

**2004 SIERRA NEVADA FOREST PLAN AMENDMENT**  
**APPEAL DECISION**

**/s/ Dale N. Bosworth**\_\_\_\_\_

DALE N. BOSWORTH  
Appeal Reviewing Officer

**November 18, 2004**\_\_\_\_\_

Date

# 2004 Sierra Nevada Forest Plan Amendment Appeal Decision

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## Acronyms and Abbreviations

<b>AR</b>	Appeal record
<b>CAR</b>	Critical Aquatic Refuge
<b>CASPO</b>	California spotted owl
<b>CFR</b>	Code of Federal Regulations
<b>dbh</b>	Diameter at breast height
<b>DEIS</b>	Draft Environmental Impact Statement
<b>DSEIS</b>	Draft Supplemental Environmental Impact Statement
<b>ESA</b>	Endangered Species Act
<b>FEIS</b>	Final Environmental Impact Statement
<b>FSEIS*</b>	Final Supplemental Environmental Impact Statement
<b>FR</b>	<u>Federal Register</u>
<b>FSH</b>	Forest Service Handbook
<b>FSM</b>	Forest Service Manual
<b>FWS</b>	Fish and Wildlife Service
<b>HFQLG</b>	Herger–Feinstein Quincy Library Group
<b>HFRA</b>	Healthy Forest Restoration Act
<b>MUSYA</b>	Multiple Use Sustained Yield Act
<b>NEPA</b>	National Environmental Policy Act
<b>NFMA</b>	National Forest Management Act
<b>NOA</b>	Notice of Appeal
<b>OHV</b>	Off–highway vehicle
<b>PAC</b>	Protected activity center
<b>RCA</b>	Riparian Conservation Area
<b>RCO</b>	Riparian Conservation Objectives
<b>ROD</b>	Record of Decision
<b>SEIS</b>	Supplemental Environmental Impact Statement
<b>SNFPA</b>	Sierra Nevada Forest Plan Amendment
<b>SPLAT</b>	Strategically placed area treatment
<b>SSFCA</b>	Southern Sierra Fisher Conservation Area
<b>TEPS</b>	Threatened, endangered, proposed, or sensitive

\* A citation with “FSEIS [Final Supplemental Environmental Impact Statement], p. 5” implies ‘Volume 1’. A citation relating to ‘Volume 2’ of the FSEIS will be indicated as such (i.e., “FSEIS, Volume 2, p. 5”).

# 2004 Sierra Nevada Forest Plan Amendment Appeal Decision

## PROCEDURAL BACKGROUND

### Appellants and Record of Decision

This is my decision on the appeals of the 2004 Record of Decision (ROD) for the Sierra Nevada Forest Plan Amendment (SNFPA). Given the large number of appeals and in consideration of the appeal issues, all appeals of the 2004 Sierra Nevada Forest Plan Amendment have been consolidated into one set of contentions. One set of applicable issues and one decision are being issued. A careful examination of the appeals demonstrated that the issues were sufficiently similar to allow consolidation (36 CFR 217.13(b)). The appeal reference numbers are abbreviated below and throughout this decision by the last four digits of the number.

A total of 6,241 appeals were submitted under regulations at 36 CFR 217. Of these, 26 were unique or otherwise individual appeals, and 6,215 were nearly identical letters or petitions raising the same or similar issues. Twelve appeals were dismissed: four were untimely, one was not filed in accordance with 36 CFR 217, and seven were withdrawn by the respective appellants. The remaining 6,229 appeals were considered in my decision. Six requests to intervene were filed by interested persons, or potentially affected persons or organizations. Intervention status was granted for all six timely requests in accordance with 36 CFR 217.14(a). The final appeal decision is available via the internet on the World Wide Web at <http://www.fs.fed.us/emc/applit/nhappdec.htm>. A listing of the appellants and interveners is included in Appendix A, also available on the Forest Service Web site, or in hard copy upon request. Each appellant and intervener will receive a copy of this appeal decision or notification of posting on the Web site.

Regional Forester Jack A. Blackwell signed the 2004 ROD for the SNFPA on January 21, 2004, replacing the 2001 ROD. The 2004 SNFPA "...conforms with the 1982 planning regulations (36 CFR 219) [1982, as amended]..." (ROD, p. 20). The 1982 planning regulations, referenced by the Regional Forester, were last published in the Code of Federal Regulations (CFR) on July 1, 2000. The Regional Forester transmitted the records for the appeal to the Chief of the Forest Service in conformance with the regulations at 36 CFR 217.15(a).

### Requests for Stay

Three appellants requested a stay of the Regional Forester's decision. After consideration and review of each individual request for stay, it was determined that a stay was not appropriate in accordance with 36 CFR 217.10(b). Appeal regulations governing stays (36 CFR 217.10(b)) are clear in that requests to stay approval of a forest plan shall not be granted. The denial of stay requests does not prejudice any of the issues raised in appeals. Likewise, denial does not prevent any future appeal of specific projects or activities through the appropriate procedures described at 36 CFR 215. Requestors are

encouraged to cooperate in local decisionmaking and to continue to provide input to management of National Forest System lands. The requests for stay were submitted by:

1. Pacific Rivers Council
2. Plumas Forest Project
3. Sierra Nevada Forest Protection Campaign, et al.

### **Summarized Request for Relief**

Appellants requested relief that would require a full or partial remand of the 2004 SNFPA decision. These specific requests for relief are not detailed in this appeal decision because of the numerous appeals received on the 2004 SNFPA.

## **DECISION SUMMARY**

### **Summary of Issues**

My review of the appellants' concerns provides a focused response to contentions involving complex regulatory and management issues. Although every contention made in the appeals may not be cited in the same order or format in this decision, the appellants' concerns have been considered. My appeal review focused mainly on compliance of the 2004 SNFPA ROD and Final Supplemental Environmental Impact Statement (FSEIS) with applicable law, regulation, and policy as cited by appellants.

Appellants raised many appeal issues concerning procedural and planning considerations, as well as a wide range of natural resource issues, which included fire and fuels, forest management, riparian and meadow ecosystems, terrestrial wildlife and aquatic species, range management, recreation, roads, and social and economic considerations. Appellants contend the decision is not in compliance with the National Environmental Policy Act (NEPA), National Forest Management Act (NFMA), Multiple-Use Sustained-Yield (MUSY) and Organic Acts, Herger-Feinstein Quincy Library Group (HFQLG) Forest Recovery Act, Healthy Forest Restoration Act (HFRA) and National Fire Plan, Clean Water Act (CWA), Endangered Species Act (ESA), Administrative Procedures Act (APA), and Executive Order 13112-Invasive Species.

A number of appellants (NOA #0053, p. 3; #0040, p. 62; #0047, p. 20; #0057, p. 14; #0031, p. 30) variously contend the decision violates the Administrative Procedures Act. The Administrative Procedures Act (or APA, which for the Forest Service has no implementing regulations) provides (at 5 USC 706 (2)(A)) that a reviewing court may "hold unlawful and set aside agency action, findings, and conclusions found to be arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law...." It is thus a statute more directly applicable at the level of judicial review. For administrative level reviews of agency decisions under administrative appeal, findings that agency decisions are (or are not) consistent with other laws relevant to appeal issues constitute a finding that the decision is not (or is) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law, and thus is (or is not) consistent with

the APA. Therefore, this decision focuses on compliance with other laws relevant to the appeal issues.

This appeal decision sets forth discussion related to appeal issues raised by the appellants as identified through a deliberative and extensive review process. A detailed list of key appeal points identified during the appeal review process is available electronically on the World Wide Web at <http://www.fs.fed.us/emc/applit/nhappdec.htm> or in hard copy, upon request.

## **Decision**

With regard to the issues raised, the Regional Forester's decision meets the requirements of applicable Federal law, regulations, and policy, upon the condition that certain actions are completed. I affirm the Regional Forester's decision to select Alternative S2 from the FSEIS and approve the 2004 SNFPA, with the following instructions:

- The standard for threatened, endangered, proposed, and sensitive (TEPS) plant surveys for early consideration for enhancement in project design was removed from the Regional Forester's decision in an effort to revise and restructure the standards and guidelines for content and readability. Due to differences in the timing and intent of the survey standard with existing direction, along with the Fish and Wildlife Service (FWS) consideration of the standard in their Biological Opinion, I instruct the Regional Forester to reinstate the standard and remedy this inadvertent technical error.
- Predicting species viability for the California spotted owl, the Pacific fisher, and the American marten is uncertain due to the lack of information about effects of the probable management practices in Alternative S2 on populations. The Regional Forester acknowledges the inherent uncertainty and risk associated with his decision and commits to an adaptive management program to address risks associated with providing viable species populations. I believe that through the Regional Forester's commitment to an adaptive management and monitoring strategy, subsequent site-specific evaluations, and continued collaborative partnerships with the science community and other interested stakeholders, the NFMA requirement to provide for diversity of plant and animal communities within the context of overall multiple use can be met. The critical initial steps of an adaptive management and monitoring strategy are included in the FSEIS. Therefore, I affirm the Regional Forester's decision on this issue with instructions to fully develop and provide me with the adaptive management and monitoring strategy component of Alternative S2 (as described in the FSEIS, pp. 87–88) within 6 months of this decision, clarifying how the timing of treatments and the feedback and adjustment loops will occur. In addition, the Regional Forester needs to clarify:
  - What is meant by implementing through “incremental steps” and completing treatments “over a limited number of landscapes;”
  - How individual forests will know their role in the treatment and feedback strategy;

- The continued collaborative involvement of other government agencies, the science community, native tribes, local communities, and other interested stakeholders.

This decision is the final administrative determination of the Department of Agriculture, unless the Secretary, on her own initiative, elects to review the decision within 15 days of receipt (36 CFR 217.17(d)). By copy of this letter and notification of availability on the World Wide Web, I am notifying all parties to this appeal.

### **2004 Sierra Nevada Forest Plan Amendment**

The 2004 SNFPA and accompanying FSEIS amend the ROD for the SNFPA, which was signed on January 12, 2001.<sup>1</sup> On November 16, 2001, I completed my review of the 234 appeals of the 2001 SNFPA ROD and affirmed the decision with instructions for the Regional Forester to re-evaluate the SNFPA decision in light of recent and repeated severe fire seasons and a need to aggressively manage excessive fuel loading. Improved integration of the HFQLG Forest Recovery Act and the SNFPA was another area of concern.

On December 31, 2001, the Regional Forester chartered the Sierra Nevada Forest Plan Amendment Review Team to evaluate any needed changes to the 2001 SNFPA ROD relative to the areas of concern identified in my appeal decision, as well as other issues raised in the appeals, which included impacts of the decision on grazing permit holders, recreation users and permit holders, and local communities. To gain insights and new information relative to the SNFPA ROD, the Review Team worked collaboratively with national forest staffs; an interagency team of Federal, State, and local agencies; former SNFPA interdisciplinary team members; scientists; and various stakeholders throughout the year-long review.

To ensure the scientific credibility of the 2004 SNFPA, the Regional Forester requested the Pacific Southwest Experiment Station to conduct a science consistency review of the Draft Supplemental Environmental Impact Statement (DSEIS). Recommendations from the October 2003 report were used to improve the environmental analysis and acknowledge the scientific uncertainty associated with the management activities and effects on wildlife habitat and populations. The Regional Forester adopted the recommendation “to use an adaptive management approach to move forward with some level of management coupled with experimentation and learning (ROD, p. 12). The 2004 ROD responds to changed circumstances and new information identified during the year-

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<sup>1</sup> The Sierra Nevada Forest Plan Amendment Supplement was prepared under the Multiple-Use Sustained-Yield Act (MUSYA) (16 U.S.C. 528 et seq.), the Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974 as amended by the National Forest Management Act (NFMA) (16 U.S.C. 1600 et seq.), the September 30, 1982, implementing regulations of the NFMA (36 CFR 219, as amended September 7, 1983), and the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.) and its implementing regulations (40 CFR 1500-1508).

long review of the 2001 SNFPA, as well as subsequent recommendations from the Science Consistency Review Team and public comments on the DSEIS.

As discussed in the ROD (pp. 3–4), this decision specifically considers the recommendations I made in my appeal decision on the 2001 SNFPA, along with comments received from the scientific reviews and public on the DSEIS, to adjust existing management direction to better achieve the goals of the 2001 SNFPA. Those considerations include:

- Providing for flexibility in aggressive fuels treatments while still providing protections for wildlife and other resource values.
- Incorporating potential new information regarding the National Fire Plan.
- Determining if additional opportunities exist to harmonize the goals of the SNFPA and the Herger-Feinstein Quincy Library Group Forest Recovery Act.
- Adopting an active and focused adaptive management and monitoring strategy to address risk and uncertainty.
- Adopting standards and guidelines for willow flycatcher habitat, Yosemite toad habitat, great gray owl protected activity centers, and grazing utilization that better reflect and embrace site conditions and management opportunities.
- Clarifying management intent for off-highway vehicles and other recreation activities.

The 2004 SNFPA ROD at issue in this appeal replaces the 2001 SNFPA ROD in its entirety, which amends the land and resource management plans for the Humboldt-Toiyabe, Modoc, Lassen, Plumas, Tahoe, Eldorado, Stanislaus, Sierra, Sequoia, and Inyo National Forests, and the Lake Tahoe Basin Management Unit to provide a programmatic framework for management (ROD, p. 15). The decision builds on the strengths of the 2001 SNFPA ROD and retains its goals, land allocations, and priority to address the fire situation in the Sierra Nevada region. The 2004 ROD provides broad management goals and strategies for addressing five issue areas: old forest ecosystems and associated species; aquatic, riparian, and meadow ecosystems and associated species; fire and fuels management; noxious weeds; and lower eastside hardwood ecosystems (ROD, p. 31).

The standards contained in the 2004 SNFPA operate as parameters within which projects must take place. Approval of any project must be consistent with these management standards (16 U.S.C. 1604(i)). If a project cannot be conducted within these parameters, the project cannot go forward, unless the plan is amended to allow for project execution. This amendment is permissive in that it allows, but does not mandate, certain activities. Approval of the 2004 SNFPA does not mandate any project decisions. Projects occur only after they are proposed, their effects on the environment are considered, and a decision is made to carry out the project.

Finally, the ROD addresses adaptive management and monitoring at the bioregional scale and the incorporation of standards and guidelines and monitoring requirements (ROD, pp. 12–13; 24). The Regional Forester states, “It is my intention that the adaptive management strategy developed for this Forest Plan Amendment will provide the

coordinated foundation upon which all Sierra-wide monitoring required of the Forest Service in this eco-region will be executed” (ROD, p. 24). By adopting a landscape-scale adaptive approach to management, the Regional Forester is committed to the continuing cycle of implementing projects, monitoring results, and adjusting management accordingly.

In summary, the 2004 SNFPA establishes a framework for decisionmaking, using programmatic direction as a gateway for compliance with environmental laws at the project level.

## NATIONAL ENVIRONMENTAL POLICY ACT

### Use of a Supplement

#### Contentions

An appellant contends, "...project changes are so substantial that the agency cannot reasonably be said to be adjusting its previous course of action. Rather, the change must be viewed as an independent 'major federal action' requiring its own EIS" (NOA #0053, p. 16). Another appellant states, "The plan of action presented in the DSEIS is so radically different from that which was implemented in the original SNFPA FEIS [Final Environmental Impact Statement] that it should be considered a significant plan amendment requiring a new EIS..." (NOA #0069, p. 2). Another contends the Forest Service, "cannot simply supplement the previous document, but must prepare a new EIS, justifying its abrupt about-face" (NOA #31, pp. 39, 40).

Appellants also contend the Forest Service does not use "changed circumstances and new information" as the NEPA regulations intend for the preparation of a supplement to an environmental impact statement. One appellant states, "The FSEIS does NOT meet the intent of NEPA for a clear description of what is intended, there is no back up to the assertion that there are changed circumstances and new information" (NOA #0031, p. 24). Another appellant contends, "[The Forest Service] claims to 'new information' are however, misleading and baseless..." (NOA #0031, pp. 34-36).

#### Discussion

The NEPA implementing regulations at 40 CFR 1502.9 (c)(1) provide federal agencies direction when considering a supplement to an environmental impact statement:

Agencies:

1. Shall prepare supplements to either draft or final impact statements if:
  - i. The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or
  - ii. There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.
2. May also prepare supplements when the agency determines that the purposes of the Act [NEPA] will be furthered by doing so.

"Significant new circumstances or information" or "substantial changes" are not defined in the regulations, providing for the responsible official's discretion in determining when to prepare a supplement. The regulations even go so far as to say an agency may prepare a supplement, "when the agency determines that the purposes of the Act will be furthered by doing so"(40 CFR 1502.9 (c)(2)).

## **Purpose and Need**

### Contentions

Appellants contend the purpose and need statement is based upon the justification for changing the 2001 SNFPA (i.e., new information or changed circumstances), which is not valid or supported (NOA #0031, p. 24; #0053, p. 20). They also contend, “the Forest Service arrived at the preferred alternative as a result of changes in policy, and... then proceeded to cobble together colorable purposes and needs that would appear to justify it,” violating NEPA through predetermination (NOA #0053, p. 21). Appellants contend, “Alternative S2 does not even meet the stated purposes and needs, except timber commodity production” (NOA #4553, p. 5).

Appellants further contend the changes in the 2004 ROD go beyond the scope of the Chief’s 2001 appeal review recommendations (NOA #6004, p. 1; #0069, p. 8; #4551, p. 2; #4552, p. 2). An appellant alleges, “the Chief’s direction was exceeded in terms of intensity of changes, as well as, expanding from three to six areas of concern” (NOA #0069, p. 9).

### Discussion

The NEPA implementing regulations at 40 CFR 1502.13 state, “The [environmental impact] statement shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action.” Since the FSEIS supplements the FEIS, it incorporates the purpose and need stated in the FEIS on pages 4 through 7. The FSEIS (pp. 26–29) focuses on three of the five problem areas outlined in the FEIS. One appellant maintains the purpose and need statement described in the FSEIS is “misleading” (NOA #53, p. 20).

Section 1.3 begins, “The purpose of the proposed action is to adjust existing management direction to better achieve the goals of SNFPA.” In addition, this section incorporates specific concerns used to develop Alternative S2. Portions of the original purpose and need statement are cited throughout Section 1.3, with emphasis that these needs are “still valid and must be addressed when making changes to existing management direction.” Some appellants may have preferred the section entitled “Purpose and Need for Action” not include the reasoning behind the supplement, as well as, the framework used to develop Alternative S2, but this is an editorial matter rather than a regulatory oversight.

Appellants also contend the changes made in the Regional Forester’s 2004 decision “far exceed in scope and intensity the direction given to the Regional Forester by the Chief of the FS to review the SNFPA ROD...” (NOA #0069, p. 8). In his appeal decision letter, the Chief instructs, “certain aspects of the decision be subject to additional review and analysis,” and he goes on to describe three concerns (AR #11006 and #11030). In response to the Chief’s appeal decision, the Regional Forester issues a memorandum to the Chief outlining a process for a review of the 2001 decision. The Regional Forester states, “Our proposed review will focus on the three elements of your appeals decision, but I expect that the scope and substance of the review will be broader” (AR #11091). He goes on to say, “I expect to review and assess the decision in light of its effects on

grazing, recreation, and impacts to local communities. I invite your continued suggestions for the work that lies ahead, and will confer with other agencies and interested parties as I proceed to design and implement the review.”

## **Scoping**

### Contentions

Appellants contend the Forest Service violates NEPA and its implementing regulations (40 CFR 1501.7) by not conducting scoping on the proposed action (NOA #0040, p.121; #0031, p. 24; #0053, p.18; #0069 pp. 3–5). One appellant asserts the Forest Service Handbook (FSH) (FSH 1909.15, Chapter 10.3 (2) also requires scoping on all proposed actions that entail an environmental analysis (NOA #0053, p. 19). Appellants contend scoping is appropriate when addressing a substantial change in a project (NOA #0053, p.18; #0069, p. 2).

### Discussion

The NEPA implementing regulations address scoping as, “an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action” (40 CFR 1501.7). Scoping was conducted while preparing the FEIS. The process is explained in Chapter 1 of the 2001 FEIS (p. 11) and is consistent with NEPA regulations. Since the SNFPA FSEIS supplements the FEIS, it incorporates this process.

The NEPA regulations exclude scoping when preparing a supplement:

Agencies: Shall prepare, circulate, and file a supplement to a statement in the same fashion (exclusive of scoping) as a draft and final statement unless alternative procedures are approved by the Council. (40 CFR 1502.9 (c)(4)).

The Forest Service Environmental Policy and Procedures Handbook (FSH 1909.15, 18.2 (c)(4)) provides similar guidance regarding supplementation. The Draft Supplemental Environmental Impact Statement was made available for public review and comment. Each national forest used a variety of public involvement methods to work with the local public and interested stakeholders. “Public involvement activities explained the proposed changes and compared them to the current SNFPA rules, especially as they accomplished habitat protection and reduced wildfire losses” (ROD, p. 13).

## **Alternatives**

### *Range of Alternatives*

### Contentions

Appellants contend the FSEIS fails to evaluate a reasonable range of alternatives and the alternatives that are considered do not address the new purpose and need (NOA #0040, pp. 91–93; #0053, p. 22; #0047, pp. 33, 34; #0057, p. 5; #4553, p. 5; #0031, pp. 40–42). Appellants contend alternatives should have been developed to address old growth (NOA #0040, p. 94), timber production (NOA #0057, p. 4–6; #4556, p. 3), restoration of native

perennial species and native upland shrub communities (NOA #0047, pp. 33, 34), and the spread of noxious weeds (NOA #0047, p. 34). Furthermore, appellants contend although the publicly stated reason for the supplement is to address fire and fuels, Agency regulations require that wheeled vehicle recreation be considered for planning and NEPA compliance and, “The FSEIS/ROD did not provide and consider a range of reasonable alternatives for wheeled vehicle recreation as required in the NEPA (40 CFR 1502.14).” (NOA #0030, p. 4)

One appellant contends, “A third option, Alternative S3, received cursory treatment in the DSEIS but was dropped entirely from the FSEIS,” thus failing to evaluate a full range of alternatives (NOA #0040, p. 91). Appellants also contend additional alternatives were identified and allege the Forest Service has violated NEPA by not considering them (NOA #0040, p. 91, 94; #0053, pp. 23–24).

