, the harvest level will be 12 MMBF/year under the Option 9 adjustments, as compared to the 22.5 MMBF/year proposed in the original Forest plan preferred alternative. This reduction represents a 47 percent decrease.

These harvest levels are below all of the studied alternatives within the Land and Resource Management Plan DEISs for these Forests.

There are several additional current issues that may further reduce the available timber harvest. These include the listing of salmonid species as threatened or endangered, the designation of critical habitat for the marbled murrelet, and potential management concerns regarding the marten and fisher.

Given these realities, the reductions in timber harvest volume likely to result from Option 9 are greater than anticipated in the DEISs, calling into question the accuracy of the DEISs' economic impact assessments. Further, the DEISs do not fully address state and county administrative costs associated with changes in private land management and federal fire protection capabilities.

The economic impacts (and concomitant social impacts) to forest communities will be much more severe in reality than the picture painted in the four Forests' DEISs. The EISs for Option 9 and individual LMPs should reflect the economic and social cumulative impacts of the drastic reductions in USFS harvesting that have occurred over the past decade.

Budget reductions are occurring throughout the National Forest System. Budget reductions may shift costs for fire protection and road maintenance to state and local governments. The Forest Service will have increasing difficulty in fulfilling its responsibilities under cooperative road agreements with local governments and others.

Impacts to CDF will result for at least two reasons. First, decreased Forest Service timber harvest levels are likely to result in increased harvesting on private lands. Such a shift will increase the workload of CDF's resource management program. Further, an imbalance may result in mutual aid relationships as CDF responds to more incidents on federal lands due to reduced Forest Service staffing and resources.

RECOMMENDATIONS FOR IMPROVED PLANNING, ADMINISTRATION AND IMPLEMENTATION

Additional information on ecosystem conditions is needed to advance ecosystem planning. More information on existing and desired forest conditions is needed to fully develop plans. Information on private forest lands must be considered, including existing conditions and projected biological and economic effects of National Forest policies on those lands. The State of California, the Forest Service, and others must provide incentives and benefits to ensure the cooperation of private landowners in this effort. These may include inexpensive or free access to data and analytical tools, training in data analysis, and data development.

Collaborative efforts must be established to access and analyze existing data. More cooperative efforts must be made by state and federal agencies, and local government to use existing analytical tools such as PROBACRE, the California Fire Economic Simulator (CFES), and the National Fire Management Analysis System (NFMAS) to model fire at regional levels across ownership boundaries. More in-depth analyses should be done to predict the changes in suppression capabilities under projected personnel reductions by the Forest Serive and private industry. These models should be improved and integrated with other spatial information to allow their use in evaluating the effects of fire on forest structure.

Efforts to compile data, develop data standards, and establish Geographic Information Systems should be identified and integrated. Projects currently underway include the Federal Forest Plan's Inter-organization Resource Information Coordinating Council (IRICC), Humboldt State University and the USFWS Ecosystem Restoration Office, and the University of California and the Trinity Bioregion Group.

CDF has developed particular expertise in the representation of ecosystem conditions in geographic information systems and the development of analytical tools to support ecosystem management. A collaborative effort would lead to substantive, rigorous and constructive comments that could significantly improve the Plans' likelihood of contributing to ecosystem integrity and sustainable economic development of northwestern California.

Planning should take advantage of local and regional groups established to foster stewardship of watersheds and natural resources. Goal development, management planning, and

data collection and analysis must include private industry, local landowners and the public. Groups such as the Trinity Bioregion Group, the Shasta-Tehama Forest Work Group, the Redwood Coast Watershed Alliance and others have been established to promote stewardship of local forest communities. These groups include members from a range of interests dedicated to identifying local goals for sustainable forest and watershed systems and to developing strategies to achieve these goals.

These groups should be involved in planning, implementation, monitoring and evaluation of National Forest Plans. These groups may be particularly valuable in exploring emerging land use pressures, management opportunities, and innovative management practices.

Adequate resources must be provided and appropriate processes established to ensure adaptive management planning. Adaptive management will provide the flexibility to adapt management to contingencies such as fire, disease and other unforeseen disturbances that compromise the desired forest conditions. The establishment of trust and the provision of adequate data are critical to this process.

The Forest Service should consider incentives for public participation in the planning process, the role of public interest groups or contractors for monitoring, and access to information and analysis.