### Discussion

The NEPA implementing regulations state agencies shall, “Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated” (40 CFR 1502.14 (a)). A decisionmaker must not consider alternatives beyond the range of alternatives discussed in the relevant environmental documents (Section 1502.2 (e)). Moreover, a decisionmaker must, in fact, consider all the alternatives discussed in an EIS (Section 1505.1(e)).

As discussed earlier, the FSEIS is an environmental document that supplements the analysis in the FEIS. It is not a separate, stand-alone environmental impact statement. With this in mind, the scope of the new environmental analysis is defined by the range of actions, alternatives, and impacts considered in the environmental document, in this case, the supplement (40 CFR 1508.25).

The FEIS developed eight action alternatives representing a wide range of perspectives on improving conditions for the five problem areas described in the purpose and need (FEIS, Chapter 2). As stated in the FSEIS, Volume 2:

For the SEIS [Supplemental Environmental Impact Statement], the purpose was not to reconsider broad changes in overall program direction. The SEIS was initiated to incorporate new information and adjust the management direction in the existing SNFPA ROD to better achieve the goals of the SNFPA. This new information has resulted in some minor adjustments to assumptions about how work can be completed on the ground as well as the effects of implementing prevailing management direction. The SEIS relies very heavily upon the analysis presented in the FEIS and incorporates that information rather than repeating it. The analysis of effects for alternatives F2 through F8 and Modified F8 can be found in the SNFPA FEIS and ROD (FSEIS, Volume 2, p. 12).

The SEIS supplements the FEIS, bringing the action alternatives from the FEIS forward as alternatives considered in detail (DSEIS, p. 38). The SEIS compares two additional alternatives (Alternatives S1 and S2) in light of the purpose and

need to consider adjustments to the existing SNFPA Record of Decision to improve the likelihood of meeting existing goals and objectives (FSEIS, Volume 2, p. 13).

The supplement adds two alternatives to the detailed analysis, bringing the total number of alternatives analyzed in detail to eleven. Alternative S1 is current management under the 2001 SNFPA and is identified as the “no action” alternative. Alternative S2 meets both the purpose and need and focuses on the Chief’s concerns (FSH 1909.15, 12.3c). The alternatives analyzed in the FEIS were cited in the FSEIS to provide context in comparing the effects of Alternatives S1 and S2.

When supplementing an environmental document, the Forest Service Environmental Policy and Procedures Handbook instructs:

After a decision to implement a proposed action has been made and when the consideration of new information leads to the supplementation or revision of environmental documents, a new decision based on the supplemented or revised environmental documents must be consistent with the scope of the new environmental analysis. (FSH 1909.15, 18.03)

The decision to be made defined in the FSEIS (p. 29) is whether to amend the land and resource management plans of the Sierra Nevada forests as proposed under Alternative S2 or keep the current management (Alternative S1). Alternatives S1 and S2, as well as new information applied to all the alternatives considered in detail, define the scope of the analysis for the supplement.

Appellants contend other concerns should have been addressed in the supplement, such as old growth (NOA #0040, p. 94), timber production (NOA #0057, p. 4–6; #4556, p. 3), restoration of native perennial species and native upland shrub communities (NOA #0047, pp. 33, 34), and the spread of noxious weeds (NOA #0047, p. 34). Decisions related to these areas are addressed in the 2001 SNFPA decision; incorporated in the effects analysis of the FSEIS; or determined to be outside the scope of the analysis and better addressed during the forest plan revision process (FEIS, FSEIS Volumes 1 and 2).

An appellant contends the FSEIS, “did not include wheeled vehicle recreation as a planning issue as required by USFS regulations for planning and NEPA compliance,” and an alternative should have addressed “standards and guidelines for wheeled vehicle recreation as required in the NEPA” (NOA #0030, pp. 3, 4). As a part of his decision on the supplement, the Regional Forester took the opportunity to clarify the original management intent of off-highway vehicles made in the 2001 decision. The Notice of Intent published in the Federal Register (68 FR 16758), the FSEIS, and the 2004 ROD outline the changes to the 2001 SNFPA that make up Alternative S2, including the clarification on off-highway (OHV) use. This wording change does not alter the meaning of the original 2001 standard and guideline; therefore, addressing it as an issue and developing an alternative around it was not necessary. A response to a comment related to this contention also explains why the wording on the standard and guideline was changed (FSEIS, Volume 2, Public Concern #2.35, p.22).

Appellants also contend Alternative S3, which was discussed in the DSEIS, was not brought forward in the FSEIS as an alternative analyzed in detail (NOA #0040, p. 91). NEPA regulations allow for alternatives to be eliminated from detailed study, as long as reasons for elimination have briefly been discussed in the EIS (40 CFR 1502.14 (a)). In Chapter 2, Alternative S3 is discussed as an alternative eliminated from detailed analysis, "...because it does not differ significantly from Alternative S1" (FSEIS, p. 93). Section 1502.14 requires the EIS to examine all reasonable alternatives. In determining the scope of alternatives to be considered, the emphasis is on what is "reasonable." When there are potentially a very large number of alternatives, only a reasonable number of examples, covering the full spectrum of alternatives, must be analyzed and compared in the EIS (Council on Environmental Quality's 40 Most Asked Questions, Question #1b). Volume 2—The Response to Public Comments of the FSEIS also addresses several comments related to alternatives that are similar to those raised in the appeals (see responses to Public Concern #2.5, p. 13; #2.9, p. 15; #2.16, pp. 16–17; #2.17, p. 17; #2.22, p. 19).

### *Comparison of Alternatives*

#### Contentions

Appellants contend although the DSEIS and FSEIS attempt to incorporate alternatives considered in the FEIS, the alternatives were not assessed using the same analytic and modeling tools rendering the FEIS alternatives incomparable to the FSEIS Alternatives S1 and S2, violating NEPA requirements for "comparable treatment" (NOA #0040, pp. 91–93; #0053, pp. 24–26). One appellant also contends the incorporated FEIS alternatives are "infrequently discussed in the environmental consequences section, omitted from important tables and figures, and are clearly not given equal considerations in the SEIS" (NOA #0040, p. 91).

One appellant further contends, "In comparing the effects of the alternatives (FSEIS, Chapter 2), the FSEIS states several times that 'Alternative S1 and S2 apply the AMS [Aquatic Management Strategy] and the same standards and guidelines for aquatic, riparian, and meadow ecosystems (see p. 101 as example).' However, this statement is inaccurate, as can be seen in the Standards and Guidelines chart comparing Alternative S1 and S2 (FSEIS, Appendix A)..." (NOA #0044, p. 11). Another appellant contends, "The FSEIS fails to accurately model treatment prescriptions in Alternative S1 thereby underestimating the benefits of this alternative to fuels reduction" (NOA #0040, p. 109).

#### Discussion

The NEPA implementing regulations require that an EIS, "Rigorously explore and objectively evaluate all reasonable alternatives..." (40 CFR 1502.14(a)). At 40 CFR 1502.10, the regulations state, in part: "Agencies shall use a format for environmental impact statements which will encourage good analysis and clear presentation of the alternatives including the proposed action" (40 CFR 1502.10). Section 1502.14(b) specifically requires "substantial treatment" in the EIS of each alternative including the proposed action. This does not dictate an amount of information to be provided, but rather, prescribes a level of treatment, which may in turn require varying amounts of information, to enable a reviewer to evaluate alternatives and their comparative merits.

An appellant contends the incorporated FEIS alternatives are not thoroughly discussed in the environmental consequences section of the FSEIS and are clearly not given equal considerations in the FSEIS” (NOA #0040, p. 91). As discussed earlier, the FSEIS is an environmental document that supplements the analysis in the FEIS. It is not a separate, stand-alone environmental impact statement requiring reanalysis of the alternatives developed for the FEIS.

One appellant contends, “The FSEIS fails to accurately model treatment prescriptions in Alternative S1 thereby underestimating the benefits of this alternative to fuels reduction” (NOA #0040, p. 109). The FSEIS, Appendix B summarizes modeling outputs and effects. Page 402 specifically addresses the issue of why the outcome for Alternative S1 is different from S2:

In summary, what distinguishes the alternatives from each other is the intensity of the activities that can occur in each of the treatment units. This directly affects the economic efficiency of the overall program and the number of acres that can actually be accomplished for a given funding level. The location of the treatment units is modeled the same for both alternatives (FSEIS, p. 402).

The Forest Service responded to a comment that is similar to this contention in Volume 2 of the FSEIS on page 112, “A key difference between Alternatives S1 and S2 applies to mechanical treatments in stands at the 50 percent canopy cover cusp: Alternative S2 would allow managers to use mechanical means to conduct fuel treatments to effectively reduce ladder and surface fuels even though it brought the stand below the 50 percent canopy cover standard. There is no such allowance under Alternative S1.”

Another appellant contends the FSEIS does not treat Alternatives S1 and S2 equally as they relate to standards and guidelines for aquatic, riparian, and meadow ecosystems and the application of an adaptive management system (NOA #0044, p. 11). A review of standards and guidelines contained in Appendix A of the FSEIS demonstrates that under Alternative S2, many are unchanged from the 2001 FEIS (FSEIS, pp. 337–350). The appellant is correct, however, in that there are several differences in the standards and guidelines between S1 and S2. These differences may be as simple as word changes or may be more substantive. For example, in Appendix A under the “Objective” column that deals with maintenance and restoration of aquatic habitats, the standard for Alternative S1 reads:

...are within the range of natural variability for the reference stream type as described in the Pacific Southwest Region Stream Condition Inventory protocol. If properties are outside the range of natural variability, implement restoration actions that will result in an upward trend (FSEIS, p. 341).

The standard under Alternative S2 reads:

...determine if relevant stream characteristics are within the range of natural variability. If characteristics are outside the range of natural variability, implement mitigation measures and short-term restoration actions needed to prevent further declines or cause an upward trend in conditions. Evaluate required long-term restoration actions and implement them according to their status among other restoration needs (FSEIS, p. 341).

In this case, Alternative S1 specifies where the information for natural variability evaluation is located and requires restoration. In contrast, under S2 there is no description of the database and there is no firm requirement for implementation. A comparison of aquatic and riparian standards and guidelines between Alternatives S1 and S2 reveals several discrepancies in the wording.

These differences are discussed in the Environmental Consequences section (FSEIS, p. 207) as follows: “Alternatives S1 and S2 both include a comprehensive AMS [Aquatic Management Strategy] and with the exception of the few Standards and Guidelines described below, the components of each are the same. Besides these differences, Alternatives S1 and S2 include minor clarifications to the standards.” A review of standards and guidelines under Alternative S2 demonstrates that in some cases, requirements (under Alternative S1) are replaced with discretionary language. While the language or wording of several aquatic and riparian standards and guidelines differs, the overall intent of the standards and guidelines appears unchanged. Additionally, the Aquatic Management Strategy established in the SNFPA 2001 ROD is retained under the FSEIS (ROD, p. 10). The Aquatic Management Strategy includes “specific standards and guidelines pertaining to management activities” in riparian conservation areas and critical aquatic refuges and other areas (FSEIS, p. 207). Finally, appropriate standards and guidelines established through project-specific analyses are required to minimize impacts to aquatic, riparian, and meadow resources.

One appellant contends, “[t]here is no clear chain of logic disclosed for why the FSEIS ranks Alternative S2 among those alternatives that would result in the greatest improvement of conditions for the Cascades frog and northern leopard frog, while the DSEIS did not list it as such.” (NOA #0044, p. 11) The DSEIS and FSEIS compare alternatives differently. While the DSEIS compares among Alternatives F2 thru F8 (FEIS alternatives) and among S1 thru S3 (SEIS alternatives), it does not compare the FEIS alternatives to the SEIS alternatives. The FSEIS, on the other hand, makes comparisons among the FEIS and SEIS alternatives. However, the decision to be made is to implement either Alternative S1 or S2, so comparison of either of those to the FEIS alternatives is only to provide a frame of reference. Both the DSEIS and the FSEIS state, “Alternatives S1 and S2 apply the same AMS [Aquatic Management Strategy] and Standards and Guidelines for aquatic, riparian, and meadow ecosystems” (FSEIS, p. 102). Since there is no change in the relationship of Alternatives S1 and S2 from the DSEIS to the FSEIS, there is no need to explain a change.

## Impact Analysis

### Contentions

Appellants variously contend the FSEIS does not adequately address, analyze, or disclose the potential impacts of the alternatives. Specific contentions raised by appellants are concerned with inadequate effects analysis of the following:

- Proposed increased timber harvest on old growth, soil quality, terrestrial and aquatic habitat, and associated species including the northern goshawk, black-backed woodpecker, olive-sided flycatcher, purple marten, and long-legged myotis bat (NOA #0040, pp. 77–84; #0053, pp. 30–31, 34–35; #6077, p. 2; #6004, p. 2; #4554, pp. 1,2,3; #4556, pp. 9,10; #4552, p. 2; #4551, p. 2; #4553, p. 12; #0031, pp. 13, 17, 43–44);
- Full implementation of the Herger-Feinstein Quincy Library Group Forest Recovery Act and failure to look at the effects on the California spotted owl, Pacific fisher, and American marten (NOA #0040, pp. 77–84; #0053, pp. 32–33; #0040, p. 1; #0031, pp. 44, 45; #4556, p. 10);
- Proposed grazing changes on water quality and riparian/meadow habitats, soils, and species including the willow flycatcher and Yosemite toad (NOA #0040, pp. 85–90; #4554, pp. 1,3; #0031, p. 46; #0047, p. 35);
- Social and economic considerations, including the development of local sustainable economies (NOA #4554, p.4; #0057, p.2; #0047 pp. 12, 19, 34; #0053, pp. 35–36);
- Current road network, as well as proposed road construction and maintenance (NOA #0044, p. 10; #4554, p.2; #0031, pp. 43–44);
- Brush maintenance in defensible fuel profile zones (DFPZs) and other commercially thinned areas (NOA #4553, p. 12);
- Proposed road and trail restrictions for wheeled vehicle recreation (NOA #0030, pp. 3,4);
- Fuels treatments to meet objectives (NOA #4552, p. 5; #4551, p. 7; #0031, p. 22);
- Impacts (including short-term and long-term) of the FSEIS on the California spotted owl and owl habitat, American marten, and Pacific fisher (NOA #0053, pp. 27–28, 32–34; #0040, pp. 77–84);
- Protections provided for California spotted owl under Alternative S2 (NOA #4556, pp. 5, 8–10); and
- Incorporation of an adaptive management plan (NOA #0040, pp. 115, 119).

### Discussion

The NEPA implementing regulations specify that the discussion of environmental consequences in a NEPA document “...will include the environmental impacts of the alternatives including the proposed action, any adverse environmental effects which cannot be avoided should the proposal be implemented, the relationship between short-term uses of man’s environment and the maintenance and enhancement of long-term productivity...” and will “...include discussions of (a) direct effects and their

significance; (b) indirect effects and their significance... (d) the environmental effects of alternatives...” (40 CFR 1502.16). Such discussion “...must be sufficient to permit an informed selection of the preferred alternative...” (FSM 1922.14). The NEPA regulations state, “NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail” (40 CFR 1500.1(b)). The regulations direct agencies to concentrate environmental effects analysis on the issues, rather than “amassing needless detail.”

The FSEIS Chapter 4 discusses “...environmental consequences for the alternatives analyzed in this supplemental environmental impact statement ...” (FSEIS, p. 185). Environmental consequences for Alternatives S1 and S2 are discussed in the FSEIS, Parts 4.2 through 4.4. The FSEIS, Part 4.5 describes the aspects of the environmental consequences for Alternatives F2 through F8 that have changed based upon new information addressed in the supplement. The FSEIS, Appendix C, “Consistency Review of Documentation for the SNFPA,” considers the proposed changes of this supplement to the 2001 FEIS effects analysis and identifies whether additional effects analysis is needed.

#### *Effects of Timber Harvesting on Old Growth, Aquatic Habitat and Soils*

Appellants variously contend the DSEIS and FSEIS contain no adequate discussion of the impact of increased timber harvest on the forest or its resources, including effects on old growth, sedimentation, aquatic and watershed ecosystems, soils, and associated species (NOA #0031, pp. 13, 17, 43–44; #0040, pp. 77–84; #0053, pp. 30–31, 34–35; #4551, p. 2; #4552, p. 2; #4553, p. 12; #4554, pp. 1,2,3; #4556, pp. 9,10; #6004, p. 2; #6077, p. 2).

Timber harvesting is identified in the FSEIS as mechanical fuels treatment, implementation of the HFQLG Pilot Project, and salvage. The FSEIS contains an extensive discussion of the effects of proposed forest management in the section titled “Effects Related to Wildfire Risk, Fuels Treatments, Management within Riparian Conservation Areas, Road Management, and Wildfire Recovery and Timber Salvage” (FSEIS, pp. 208–215). Impacts of mechanical fuels treatments and implementation of the HFQLG Pilot Project on various species of the Sierra Nevada are discussed on pages 234–315 of the FSEIS. The discussions of timber harvesting contain extensive literature citations and references to results of monitoring the impacts of best management practices on potential activities permitted under the selected alternative.

Chapter 4 of the FSEIS discusses the environmental consequences of timber harvesting on old growth (pp. 196–199), terrestrial and aquatic systems (pp. 207–215), and soils (p. 233). Chapter 4 also includes a section entitled, “Species of the Sierra Nevada,” which includes detailed analyses of the direct effects of Alternatives S1 and S2 for a variety of old growth, terrestrial and aquatic habitat species (FSEIS, pp. 234–315). This overview does not address “habitat,” which must be approached from a species or guild scale.

An appellant contends the effects are not quantified (NOA #0053, p. 30). The appellant is correct that the analysis is indeed qualitative rather than quantitative; however, neither NEPA-implementing regulations nor Forest Service policy requires a quantitative

methodology. The FSEIS clarifies this concern in the response to Public Concern #9.8.3, whereby any site-specific actions proposed to implement direction in the SNFPA would require compliance with NEPA. The response states, “An environmental analysis would be completed to assess the potential impacts of proposed activities on water quality and aquatic and riparian systems” (FSEIS, Volume 2, p. 125).

#### *Effects of HFQLG Forest Recovery Act Implementation*

Appellants variously contend the FSEIS does not adequately analyze the effects of full implementation of the HFQLG Forest Recovery Act and fails to look at the effects on species (NOA #0040, pp. 77-84; #0053, pp. 32-33; #0040, p. 1; #4556, p.10; #0031, pp. 44, 45). The effects of implementation of HFQLG Forest Recovery Act on species are discussed in numerous places in the FSEIS including the following:

- California red-legged frog – p. 238
- Least Bell’s vireo – p. 240
- Fisher – pp. 243, 249
- Marten – pp. 256, 258, 259
- California spotted owl – pp. 263, 264, 266, 268, 269, 272, 274, 277, 279
- Willow flycatcher – p. 291
- Great gray owl – p. 294
- Foothill yellow-legged frog – p. 298
- Mountain yellow-legged frog – p. 300
- Yosemite toad – pp. 303, 304
- Northern leopard frog – p. 306
- Cascades frog – p. 307

#### *Effects of Grazing*

Appellants contend the FSEIS fails to adequately address the effects of grazing changes proposed in Alternative S2 on water quality and riparian/meadow soils and species (NOA #0040, pp. 85–89; #4554, pp. 1,3; #0031, p. 46, #0047, p. 35). The effects of grazing on aquatic, riparian and meadow ecosystems are discussed in Chapter 4 of the FSEIS (p. 214). Effects on water quality are considered in the same section. Broad-scale effects, such as programmatic effects on riparian/meadow habitat, can be adequately discussed in a general manner in a programmatic-level analysis. As mentioned in the previous section on the effects of timber harvesting, effects discussions on soils are not discussed in detail in the FSEIS, but will be discussed on a site-specific basis as appropriate when project analysis is completed.

The appellant generally contends the FSEIS fails to take a “hard look” at the plan’s impacts on imperiled species associated with riparian and meadow habitats. Specifically, the appellant lists concerns related to the willow flycatcher and Yosemite toad (NOA #0040, pp. 85–90; #0031, p. 46). The FSEIS provides scientific information for all imperiled species associated with riparian and meadow habitats in Chapter 3: Affected Environment, part 3.2 Species of the Sierra Nevada. This includes all information presented in the 2001 SNFPA as well as new information (FSEIS, p. 134). To determine impacts on riparian/meadow species, analysis prepared for the FSEIS and "Biological

Evaluation for SNFPA FSEIS" (AR #512022) was used. Chapter 4 of the FSEIS addresses the potential effects of Alternatives S1 and S2 on threatened, endangered and proposed species (pp. 234–241) and Forest Service sensitive species (pp. 241–308).

The appellant raises several concerns related to the willow flycatcher (NOA #0040, pp. 86–89). New information from the Willow Flycatcher Conservation Assessment (AR #512002) is incorporated into the effects analysis, which led to the logical change in management direction (FSEIS, p. 290). The appellant contends the FSEIS “fails to make the distinction that occupied habitats will not be grazed at all in Alternative S1. There is no rational explanation offered to support the conclusion that the absence of season-long grazing is the same as late season grazing” (NOA #0040, p. 88). In the 2001 ROD, the conservation strategy includes standards and guidelines for modifying grazing practices in occupied or historic flycatcher habitat. Surveys of known willow flycatcher sites will be conducted to determine occupancy. If surveys detect willow flycatchers, livestock grazing would be prohibited in the entire meadow—beginning one calendar year after detection. If surveys do not detect willow flycatchers, to permit recovery of the meadow and increase the likelihood of re-colonization of these historically occupied sites by flycatchers, late season grazing could occur with utilization levels based on habitat condition.

Appellants raise concerns regarding the adequacy of FSEIS analysis related to the Yosemite toad (NOA #0040, pp. 89–90). Specifically, appellants contend the FSEIS failed to analyze differences between alternatives regarding pesticide application (NOA #0040, p. 89–90). As explained in the FSEIS, “The FEIS identified four factors that affect habitat and populations of the Yosemite toad. Of these, two would be unaffected by the proposed alternatives: chemical toxins (i.e., locally applied pesticides and herbicides) and exotic fish stocking. The effects of these factors on this species are discussed in the FEIS (Volume 3, Chapter 3, part 4.4, pp. 219–220).”

A review of the record demonstrates standards and guidelines for Alternatives S1 and S2 are consistent regarding pesticide application in riparian conservation areas and critical aquatic refuges (FSEIS Appendix A, p. 337; 2001 SNFPA ROD, Appendix A, p. A–54). However, the language presented in standards and guidelines for Alternative S1 and Alternative S2 in Appendix A (FSEIS, p. 337) does not, however, reflect the same language in Standards and Guidelines 97 and 98 [under RCO #1] as presented in the ROD (p. 63). These standards and guidelines state:

97. Limit pesticide applications to cases where project-level analysis indicates that pesticide applications are consistent with riparian conservation objectives.

98. Within 500 feet of known occupied sites for the California red-legged frog, Cascades frog, Yosemite toad, foothill yellow-legged frog, mountain yellow-legged frog, and northern leopard frog, design pesticide applications to avoid adverse effects to individuals and their habitats.

The standard and guideline regarding pesticide application for Alternatives S1 and S2 in the FSEIS Appendix A states:

Limit application of pesticides in RCAs and CARs to cases where project-level analysis indicates their application is consistent with the Riparian Conservation Objectives. Avoid application of pesticides to areas within 500 feet of known occupied sites for California red-legged, foothill and mountain yellow-legged, Cascade and northern leopard frogs and Yosemite toads unless environmental analysis documents pesticides are needed to restore or enhance habitat for these amphibian species.

There is no explanation provided in the FSEIS or ROD that addresses the different wording contained in the standard and guidelines, which limits pesticide application. The intent of standards and guidelines is to provide parameters for project design. The variations in wording between versions of the same standards in the FSEIS and ROD lead to the same conclusions regarding effects on individuals and habitats. Individuals and habitats are protected as stated in the ROD, “design pesticide applications to avoid adverse effects to individuals and their habitats” (ROD, p. 63).

Appellants cite the following from page 304 of the FSEIS regarding both alternatives: "suitable habitats for Yosemite toads would be either broadly distributed or highly abundant across the historical range of the species on national forests." In contrast, appellants contend the FEIS primarily found that for Modified 8, “Suitable environments are frequently distributed as patches or they exist as low abundance or both.” The sentence following the one cited above from the FSEIS (p. 304) is: “However, gaps exist where suitable habitats are absent or are only present in low abundance.” The content of the analysis is not in fact different. Both discussions speak to “patches” or “gaps” existing in suitable habitat when there is low abundance.

An appellant contends that the decision makes significant changes to livestock management in aquatic ecosystems, which will likely result in greater impacts to threatened, endangered, and sensitive plants in these areas than was anticipated in Alternative S1 (NOA #4555, p. 8). A Biological Evaluation and a Biological Assessment (for sensitive and listed species respectively) (AR #514004, #514001), along with the Biological Opinion from the Fish and Wildlife Service and the National Marine Fisheries Service all support the adequacy of the analysis. In addition, the Science Consistency Review states, “...no threats to viability or trends towards listing would occur with these changes [Alternative S2]” (FSEIS, p. 424). Finally, project-specific analyses made as the provisions of the FSEIS are implemented will assure that the appropriate standards and guidelines are in place to minimize or eliminate impacts to TEPS plants (FSEIS, p. 315).

### *Social and Economic Considerations*

Appellant contends the social and economic impacts of Alternative S2 are based only on timber harvest and there is no discussion of ecotourism generated by natural ecosystems (NOA #4554, p.4). As stated in the FSEIS, Volume 2, response to Public Concern #10.3, the focus of the 2004 SNFPA is not on ecotourism but on the five issue areas identified to be addressed in the FSEIS (FSEIS, p. 127). The responses to Public Concerns #10.4 and

#10.5 provide an explanation of how the FSEIS considers impacts on natural experiences and tourism from logging proposed under Alternative S2 (FSEIS, p. 127).

Another appellant contends the 2004 SNFPA ROD and FSEIS fail to provide an “integrated consideration” of economics as required in the Resource Forest and Rangeland Renewable Resources Planning Act of 1974 (16 U.S.C. 1600 et seq.), and “...economic factors were subordinate to ecological factors in every step of the planning process for this decision” (NOA #0057, p. 2). The 2004 SNFPA and FSEIS were developed pursuant to the 1982 planning rule, 36 CFR 219 (See NFMA, 2000 Planning Rule). The 1982 rule does not require equal consideration of social, economic, and ecological sustainability. The analysis considered social and economic concerns, which are summarized in the FSEIS on page 18 and discussed in greater detail in Part 2.5.5: Socio-Economic Concerns (pp. 103–106) and Part 3.4: Social and Economic Environment.

#### *Effects of Roads*

Appellants contend the FSEIS does not adequately analyze the impacts of the projected road system on soils, watersheds, wildlife, and recreation to achieve the fuels management and timber harvesting objectives described in Alternative S2 (NOA #0044, p. 10; #0031, pp. 44–44; #4554, pp. 1–3). The FSEIS discusses the effects of road management activities on aquatic ecosystems and water quality, particularly in relationship to fuel management activities, wildfire risk, and timber salvage, in the environmental consequences discussion for Part 4.2.3: Aquatic, Riparian, and Meadow Ecosystems (FSEIS, pp. 208–209; pp. 212–213). In regard to the effects of roads on recreation, the FSEIS states, “The proposed changes considered in this document (Alternative S2) would not change the types or range-wide availability of recreational opportunities from those anticipated under current direction (Alternative S1) (FSEIS, p. 192). The FSEIS further states, “The projected effect of roads in Alternatives S1 and F2–F8 are documented on pages 443–452 of the [2001] SNFPA FEIS (Vol. 2, Chapter 3). Road-related effects from these alternatives remain unchanged and are included by reference” (FSEIS, p. 324). The FSEIS, Part 4.4.3: Roads, describes the projected miles of new road construction, reconstruction, and decommissioning over the next decade and the general effects of those activities (FSEIS, pp. 324–325). Site-specific effects of road management activities will be identified and analyzed in compliance with project-level NEPA requirements.

#### *Effects of Brush Maintenance*

The appellant contends the issue of maintenance in the DFPZs and other commercially thinned areas was not adequately analyzed (NOA #4553, p. 12). The FSEIS, Appendix B–1.11: Modeling Assumptions (pp. 402–403) states that 80 percent of the initial treatments will require follow-up treatments to reach desired fire behavior conditions. These may occur in 2–4 years and at 10 years. Maintenance treatments are assumed to be in a 20-year cycle afterwards. This will vary depending on local conditions. The FSEIS, Table 4.2.4c, states, “Maintenance of DFPZs in the HFQLG pilot project area has been

included. Outside of the HFQLG area, maintenance treatments are assumed to be accomplished with prescribed fire” (FSEIS, p. 221).

The FSEIS further describes in its modeling assumptions, “Plantations are treated as a separate unit or allocation. It is assumed that the required release and pre-commercial thin would occur to maintain them”(FSEIS, p. 403). All of these maintenance thinning treatments are projects that would be factored in during the project-level planning.

The issue of maintenance in the DFPZs and other commercially thinned areas was analyzed. Specific maintenance treatments are project-level planning issues. Further discussion on maintenance treatments can be found in the contention response for NEPA: Public Disclosure in this review document.

### *Effects of Wheeled Vehicle Recreation*

The appellant contends the FSEIS does not discuss the impacts of the proposed Alternative S2 on current and future wheeled vehicle recreation (NOA #0030, pp. 3–4). As mentioned in the “Road Network” discussion above, the FSEIS states that the proposed changes considered in Alternative S2 would not change the effects on recreational opportunities previously analyzed in the 2001 FEIS and anticipated under current direction (FSEIS, p. 192).

### *Effects of Fuels Treatments*

The appellants contend the 2004 SNFPA ROD fails to conduct an adequate fire effect analysis (NOA #4552, p. 5; #4551, p. 7; #0031, p. 22). Fire effects are discussed throughout Chapter 4 of the FSEIS. The FSEIS focuses discussion on the projected wildfire acreage burned and severity of effects, treatment effectiveness, economics of fuels treatments, and risk and uncertainty of implementation for Alternatives S1 and S2 (FSEIS, p. 215).

### *Effects on Pacific Fisher, California Spotted Owl, and American Marten*

#### Pacific Fisher

The appellant contends there is inadequate disclosure of short-term adverse effects on the Pacific fisher while utilizing modeling to project long-term improvements (NOA #0040, p. 80–81). On page 244 the FSEIS states, “Habitat will improve significantly... over time... The short-term trade offs in current habitat quality to sustain long-term benefits are of greatest importance to fisher viability within the area of known occupancy, the SSFCA [Southern Sierra Fisher Conservation Area]. Outside of the SSFCA, the greatest concern is the risk of further fragmentation due to large stand replacing fire.” It appears that short-term effects are largely unknown and the uncertainty and risks are addressed through the adaptive management and monitoring strategy. Uncertainty and risks about short-term effects are addressed in the AMMS: “the effects of Alternative S2 on fisher habitat are largely unknown...” (FSEIS, p. 76). The adaptive management and monitoring strategy further discloses an urgent need to understand the effects of proposed fuels treatments on fishers and habitat elements important to them (FSEIS, p. 76).

The appellant raises several concerns regarding inadequate disclosure of the adverse impacts of logging standards and guidelines on medium to large trees, canopy closure, snags and downed logs, habitat fragmentation and connectivity related to the fisher resting and denning habitat (NOA #0040, pp. 80–82). The SNFPA replaces smaller diameter caps with the 30” diameter at breast height (dbh) cap, but also adds a requirement for retention of 40 percent of existing basal area in the largest trees. Analysis of such a standard in the California spotted owl (CASPO) report (1992, p. 23) shows that it would result in the retention of trees down to approximately 22 to 24” dbh but not of smaller trees. Research by Zielinski (FSEIS, p. 139) showed that stands containing 11 to 24” dbh trees were an important component of home ranges and of the area immediately surrounding fisher rest sites. This suggests that the new standard may pose additional risk to fisher habitat.

Across the Sierra Nevada, Alternative S2 will allow greater reductions in canopy closure than the original plan. It may be reduced to 40 percent in treated stands. In regard to canopy closure, the FSEIS (p.138) states, “It is clear from the available literature (Zielinski et al. in press-b, Mazzoni 2002) that canopy closure over 60% is important, and fishers preferentially select home ranges with high proportions of dense forested habitat.” In projecting effects, the FSEIS states, “Forty percent canopy closure is within the range of canopy cover in habitats used by fisher for foraging and dispersal. Such thinning should not limit connectivity between stands of higher canopy cover, denning-quality habitat, because proposed treatments would only affect approximately 25-30% of the forested area. Effects on denning and nesting habitat would vary by project” (FSEIS, p. 247). Effects to denning and nesting habitat components will be evaluated in project-level biological evaluations.

Within the SSFCA, the standard and guideline for retention of dense forest has been replaced by a desired condition statement. The level of effectiveness of a desired condition statement cannot be predicted, but it is likely to be less effective than a standard and guideline. The FSEIS suggests 69 percent of the area in the SSFCA having >50 percent canopy closure will not be treated under Alternative S2 but does not indicate the timeframe of this analysis. The FSEIS further projects that average canopy closure in the SSFCA will not differ significantly between the alternatives but does not indicate assumptions that were used in this analysis (FSEIS, p. 247).

The level of retention of large snags and logs will be determined for each project rather than being established through the SNFPA. Snags and logs were two of the key factors considered in the FSEIS for assessment of environmental consequences on fishers (FSEIS, p. 242). Effects to snag and log habitat components will be evaluated in project-level biological evaluations.

In addressing the appellants concern about fragmentation and connectivity, the FSEIS states, “Each of the Sierran Forests have developed strategies to provide suitable habitat for forest mesocarnivores...including corridors of habitat managed for connectivity” (FSEIS, p. 244).

The appellant contends the FSEIS fails to consider the effect of eliminating standards and guidelines for protecting old forest emphasis areas and small old growth stands (NOA #0040, p. 82). Alternative S1 contained specific standards to retain old forest attributes in California Wildlife Habitat Relationship 5M, 5D and 6 stands of 1 acre or larger outside the defense zone. These standards are not included in S2. This could be a very important change as even small areas of dense forest can contribute to the suitability of habitat for fishers (FSEIS, p. 246). The FSEIS acknowledges, “managing vegetation to retain stands of larger trees, or to retain highly variable stands with clumps of denser vegetation focused around large trees, may provide lower vulnerability to stand replacing fire while meeting fisher habitat needs over the long-term” (FSEIS, p. 139).

Standards and guidelines for old forest emphasis areas under Alternative S1 have been replaced by desired condition statements under Alternative S2. Under Alternative S1, old forest emphasis areas were established on 2.3 million acres (FEIS Vol. 3, Chap. 3, part 4.4, p.14). The old forest emphasis area allocation is retained in Alternative S2, but no standards or guidelines are associated with old forest emphasis areas (FSEIS, p. 377). Effects of the standards and guidelines in these two areas may pose additional risk for the fisher. However, Alternative S2 includes a standard and guideline to avoid degrading fisher habitat in SSFCA (FSEIS, p. 386).

The appellant states, “The USFWS has concluded that the likely result of fully implementing the DFPZ [Defensible Fuel Profile Zone] program under the QLG [Quincy Library Group] pilot project will be to fragment habitat and limit fisher movement and dispersal, ‘thus precluding future recovery options,’” rendering the consideration of habitat fragmentation and connectivity issues incomplete. Regarding the HFQLG Forest Recovery Act, the FSEIS states that standards for retention of 40 percent canopy closure in CHWR classes 5M, 5D, and 6 will retain stands within the range used by the fisher for foraging and dispersal so that large new barriers to connectivity will not be created (FSEIS, p. 243). The FSEIS also states, “fishers do not appear to inhabit the area,” therefore no further analysis of the effect of the HFQLG on fisher habitat was made (FSEIS, p. 243).

### California Spotted Owl

The appellant contends the FSEIS fails to analyze short-term impacts on owl habitat (NOA #0040, p. 77). The FSEIS acknowledges, “With regard to owl population persistence, the short-term effects of management activities are believed to be most relevant (Stine, personal comm. 2003) and are highlighted in this effects analysis” (FSEIS, p. 267). It is unclear which effects are considered short-term versus long-term in the FSEIS. In Table 4.3.2.3k, the short term is defined as 20 years. On page 270, it is noted, “vegetation treatment over the short term (20 years) may introduce some unknown level of risk to the California spotted owl population.” However, on page 268, projections for habitat loss in the HFQLG area are given for 5 years, and those losses are approximately double the losses projected for the longer timeframe of 20 years (Table 4.3.2.3g). In the second paragraph on page 269, it is reported that 123,500 acres of stands currently supporting >50 percent canopy cover could be treated to reduce cover to 40 percent in the HFQLG area. The timeframe for this change is not specified, but it is

apparently a short-term change and greater than the change indicated in tables for a timeframe of 20 years. Thus, it appears that the 20-year timeframe is generally used as “short-term.” It is acknowledged, “Under Alternative S2, there is some risk of negatively affecting California spotted owls in the short-term because of the uncertainty associated with the effects of using mechanical treatment in PACs [protected activity centers].” These risks are acknowledged in the FSEIS, Chapter 2 under the Adaptive Management and Monitoring Strategy (FSEIS, pp. 72–74).

The appellant contends short-term impacts on owl habitat are not analyzed, particularly with respect to canopy cover and snags and down wood (NOA #0040, pp. 77–79). The FSEIS discusses snag retention: “Both alternatives are projected to retain a number of snags  $\geq 15$ ” dbh in the general forest allocation and are projected to retain at least five snags per acre in all decades” (FSEIS, p. 277). The basis for this projection is not given, and its relationship to snag retention guidelines for Alternative S2 (ROD, p. 51) is not clear. In those guidelines, snag retention levels are left to decisions on individual projects. The “General Guidelines” are for retention of four of the largest snags per acre in westside mixed conifer and ponderosa pine, six of the largest snags per acre in red fir, and three of the largest snags per acre in eastside pine and mixed conifer. In reference to down wood, the FSEIS states the standards and guidelines for retention of large woody debris are essentially the same between Alternatives S1 and S2. This statement seems to contradict the differences between down wood standards and guidelines for Alternatives S1 and S2 (FSEIS, p. 354). Alternative S1 has quantified and prescriptive standards for down wood, while Alternative S2 requires that retention levels be determined on an individual project basis. However, Alternative S2 requires consideration of desired conditions, which call for higher than average levels of snags and down woody material (ROD, p. 40).

Appellants assert the FSEIS fails to analyze habitat effects at the scale of individual home ranges or at the scale of landscapes, and they cite the concerns of the Science Consistency Review Team in this regard. The following is a response to the concern about individual home range analysis (FSEIS, p. 450):

The underlying premise of both alternatives is that the spatial location of SPLATs [strategically placed area treatments] is critical to effectively changing landscape wildfire intensity and behavior. At the bioregional scale, the method used to approximate this spatial placement of SPLATs was to apply a regular grid across the bioregion. This is clearly understood to not represent expected actual areas of SPLAT implementation. Direction in Alternative S2 includes a strong emphasis to avoid PACs [protected activity centers] when designing treatments at the project level and to design prescriptions to consider the desired condition of HRCAs [home range core areas]. An evaluation of projected effects to individual PACs and HRCAs based upon the bioregional modeling would not be meaningful in assessing how actual projects might be implemented. The aggregate evaluation used provides a reasonable estimate of potential effects to PACs and HRCAs across the bioregion. Effects to individual PACs and HRCAs would be fully evaluated during site-specific project planning and cumulative effects across the bioregion would be assessed by implementation monitoring.

Analyses of landscape effects are provided in the section on “Distribution of Owl Sites Among Land Allocations” (FSEIS, p. 262); “Proportion of California Spotted Owl Breeding Territories Protected” (FSEIS, p. 264); “Provisions for Habitat Abundance at the Landscape and Home Range Scales (FSEIS, p. 266); “Amount of Habitat Provided Within Owl Home Ranges Occurring in Geographic Areas of Concern” (FSEIS, p. 271); “Fragmentation Effects Resulting from Vegetation Treatments” (FSEIS, p. 273); and “Location of Vegetation Treatments in Relation to Geographic Areas of Concern” (FSEIS, p. 274). The discussion of areas of concern and the HFQLG area is cited above in the discussion of contentions related to the HFQLG pilot project.

Appellants contend, “Critical conclusions regarding the significant, negative impacts on owl habitat in the FSEIS have been removed from the FSEIS without adequate basis” (NOA #0040, p. 80). Appellants specifically cite pages 186, 187, 188, and 193 in the DSEIS. In general, these statements have been reworded for the FSEIS with the result that they are somewhat less definitive. The summary statement, which is one of the conclusions cited by the appellants, may have been most heavily modified. Here the DSEIS stated:

Alternative S2 tends to disrupt the continuity of habitat conditions (i.e., habitat structure and distribution) over the 20-year time period. This disruption may lead to increases in fragmentation and habitat patchiness. The increases in fragmentation and patchiness are likely to isolate subpopulations and limit the opportunity for interactions across NFS lands. To exacerbate these short-term conditions, present environmental conditions at the southern portions of this species range are further isolating that subpopulation and further limiting its ability for potential interaction with the more (sic) Sierra Nevada subpopulation (DSEIS, p. 193).

In the FSEIS, the summary statement concerning Alternative S2 was modified to the following:

Under Alternative S2, there is some risk of negatively affecting California spotted owls in the short-term because of the uncertainty associated with the effects of using mechanical treatment in PACs (potentially affects 5% of all PACs). It is assumed that because of the sensitivity of these habitat areas and the uncertainty mechanical treatments impose, line officers will proceed with extreme caution when proposing vegetation management within California spotted owl PACs and will attempt to avoid such treatments wherever possible (FSEIS, p. 280).

The FSEIS and ROD rely on the adaptive management and monitoring strategy to address risk.

Appellants contend that the impact of the changes in the FSEIS on the spotted owl and owl habitat are “not fully and fairly disclosed and addressed in the FSEIS in violation of NEPA” (NOA #0053, p. 33) and cite the following text from the Science Consistency Report (FSEIS, p. 453):

As described throughout the preceding discussion, the SEIS would greatly benefit from a more coherent and complete presentation of expected results on which to

assess possible outcomes over the short and long-terms. Alternative S2 likely incurs greater risk to owl persistence because of: (1) potential to treat more PACs (51% of total PACs); (2) canopy cover reduction in PACs (3) more aggressive vegetation treatments compared to S1 (lower canopy cover retention, increased harvest of mid-sized trees <30" dbh); (4) full implementation of HFQLG; and (5) unquantified amounts of Forest Health treatments. Given continued concern regarding owl population trends Alternative S2 likely incurs greater risk.