Adaptive Management Areas should represent the full range of biological diversity present in the region. Analyses beyond the initial ones developed by CDF should be done across the region. The establishment of AMAs should also take advantage of local management or economic opportunities, and local recommendations on management alternatives. Standards and practices should be evaluated by interagency/public groups on an on-going basis.

Funding and personnel must be ensured for the collection, analysis and dissemination of monitoring data. The availability of this information is critical to adaptive planning and management.

Additional interagency cooperation will be needed to ensure adaptive ecosystem management. Federal and state agencies must resolve existing policy and regulatory conflicts that impede ecosystem management.

Air quality regulations may impede prescribed burning critical to achieving desired forest conditions and to minimizing wildfire risks. Cooperative research, analysis and management

efforts with the Air Resources Board and local Air Quality Management Districts may be needed to identify acceptable management practices and efficient permitting processes.

Cooperation between the USFWS and the State in implementing and evaluating the effects of the 4(d) rule on the northern spotted owl and the ecosystem at large will be needed. These agencies should cooperate closely on any future rulemaking efforts to ensure adequate ecosystem assessment and monitoring.

In summary, additional efforts are needed to make the LMPs consistent with current federal policy, to adequate assess the impacts of those plans on ecosystems, and to implement ecosystem management in general. The plans vary in their efforts to describe desired forest conditions and the means for achieving them. The plans must include information on private lands and a full evaluation of the biological and economic effects of federal activities on those lands.

Ecosystem management planning will require a level of information, analysis, monitoring and administration which can only be achieved through increased cooperation with the State and the public. CDF emphasizes three areas of analysis that must be done to fully evaluate the effect of the LMPs:

- the impact of fire and fire management on ecosystem conditions;
- the effect of management prescriptions on forest conditions within management areas and across landscapes;
- the effect of public policy on private management decisions and the cumulative economic and biological impacts in various regions.

CDF is prepared to select several areas to demonstrate these types of analyses and to develop additional analytical tools or applications, as needed. We would like to work closely with the Forest Service and other groups to accomplish this.

12-21-93

Board of Supervisors
of
SISKIYOU COUNTY
P. O. Box 338
Yreka, California 96097

CLERK:
Lisa Chandler
Phone: 916 842-8081

December 8, 1993

Ms. Barbara Holder, Forest Supervisor
Klamath National Forest
1312 Fairlane Road
Yreka, California 96097

Dear Ms. Holder:

Subject: Draft Environmental Impact Statement and Land and Management Resource Plan for the Klamath National Forest/Shasta-Trinity National Forest

The County of Siskiyou, as a vitally affected agency and representative of broad interests both throughout and adjacent to the National Forest, offers the following comments on the above-referenced Draft Environmental Impact Statement and Land and Resource Management Plan:

1. The Plan, consistent with Option 9, requires 180 year rotations. As we have previously discussed, the County disagrees with the proposed 180 year rotations. Clearly, there are areas within the forests that 180 year rotations are neither necessary nor desirable. Further, it appears this 180 year rotation applies regardless of species or stand condition. It is believed the biologic, hydrologic and geographic data should be the driving forces in setting rotations.

2. Treatments within late seral reserves are limited to stands less than 80 years in age. This absolute limit is counter-productive for a number of reasons:

   a. Not all designated stands are of high sight condition. Remedial work within designated stands would enhance the development of old growth characteristics.

   b. Due to the poor condition of many of the designated stands, these areas are at risk for catastrophic fires.

   c. By allowing some treatments appropriate for old growth

characteristic development, there will be additional funding available to support local communities. Other forest programs which would support bio-diversity and appropriate ecosystem management could also be funded.

Recommendation: The plan should add language which would allow upon demonstration of complying with specific criteria the habitat improvement within stands in excess of 80 years of age.

3. The County has previously recognized the need of fire as a management tool and has commented about the lack of recognition of fire in the Option 9 directive. If the use of fire is allowed at the forest level in conjunction with the Option 9 directives, no further action is necessary. However, if there is any doubt, language should be added to this forest plan which clarifies the ability to use fire as an appropriate management tool.

4. The use of adaptive management areas (AMA) is an example how flexible management can provide for new and different solutions to old problems. This willingness to provide for creative management should be extended to all areas of the forest, including the riparian reserves to allow true problem solving and increased forest productivity.

5. There appears to be an outstanding question of adequacy of funding in order to accomplish even the broad goals as set forth in these plans. If forest revenues continue at their depressed level, it is questionable whether the funding necessary to implement these plans will be available. Clearly, there must be an economic commitment to the management of these lands consistent with these plans or the planning effort will never be implemented.