The conclusory statement included in the FSEIS (p. 280) states:

Maintaining the metapopulation is keyed to the amount of habitat across the Sierra Nevada landscape and the size of the habitat gaps, created by wildfire, over the next 50 years. In this regard, Alternatives S1 and S2 cause slight changes from the current condition. Under Alternative S2, there is some risk of negatively affecting California spotted owls in the short-term because of the uncertainty associated with the effects of using mechanical treatment in PACs (potentially affects 5% of all PACs). It is assumed that because of the sensitivity of these habitat areas and the uncertainty mechanical treatments impose, line officers will proceed with extreme caution when proposing vegetation management within California spotted owl PACs and will attempt to avoid such treatments wherever possible.”

It is clear the FSEIS and ROD acknowledge the short-term risk to the California spotted owl; however, additional development of the adaptive management and monitoring strategy is warranted.

#### American Marten

The appellant contends the FSEIS fails to disclose or analyze a gap in the distribution of marten in the Sierra Nevada (NOA #0040, p. 83). The appellant further notes that the FSEIS at page 141 dismisses the apparent gap by stating “some systematic surveys on the Plumas and Lassen National Forests reported negative detections (Kucera et al. 1995) in areas where marten are believed to exist.” The FSEIS does not explain the basis for the conclusion that marten are believed to exist in this area and does not provide any further analysis of the distribution of the marten population. The 2001 FEIS (Volume 3, Chapter 3, part 4.4, p. 22) mentions these negative survey results: “Verified marten detections (either by track or photo) exist for all Sierra Nevada national forests, although negative survey results occurred at numerous locations in central Plumas and southern Tulare Counties (Kucera et al. 1995).” The appellants cite comments by Kucera (2003) drawing attention to this apparent gap and the need to analyze it in the FSEIS. In that letter, Kucera notes that the gap in marten distribution occurs in an area that already supports less late-seral forest than other portions of the Sierra Nevada and will be affected by the HFQLG pilot project.

The appellant cites literature that investigates the percent of forest openings tolerated by marten in landscapes and contends the FSEIS does not explore the percentage of the landscape that will be in openings under the alternatives, particularly in the area of the HFQLG project (NOA #0040, p. 84). The FSEIS, at page 259, does discuss openings that will be created by group selection, the percent of the landscape that will be in new

openings created by these cuts, and other mitigations that may limit the percent of openings (FSEIS, p. 259). The FSEIS also describes a furbearer network that is being used by the Lassen, Plumas, and Tahoe national forests to design projects, although it acknowledges the Plumas and Tahoe national forests have not formally adopted the network (FSEIS, p. 259). The FSEIS concludes, “Alternative S2 would result in little overall change in marten habitat compared to Alternative S1. This conclusion is based on the assumption that the strategic pattern of treatments would not involve more than approximately 25-30% of the landscape and that red fir types would not generally be subjected to fuels treatments” (FSEIS, p. 260).

Again in reference to the HFQLG project, appellants contend there is inadequate analysis of effects of removing trees up to 30” dbh and reducing canopy closure to “low levels” (NOA #0040, p.84). The pertinent discussion of large tree retention in the FSEIS consists of the following:

For the eastside pine type, Alternative S2 may result in a greater risk to large tree retention by raising the maximum diameter limit of trees that can be cut from 24” to 30”. However, this change in minimum size retention will likely be offset by the requirement to retain 30% of the existing basal area in the largest trees available (FSEIS, p. 254).

By retaining 30 percent of existing basal area using the largest trees available, smaller trees would, by necessity, be removed first. Trees as large as 30 inches would be removed only where there are a sufficient number of trees over 30 inches to retain 30 percent of the original basal area.

Appellants contend (NOA#0040, p. 84) that the FSEIS asserts that there are essentially no differences between alternatives involving snags, large woody debris, and canopy closure, but then reverses itself by concluding, “Alternative S2 would involve more intensive treatments at local scales compared to Alternative S1, which may lead to a greater risk to important marten habitat components, including canopy closure, large tree density, snag and down log recruitment, and multi-storied structural diversity” (FSEIS, p. 260). The FSEIS explains that little difference is expected between Alternatives S1 and S2, when considered in the context of the broad planning area, since treatments will only affect 25 to 30 percent of the landscape, and few treatments will occur in the red fir type that is important to marten (FSEIS, p. 260).

#### *Protections Provided for California Spotted Owls*

The appellant contends, “. . .the Forest Service arbitrarily allowed short-term considerations to dominate the public process” resulting in a faulty effects analysis as regards the California spotted owl (NOA #4556, p. 10). The appellant specifically contends the effects analysis on owls focuses on a time period of 20 years to the exclusion of longer term effects. A review of the FSEIS demonstrates that the appellant’s concern about the focus on short-term effects is unwarranted. Analyses of effects on owls and their habitat include projections for 50 and 130 years in addition to the projections for 20 years (FSEIS, pp. 268–269). There is no indication that short-term considerations dominated the process.

Another appellant contends the SEIS reaches "...unwarranted conclusions regarding vegetation treatments..." and based on research by Verner, Lee, and Irwin, "...the SEIS cannot legitimately make findings..." on the likelihood of negative impacts of vegetation treatments on California spotted owl habitat (NOA #4556, p. 9). The appellant is correct that the FSEIS cites apparent conflicting science, and correctly quote the FSEIS as saying, "Lee and Irwin (in review, 2003) found that concerns about proposed fuels treatments having a negative effect, either short- or long-term on spotted owls through reductions in canopy cover at the landscape scale are not supported by their analysis or other published information" (FSEIS, p. 270). However, this simple summary is an imperfect characterization of Lee and Irwin (note that this paper is now in press according to Lee). Results of Lee and Irwin were that:

- The likelihood of territories being occupied by owls increased as the amount of forest with  $\geq 40$  percent canopy closure increased.
- On average, 70 percent of the area of nesting territories was composed of forest with moderate ( $\geq 40$  percent) and dense ( $\geq 70$  percent) canopy closure.
- Analyses suggested that there is a lower threshold of 56 percent of a territory composed of moderate and dense canopy closure forest in order for it to be a nesting territory.
- These findings led to an overall conclusion that, "reproductive success increases with increasing levels of canopy cover because of a higher estimated frequency of nesting pairs, rather than greater reproduction by pairs that are known to be actively nesting."
- In addition, modeling efforts were said to, "lend credence to the hypothesis that modest fuels treatments are compatible with territory-level canopy cover needs for spotted owl reproduction in the Sierra Nevada. We encourage empirical testing of this hypothesis."
- Lee and Irwin did not make a finding about other published literature that supported concerns that fuels treatments could have a negative effect on spotted owls.

One of the primary differences between Lee and Irwin and other published literature (e.g., Hunsaker et al. 2002) cited in the FSEIS is Lee and Irwin's focus on canopy closures  $\geq 40$  percent rather than canopy closures  $\geq 50$  percent. Since the FSEIS included forested acres with canopy closure  $\geq 40$  percent in the assessment of suitable owl habitat (WHR classes 4M and 5M include canopy closure of 40 to 59 percent), it appears that the FSEIS projection of acres of suitable habitat is consistent with the science in Lee and Irwin.

Appellants also contend Hunsaker et al. (2002) is misinterpreted in the FSEIS and the appropriate interpretation of this paper would support a rule that requires at least 50-percent canopy cover on 50 percent of the landscape instead of the FSEIS standard, which they characterize as saying "at least 50% canopy cover wherever you can get it." The appellant's characterization of this research is inaccurate. Actual results reported in Hunsaker et al. were the following:

- More than 70 percent (on average) of 72–hectare areas occupied by owls were composed of forest with >50 percent canopy closure (measured by aerial photography)
- For nesting, owls select stands with >70 percent canopy closure
- Sites that consistently produce young contain a higher proportion of area with >50 percent canopy closure. Mean observed proportions were 75 percent of 72–hectare analysis areas and 60 percent of 430–hectare analysis areas.

Concerning the finding of potentially negative effects on owl habitat suitability of vegetation treatments in the HFQLG area, one appellant contends they are:

apparently artifacts of the original HFQLG EIS but those conclusions are on the verge of outliving their period of validity in terms of NEPA regulations, and in any case they have not been reevaluated and they lack support from new information on the spotted owl’s actual status (NOA 4556, p. 9).

It appears that the “new information on the spotted owl’s actual status” is a reference to the recent meta-analysis of demographic data. There is no basis for contending that there is a “period of validity” under NEPA. Further, the status of the owl (i.e., its current population trend) does not affect the definition of suitable habitat, so the contention that the assessment of suitable habitat should be revised based on status information is inappropriate.

In a further contention related to the HFQLG, the appellant states, “...increased protection for the forest and the spotted owl that results from DFPZs is key to a landscape level owl protection program...” a fact that is “...ignored in the SEIS...” (NOA #4556, p. 10). In fact, there is significant emphasis in the FSEIS on landscape-level protection and the projected decline in acres affected by wildfire under S2 as compared to S1.

In a final contention related to HFQLG, the appellant states that there is no legitimate foundation for the statement in the SEIS “...that within the HFQLG area at the end of 20 years there would be 65,000 acres fewer acres of suitable owl habitat than under Alternative S1” (NOA #4556, p. 8). One concern expressed by the appellant is the fact that the FSEIS bases this number on simple projection of WHR classes. However, on page 270, the FSEIS acknowledges that “the above discussion of changes in broad size class categories does not reflect habitat modifications that occur within the lower layers of treated stands,” and thus recognizes the general nature of these projections. The appellant also contends these projections do not take into account thinning projects that have been completed and which the appellant claims have not degraded habitat. There is no data presented by the appellant to substantiate this claim. Finally, the appellant claims that this projection is incorrect because it fails to take into account the fact that treatments would not occur in PACs or spotted owl habitat areas. This is not pertinent to the projection of overall amounts of suitable habitat.

Appellant contentions regarding necessary amounts of habitat for owls’ prey as a limiting factor, and prey habitat are addressed in the FEIS (Volume 3, Chapter 3, Part 4.4.2.1). Rationale for the length of the limited operating period is also documented in that section

of the FEIS, although the rationale for the size of the area protected through the limited operating period is not provided. Assessments of effects (including benefits) of treatments on other species are also provided in the FEIS (Volume 3, Chapter 3, Part 4.4).

### *Risk and Uncertainty*

An appellant contends, “The ROD fails to establish an adaptive management program that is capable of addressing the uncertainty of the effects of management actions inherent to the decision” (NOA #0040, p. 115). The NEPA regulations address “Incomplete or Unavailable Information” at 40 CFR 1502.22. The section states, “When an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an environmental impact statement and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking.” Risk and uncertainty is disclosed and discussed throughout the FSEIS and in the ROD. A discussion of a proposed adaptive management and monitoring strategy to address risk is found in the FSEIS, Chapter 2 (pp. 64–88), and the ROD “adopts an active and focused adaptive management and monitoring strategy” (ROD, p. 4).

## **Cumulative Effects Analysis**

### Contentions

Appellants contend the FSEIS/ROD fails to adequately assess and disclose the cumulative effects of the proposed action and thus violates NEPA and/or its implementing regulations. These failures occur particularly with respect to the following: aquatic, riparian, and meadow ecosystems and species; wheeled vehicle recreation; and consideration of developments since the 2001 Framework, including US Fish and Wildlife Service’s decision not to list the California spotted owl, effects of private land management on owl and fisher habitat, the Giant Sequoia National Monument management plan, and the “Healthy Forests” measures violating NEPA implementing regulations 40 CFR 1508 and 36 CFR 219.19 (1982) (NOA #0053, pp. 36, 37; #0040, pp. 95–98; #0030, p. 3; #0044, p. 12; #0031, p. 47).

One appellant contends, “The failure of the Forest Service to first analyze the cumulative impacts of the nationwide policy of increased logging to pay for treatments, increased grazing to benefit ranchers, increased off-road vehicle use, and severely weakened habitat protection violates the National Environmental Policy Act by segmenting this programmatic change into regional analysis documents that cannot analyze the nationwide cumulative impacts of this policy” (NOA #0031, p. 27).

### Discussion

Cumulative impact is defined as “...the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions...” (40 CFR 1508.7). Forest Service NEPA procedures further elaborate by stating, “Individual actions when considered alone may not have a significant impact on the quality of the human environment. Groups of actions, when added together, may have collective or cumulative impacts which are significant.

Cumulative effects which occur must be considered and analyzed without regard to land ownership boundaries. Consideration must be given to the incremental effects of past, present, and reasonably foreseeable related future actions of the Forest Service, as well as those of other agencies and individuals” (FSH 1909.15, sec. 15.1). Actions that have no direct or indirect effects on a particular program will not result in cumulative effects.

The FSEIS discusses the cumulative effects analysis process in Part 4.1 and states, “The [2001] FEIS provided a detailed assessment of potential cumulative effect of the eight alternatives...” considered in the original FEIS. The FSEIS further states that “supplemental information is provided...” in Chapter 4: Environmental Consequences to update the assessments to reflect changes proposed in this supplement and the effects from “...actions completed in the Sierra Nevada national forests...” since issuing the 2001 SNFPA ROD (FSEIS, pp. 185, 186).

#### *Aquatic/Riparian/Meadow Ecosystems and Species*

An appellant contends the Forest Service violates NEPA implementing regulations at 40 CFR 1508.25(c) because “[the] FSEIS fails to adequately assess and disclose potential cumulative impacts of the proposed action, consistent with NEPA requirements, particularly as it relates to management that is likely to cumulatively affect riparian, aquatic, and meadow resources...the FSEIS fails entirely to evaluate the cumulative effects to aquatic ecosystems of roads, salvage logging, fuels management, livestock grazing, mining, herbicides and recreational use that will occur within the planning area” (NOA 0044, p. 12).

A comprehensive cumulative effects analysis was performed as part of the 2001 FEIS. Limited additional work was performed for the FSEIS analysis, as most of the FEIS assessment adequately describes the cumulative effects of implementing the proposed changes considered in the DSEIS (FSEIS, p. 186). Where this is not the case, additional information is presented in Section 4.1.3. The stated assumption is that since the proposed changes in the supplement “are consistent with the range of choices in the FEIS, this assessment adequately describes the conditions that would result from implementing the alternatives in this SEIS (FSEIS, p.191). The cumulative effects analysis in the FSEIS includes actions and effects reported for the period between the 2001 and 2004 RODs (FSEIS, p. 187).

As referenced earlier in the response to contentions under NEPA: Inadequate Impact Analysis, “[a]ny site-specific actions taken to implement direction in the Forest Plan Amendment would require compliance with NEPA. An environmental analysis would be completed to assess the potential impacts of proposed activities on water quality and aquatic and riparian systems. The analysis would also include an assessment of cumulative watershed effects relative to thresholds of concern established for watersheds in the project analysis area” (FSEIS, p.125). These cumulative effects analyses would provide more site-specific analyses related to individual watersheds and subbasins, including disclosure of potential impacts of proposed activities such as roads management, salvage logging, fuels management, livestock grazing, mining, herbicides, and recreational use.

There is extensive discussion of the effects of proposed management under the selected alternative (S2) in the section titled “Effects Related to Wildfire Risk, Fuels Treatments, Management within Riparian Conservation Areas, Road Management, and Wildfire Recovery and Timber Salvage” (FSEIS, p.208). The timber harvesting section contains extensive literature citations and references to the results of monitoring best management practices for many activities proposed under the preferred alternative (see previous discussions under the heading “Impact Analysis”).

Additionally, project-level analyses for activities subsequent to the 2004 decision are required to demonstrate compliance with Clean Water Act and State water quality standards.

#### *Off-Highway Vehicle Recreation*

The appellant contends that the FSEIS/ROD does not evaluate “... the cumulative effects of a piece by piece... implementation of the preferred alternative for wheeled vehicle recreation” (NOA #0030, p. 3). The FSEIS summarizes the discussion of cumulative effects disclosed in the 2001 SNFPA FEIS for recreation, which included an analysis of off-highway vehicle opportunities, and discusses whether the proposed changes in the supplement would affect the original cumulative effects analysis (FSEIS, p. 192). The FSEIS states, “The proposed changes considered in this document (Alternative S2) would not change the types or range-wide availability of recreational opportunities from those anticipated under current direction (Alternative S1) (FSEIS, p. 192). Therefore, the cumulative effects for off-highway vehicle recreation remain unchanged.

#### *Consideration of Developments Since the 2001 SNFPA*

The appellant contends the Giant Sequoia National Monument (GSNM) plan was released before the revised plan was signed, and the FSEIS does not “consider the cumulative acreage that may be affected by implementing both plans, cumulative number of owl and fisher home ranges that may be degraded, the cumulative effects on fisher and owl viability...” (NOA #0040, p. 99).

The first sentence from the GSNM plan discussion in the FSEIS (pp. 252–253) states, “The final environmental impact statement for the GSNM Management Plan will be available in late 2003.” Realistically, the planning team could not have, in a timely manner, evaluated the cumulative effects of implementation of the management plan if the final environmental impact statement was not available until late 2003. The ROD for the SEIS was signed in January 2004.

The FSEIS presents a list of cumulative effects expected within the GSNM. Further, the FSEIS states, “For the purposes of estimating cumulative effects in this document, future management of the GSNM was modeled using a modification of Alternative 6 of the draft GSNM FEIS, to simulate the mid-range of the potential effects of the various alternatives” (FSEIS, p. 253). Given that the final EIS for the GSNM Management Plan was not available until late 2003, the estimated effects on these species are adequately disclosed.

### *Healthy Forest Measures*

Appellants contend the 2004 SNFPA fails to discuss the potential cumulative impacts of the 2004 SNFPA in combination with the “Healthy Forest” initiatives and measures (NOA #0053, p. 37; #0031, p. 47). Specific “Healthy Forest” measures cited by appellants are the Final Rule for Notice, Comment, and Appeal Procedures for National Forest System Project and Activities (36 CFR 215) and the categorical exclusions for hazardous fuels reduction and fire rehabilitation activities. The cited measures are administrative tools that provide for more efficient procedures for project planning. These administrative tools do provide for public input on projects but do not, in and of themselves, result in environmental impacts. Use of the project-level tools cited by the appellant does not add to the impacts analyzed and displayed in this FSEIS and is outside the scope of this 2004 SNFPA ROD.

One appellant further contends, “Under a proper cumulative impacts analysis, harvesting permitted under the Revised Framework must be considered together with harvesting that may occur as “forest health treatment” (NOA #0053, p. 37). The quantity of acres treated is displayed in FSEIS, Table 4.2.4c—Planned Treatments Assumed in Analyzing the Effects of Alternatives S1 and S2 (FSEIS, p. 222). The estimated number of acres of wildfire is displayed on pages 96 and 218 of the FSEIS. Timber outputs, including estimates from salvage operations, are displayed in the FSEIS on pages 104 and 316. While Alternative S2 does not provide programmatic direction for a bioregional strategy specifically aimed at forest health problems, in order to analyze effects “...the interdisciplinary team assumed that forest health treatments would be incorporated into strategically placed area treatments” (FSEIS, Vol. 2, pp. 83–84). In addition, “...the extent of treatments for forest health purposes is expected to be within the range of strategically placed area treatment acreages modeled for Alternative S2” (FSEIS, Vol. 2, p. 121).

### *National Policies*

One appellant contends, the Forest Service must first analyze the cumulative impacts of nationwide policies related to increased logging, grazing, and off-road vehicle use. The FSEIS analyzes effects and subsequent cumulative effects in the context of the 11 national forests, for which the plan amendment will apply. There is no requirement to develop or evaluate nationwide policies, before analyzing their effects at the regional or forest level.

### **Public Disclosure**

#### Contentions

Appellants contend the elimination, addition, and modification of standards and guidelines and glossary definitions violated NEPA for the following reasons: 1) changes between the DSEIS and the FSEIS occurred without the opportunity for public comment (NOA #0047, pp. 4, 7); 2) rationale for changes were not clearly disclosed (NOA #0047, pp. 6, 7, 12, 25, 35, 43, 52); and 3) the effects of changes were inadequately disclosed (NOA #0047, pp. 11, 16, 35, 46). Also see “Impact Analysis” for third contention.

## Discussion

In defining the purpose of an environmental impact statement, NEPA regulations state, “It shall provide full and fair discussion of significant environmental impacts...” (40 CFR 1502.1). At 40 CFR 1502.9 (a), NEPA regulations require an agency to make every effort to disclose and discuss at appropriate points in the draft statement all major points of view on the environmental impacts of the alternatives including the proposed action.

### *Changes Between Draft and Final/Reasons for Changes*

Appellants contend changes between the DSEIS and the FSEIS occurred without the opportunity for public comment (NOA #0047, p. 4), in violation of NEPA implementing regulations (40 CFR 1503.1). Changes between the draft and final are expected since the Forest Service actively seeks comments from the public, federal, state and other local agencies, Indian tribes, and other affected parties and uses these comments in arriving at a final decision.

Planning regulations at 36 CFR 219.6 state multiple purposes for circulating the Draft Environmental Impact Statement. The nature of two of these purposes is such that it would not be unexpected for some changes to result from comments between the draft and final. These are to “[b]roaden the information base upon which land and resource management planning decisions are made” and “[e]nsure that the Forest Service understands the needs, concerns, and values of the public...” Accomplishing either or both of these could lead to changes between the draft and final supplement to an environmental impact statement as well. Furthermore, the NEPA implementing regulations at 40 CFR 1503.4 direct the agency’s response to comments made on a DEIS. An agency may respond in one or more of several ways, including supplementing, improving, modifying, or correcting its analysis (Section 1503.4(3)).

The SNFPA FSEIS is different from the draft supplement. Changes made in the FSEIS reflect responses to comments from a science consistency review and supplemental review of the DSEIS, as well as, comments from other agencies and the public. In the introduction to Chapter 4: Environmental Consequences, the FSEIS states,

The ID [interdisciplinary] team used the comments of the Consistency Review Team, along with comments from other agencies, outside scientists and the public to improve the FSEIS. From draft to final, the IDT team improved readability and clarity of the document; clarified management direction, used more graphics and tables to clearly display complex information; improved consideration, interpretation and citation of scientific information; enhanced discussion of risk and uncertainty; and acknowledged and addressed responsible opposing scientific viewpoints. Issues of scientific controversy, conflicting scientific information, uncertainty and significant data gaps are summarized in Appendix E, Science Consistency Review and in SEIS Volume 2, Response to Comments” (FSEIS, p. 188).

Changes are not necessarily presented as new information. This meets the provisions of the NEPA regulations at 40 CFR 1503.4(3) for addressing public comments.

Another appellant contends the table of standards in Appendix A of the FSEIS is confusing. Appendix A does not have an introduction with instructions on how to use the table. While the Appendix could have included a better explanation, its contents can be understood from the record.

The difference between Alternatives S1 and S2 standards and guidelines is described in the FSEIS, Chapter 2 (FSEIS, pp. 45–64). Changes to standards and guidelines between the DSEIS and FSEIS are documented in the record (AR #51003 and #59040). Some standards were deleted to avoid repetition of ones already in place. The procedure to reduce repetition was intended to improve content and clarity, not mislead the public.

#### *Off-highway Vehicle Standard and Guideline*

The appellant contends, “The Forest Service failed to follow established laws and regulations when reviewing, analyzing and disclosing the impacts of the Forest Plan Amendment to the public and decision maker, thereby denying Californians and Nevadans the ability to provide meaningful input in the decision making process. The outcome for the off-highway recreation and wheeled vehicles (ROD page 59) was predetermined in advance, in a bureaucratic vacuum and never intended to be conducted in a fair and open review with public participation” (NOA #30, p. 2).

As a part of his decision on the supplement, the Regional Forester took the opportunity to clarify the original management intent for off-highway vehicles (OHVs) made in the 2001 decision. The Notice of Intent published in the Federal Register (68 FR 16758), the FSEIS, and the 2004 ROD outline the changes to the 2001 SNFPA that make up Alternative S2, including the clarification on OHV use. This wording change does not alter the meaning of the original 2001 standard and guideline. This standard and guideline was adequately disclosed through scoping and during the comment periods for the DEIS and DSEIS. Responses to two comments related to this contention also explain why the wording on the standard and guideline was changed (FSEIS, Volume 2, Public Concerns #2.34 and #2.35, p. 22).

The focus of the SNFPA FEIS and the FSEIS is not on recreation management, but on addressing the five problem areas identified in the “Purpose and Need” sections of these documents. The alternatives address recreation only to the extent that standards and guidelines are needed to address the five problem areas. Changes or mitigations in recreational use to protect resource values would follow, as they do under current management direction, from site-specific, project or forest-level analysis (FSEIS, Volume 2, Public Concerns #6.2 and #6.6, pp. 68–69). The SNFPA interdisciplinary team reviewed and analyzed many comments and concerns that were provided by Californians as apparent from the comments in the FSEIS, Volume 2.

#### *Fuels Reductions and Treatments*

An appellant contends the public was not informed, “that the use of prescribed fire would be very much greater than the ‘gross acres’” (NOA 4556, p 4). Table S3 (FSEIS, Summary, p. 13) estimates 42,020 acres would be treated by prescribed fire out of a total

114,200 acres treated for Alternative S2. The FSEIS, Volume 2, page 100 states, “Under both alternatives, it is assumed that approximately 80 percent of the treated acreage would require at least one (and most likely two) followup or maintenance treatments.” The response to Public Concern #9.4.15 further states that prescribed fire would be used to meet the intent of the follow-up or maintenance treatments for reintroducing fire as an ecosystem process. The increase in mechanically treated acres under Alternative S2 compared to Alternative S1 is attributed to a combination of increased acres in group selection in the HFQLG Pilot Project area and a change from emphasizing prescribed fire under Alternative S1 to providing greater flexibility to select appropriate fuels treatments based on local conditions under Alternative S2 (FSEIS, Volume 2, p. 100).

The same appellant contends, “[the decision] proposes unrealistically high levels of prescribed fire... effectively concealed from the public...” (NOA #4556, p. 15). Table S3 (FSEIS, Summary, p. 13) shows the number of acres to be treated that modify the fuel loadings that change fire behavior. Table 4.2.2c (FSEIS, Chapter 4, p. 222) shows the same total number of acres planned as the initial treatment acres for a 20-year period. These are listed as “Total Mechanical Treatment including Hand Treatment” and “Total Treatment by Rx Fire.” As stated in the above paragraph, follow-up or maintenance treatments would occur. Follow-up acres are listed at the bottom of Table 4.2.2c. The FSEIS discloses that 80 percent of the treated areas would require follow-up treatments to reach desired fire behavior conditions. These may occur in 2 to 4 years and at 10 years, with treatments assumed to be in a 20–year cycle afterwards. The appendix indicates that the majority of maintenance treatments are “assumed to be by prescribed fire” (FSEIS, pp. 402, 403).

The appellant further contends, “Citizens are not informed that the scientific paper said to be the foundation of the SNFPA strategy for fire protection...shows that a different strategy would provide better protection and improved safety for fire fighters” (NOA #4556, p. 4). The FSEIS Summary discloses, “[the] SNFPA Review Team identified a need to more fully consider three critical aspects of the fire and fuels management strategy established in SNFPA” (FSEIS, p. 4). The Summary further notes the SNFPA Review Team found the need to adjust the existing fuels management direction so that it was less complicated and costly to implement. The SNFPA Review Team found, “standards and guidelines must allow a wider array of tools and techniques for meeting fuels reduction objectives and better respond to local resource conditions in a cost-effective manner” (FSEIS, p. 4).

The SPLAT strategy is new, but when properly implemented it provides protection as do other fuel treatments like those documented on the Hayman Fire in Colorado (Graham and McCaffrey 2003; Omi and Martinson 2002). This is further supported by research on four large fires by Omi and Martinson, 2002. The Review Team found, “Our ability to strategically place fuel treatments for optimum effectiveness has been compromised by the set of complicated rules in the SNFPA 2001 ROD” (2004 ROD, p. 8). However, the SNFPA and Forest Service Washington Office Fuels Review Teams found, “Treatments limited to the removal of material 6 inches in diameter or less would be ineffective over much of the bioregion” (FSEIS, p. 220). They further agreed that more intensive treatments were necessary to meet fire behavior objectives.

Another appellant contends, “The overestimation of fire severity and its effect on the modeling outcomes was not disclosed” (NOA #0040, p. 107). On page 399, the FSEIS reveals, “The purpose of disturbance prescriptions is to model disturbance and recovery from wildfire.” The modeling tool, First Order Fire Effects Model, uses tree-algorithms that were determined by research. Tree mortality factors in the model are scorch height and bark thickness. The modeling uses three conditions of fire severity, which are modeled in the internal disturbance prescriptions: lethal fire, mixed lethal fire, and non-lethal fire. The FSEIS further discloses that Appendix B in the FEIS, pages B–37 thru B–38 indicates how they are modeled. “Results from the modeling effort are only approximations of the outcomes under any given alternative” (FEIS, p. 391).

The public was informed of “gross acres” and “high levels” of prescribed fire in the FSEIS. These acres are discussed and shown in the tables. The public was also informed on the differences between the SNFPA 2001 ROD and the 2004 ROD. These differences were disclosed by showing the need “to adjust the existing fuels management direction so that it was less complicated and costly to implement” (FSEIS, p. 4). Furthermore, modeling of fire severity and its effects were disclosed.

#### *Water Quality*

The appellant contends, “No rationale was provided as to why only TMDL [total maximum daily load] is now being considered” (NOA #0047, p. 6). “...modifications...were not proposed or specified in the 2003 SNFPA DSEIS” (NOA #0047 p.7). There is a limited change in standard and guideline #95 (ROD, p. 63) involving total maximum daily load (TMDL), where the agency would first consult and then implement TMDL. This does not influence the outcome of the TMDL process where the agency is still required to implement the agreed upon TMDL for the identified water body. This is a clarification of Forest Service responsibilities (FSEIS, p.342).

#### *Science Consistency Review Team Results*

The appellant contends the Science Consistency Review Team raised concerns that the FSEIS and ROD ignored and that the concerns were not fully disclosed in the summary of the Review Team's report in Appendix E of the FSEIS (NOA #0044, p. 13). The Science Consistency Review and supplemental reviews are discussed in the FSEIS, on pages 185–186. The discussion states, “The review team’s findings and the Forest Service’s response are *summarized* [emphasis added] in this appendix [Appendix E]” (FSEIS, p. 186). Appendix E contains similar language. Among the summarized comments and responses is a discussion of Yosemite toad viability (FSEIS, p. 442–443). The full text of the Science Consistency Review report is in the appeal record, documents #36002–36005.

#### *Use of Long-term Modeling in Decisionmaking*

Two appellants contend the Forest Service fails to disclose the uncertainty of long-term modeling. Another appellant raises issues with the uncertainty of modeling, the assumptions, the trends, and the prescriptions used. The modeling in FSEIS is at the

programmatic level. Modeling outputs, effects, and uncertainty are discussed extensively in Appendix B to the FSEIS (FSEIS, pp. 391–410).

The FSEIS states, “The models used were not intended by their developers to provide precise information, especially over the geographic scale and time frame encompassed by the SNFPA, but rather to provide indication of direction of change, estimates of the magnitude of change, and time frames surrounding such change” (FSEIS, p. 391). The models used were “[e]ssentially the same modeling and analysis systems used in the FEIS...supplemented by 2 large-scale landscape analyses to test a number of assumptions...” (FSEIS, p. 391). As stated in the response to comments, “...modeling techniques and programs have been used to provide visual and numerical representations of effects...[h]owever, the FSEIS does not rely strictly upon modeling...” (FSEIS, Volume 2, p. 8) Finally, the Regional Forester acknowledges the uncertainty in longer term forecast periods (e.g., 120 years) relative to the “...fair projection of conditions and events...” resulting from the first 20-year forecast period (ROD, p. 12). He states that he “...did not rely on these longer term projections in my decision” (ROD, p. 12).

### *California Spotted Owl*

The appellant references the statement in the FSEIS that “Alternative S1 and S2 lack assurances that vegetation treatments would not reduce the occupancy and productivity of owl sites...” (FSEIS, Vol. 1, p. 272) and contends the FSEIS “...misleads the public by applying a standard that is unlawful...” (NOA #4556, p. 9). The appellant goes on to contend the FSEIS fails to mention other information about the owl. The statement referenced by the appellant is not a standard but a statement of effects and is appropriate to disclose. Contrary to the appellant’s allegations, the FSEIS discloses on pages 27 and 147 (in addition to multiple other places) the US Fish and Wildlife Service decision that listing of the California spotted owl as an endangered species was not warranted. Owl populations are discussed in the FSEIS, pages 142–143.

## **Scientific Basis**

### Contentions

Appellants variously contend the FSEIS violates NEPA and/or its implementing regulations by conflicting with and/or failing to consider the best available information and science regarding the following (NOA #0030, p. 4; #0031, p. 12; #0040, pp. 104, 105; #0043, p.2; #0045, p. 9; #0047, pp. 17, 26, 36; #0057, p. 7; #4551, p. 3, 4, 5, 6; #4552, pp. 3, 4, 5; #4556, pp. 5, 6, 7, 11):

- intensified logging and the protection of old growth forests and their associated species (including CASPO and Pacific fisher);
- aquatic/meadow ecosystems and their dependent species (including Yosemite toad and willow flycatcher);
- fire risk and fuel reduction methodology;
- restrictions on fire protection and forest health;

- restrictions on motorized wheeled vehicle access; and
- grazing utilization standards.

One appellant further contends the FSEIS “fails to provide scientific evidence to prove that the full implementation of the HFQLG [Herger-Feinstein Quincy Library Group] pilot project... would not be ecologically damaging...” (NOA #0031, pp. 15-16) and “... to support the proposal that removing 7,021,000 bone dry tons of commercial biomass from the Sierra Nevada national forests in the first 10 years will not have a negative impact on the soil nutrient cycle, soil productivity, soil hydrology...” (NOA #0031, p. 15).

One appellant also contends by rejecting “the cautious approach” in the 2001 Framework, the FSEIS allows increased consumptive uses in spite of significant short-term risk and speculative long-term benefits, while not utilizing the “best available science” in planning (NOA #0053, p. 46).

Appellants variously contend the FSEIS does not adequately discuss limitations and assumptions associated with forest modeling (NOA #0040, pp. 99–106, 108–113; #0053, pp. 27–29; #0040, pp. 99–101; #0031, p. 43);

### Discussion

The NEPA implementing regulations (40 CFR 1500) address the use of science primarily in the context of estimating the effects (environmental consequences) of proposed actions and alternatives (see for instance Sections 1501.2(a) and (b), and 1502.6), on the use of science in decisionmaking which may affect the environment, and particularly 1502.16, which “forms the scientific and analytic basis for the comparisons” of alternatives. The regulations encourage brevity in presenting scientific analysis and data in the environmental impact statement, focusing on “the issues that are truly significant” (Section 1500.1(b)) and that will be “based upon the analysis and supporting data” (Section 1502.8), which is done partly through referencing appendix material or documents contained in the planning record. “Science” is sometimes qualified as “accurate” (Section 1500.1(b)) or “integrated” (Section 1502.6), but the word is not usually qualified. Terms such as the “best available science” or “best science” do not occur in the NEPA regulations.

### *Old Growth Forests and Associated Species Protection*

Appellants allege the ROD, “... fails to consider important scientific information regarding the protection of old growth forests...” (NOA #4551, p. 6; #4552, p. 4). The effects of the alternatives on the amount and distribution of old forest conditions are discussed on pages 197–199 of the FSEIS. A variety of scientific information on old growth forests was consulted and a science consistency review was conducted in which the “... review team members judged the DSEIS to be generally consistent with available scientific information” (FSEIS, p. 185 and AR #36002, p. 4). “Comments from the reviews subsequent to issuance of the Draft SEIS have been incorporated in to the Final SEIS” (FSEIS, Volume 2, p. 8). Additional discussion of existing old forest and the level

of mortality associated with the predicted fires is found in the FEIS (FEIS, Volume 2, Chapter 3, part 3.2).

### *Aquatic/Meadow Ecosystems and Species*

Appellants contend the ROD fails to adequately consider scientific information regarding aquatic/meadow ecosystems (NOA #4551, p. 4, 5; #4552, pp. 4, 5). Appellants present no specific science that was not considered in the FSEIS. Aquatic, riparian, and meadow ecosystems were considered and addressed throughout the FSEIS, as were the Yosemite toad and willow flycatcher. The environmental consequences of Alternatives S1 and S2 are discussed on pages 207–215 of the FSEIS. Effects on Yosemite toad and willow flycatcher are discussed on pages 301–305 and 286–292 of the FSEIS, respectively.

Another appellant contends, “The FSEIS fails to provide adequate scientific evidence to support the contention that grazing in riparian habitats in the area of nest sites would protect the species...” (NOA #0031, p. 19). The FSEIS openly acknowledges that “[t]he major area of uncertainty regarding Yosemite toads revolves around habitat conditions and the relationship of disturbance (both natural and human-induced) to meadows to population response. Overall viability of the mountain meadow ecosystems is contingent on a variety of physical and biological factors that are not completely understood.” More thorough scientific information is needed to determine if and how livestock could be compatible with persistence of self-sustaining populations of Yosemite toads” (FSEIS, p. 77). The discussion in the FSEIS further notes there are several information gaps that create general areas of uncertainty common to this amphibian species (FSEIS, p. 77).

Based on the current assessment of information on the Yosemite toad, under Alternative S2, the Region will work to reduce management uncertainties about this species by selecting six allotments from the Stanislaus and Sierra National Forest for an adaptive management study and developing site-specific management plans for certain allotments where grazing occurs in occupied Yosemite toad habitat. These management plans would be developed by an interdisciplinary team, and include a biological evaluation and a monitoring plan (FSEIS, p. 77). The Regional Forester’s decision “excludes grazing from occupied Yosemite toad habitat except where an interdisciplinary team has developed a site-specific plan to successfully manage stock around these areas” which allows field managers to capitalize on site conditions and characteristics that cannot be foreseen at the regional scale (ROD, p. 11). Given the uncertain nature of how grazing affects the Yosemite toad, tailoring studies and management plans to site-specific conditions will help evaluate whether grazing is compatible with the species’ nesting needs.

Another appellant contends that management changes in the Sierra Nevada Forest Plan, as amended, that relate to the willow flycatcher are in conflict with the “...findings, explicit recommendations, and implicit management recommendations that can be reasonably inferred from the best available science...” (NOA #0047, p. 36).

The “Conservation Assessment of the Willow Flycatcher in the Sierra Nevada” (March 2003) (AR #512002) considers current science regarding the willow flycatcher. The

discussion and analysis of the willow flycatcher in the FSEIS (FSEIS, pp. 78, 286–292) is consistent with the conservation assessment in its discussion of uncertainty surrounding whether and how different grazing practices affect the willow flycatcher and in developing management direction for the willow flycatcher. Furthermore, the Regional Forester states that he will initiate a conservation strategy to build upon the 2003 assessment. “The conservation strategy will include specific management recommendations for such issues as meadow condition, monitoring, nest predation, habitat restoration, and cowbird parasitism” (ROD, p. 10). The focus on such issues is also consistent with recommendations discussed in the March 2003 Conservation Assessment.

Chapter 2 of the FSEIS discusses uncertainties regarding whether all extant populations of willow flycatchers are known. The discussion explains:

It is estimated that only approximately 60-70 percent of currently occupied willow flycatcher sites have been identified. Thus, there is some risk of impact to willow flycatchers from management activities because managers are unaware of the species’ presence. Furthermore, restoration of suitable habitat to increase the population requires a more thorough understanding of the limiting factors that influence population performance (FSEIS, p. 78).

Discussion in the FSEIS on page 78 explains that based on the current assessment of information on the willow flycatcher, under Alternative S2, the Region will work to reduce management uncertainties about this species by directing the Regional Office to develop a conservation strategy for willow flycatchers in the Sierra Nevada and develop site-specific management plans for some allotments where grazing occurs in occupied willow flycatcher habitat. These management plans will be developed by an interdisciplinary team, and include a biological evaluation and a monitoring plan. As the Regional Forester explains, “My expectation is that some of these solutions will provide a cornerstone for testing, monitoring, and perhaps changing these broader guidelines over time” (ROD, p. 10).

The FSEIS and ROD disclose the uncertainties from the management perspective, as to whether or how grazing practices affect the willow flycatcher and Yosemite toad (including nesting sites). These documents emphasize the importance of ongoing studies and the development of conservation strategies studies to help gather additional information on the impacts of grazing on the species and nesting sites.

#### *Fire Risk and Fuel Reduction Methodology*

One appellant contends there is no evidence supporting the use of acres burned in the past to predict acres burned in the future (NOA #0040, p. 104). The FSEIS does admit that projecting future wildfire acreage “is laden with uncertainty... However, the available information supports an upward trend in both burned acreage and biomass accumulation. The assessments in the National Fire Plan underscore these trends” (FSEIS, p. 129).

The fire risk determination “is based on comparisons with early conditions inferred from numerous historical accounts, documented fire histories, and structures of uncut stands

(Kilgore and Sando 1975, Parsons and DeBenedetti 1979, Bonnicksen and Stone 1982, van Wagtenonk 1985, Biswell 1989, Weatherspoon et al. 1992, Chang 1996, Skinner and Chang 1996, Weatherspoon and Skinner 1996)” (FSEIS, p. 124). In addition, “The dramatic reduction in area burned in the twentieth century, combined with the effects of forest management practices and generally warmer-moister climatic conditions (Graumlich 1993, Stine 1996), has almost certainly led to substantial increases in the quantity of live and dead fuels and changes their arrangement” (FSEIS, p. 124).

While the FSEIS observes “...the assertion is that current fires burn much larger contiguous areas at high intensities...” (FSEIS, p. 125) it also admits, “[w]e have no direct data to support these assertions, but, as with the increase in fuels, such a conclusion is consistent with information available from fire history studies and other sources” (FSEIS, p. 125).

Another appellant contends the “...scientific support for the fuel reduction hypotheses is quite tenuous...” (NOA #0043, p. 2). The FSEIS analyzed “strategically placed treatment areas across landscapes to resemble a herringbone or tread pattern which more closely matches the pattern based on Dr. Mark Finney’s work” (FSEIS, Volume 2, p. 14). The FSEIS (pp. 219–220) cites recent research by Graham and McCaffrey (2003), Omi and Martinson (2002), and Stephens (1998) that support the fuel reduction methodology. These documents support the thinning and fuel treatments that will be used under Alternative S2. The fuel treatments will reflect the findings of the recent research so that the Forests are developing “projects that make sense from an ecological and financial perspective” (ROD, p. 3). The Regional Forester states, “The Region will work in close partnership with the Pacific Southwest Research Station to address some of the management uncertainties...[and] to expand upon opportunities to gather information and understanding as this decision is implemented” (ROD, p. 4).

#### *Fire Protection and Forest Health Restrictions*

The appellant contends there is no “...adequate or convincing scientific evidence to justify the increased level of logging...” (NOA #0031, p. 12). According to the FSEIS, “California continues to have significant problems with wildland fire and forest health” (FSEIS, p. 2). Alternative S1 specifies that areas of mechanically treated stands be left untreated which would “...compromise the effectiveness of the treatment areas” to modify landscape fire behavior (FSEIS, p. 220). In addition, Alternative S1 limited treatments on about 30 percent of the landscape to material 6 inches in diameter or less. Both the SNFPA and the Washington Office Fuels Review Teams concurred on their findings, “Treatments limited to the removal of material 6-inches in diameter or less would be ineffective over much of the bioregion” (FSEIS, p. 220). They further agreed that more intensive treatments were necessary to meet fire behavior objectives, “Alternative S2 allows more fuel components to be reduced by using a full range of treatments to ensure the effectiveness of treated areas” (FSEIS, p. 220).