In closing, we would like to restate our belief that our forests are dynamic resources, which must be subject to dynamic management. Inflexible planning and management practices create undesirable results. As a dynamic resource, we must manage the forest within the forests' capacity to accomplish the end results desired without becoming enslaved by a regulatory process.

Your consideration of our concerns is respectfully requested.

Yours truly,
Siskiyou County Board of Supervisors

Ivan Young, Chairman

Names and Numbers of Those Who Commented

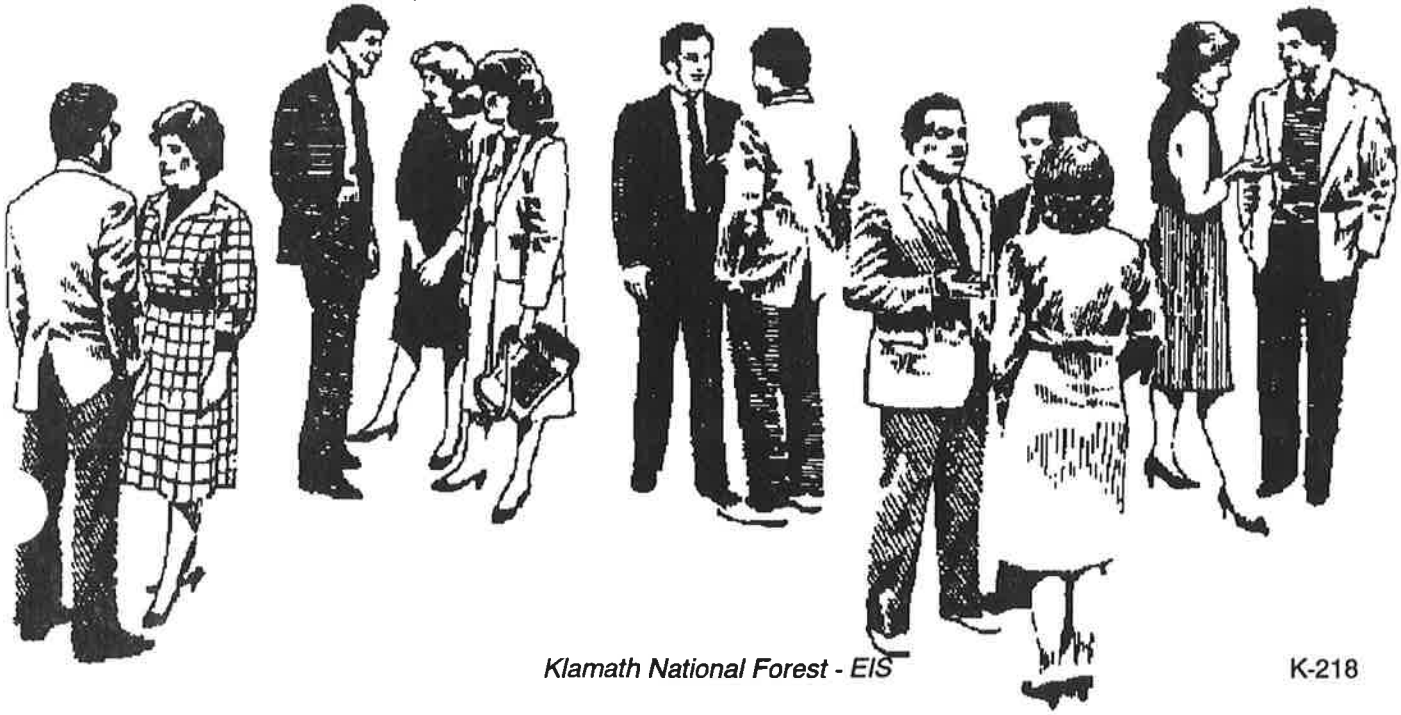
155 Adams, Edward L.
139 Alexander, John R. & Debra K.
12 Allen, Dwight S.
242 American Alpine Club
301 American Fisheries Society
56 Anderson, Betty C. & Sherman D.
257 Anderson, Lee Roger
281 Armstrong, Marcia H.
111 Auerbach, Elsie
196 Backcountry Horsemen of California
129 Bailey, Melinda & Mark
220 Baker, Carol
106 Balcon, Mark & Jan
150 Barbour, Sandra I.
174 Barina, Megan McCall
323 Barron, David
87 Bartlett, Donald B.
193 Bauer, Ann
247 Baumgartner, William
48 Baxter, David
332 Baxter, Jane
295 Bear,Lynn & Connie
212 Beamer, Dr. Lesa J.
223 Bertacchi, Sarah
86 Bloom, Richard
251 Blumberg, Frances G.
237 Blumberg, Louis, The Wilderness Society
32 Blythe, Becky
19 Bofinger, Randy
197 Boyer, Ned
225 Bower, Joseph
96 Bralver, Peter J.
141 Branch, Thomas & Pamela
137 Brennan, Jude K.
97 Broshears, James N.
302 Brucker, Peter, Salmon River Concerned Citizens
142 Buckley, John
326 Burnstein, Sanford
99 Cae, David, Bioregional Ecological Center
272 Cain, Tim
72 California Department of Fish and Game
259 California Department of Forestry and Fire Protection
74 California Forestry Association
256 California Native Plant Society
255 California Off Road Vehicle Association, Inc.
82 California Trout, Inc.
303 California Regional Water Quality Control Board
291 California Wilderness Coalition
236 Campbell, Bruce
80 Campbell, Mrs. Jane F.
122 Cantore, Mrs. Doris A.
42 Carpenter, Jim
128 Carroll, Carlos
143 Casarjian, Carol
177 Chapman, Robin
103 Christoph, Marguerite
104 Cimino, Richard S.
320 Coalition for the Health of California Fisheries
144 Cole, Marianne R.
125 Cooksey, Jack C. M.D.
59 Cooper, Paul Edward, Sr.
253 Cooperman, Roslun
10 Copoulos, John
41 Coules. Dennis
4 Cowardin, Dick
74 Craine, James, California Forestry Assn.
309 Crandall, Bob
310 Crosse, Greg & Marjorie
67 Cross, Bill, Runningwild, Whitewater School
209 Cubberly, Sue
207 Curry, Charles L.
275 Daniels, Mr. & Mrs. James B.
72 Department of Fish and Game
259 Department of Forestry and Fire Protection
36 Devall, Bill
233 Dodson, Jake
81 Dom, Carolyn
321 Donahue, Tim, Sierra Club, S.F. Bay Chp. Delta Regional Grp
296 Duguay, Mike, Stone Forest Industries, Inc.
273 Dunn, Christy
47 Duran, Sylvia