Another appellant contends there is no scientific basis for establishing a diameter limit on trees to be removed (NOA #0057, p. 7). The ROD states, “One of the most difficult balancing tasks has been to find the best way to protect old forest dependent species and

to increase and perpetuate old forest ecosystems, while we face a desperate need to intervene in the forest to reduce the fuel loads feeding catastrophic fires” (ROD, p. 5). “Vegetation treatments in old forest emphasis areas are no longer restricted to prescribed fire. Some trees larger than 12 inches dbh, but smaller than 30 inches dbh, may be removed mechanically” (ROD, p. 5) The Regional Forester further says in his rationale, “This flexibility will provide district rangers the opportunity to manage tree density on individual sites and to improve the forest’s resilience to drought, and insect and disease conditions” (ROD, p. 6). “Collectively, the standards and guidelines for mechanical treatments ensure that there will be a continuous supply of large trees in all managed areas to provide for future old forest stand structure” (ROD, p. 5).

### *Off-Highway Vehicle Restrictions*

The appellant contends there is no “hard data to support restrictions on motorized/wheeled vehicle access” (NOA #0030, p. 4). As a part of his decision on the supplement, the Regional Forester took the opportunity to clarify the original management intent of off-highway vehicles (OHV) made in the 2001 decision. The scientific basis for the decision was addressed in the SNFPA FEIS. As previously discussed under NEPA: Alternatives, this wording change does not alter the meaning of the original 2001 standard and guideline; therefore, it is outside the scope of the supplemental analysis.

### *Grazing Utilization Standards*

One appellant contends the grazing utilization standards are not grounded in any science applicable to Sierra meadows (NOA #0045, p. 9). Another appellant contends the utilization standards for herbaceous material and for woody browse are “...inconsistent with scientifically credible, range-related literature...” (NOA #0047, p. 17, 26). The FEIS contains extensive discussion of grazing utilization in section 5.3 and the list of references includes those cited by the appellants. The discussion of the effects related to livestock grazing states, “Alternatives S1 and S2 include the same standards and guidelines for streambank disturbance and browse...[and] also have the same numeric standards for plant utilization and stubble height” (FSEIS, p. 214). There is a difference between Alternatives S1 and S2 related to certain standards and guidelines for the great gray owl, willow flycatcher and Yosemite toad, however, Alternative S2 is “...designed to meet the intent of the standards and guidelines for Alternative S1” (FSEIS, p. 214).

The appellant further alleges the best science was not used in regard to the impact of livestock grazing on Yosemite toads (NOA #0045, pp. 2–5) and in establishing grazing utilization standards (NOA #0045, p. 9). The discussion on historical and current distribution (FSEIS, pp. 160–161) is “[b]ased on museum records of historic and recent sightings, published and unpublished data, and field notes from knowledgeable biologists, 55 historically documented general localities throughout the range of the species (based on 144 specific sites) were surveyed (Jennings and Hayes 1994).” The discussion presents the results of the surveys and noted percentages of population decline. Additionally, as explained in the FSEIS, “Substantial areas have been surveyed for this species since the signing of the ROD (USDA Forest Service Pacific Southwest

Region 2003a). Most of the livestock grazing allotments will have required surveys completed by the end of 2004. Many of the areas of suitable habitat used by recreational pack stock occur in remote high country areas. Surveys of some of these areas have been completed; however, surveys will likely not be completed until at least 2006 for all of these sites.”

Analysis and management decisions related to the Yosemite toad also relied upon the US Fish and Wildlife Service’s 12-month petition finding for the Yosemite toad (67 FR 75834–75843). This finding “cites all relevant research, unpublished data, and observations by researchers and managers, and reveals the potential adverse effects of multiple stressors on species populations and long-term species viability.” The FWS finding identified livestock grazing, among numerous others, as a potential impact to this species and its habitat (FSEIS, p. 162). The discussion of the impacts on the Yosemite toad and its suitable habitat are based on the best available science.

Risk factors to the Yosemite toad are noted in the FEIS (Volume 3, Chapter 3, part 4.4, pp. 218–219). Other potential grazing-related impacts to the Yosemite toad and its habitat are cited in the FSEIS (p. 162). As explained in the analysis, “The effect of these risk factors on the viability of the Yosemite toad is unknown. These factors have been identified from researchers’ unpublished data and personal communications, as well as resource managers’ observations, and have not been thoroughly investigated by researchers” (FSEIS, p. 162)

In the ROD, page 10, the Regional Forester acknowledges the uncertainty whether and how grazing practices affect the Yosemite toad. He states his “decision maintains the habitat components that have been identified as being important to these species” and directs “the completion of on-going surveys of suitable habitat within the species’ historic range to be completed within two years of this decision. Additionally, in collaboration with the Pacific Southwest Research Station, affected permittees, and local managers, the Region will initiate a study or series of studies of the effects of ongoing grazing practices on habitat attributes important to the species.” Discussions contained in the FSEIS (p. 77) and ROD demonstrate that a good faith effort has been made to identify the risks to Yosemite toad, and disclose that uncertainties of how grazing practices affect this toad still exist and need to be examined.

#### *Herger-Feinstein Quincy Library Group Project Implementation*

The appellant contends the FSEIS fails to prove full implementation of the Herger-Feinstein Quincy Library Group (HFQLG) pilot projects would not be damaging to the ecology and the soil” (NOA #0031, pp. 15–16). Environmental consequences of the alternatives are discussed in Chapter 4 of the FSEIS on pages 194 through 334 and include programmatic discussions of possible and likely impacts of mechanical treatment of fuels through logging. The discussion includes the effects of implementing the HFQLG Forest Recovery Act. The impacts on the various resources of concern including old forests; aquatic, riparian, and meadow ecosystems; fire and fuels; and various species of the Sierra Nevada are included in the discussion.

The FEIS discusses the effects of fuels reduction treatments, both mechanical and prescribed burning, on the soil resource (FEIS pp. 358–359). It describes both potential negative and beneficial effects and the situations that could contribute to those effects. It goes on to estimate the effects of treatments on soils using a landscape-level approach (FEIS, pp. 363–368).

The appellant contends the record does not provide evidence there is a not a negative effect to soils from biomass removal (NOA #0031, p. 15). To the contrary, the record discloses potential detrimental or “negative” effects to the soil of removing biomass (FSEIS, p. 211). The effects to soils from mechanical treatments and wildfire, as proposed in Alternatives S1 and S2, are found in the FSEIS on pages 232–233.

### *Consumptive Uses*

The appellant contends the “...Forests Service’s rejection of the cautious approach violates NFMA’s requirement to use the best available science...allow[ing] increased extractive and consumptive uses of the national forests...” (NOA #0053, pp. 45–46). While the appellant equates the “cautious approach” to good science, such a relationship is a reflection of the appellant’s values rather than science. Management can be informed by science, but “[u]ncertainty and risk are central considerations in decisions about natural resource management” (FSEIS, p. 37). As discussed above, the Scientific Review Team found the FSEIS generally consistent with available scientific information. The Regional Forester selected Alternative S2 because it is “...aggressive enough to reduce the risk of wildfire to communities...while modifying fire behavior over the broader landscape” (ROD, p. 3). Alternative S2 also includes direction for managing grazing that allows local managers the flexibility to “...develop site-specific approaches to meet overall program goals for species conservation” (ROD, p. 17). He feels his decision strikes a balance between the needs of people and wildlife to best achieve the goals established by the 2001 SNFPA ROD and “...accepts the risks of temporarily changing some habitat...to reduce the future risk of wildfire to habitat and human communities” (ROD, p. 17).

### *Forest Modeling Limitations and Assumptions*

Appellants contend, “Failure of the FSEIS to describe the uncertainty surrounding the modeling estimates of wildlife habitat and other attributes, particularly when the FSEIS emphasizes issues of uncertainty with respect to the owl population trend estimates, is arbitrary and capricious and violates the full disclosure requirements of NEPA” (NOA #0040, p. 109). In the 2004 SNFPA ROD, the Regional Forester describes the actions taken to ensure “...this amendment be scientifically credible” (ROD, p. 12). The Regional Forester further states, “...I asked the Pacific Southwest Experiment Station to conduct a science consistency review (SCR, FSEIS, Appendix E) of the DSEIS to be used ...to improve the environmental analysis and to acknowledge scientific uncertainty and differing points of view” (ROD, p. 12). The ROD acknowledges the science consistency review finding, “...there is a degree of uncertainty in a number of areas, especially related to the relationship between management activities and their effects on

wildlife habitat and populations” and adopts the recommendation in the report “...to use an adaptive management approach...” (ROD, p. 12).

The issue of uncertainty and its disclosure is discussed in the FSEIS, Chapter 2: Description of Alternatives, page 39. The discussion of uncertainty in the FEIS (FEIS, Volume 3, Chapter 3, part 4, p. 7–8) is also incorporated into the FSEIS by reference. The specific issue of uncertainty in the models used by the SEIS team is addressed in Appendix B–1 of the FSEIS on page 391. The specific methods used to model wildlife habitat are described in Appendix B on page 398. The FSEIS discussion falls within the range of accepted practice for disclosure of uncertainty in Forest Service NEPA documents.

The appellants contend there was inadequate analysis of the impacts associated with forest modeling of the alternatives. Appellants variously contend that wildfire and burned acres: 1) failed to show significant trends (NOA #0053, pp. 27–29; #0040, pp. 99–106); 2) overestimated severity of fire (NOA #0040, pp. 107–108); and 3) indicated a variance between the modeling and the actions allowed (NOA #0040, p. 112).

The FSEIS graphically shows a trend line that, “suggests that more acreage is burning now than in the past and that this trend is likely to continue in the absence of some intervention” (FSEIS, p. 129). The FSEIS indicates that projecting future wildfire acreage “is laden with uncertainty... However, the available information supports an upward trend in both burned acreage and biomass accumulation. The assessments in the National Fire Plan underscore these trends” (FSEIS, p. 129). Further discussion on maintenance treatments can be found under contention response for NEPA: Scientific Basis.

The FSEIS indicates fire severity effects are modeled using the First Order Fire Effects Model and “3 conditions of fire severity, with associated recovery options, are modeled...” and described in Appendix B of the FEIS (FSEIS, Appendix B, p. 399). Further discussion on maintenance treatments can be found under contention response for NEPA: Scientific Basis.

The appellants contend there is a variance between the modeling and the actions allowed in the ROD. The ROD states, “Management direction for carrying out this Decision includes standards and guidelines for project design and implementation...At the project level, these standards and guidelines are used in conjunction with desired conditions, management intents, and management objectives for the relevant land allocation to determine appropriate treatment prescriptions” (ROD, p. 49). The ROD further states, “The 2001 Plan prescribed technical solutions that do not produce needed results, or offered methods we often dare not attempt in the current Sierra Nevada” (ROD, p. 5). The WO Fuels Review Team concurred with the finding that the 2001 ROD “contains a very complex set of standards and guidelines” (ROD, p. 5).

The modeling in the FSEIS is at the programmatic level. The FSEIS states, “The models used were not intended by their developers to provide precise information, especially over the geographic scale and timeframe encompassed by the SNFPA, but rather to

provide indication of direction of change, estimates of the magnitude of change, and timeframes surrounding such change” (FSEIS, Appendix B, p. 391). The project design will have more data and site-specific information.

## **Response to Comments**

### Contentions

Appellants contend the Forest Service did not adequately respond to comments concerning lack of evidence as to the effectiveness of the fuel reduction strategy of Alternative S2; effects of fuels treatments on riparian, meadow, and aquatic ecosystems; long-range modeling assumptions; meadow condition definitions; vegetation seral status; utilization standards; non-native plant colonization; inaccurate and deficient analysis regarding fire science, spotted owl PACs, and impacts to snag forest species; and disclosing effects or rationale for changing the Forest from “open” to “restricted” to motorized recreation (NOA #0043, p. 13; #0047, pp. 21, 23, 24, 28, 29, 52; #4553, p. 13; #0038, p. 2; #0042, p. 1; #0031, pp. 12, 14).

### Discussion

The NEPA implementing regulations (40 CFR 1502.9 (b)) require that, “Final environmental impact statements shall respond to comments,” and an agency “shall discuss at appropriate points in the final statement any responsible opposing view which was not adequately discussed in the draft statement and shall indicate the agency's response to the issues raised.” At 40 CFR 1503.4 (a) the regulations state, “An agency preparing a final environmental impact statement shall assess and consider comments both individually and collectively, and shall respond by one or more of the means listed below, stating its response in the final statement.” An agency may respond in several ways, including supplementing, improving, or modifying its analysis (40 CFR 1503.4(a)). Furthermore, NEPA regulations recognize the need to summarize comments and responses when exceptionally voluminous, but should be attached to the final statement whether or not the comment is thought to merit individual discussion by the agency in the text of the statement (40 CFR 1503.4(b)).

The DSEIS was available for public review and comment for three months, from June 13, 2003 to September 12, 2003. During the comment period, the Forest Service heard from nearly 56,000 people (FSEIS, p.31; ROD, p. 14). A content analysis was conducted (AR #210002–210015; Content Analysis Report (AR # unassigned)) and provided the basis for responding to the exceptionally voluminous number of comments. To address such a large number of individual comments, a Content Analysis Report (October 2003) and associated documents (AR #21009) provide a process for tracking responses to particular comments and commenters. Comments are summarized in the form of public concern statements. The report’s introduction explains, “public concerns are designed to systematically identify specific, coherent concerns, and suggestions raised by respondents. The public concerns are succinct statements that capture the requests of respondents, vis-à-vis the Draft SEIS and proposed Forest Plan Amendment.” The report goes on to say, “A given public concern may represent only one respondent, or may represent hundreds or even thousands of respondents who articulate an identical point.

Consequently, the reader should not assume that the sample statements listed are inclusive of all comments supporting a given public concern” (AR #21009, p. iv). Volume 2 of the FSEIS summarizes responses to several hundred public concerns.

Appellants’ contentions that their comments were not addressed are not warranted. For example, NOA #0043 (p. 13) states, “The Forest Service did not respond to public comments concerning the lack of confirming evidence as to the effectiveness of the fuel reduction strategy of S2.” The appellant contends issues were sidestepped on the effectiveness of the S2 strategy in the FSEIS, Chapter 4 and alleges the issue of adaptive management response to the fuels reduction strategy is not supported by the Science Review Team.

Comments related to this issue are summarized in Public Concern #9.4.21: The Final SEIS should clarify the effectiveness of fuels strategies and treatments between Alternatives S1 and S2 (FSEIS, Volume 2, p. 101). The response cites the FEIS, Volume 2, which is incorporated into the SEIS, and goes on to explain, “The Final SEIS discusses fuels treatment effectiveness relative to treatment types, acres treated, and location of treatments. The FSEIS also includes an expanded discussion regarding uncertainties about fire behavior and treatment effectiveness.” The NEPA regulations allow for supplementing, improving, or modifying the environmental analysis as one way to respond to public comments, which is what the SNFPA Final SEIS has done.

Another appellant alleges, “The USFS did not provide an adequate, substantive response to (or adequate, substantive comment upon) any of Todd Shuman’s comments, arguments, and requests concerning artificially inflated vegetation seral status assessments, plant seral inflation, plant indicator classification problems, and plant indicator classification changes needed in the R-05 Rangeland Plant List” (NOA #0045, p. 23). On the contrary, Public Concern 4.98 responds directly to the appellant’s original comment.

The term “artificial inflation” of seral status ratings for specific grass and grasslike species is the personal opinion of the commenter. Seral status ratings for about 200 grasses and 100 grasslike plants listed in the R5 Rangeland Plant List were determined by a number of references included in the R5 Rangeland Plant list and by a panel of Rangeland Management Specialists and Ecologists in 1999 to 2000. The information used to develop seral status was the best available information available at the time. The scope of the SEIS is to evaluate any unintended and adverse impacts on grazing permit holders. To re-assess specific seral indicators for specific grass and grasslike species is outside the scope of this SEIS (FSEIS, Volume 2, p. 59).

An additional appellant contends, “The FSEIS and ROD failed to address one of the major actions that BRC [Blue Ribbon Coalition] highlighted during the FSEIS comment period regarding changing the last remaining “Open” Forest to “Restricted” for motorized recreation... The FSEIS did not assess or daylight to the public any of the effects for this change. In addition, the FSEIS and ROD did not provide any rationale for changing from open to restricted (NOA #0038, p. 2). A response to a comment related to this contention

provides a specific explanation why the wording on the standard and guideline was changed.

The language for this standard and guideline in Alternative S2 is proposed to clarify direction on management of OHV use and make it consistent with the standard used for analysis of environmental consequences of alternatives in the FEIS. (See FEIS Volume 4, Appendix D-4, All Alternatives – All Allocations, standard and guideline R09). Alternative S2 also makes the direction consistent with a number of responses to public comments on the DEIS, which state, ‘Under the FEIS preferred alternative, wheeled off-highway vehicle (OHV) travel is prohibited off of designated routes or outside of designated OHV open areas’ (For example, see FEIS, Volume 5, p. 3-424, Response #125). (FSEIS, Volume 2, p.22)

## **Site-Specific Analysis**

### Contentions

Appellant contends the SNFPA ROD violates NEPA because it “...effectively eliminates grazing from existing allotments, without any site-specific analysis...” (NOA #0045, p. 1).

### Discussion

According to Forest Service policy, “[p]lanning for units of the National Forest System involves two levels of decisions. The first is development of a forest plan that provides direction for all resource management programs, practices, uses, and protection measures... The second level planning involves the analysis and implementation of management practices designed to achieve the goals and objectives of the forest plan. This level involves site-specific analysis to meet NEPA requirements for decisionmaking” (FSM 1922).

Forest Service policy for making grazing capability and suitability determinations is detailed in an April 25, 1997 memorandum from Acting Deputy Chief, National Forest System, Janice McDougle to the Regional Foresters (see attached, Appendix B). The aforementioned memo discusses site-specific analysis when it states “...management prescriptions and standards and guidelines are applied as part of the environmental analysis when determining whether to authorize domestic livestock grazing on a specific site” (see attached, Appendix B).

The standards and guidelines to which the appellant refers, specifically numbers 51 through 54, are clear in their intent that site-specific analysis will be completed and will consider such things as grassland condition, annual precipitation, and the practicality of physically excluding livestock (ROD, p. 56). Such analysis is completed before grazing determinations are made.

## **Tiering**

### Contentions

Citing 40 CFR 1502.16 and 1508.8(a)(b), one appellant contends the FSEIS fails to meet the NEPA implementing regulations by “adopting certain management standards, guidelines, and approaches from the HFQLG FEIS without analyzing them in the context of proposed changes. In light of the significant changes being proposed to the SNFPA, reliance on the HFQLG FEIS is clearly in error. The environmental effects of the FSEIS proposal are different from and cover a much larger planning area than those analyzed in the HFQLG FEIS. The FSEIS has thus improperly tiered to the HFQLG FEIS in violation of NEPA. 40 CFR 1502.20” (NOA #0044, pp. 11–12).

### Discussion

Tiering is defined by the NEPA implementing regulations at 40 CFR 1508.28 and discussed at 40 CFR 1502.4(d). “Tiering refers to the coverage of general matters in broader environmental impact statements...with subsequent narrower statements or environmental analyses... incorporating by reference the general discussions...” (40 CFR 1508.28). The regulations instruct agencies to “...employ tiering...to relate broad and narrow actions and to avoid duplication and delay” (40 CFR 1502.4(d)). Tiering is used to carry analysis “...from a program, plan, or policy environmental impact statement to a program, plan, or policy statement of lesser scope or to a site-specific statement or analysis” (40 CFR 1508.28(a)).

The environmental effects of the HFQLG pilot project were analyzed in the HFQLG FEIS. The Sierra Nevada Forest Plan Amendment FSEIS does not tier to that analysis; rather, it is a programmatic-level analysis that includes discussions of the environmental effects and standards and guidelines of the HFQLG pilot project when pertinent to the analysis of Alternatives S1 and S2.

## Decision on NEPA Compliance

I find the Regional Forester's decision meets the following requirements of NEPA.

- The Regional Forester considered the instructions outlined in my appeal decision (AR #11091) and the "Sierra Nevada Forest Plan Amendment, Management Review and Recommendations" (AR#11001–11005) to determine that a supplement to the FEIS was appropriate. The supplement was prepared in the "same fashion as a draft and final statement" (40 CFR 1502.9 (c) (4)), meeting the requirements for a supplement to a statement.
- The concerns outlined in my 2001 appeal decision, as well as the Regional Forester's three additional items, fall within the purpose and need for action described in the 2001 FEIS (pp. 4–7). The Regional Forester had considerable discretion to determine the scope of the supplement. The new decision, which is based on the supplement, is supported by the new environmental analysis, therefore consistent with NEPA regulations (40 CFR 1502.9) and agency NEPA procedures (FSH 1909.15, 18.03).
- I find the Regional Forester is in compliance with 40 CFR 1502.9 (c) (4), for preparing the Supplemental Environmental Impact Statement.
- I find the Regional Forester has complied with NEPA implementing regulations by considering alternatives within the range of alternatives discussed in the relevant environmental documents (Section 1502.2 (e)) and all the alternatives discussed in an EIS (Section 1505.1(e)). In accordance with FSH 1909.15, 18.03, the Regional Forester's decision centers on the scope of the FSEIS. The FSEIS adequately modeled treatment prescriptions in Alternative S1 and did not underestimate the benefit to fuels' reduction.
- A review of the record finds that the analysis and discussion of the environmental effects of the alternatives is adequate and in compliance with NEPA, and I find no violation of NEPA or its implementing regulations or agency policy regarding the need to quantify effects. The Regional Forester did understand the impacts associated with each alternative. The FSEIS and ROD go to great length to explain that there is uncertainty and risk in what has been proposed. The limitations and assumptions associated with forest modeling were adequately addressed and analyzed. Because of the complexity and magnitude of implementing the selected alternative, every impact cannot be thoroughly analyzed. Issues raised regarding potential variances in the modeling, and the standards and guidelines will be addressed at the project level where further NEPA analysis and decisions are made.
- The majority of the cumulative effects analysis related to effects on riparian, aquatic, and meadow resources is contained in the 2001 FEIS. The cumulative effects analysis in the 2001 FEIS adequately describes the cumulative effects of implementing the proposed changes considered in the FSEIS. As explained in the FSEIS, Volume 2, Response to Comments, additional environmental analysis, including an assessment of cumulative watershed effects relative to thresholds of concern, will be disclosed at the project level. Regarding the appellant's concerns on this topic, the FSEIS complies with NEPA and its implementing regulations at 40 CFR 1508.25(c).