291 Eaton, Jim, California Wilderness Coalition
16 Edwards, Jeffrey S.
185 Eckert, Karen L.
343 Ecology Center of Southern California
57 Economou, Constantina
214 Eisenberger, Arthur
45 Eissler, Fred, Scenic Shoreline Preser. Cnf.
72 Elliott, Richard L., CDFG
85 Emmons, Staci L.
246 Erickson, Lily
314 Ernstoff, Michael & Donna
292 Erwin, Alan & Myra
228 Eusbefsley, Rachel
304 Evans, Steve, Friends of the River
313 Evans, Willis S., Evan Environmental Consultants
282 Farrel, David, U.S. Environmental Protection Agency
15 Feramin, Robert
159 Firl, Gerold
83 Fischer, Meade L.
189 Flanigan, Celeste Kay
227 Floeter, Conrad F.
312 Force, Tom
73 Floyd, Lora
304 Friends of the River
115 Fritz, John J.
44 Frost, Evan J.
68 Frost Martha J.
222 Funocchi, Mary Ann
31 Gabriel, Marianne
262 Gates, William E.
183 Gaylor, Henry W. III
324 Gearin, Elizabeth
13 Gerstley, Mrs. James M.
135 Gitlin-Emmer, Susan
110 Glick, Ron
218 Gluck, David L. Ph.D
17 Goldie, Virginia
112 Goodrich, Lucile
109 Goodrich, Roberta N.
107 Graham, Dr. & Mrs. John L.
120 Graham, Mark
285 Greenleaf, Anna
30 Griffith, Carolyn
28 Griffith, Irene S.
27 Griffith, Owen M.
29 Griffith T.
140 Grosser, Paul
66 Guldman, Thomas A. R.
311 Gulledge, Patrick
149 Handler, Leslie
297 Hansell, Margaret
123 Hansen, Doug
224 Haroun, Lee
242 Hart, John
94 Harter, Jane M.
243 Hartman, R.
52 Harvey, Alison
343 Harlowe, Anna
101 Harms, Ms. Bobbie
255 Hathaway, Kurt, CA Off Road Vehicle Assn
263 Heart, Carol
134 Hector, Susan M.
335 Helms, Anne Adams
23 Hennig, Anita E.
24 Hennig L.W.
264 Hi-Ridge Lumber Company
229 Hollenbeck, Bea
55 Holmer, Steve
118 Holden, Matthew
239 Hollister,Aletta
114 Honemann, Patricia B.
258 Hoover, Vicky, Sierra Club, S.F. Bay Chapter
61 Hopkins, Karen
71 Horowitz, Richard E.
161 Horton, Barbara & Melvin
136 Howard, Marge
151 Howard, Roni
39 Ibison, Jodie
96 Interdisciplinary Researchers
1 Iverson, Wayne D.
188 Ivey, Sandy
318 Jacobowitz, Ira
200 Jackson, James A.
266 Jackson, Michael B.
113 Janosik, Steve