- The Regional Forester has made every effort to disclose and discuss all major points of view on the environmental impacts of the alternatives according to 40 CFR 1502.9 (a). In response to public comments on the DSEIS, the Regional Forester chose to supplement, improve or modify the environmental analysis disclosed in the FSEIS, meeting the requirements of 40 CFR 1503.4.
- The Regional Forester satisfied the NEPA implementing regulations as to the use of science primarily in the context of estimating the effects (environmental consequences) of proposed actions and alternatives (40 CFR 1501.2(a) and (b), and 1502.6). The Regional Forester used science and analysis as a basis in comparing alternatives consistent with 40 CFR 1502.16. My conclusion is also supported by the results of various science consistency reviews conducted during the decisionmaking process. I find ROD and FSEIS comply with NEPA in regard to the use of science.
- The Regional Forester adequately responded to over 50,000 comments on the DSEIS in compliance with 40 CFR 1502.9 (b). These comments were assessed individually and collectively and comments and responses were summarized according to Section 1503.4(b).

## **NATIONAL FOREST MANAGEMENT ACT**

### **Significant Forest Plan Amendment**

#### Contentions

Appellants contend the Forest Service violates the National Forest Management Act (NFMA) and forest planning regulations (36 CFR 219) by failing to consider the 2004 Sierra Nevada Forest Plan Amendment (SNFPA) as a significant forest plan amendment to the 2001 SNFPA, requiring the same procedure as the development and approval of a forest plan (36 CFR 219.10 (f)) (NOA #0040, pp. 121, 122; #0069, p. 2; #6004, p. 1; #6077, p. 2). One appellant contends, “the Forest Service did not follow the detailed requirements laid out in 36 CFR 219.12” due to a failure to conduct scoping and benchmark analysis (NOA #0040, p. 121).

#### Discussion

The process for a significant amendment of a forest plan must include the 10 requirements listed in 36 CFR 219.12 (b) through (k). The regulations require the environmental impact statement be prepared according to procedures under the National Environmental Policy Act (NEPA) (36 CFR 219.12 (a)).

Forest planning is a continuing process. Plans are prepared, monitored, and may be changed incrementally through plan amendments (36 CFR 219.10(f)). Initial plan preparation establishes an information platform—a foundation of facts. The platform is loaded continuously with information building on previous information through time. The process continues through monitoring, evaluations, and plan amendments. This body of information is cumulative through the life of the plan.

Appellants contend a violation of NFMA because of a failure to conduct scoping for the 2004 SNFPA. The regulations (36 CFR 219.12 (b)) do not specify a scoping period, but require the interdisciplinary team and Forest Supervisor to identify major public issues, management concerns, and resource use opportunities. An SNFPA Review Team gathered information about management concerns, held meetings with interest groups, and sponsored field trips (FSEIS, Summary, p. 1). Each national forest worked with the general public, elected officials, Resource Advisory Councils, Native Americans, special interest groups, the media and other people in their local area. These public participation activities meet the intent of 36 CFR 219.12 (b).

Appellants contend a violation of NFMA due to the lack of benchmark analyses. The “Analysis of the Management Situation” determines the ability of the planning area to supply goods and services in response to societal demand, thus providing a basis for a broad range of alternatives and examining the capability of the unit to supply outputs (36 CFR 219.12 (e)). Each of the Sierra Nevada national forests has conducted the Analysis of the Management Situation to examine the capability of their unit. The 2001 SNFPA added two benchmarks to the collective information base, along with sensitivity analysis of fire and non-declining yield analysis (2001 DEIS, p. B-27). The 2004 SNFPA did not change the capable, available, and suitable lands determination made in forest plans

(2004 ROD, p. 15). That determination recognizes that the 2004 amendment fits within the scope of existing forest plan benchmarks and the 2001 FEIS alternatives.

The remaining requirements primarily associated with the NEPA process, such as formulation of alternatives (36 CFR 219.12(f)) and estimated effect of alternatives (36 CFR 219.12(g)) are met through the environmental analyses for the 2004 amendment, the 2001 amendment, or the forest plan. Requirements associated with the plan amendment, such as, plan approval (36 CFR 219.12(j)) and monitoring (36 CFR 219.12(k)) are met in the 2004 ROD.

## **2000 Planning Rule**

### Contentions

The appellant contends the amended SNFPA does not comply with the requirement of the 2000 Planning Rule (36 CFR 219.20) to provide ecological conditions that provide a high likelihood of supporting over time the viability of native species well distributed throughout their ranges (NOA #0047, pp. 24, 50).

### Discussion

The appellant contends the SNFPA violates NFMA and its implementing regulations (36 CFR 219). The 2004 SNFPA was prepared under the NFMA and the 1982 implementing regulations of the NFMA (36 CFR 219, as amended September 7, 1983). The 1982 NFMA implementing regulations have subsequently been replaced by the November 7, 2000 planning rule (36 CFR 217 and 219), which included a transition period for forest plan revisions or amendments already in progress. On May 17, 2001, the Forest Service extended the transition period by one year (FR 27552), and on May 20, 2002, the Forest Service extended the transition period until adoption of a new rule (FR 35451). The Responsible Official elected to remain under the 1982 regulations.

In the 2001 SNFPA ROD, the Regional Forester discussed the two sets of planning regulations in the ROD (p. 35), and explained why the 1982 Rule applied. The 2004 ROD also cites the 1982 planning rule, “My decision conforms with the 1982 planning regulations (36 CFR 219) that implement the National Forest Management Act” (2004 ROD, p. 20). The SNFPA falls within the transition provision. The regulation cited and quoted by the appellant is from the 2000 Planning Rule. The 1982 Planning Rule has no similar language that applies to SNFPA.

## **Net Public Benefits**

### Contentions

One appellant contends the Sierra National Forest Plan, as amended, violates the National Forest Management Act because it “...fails to maximize the long-term net public benefit...” (NOA #4556, p. 4).

## Discussion

The 1982 planning regulations implementing NFMA at 36 CFR 219.1(a) require forest plans provide for the multiple use and sustained yield of goods and services from the forests in a way that maximizes long-term net public benefits in an environmentally sound manner. The regulation at 36 CFR 219.3 provides a definition for net public benefits that explicitly indicate that net public benefits are measured by both quantitative and qualitative criteria, rather than a single measure of index. In the context of multiple use and sustained yield, resources that are not represented by market value must also be considered.

As discussed in the FEIS purpose and need statement for SNFPA, two primary goals of the SNFPA were 1) ensuring the long-term protection and recovery of old-forest conditions and the spotted owl and other species, and 2) being able to ensure that the risk of wildfires within the Sierra Nevada can be managed to protect ecosystems, property, and communities. Consistent with the FEIS purpose and need statement, the FSEIS focuses on three problem areas in the Sierra Nevada region that were analyzed in the FEIS: 1) old forest ecosystem and associated species; 2) aquatic riparian and meadow ecosystems; and 3) fire and fuels. Also as discussed in the FSEIS, Volume 2, Response to Public Comments, Public Concern 10.1, the SNFPA attempts to balance the need to protect, increase, and perpetuate old forest ecosystems and the wildlife species associated with them with the need to reduce the threat of wildfire to both ecosystems and human communities (FSEIS, Volume 2, p. 126). Among nine broad ranged alternatives considered, the Regional Forester felt that the FSEIS Alternative S2 met the purpose and need for amendment, and represents a better balance between providing for the production of timber, grazing, and other resources and the long-term protection and restoration of the environment. As defined in 36 CFR 219.3, net public benefits are measured by both quantitative and qualitative criteria rather than a single measure of index. Therefore, the Regional Forester is not required to select the alternative with the highest dollar value as other important resources may have qualitative values that are also important to ecosystems and society.

## **Standards and Guidelines**

### Contentions

An appellant contends that although the FSEIS states the Standards and Guidelines for threatened, endangered, proposed and sensitive (TEPS) plant species were retained, they were actually removed from the January 2001 ROD to the 2003 DSEIS (NOA #4555, pp. 10–11). This appellant also contends, although the FSEIS indicates that the TEPS plant species measures are addressed by current law, regulation, or policy and do not need to be repeated in the Standards and Guidelines, there are no existing requirements for conducting TEPS plant surveys “early enough in the project planning process so that the project can be designed to conserve or enhance TEPS plants and their habitat” (NOA #4555, pp. 11–12).

Two appellants contend, “Current ‘recreation exemption’ statements from the Standards and Guidelines in the FSEIS and ROD are not sufficient to assure that important access

and recreation facilities are not closed in the interim before an official site-specific route designation process is complete,” and do not clearly reflect the Regional Forester’s intentions (NOA #0038, p. 1; #0055, p. 2).

Finally, one appellant contends, “The Standards and Guidelines do not provide adequate direction, or requirement, for aquatic, riparian and meadow ecosystem protection... The discretionary language used in the Standards and Guidelines reduces the protection of these ecosystems to suggestions rather than requirements, and provides for assessment and analysis of environmental impacts without forcing the alleviation or avoidance of such impacts. This inadequacy violates the Forest Service’s duty [to] protect watershed conditions, soil productivity, and biological diversity under NFMA” (NOA #0044, p. 6). This appellant further contends “the minimal direction given for road management under the Standards and Guidelines is inadequate to address road related impacts or the Forest Service’s duty under the Roads Policy” (NOA #0044, p. 11).

### Discussion

The 1982 planning regulations require a forest plan to contain management prescriptions and associated standards and guidelines for each management area (36 CFR 219.11(c)).

#### *Plant Species*

The threatened, endangered, proposed or sensitive plant species issue focuses on the need for a standard/guideline that requires early surveys so that project design may incorporate habitat enhancement activities listed in the DSEIS:

Conduct field surveys for TEPS plant species early enough in the project planning process that the project can be designed to conserve or enhance TEPS plants and their habitat. Conduct surveys according to procedures outlined in the Forest Service Handbook (FSH 2609.25.11). If additional field surveys are to be conducted as part of project implementation, survey results must be documented in the project file (DSEIS, p. 279).

This standard/guideline was removed from the preferred alternative between the DSEIS and the FSEIS (Appendix A) to revise and restructure standards and guidelines for content and readability (AR #41003, #41019, and similar language in #41020 and #41023).

The Biological Evaluation and Biological Assessment for the FSEIS (AR #512106) are based on the DSEIS, which includes the early and enhance standard. The Biological Opinion (BO) from USFWS and NMFS (AR #31012) is based on the Biological Assessment. The standards and guidelines were key components in the opinion reached by the USFWS.

A review of the R5 existing policy of FSH 2609.25 and FSM 2672.42 (Standards for Biological Evaluations) and 2672.43 (Procedure for Conducting Biological Evaluations) indicates differences between existing policy and the “early and enhance” standard/guideline. The standard states that field surveys should be conducted early in the planning process so that the project can be “designed to conserve or enhance TEPS

plants and their habitat.” Neither the requirement for early surveys, nor the provision to conserve and enhance exists in either FSH 2609.25 or FSM 2672.

Forest Service Manual direction at FSM 2672.42 and FSM 2672.43 provides the Standards and Procedures for conducting a Biological Evaluation. Neither sections address survey timing. The FSM makes no specific statement regarding TEPS plant habitat enhancement and is silent regarding the timing of rare plant surveys relative to the planning process.

### *Recreation*

The appellants contend the recreation exemption language is not clear and may lead to closures before completing the site-specific route designation process (NOA #0038, p. 1; #0055, p. 2). The language in the SNFPA and FSEIS is clear in that the prohibitions do not take effect until the designations are completed. The designations must follow the regulations of 36 CFR 295, which require public participation.

### *Aquatic, Riparian, and Meadow Ecosystems*

The appellant contends that the standards and guidelines do not adequately provide for aquatic, riparian and meadow ecosystem protection, “reduce[ing] the protection of these ecosystems to suggestions rather than requirements.” (NOA #0044, pp. 6, 9) Management direction for aquatic, riparian and meadow ecosystems is contained throughout the ROD (Appendix A, pp. 32–33, 42–44, 62–66). The Regional Forester explains that his decision retains the critical aquatic refuges, riparian conservation areas and goals of the Aquatic Management Strategy established in the SNFPA 2001 ROD (2004 ROD, p. 10).

The FEIS outlines the Aquatic Management Strategy. As explained in the FSEIS (p. 207), the Aquatic Management Strategy, “includes goals that describe desired landscape-level conditions for aquatic, riparian, and meadow ecosystems; important land allocations such as riparian conservation areas (RCA) and critical aquatic refuges (CARs) needed to attain these goals; riparian conservation objectives (RCO) and specific standards and guidelines pertaining to management activities in these allocations and other areas; and landscape analysis. Alternatives S1 and S2 both include a comprehensive AMS [Aquatic Management Strategy] and with the exception of the few Standards and Guidelines..., the components of each are the same” (FEIS, Volume 1, pp. 40–50 and SNFPA ROD, Appendix A, pp. A–5 to A–9).

Many of standards and guidelines in the FSEIS, Appendix A, S2, are unchanged (pp. 337–350). As the Regional Forester states, “existing land and resource management plans contain many standards and guidelines that are not amended by this decision” (ROD, p. 15).

Some changes to aquatic standards allow greater flexibility. For example, language in the 2001 SNFPA decision for evaluating the range of natural variability provides specific geomorphic variables for evaluation and identifies the source for data evaluation. The current standard and guideline #102 under Alternative S2 (FSEIS, ROD, p. 63) states:

Prior to activities that could adversely affect streams, determine if relevant stream characteristics are within the range of natural variability. If characteristics are outside the range of natural variability, implement mitigation measures and short-term restoration actions needed to prevent further declines or cause an upward trend in conditions. Evaluate required long-term restoration actions and implement them according to their status among other restoration needs.

Although specific evaluation variables are not identified in standard/guideline #102, mitigation measures are required to prevent declines. Also, it is required that landscape and project-level analyses under standard/guideline 93 (ROD, p. 62) will consider effects of treatments at different scales.

### *Road Management*

The appellant contends “the minimal direction given for road management under the Standards and Guidelines is inadequate to address road related impacts or the Forest Service’s duty under the Roads Policy” (NOA #0044, p. 11). The standards for riparian conservation areas and critical aquatic refuges require an evaluation of proposed activities (including road related activities) for consistency with the Aquatic Management Strategy and require mitigation to minimize risks of sediment and impact to plants and animals (ROD, p. 62). The Roads Policy requires a forest-wide roads analysis, however, the Sierra Nevada Framework is exempt from requirements to conduct a roads analysis (FSM 7712.13d).

### **Species Viability Analysis**

#### Contentions

Appellants variously contend the FSEIS threatens or fails to conduct an adequate species viability analysis of sensitive species including the California spotted owl, Yosemite toad, willow flycatcher, Pacific fisher, American marten, and sensitive plants, which will lead to federal listing, in violation of NFMA and its implementing regulations (36 CFR 219.19) (NOA #0040, pp. 1, 9; #0053, p. 40; #4555, pp. 3, 10; #4552, p. 2; #4551, p. 3; #0043, p. 7). One appellant further contends “the weakening of the aquatic protections in the FSEIS and ROD” fails to maintain viable aquatic species populations, in violation of NFMA (NOA #0044, p. 4). Two appellants contend the 2004 ROD and FSEIS contain little or no actual analysis of the impacts the decision may have on the viability of relevant sensitive species populations, and that these documents fail to show how risks posed to species habitat are linked to impacts on species viability (NOA #0053, p. 40; #0031, pp. 49–50).

Other appellants contend full implementation of the HFQLG Forest Recovery Act violates NFMA and its requirements to maintain viable species (NOA #4552, p. 6; #0040, pp. 20, 23, 40, 41, 48).

#### Discussion

The NFMA regulatory requirement is to manage fish and wildlife habitat to maintain viable populations of existing native and desired non-native vertebrate species in the

planning area (36 CFR 219.27). In order to insure that viable populations will be maintained, habitat must be provided to support, at least, a minimum number of reproductive individuals and that habitat must be distributed so that those individuals can interact with others in the planning area (36 CFR 219.19).

An assumption for every species discussed in the FSEIS is: “Any projects proposed to implement the decision will require site-specific analysis in biological evaluations” (FSEIS, p. 242). Irreversible or irretrievable commitments of resources are not made in this decision, but are evaluated and decided at the site-specific level.

The Regional Forester addresses viability provisions for fish and wildlife in the ROD (p. 21). He asserts that absolute certainty is not possible in the planning context and that information is evolving. After reviewing the Final SEIS, Biological Assessment, Biological Evaluation, and Biological Opinion, he believes that the selected management approach represents a balance of wildlife habitat conservation measures that considers the available science and risks associated with wildfires and will provide wildlife and fish habitat to maintain viable populations. He states, “...compliance with the regulation is a matter of assessing risk, which is not subject to precise numerical interpretation and cannot be fixed at any one single threshold” (ROD, p.21).

A Biological Evaluation was prepared for Alternative S2 (Nov 25, 2003). Considering sensitive species, the BE concluded that for some species at risk, individuals may be impacted but would not lead to federal listing (AR #512022). The determination is based on the analysis within the FSEIS.

To comply with the Endangered Species Act, a Biological Assessment was prepared for Alternative S2 (AR #511028). The US Fish and Wildlife Service reviewed the Biological Assessment and rendered a Biological Opinion that the proposal would not jeopardize populations of listed species (AR #31012).

Effects on habitats were modeled using a multi-scale hierarchical approach (FSEIS, p. 391). The modeling efforts are “only approximations of the outcomes” under any given alternative (FSEIS, p. 391). The modeling process is documented in the FSEIS, Appendix B.

### *California Spotted Owl*

Appellants contend Alternative S2 weakens the provisions for California spotted owl (CASPO) habitat and would threaten the viability of the species. The FSEIS reviews the following potential negative impacts and risks:

- the largest impact to spotted owl protected activity centers would occur within the first few years of S1 and S2 implementation, while the majority of protected activity center intersections outside the wildland urban intermix would likely be treated later in the planning cycle (FSEIS, p. 266);
- vegetation treatment over the short-term may introduce some unknown level of risk to California spotted owl populations (FSEIS, p. 270);

- the more intensive vegetation treatments outside home range core areas and protected activity centers are more likely to reduce canopy cover to 40 percent in approximately 8 percent of acres treated at 50 percent canopy cover or greater and potentially affecting habitat sustainability (FSEIS, p. 274);
- more canopy cover would be maintained in the first three decades under S1 than S2 (FSEIS, p. 275);
- S2 would increase mechanical treatments in home range core areas and protected activity centers from 292,852 acres to 558,523 acres. Alternative S2 would increase the potential for disturbance of duff layers that may be important to spotted owl prey (FSEIS, p. 277);
- analytical techniques used to project tree growth and canopy closure do not address structural components (FSEIS, p. 278);
- structural stand diversity would be reduced within defensible fuel profile zones using Alternative S2's Herger-Feinstein Quincy Library Group Forest Recovery Act standards and guides (FSEIS, p. 279);
- structural characteristics would be affected within 265,661 additional acres projected under Alternative S2 (FSEIS, p. 279);
- under Alternative S2, there is some risk of negatively affecting California spotted owl in the short-term because of the uncertainty associated with the effects of using mechanical treatments in protected activity centers (FSEIS, p. 280).

While these statements describe potential adverse effects, they are general and do not set a numerical interpretation or threshold. They provide a sense of risk about Alternative S2 on the California spotted owl. Appellants disagree with this risk assessment. The record shows how risk was evaluated and will be managed in relation to the CASPO.

The California Spotted Owl technical report (CASPO Report, 1992) recommended a strategy to conserve the species. The CASPO report was one of the background documents used by scientists, managers, interested stakeholders, and local communities to craft the Sierra Nevada Forest Plan Amendment. After nearly 10 years of work, the 2001 SNFPA FEIS and ROD amended the management direction for 11 national forests.

Management concerns with the SNFPA FEIS and ROD prompted a review culminating in a year's worth of investigation. The SNFPA Management Review Team (AR #11001, March 2003) found several of the 2001 SNFPA requirements restrict ways to manage wildfire risks. The team recommended broadening the flexibility of several standards to balance risk between wildfire and sustaining owl populations.

Owl scientists met with the SNFPA interdisciplinary team to review the DSEIS on February 10, 2003. On February 22, 2003, a memo from several scientists stated, "the proposal is an application of untested hypotheses, assumptions, or modeling (without estimates of uncertainty) which imposes a highly artificial forest structure or management activities on the Sierran landscape. Therefore, we do not support the proposal" (Franklin, Gould, Gutierrez, McKelvey, and Seamans, Feb. 22, 2003). The thrust behind disagreements were the standards broadening the thresholds of tree diameters, canopy

cover and basal area requirements, and the uncertain effects on owls. Faced with that uncertainty, the scientists recommended a staged implementation strategy adhering to an experimental design that meets scientific criteria. The strategy recommended by the scientists is represented in Alternative S3 in the DSEIS. However, it is unclear in the record to what degree these recommendations were incorporated in the final decision.