156 Jelinck, Lynda
7 Johnson, David E.
280 Johnson, Gerald J., Off-Hwy MVR
201 Johnson, James M.
153 Johnson, Nida
337 Jones, Priscilla M.
329 Journette, C. W. D., Tehama Fly Fishers
202 KARE
203 Karuk Tribe of California
267 Karuk Tribe of California
53 Katzen, Joanne
322 Kelly, Patrick E.
172 Kemp, Mr. Richard B.
198 Kennedy, David Leo, Native Plant Society of OR
22 Kensley, Grace H.
211 Kimball, Don
331 Kirby, Jeff
169 Kitt, Jeffrey B.
283 Klamath Forest Alliance
152 Kramer, Kenneth Alan
276 Krueger, David S.
148 Lacy, Angeline
147 Lacy, Robbin
89 Lavaule, John
121 Lazier, Cathie
330 Le Bel, Bruce
165 Leonard, T.M.
90 Leong, Robin
132 Light, Lillian K.
187 Lincke, Susan
33 Littman, Peter
98 Logan, Barbara B.
210 Los Angeles Audubon Society
264 Losekoot, Frank, Hi-Ridge Lumber Company
256 Magney, David, Ca. Native Plant Society
126 Malkin, Deborah A.
78 Maplesden, Hooper & June
206 Marks, Martha A.
40 Marskell, Greg
158 Martin, Dan
232 Martin, Donald R.
290 Mason, Peter
82 Matzke, R. Brett, California Trout, Inc.
241 Maurer, Jeffrey, R.
325 May, James W.
178 McAllister, Bard
174 McCall, Linda, Sherrod & S. Cameron
34 McCurdy, Sharon
301 McEwan, Dennis, American Fisheries Society
269 McKay, Tim, Northcoast Environmental Center
127 McKinley, Mary Anna
270 McKinney, Marilyn
319 McLaughlin, Robert J.
192 McMahon, Marion & John
230 McMaster, Ken
76 McNabney, A.B., Mt. Diablo Audubon Society
316 McNicholas, Thomas & Stephanie
226 Meier, Alan C.
238 Mendocino Forest Watch
277 Menzies, Robert H.
8 Metzger, Harry
320 Milener, Scott
249 Miller, Carol
244 Miller, Sally
171 Millers-Younger, Sandra
2 Moffat, Alden
205 Moore, John K., Sierra Club Mother Lode Chapter
180 Morel, Barbara
238 Morris, Don
271 Morris, Gloria A.
76 Mt. Diablo Audubon Society
327 Mullen, Philip G.
198 Native Plant Society of Oregon
303 Neely, Mark, CA Regional Water Qual. Control Board
245 Nelson, Dennis R.
179 Newbold, Mr & Mrs. P.G.
75 Niswander, Ruth M.
199 Norman, Julie
269 Northcoast Environmental Center
3 Olsen, Bruce
204 Ottenberg, Majorie
235 Owens, Jim, Western Ancient Forest
283 Pace, Felice, Klamath Forest Alliance

201 Pacific Coast Federation of Fishermen's Associations, Inc.
306 Pagel, Joel E.
288 Papciak, Theresa & Michael
11 Parton, Glenn
196 Parton, Lorna, Back Country Horsemen of CA
254 Patterson, Nellie D.
265 Peck, Norman
70 Peckham, Kathleen E.
165 Peckham, Kathleen E.
298 Pella-Donnelly, Mary-Anne
133 Perello, Dominic
116 Philbin, Ewing
248 Pitton, Mrs. Helen
102 Pomery, Elizabeth W.
307 Pott, Patricia, U.S. Dept of Interior
260 Purcell, Philip
138 Purdy, Linda L.
175 Rafacy, Bernard A.
342 Rais, Manual
79 Raleigh, Dr. Dan
250 Ramos, Didacus
332 Range Watch
119 Reagen-Robery, Kelly
39 Reb, Blythie
182 Reinhart, Robin
21 Reitz, Tony & Jeanne
261 Resources Agency of California
170 Richards, Ed
195 Ring, Jean & Ellen
219 Riipi, George
60 Rivera, Joe M. Jr.
130 Robbins, Peter M.
289 Robery, Steven M.
166 Robley, Katie
186 Rogalin, Kim
131 Rogers, Eric
173 Rogers, I.C.
203 Rohde, Robert
267 Rohde, Robert
58 Roper, Deborah
191 Rose, Menko
294 Rothenberg, Rebecca S.
136 Rullman, T. W.
77 Runningdeer, Islene D.
6 Russell, Virginia
64 Sanders, Charles L.
14 Saufley, Frost
208 Saunders, William C.
65 Sawyer, Peter Edwards
328 Sayre, Stephen
124 Scales, Todd H.
217 Scheck, Dennis C.
164 Schiraga, Lori
308 Scholbe, Art & Betty
100 Schwarzenberg, Carl H.
93 Scott, Sally M.
317 Scratch, Verna Holson
261 Shafroth, William G., Resources Agency of CA
286 Shandrew, Penny
108 Sharpenter, Robert J.
278 Shirk, Analee
213 Sickal, Kenneth
63 Siegler, Joannie
154 Sierra Club Legal Defense Fund
205 Sierra Club Mother Lode Chapter
221 Sierra Club Redwood Chapter
54 Sierra Club Redwood Chapter, North Group
258 Sierra Club San Francisco Bay Chapter
321 Sierra Club San Francisco Bay Chapter, Delta Regional Group
181 Silver, Dan M.D.
37 Siskiyou County Board of Supervisors
281 Siskiyou County Farm Bureau
338 Skinner, Virginia O.
284 Slayer, Sara
163 Smekas, Frank
26 Smith, Bob Kupa'
202 Smith, Joan T.
88 Smith, Kenneth L.
25 Smith, Susan M.
49 Sochet, Marty
184 Soderlund, A. G.
341 Solfani, Atossa
240 South Fork Trinity Up-River Friends
160 Speake, Constance J.

279 Steinberg, Dr. & Mrs. Daniel
145 Stevens, George
296 Stone Forest Industries, Inc.
162 Strachan, A.
293 Strand, Bonnie C.
216 Suk, Tomas
222 Sullivan, Colleen
69 Sundstedt, David
9 Swanson, John R.
221 Swenson, Leonard
157 Taylor, Nancy
35 Teague, Mr. & Mrs. Donald
329 Tehama Fly Fishers
305 Terence, Susan & Michael
237 The Wilderness Society
43 Thomas, Chant
92 Thomas, Leonard R.
146 Tindal, Shirley J.
336 Tomer, D. W.
334 Traweek, June P.
20 Trimbell, Michael
105 Tromba, Sal
159 Tuan, Linda
84 Tuck, Gene
62 Tustin, Shirley
315 Ulloth, John Jay
307 U.S. Department of Interior
282 U.S. Environmental Protection Agency
54 Van Kirk, Susie
274 Van Steenbergh, Mary
333 Van Steenbergh, Mary
154 Volker, Stephen C., Sierra Club Legal Defense Fund
176 Voss, Michael J.
204 Wallace, R.E.
18 Walsh, S. J. MD
95 Wasielewski, Jeff
38 Watson, Edna
339 Weaver, Barbara
167 Wells, Mark
340 West, E.D.
235 Western Ancient Forest Campaign
194 Wells-Thomas, Penny
234 Wheeler, Bryce & Wilma A.
50 Whitaker, H. J.
190 Witteman, Richard
163 Wilson, James
231 Wilson, Karen
240 Wilson, Karen
51 Wilson, Ron
259 Wilson, Richard A., CDF
210 Wohlgemuth, Sanford
5 Wolf, Bob
117 Wolochow, Donald A. MD
91 Wong, Tammy
268 Woody, Carol B.
299 Wysocki, Cheryl
37 Young, Ivan



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