The FWS also expressed concern about the uncertainty of Alternative S2 on owl habitat and the lack of a viability analysis. They recommended stronger involvement of the scientific community in the evaluation of the alternatives' effects on owl viability. They also recommended strengthening the adaptive management approach for all aspects of the proposal; clarifying mechanisms for a strong feedback loop; and using an interagency approach with involvement of scientists (FWS, Sept. 12, 2003; FSEIS, pp. 220–228).

The Regional Forester directed a review of the DSEIS for science consistency. A meeting with owl scientists was held on August 7th and 8th, 2003. The meeting focused on strengthening the adaptive management proposal. The owl scientists proposed that changes to standards (Alternative S2) should be viewed as experimental management, with large portions of programs dedicated to adaptive management (AR #36023, Stine, Aug. 11, 2003).

The science consistency team reported findings on September 29, 2003 and supplemented their report for the California Spotted Owl on November 3, 2003. The science team found that many uncertainties or risks associated with relevant scientific information were not acknowledged or documented. They acknowledge that the "adaptive management program is not well defined and there is scientific uncertainty regarding whether or not a valid program will be developed to accompany the greater risk perceived with Alternative S2 (AR #36004, Science Consistency Review Report; Stine, Peter A. and Keane, John; Nov. 3, 2003).

Further concerns about the adaptive management program were expressed in the Supplement #1 of the Science Consistency Review. "The scientists on the SCR review team think that several of these issues will rise and fall on the rigor of implementation of the monitoring and research program, and on the commitment by the agency to follow up with timely modification of treatments under indications that populations are being affected. "Anything that the planning team could do to more precisely state how monitoring and research will be done and how treatments will be modified in response to monitoring will be appropriate and will bolster the rationale for taking an adaptive management approach to this whole management decision" (AR #36005; Guldin, James A. and Stine, Peter; Science Consistency Review Report; Supplement #1; Nov. 7, 2003).

The Regional Forester and the interdisciplinary team responded by identifying the initial steps of the adaptive management plan in the 2004 ROD and FSEIS. They identify the types of monitoring, the crucial questions to address, and ongoing efforts to obtain information (FSEIS, pp. 64–88).

The interdisciplinary team acknowledges that an adaptive management approach needs to be well organized, supported and implemented realistically through incremental steps

(FSEIS, p. 68). For example, the approach to assessing wildfire fuel treatments is characterized as follows:

Efforts to reduce uncertainty about the effects of management activities on the California Spotted Owl and Pacific Fisher will provide a template for testing the effectiveness of the fuels strategy adopted under S2. A complete set of treatments will be completed over a limited number of landscapes to evaluate species of concern...the performance of the fuels reduction strategy can be evaluated before it is applied across the entire bioregion. (FSEIS, p. 72)

The adaptive management plan also identifies other considerations for the spotted owl: a paired-PAC study would be initiated through landscape-level studies and recommendations of owl demographic researchers were identified (FSEIS, pp. 75-80).

To guide the adaptive management approach, the team identifies the steps needed for successful implementation, criteria to guide future decisions, the need for rigorous reporting timeframes, and oversight from an appropriate array of stakeholders (FSEIS, pp. 87-88).

In the ROD, the Regional Forester commits to using the FACTS database to provide a baseline for evaluating what activities are occurring and where, establishing an evaluation process, and bioregion-wide tracking of key attributes and directs the Sierra Nevada implementation team to complete an assessment of implementing the adaptive management program. The recommendations should be completed in 6 months (ROD, p. 12-13).

The record discloses the uncertainty and risk associated with changes to management direction for the California spotted owl. To meet the intent of NFMA to provide for diversity of plant and animal communities, including the California spotted owl, the amended SNFPA provides that assurance through adaptive management—intensive monitoring and research on owls and adjustment of management direction as needed. The first steps in development of the adaptive management program have been taken: identifying the crucial questions to address the risks. Continued development of the adaptive management and monitoring strategy is needed to articulate how monitoring data will be evaluated and how/when subsequent management activities will be adjusted. Project implementation and current monitoring activities will add to the body of information collected while the evaluation and adjustment facets of the adaptive management strategy are developed.

### *Pacific Fisher*

Appellants contend changes in standards for canopy cover, old growth stands of one acre, larger dbh caps, protections of snags, and limited operating periods weaken protection of the fisher. The biological evaluation for Pacific Fisher determined that S2 would impact individuals but not lead to federal listing (AR #512022). The FSEIS projects that the primary potential effect of Alternative S2 on fisher would be the result of different standards and guidelines affecting canopy closure (FSEIS, p. 250). The FSEIS estimates that average canopy closure across the Southern Sierra Fisher Conservation Area would

have no significant differences between Alternatives S1 and S2 after 20 years. But the extensive thinning, including the change in standard to 40 percent minimum canopy cover, would result in slower increase in canopy closure under S2 (FSEIS, p. 247); "...much of the decrease in fire effects under Alternative S2 would not become evident until after the 20-year analysis horizon" (FSEIS, p. 250).

Outside the SSFCA, the greatest concern is the risk of further fragmentation due to large stand-replacing fire (FSEIS, p. 244). Maintaining existing conditions over the long-term presents a high degree of risk and uncertainty to viability of fisher in the Sierra Nevada (FSEIS, p. 245). The short-term tradeoffs in current habitat quality to sustain long-term benefits are of greatest importance to fisher viability within the area of known occupancy, the SSFCA (FSEIS, p. 244).

Short-term tradeoffs in current habitat quantity may mean that, "...If undesirable effects materialize from implementing the thinning prescriptions, recovery would be relatively fast compared to recovery after stand-replacing fire" (FSEIS, p. 250). However, it appears that short-term effects are largely unknown and the uncertainty and risks are addressed through the adaptive management and monitoring strategy.

Uncertainty and risks about short-term effects are addressed in the adaptive management and monitoring strategy: "the effects of Alternative S2 on fisher habitat are largely unknown..." (FSEIS, p. 76). The adaptive management and monitoring strategy further discloses an urgent need to understand the effects of proposed fuels treatments on fishers and habitat elements important to them (FSEIS, p. 76). The Regional Forester commits to continuing existing status and change monitoring for fisher, and will initiate discussions with California Department of Fish and Game to explore reintroduction opportunities (ROD, pp. 7–8). Continued development of the adaptive management approach is needed to articulate how monitoring data will be evaluated and how/when subsequent management activities will be adjusted. Project implementation and current monitoring activities will add to the body of information collected while the evaluation and adjustment facets of the adaptive management strategy are developed.

#### *American Marten*

A review of potential risks of Alternative S2 on Marten from the FSEIS follows:

- Alternative S2 for the eastside pine group may result in a greater risk to large tree retention by raising the maximum diameter limit of trees that can be cut from 24" to 30" (FSEIS, p. 254);
- In the short-term, implementation of Alternative S2 is projected to result in less than one percent lower average canopy closure than Alternative S1 (FSEIS, p. 255);
- Effects may be less than anticipated because they occupy habitats at higher elevation than the majority of proposed treatments (FSEIS, p. 255);
- In terms of overall habitat quantity, S1 would reduce risk over the short-term by resulting in approximately 5 percent more late-seral forest, but S2 would have the same in 70 years and 17 percent more in 130 years (FSEIS, p. 258);

- Alternative S2 would involve more intensive treatments at local scales compared to Alternative S1, which may lead to a greater risk to important marten habitat components (FSEIS, p. 260).

These statements convey risks and effects in broad, general terms. The adaptive management and monitoring strategy considers monitoring for marten (FSEIS, p. 84); however, it is not clear how the risks to marten are addressed in the adaptive management and monitoring strategy and additional information is needed.

Appellants contend that the 2004 SNFPA weakens protections for marten habitat, particularly in the QLG area and eastside forests. Effects on potential marten habitat in the HFQLG area are documented in the FSEIS analysis of spotted owls (FSEIS, pp. 268–269). Suitable habitat may be reduced in the short term. In eastside forests, there may be a reduction in habitat due to the lack of a canopy closure standard. Although canopy closure and live tree standards have been loosened in the FSEIS, the basal area retention standards will partially compensate (FSEIS, pp. 368, 388). Snag and log standards have been made discretionary (FSEIS, pp. 354, 357). The furbearer network in use on the Lassen, Tahoe and Plumas national forests may mitigate effects on these forests, but has not yet been officially adopted on the Plumas and Tahoe national forests.

As noted in both the FSEIS and the FEIS, the core of marten habitat in the Sierra Nevada occurs in the red fir zone, which will not be strongly affected by activities under the plan. However, local extirpations outside of this core habitat are of concern. As noted in the NEPA: Impact Analysis discussion concerning American marten, there is not a full accounting of the likely future landscape condition of the Herger-Feinstein Quincy Library Group area, where few or no marten detections have been made. Better knowledge of percent openings in this landscape along with how the risks to marten are addressed in the adaptive management and monitoring strategy would improve the assessment of marten viability.

#### *Willow Flycatcher*

Appellants contend protection for willow flycatchers is primarily weakened by the following provisions of the 2004 SNFPA ROD:

- Allowance of late-season grazing (after August 15) in occupied meadows
- Allowance of season-long grazing in historically occupied sites without current flycatcher detections
- No requirement to survey emphasis habitat unless a project is planned in that habitat

The FSEIS (p. 289) explains that only approximately 10 percent of flycatcher nesting attempts has been observed to occur after August 15. The risk that late-season grazing would affect these flycatchers is mitigated by standards and guidelines for willow grazing that will restrict the utilization of willows in the period after August 15. Because few nesting attempts occur after this “on” date for grazing, and that grazing will be strictly controlled, there is little or no negative effect expected for the late-season grazing. This late-season grazing will also be carefully monitored (FSEIS, p. 289). By August 15 the egg and incubation stage will generally be over making “making nests less susceptible to

successful parasitism” (FSEIS, p. 290). Discussions in the FEIS (Vol. 3, Chapter 3, part 4.4, pp. 176–177) describe how late-season grazing can be compatible with maintenance and restoration of willow flycatcher habitat.

Under Alternative S2, surveys for willow flycatchers are not required in emphasis habitat unless a project is proposed. The FSEIS (p. 290) explains that some new territories may go undetected because of this modified requirement. However, this would have little effect on willow flycatchers because “the primary intent of late season grazing requirements is to protect nests from physical disturbance” and “there is little additional risk because these areas would not be in active allotments” (FSEIS, p. 290).

Appellants contend (NOA #0040, p. 55) that meadow and habitat restoration is focused too narrowly. Standards and guidelines direct that restoration will focus on historically occupied willow flycatcher sites that are currently degraded (ROD, p. 58). Appellants present no evidence to demonstrate that focusing restoration on these areas will create unacceptable risk to willow flycatcher viability.

Appellants contend (NOA #0040, p. 55) that the proposal to develop a conservation strategy for willow flycatchers (FSEIS, p. 78) was not adopted in the ROD. However, the ROD (p. 10) specifically states a conservation strategy will be initiated “to build upon the recently completed conservation assessment. The conservation strategy will include specific management recommendations for such issues as meadow condition, monitoring, nest predation, habitat restoration, and cowbird parasitism.” These statements are consistent with the proposed conservation strategy presented in Chapter 2 of the FSEIS.

Appellants also contend management for control of cowbirds is ignored in the ROD. However, as explained in the FSEIS (p. 290), the conservation strategy for willow flycatchers will “evaluate and prioritize the concern for brown-headed cowbird brood parasitism and will be used to inform local management decisions.” Additionally, as stated on page 10 of the ROD, the proposed conservation strategy will include specific management recommendations for issues such as cowbird parasitism. Clearly, the ROD and FSEIS do not ignore the management issue of cowbird control.

Appellants contend the monitoring strategy for willow flycatchers is deficient because 1) it is not included in the “site-specific meadow management strategy” and 2) doesn’t provide for a regional assessment of the combined effects of local management plans. The FSEIS (p. 78) states that site-specific management plans for some allotments where grazing occurs in occupied willow flycatcher habitat will be developed by an interdisciplinary team, and will include a biological evaluation and monitoring plan. Discussion in the FSEIS also reiterates the primary focus of adaptive management for willow flycatchers (p. 78). Finally, analysis in the FSEIS states, “sites subject to late-season grazing would be monitored to assess annual forage utilization and willow flycatcher habitat condition” (p. 289).

### *Fish Species*

The appellant is correct that there are no focal fish species analyzed in the FSEIS. The purpose and need statement for the FSEIS does not mention problems with at-risk fish species in the planning area. However, there are other analyses prepared as part of this planning process and for the 2001 FEIS. The analysis of effects from all alternatives on fish species was conducted in the "Biological Assessment for the SNFPA FSEIS, July 30, 2003." The effects of management under all alternatives in the FEIS were evaluated and no differences in the alternatives were identified. The Consistency Review of Documentation for the Sierra Nevada Forest Plan Amendment evaluated the preferred alternative and found that:

Alternative Modified 8 would provide the largest area of critical aquatic refuges, thereby providing greater protection for fish than the other alternatives. The proposed changes considered in the SEIS would not alter the existing strategy for completing landscape analysis or protecting special management areas included in Alternative Modified 8. Protection of most fish would therefore be similar, and further evaluation of potential impacts of the proposed actions is not needed. (FSEIS, Appendix C, p. 417)

The Biological Assessment for the FSEIS considered potential effects of Alternative S2 on ten species of fish and their critical habitat. The analysis in Appendix C states, "Implementation of the proposed changes considered in the SEIS would result in conditions that would be similar to those resulting from Alternative Modified 8, because the Aquatic Management Strategy would be unchanged. Further analysis of effects of proposed changes on these fish species is not needed." Additionally, standard/guideline #104 contained in the FSEIS is specific to address the needs of threatened or endangered fish where,

In stream reaches occupied by, or identified as 'essential habitat' in the conservation assessment for, the Lahonton and Paiute cutthroat trout and the Little Kern golden trout, limit streambank disturbance from livestock to 10 percent of the occupied or 'essential habitat' stream reach (Conservation assessments are described in the ROD). Cooperate with State and Federal agencies to develop streambank disturbance standards for threatened, endangered, and sensitive species. Use the regional streambank assessment protocol. Implement corrective action where disturbance limits have been exceeded. (ROD, p. 63)

### *Yosemite Toad*

The appellant contends, "Despite the recognition in the FSEIS and from experts that the definition of rearing season would increase the likelihood that individuals of all life stages would be killed, the new decision fails to adopt the more protective measure" (NOA #0040, p. 59). Breeding and rearing seasons are to be locally determined under both alternatives. Under Alternative S2 in the proposed action there is explicit recognition that livestock are excluded during the breeding and rearing seasons of Yosemite toad:

...livestock would be excluded from habitat occupied by Yosemite toads (standing water and saturated soils) during the breeding and rearing seasons. Where physical exclusion of livestock was impractical, livestock would be excluded from the entire meadow. Exclusion requirements could be waived if a site-specific management plan were developed and included a monitoring component. Restrictions would apply only to commercial livestock and only in areas where surveys indicate occupancy. (FSEIS, Chapter 2, p. 63)

This protection may be significant for eggs and tadpoles, but may not be sufficient to protect metamorphs once the end of the rearing season occurs. However, in this case "Trampling risks would be evaluated in a formal adaptive management study in Alternative S2 and would be considered in any site-specific management plans that are developed" (FSEIS, Volume 2, p. 53). Site-specific management plans should address the timing of protections for each life stage and adjust seasonal grazing accordingly.

The appellant states, "Contrary to comments from experts and recommendations from the US Fish and Wildlife Service, the new plan allows grazing in meadows that support Yosemite toad and increases the exposure of this species to activities that can have an adverse impact" (NOA #0040, p. 60). Under the preferred alternative, grazing would be permitted during the breeding and rearing season only if there was a site-specific management plan in place. As stated above, "Exclusion requirements could be waived if a site-specific management plan were developed and included a monitoring component. Restrictions would apply only to commercial livestock and only in areas where surveys indicate occupancy." Under both alternatives the standards and guidelines are the same with one exception regarding the development of site-specific plans, "Both alternatives include the same Standards and Guidelines that limit the amount of streambank disturbance and amount of riparian shrub utilization which are designed to limit adverse effects to riparian areas" (FSEIS, Volume 2, p. 53). Further protections for aquatic, meadow, and riparian species are specified under the Aquatic Management Strategy including critical aquatic refuges and riparian conservation areas. Additionally, the adaptive management strategy of Alternative S2 allows for development of studies on a number of allotments that will examine alternative management strategies including a site-specific monitoring and biological evaluation component (DSEIS, pp. 77–78).

The appellant also contends, "The ROD's failure to regulate pack and saddle stock grazing stock increases the likelihood of adverse impacts to a species that is already imperiled, and is contrary to expert opinion" (NOA #0040, p. 61). Pack and saddle stock were excluded from grazing in meadows occupied by Yosemite toads under Alternative S1 and under the 2001 ROD. This decision was changed under Alternative S2 where the site-specific management plan and project plan will be used to evaluate pack stock grazing at a local level. The Regional Forester's states, "These grazing restrictions do not apply to pack stock or saddle stock. Given the relatively low concentration of these animals in the affected areas and the disparate characteristics and needs of this user group, I believe that this management direction is most appropriately developed as part of individual forest plan direction" (ROD, p. 11). Again, additional adaptive management exercises will occur on some allotments and site-specific management plans will be developed where grazing occurs in occupied Yosemite toad habitat. These management

plans will be developed by an interdisciplinary team, and include a biological evaluation and a monitoring plan (DSEIS, Chapter 2, pp. 77–78). The effects of this pack stock or saddle stock on Yosemite toad habitat and life histories are currently unknown. Additional information should become available when the conservation assessment for this species is complete. One focus of the assessment is to "better define the risk of toad trampling from pack and saddle stock" (FSEIS, p. 302).

Appellants contend, "...the implementation of the site-specific management plans will increase the likelihood of impact to this species" (NOA #0040, p. 62; #0044, p. 5) and "[a]bsent a sound conservation strategy, the 2004 Record of Decision increases the uncertainty that cattle are excluded from toad habitat during the summer breeding season thus placing the species at increased risk of extinction in violation of the National Forest Management Act and its regulations 36 CFR 219.19" (NOA #4552, p. 4; #4551, p. 5). Conducted properly, site-specific management plans and local project plans should inform decisions at the local level regarding the timing of breeding and rearing and the location of toads within the allotment to help reduce impacts to the Yosemite toad.

As explained in the FSEIS, Volume 2: Response to Public Comments, site-specific plans "are only required if alternative methods to total exclusion of livestock from occupied habitat is desired and they require annual systematic monitoring of habitat conditions and toad occupancy and population dynamics on a sample of sites within the meadow. Adjustments in the strategy would be made if monitoring indicates that it is ineffective" (FSEIS, Volume 2, p. 53). Adaptive management studies should provide new information on habitat requirements and the effects of grazing given carefully controlled experiments. Additional guidance should come from site-specific management plans developed for some allotments where grazing occurs in occupied Yosemite toad habitat. "It is expected that all site-specific management plans would be informed and adjusted accordingly as scientific information from the adaptive management studies becomes available (FSEIS, Volume 2, p. 53).

Appellants contend, "The new plan also fails to establish any timeline for the completion of Yosemite toad surveys and more importantly removes any consequences of failing to complete the surveys" (NOA #0040, p. 62). Alternative S2 requires surveys to be completed within 2 years of the signing of a new ROD. In Alternative S2 there is no requirement to assume occupancy if surveys are not completed. It is estimated, however, that surveys of suitable habitat within active range allotments will be completed by the end of 2004 (FSEIS, Volume 2, p. 53). As this response demonstrates, the FSEIS does establish a timeline for completion of surveys, however, the consequences of failing to complete the surveys is not explicitly stated.

#### *Mountain Yellow-legged Frogs and California Red-legged Frog*

Appellants contend inadequate protections under Alternative S2 threaten the viability of the foothill and mountain yellow-legged frogs and California red-legged frog (NOA #0044, p. 4–6; #0031, p. 51). The Regional Forester specifically addresses riparian dependent species including the foothill and mountain yellow-legged frogs in his decision. He states (ROD, p. 10):

Significant progress has been made toward the completion of conservation assessments for other riparian dependent species including the foothill and mountain yellow-legged frogs, cascades frog, Yosemite toad and northern leopard frog. Standards and guidelines for grazing utilization, streambank trampling, and willow browse remain essentially unchanged. These guidelines, coupled with our existing direction for grazing management, give assurances that meadow hydrology and important habitat attributes will be managed to support these sensitive species.

Regarding the foothill and mountain yellow-legged frogs, the FSEIS states, "Alternatives S1 and S2 apply the AMS [Aquatic Management Strategy] and the same standards and guidelines for aquatic, riparian, and meadow ecosystems. These alternatives protect discovered populations by designating critical aquatic refuges (CARs)" (FSEIS, p. 101). The discussion does state, "Alternative S2 changes some of the grazing management standards and guidelines related to these species, which could potentially indirectly affect the mountain yellow-legged frog. "However, changes in grazing management would require site-specific analyses, including biological evaluations that would address all species occurring within the affected area. Thus, the implications of such changes would likely be minimal" (FSEIS, pp. 101–102).

The FSEIS discusses that under both alternatives protection measures are included to protect the California red-legged frogs and its habitat at the site-specific project level. Further, the discussion states, "CARs [critical aquatic areas] will be established for populations of California red-legged frogs within known occupied drainages following completion of the HFQLG Pilot Project. As additional populations are identified, additional CARs can be added to the system. Since this species is a federally listed species, effects of the proposed changes in S2 would likely be negligible, because site-specific analysis, project mitigation, and consultation with the FWS, where necessary, would be carried out. Habitat for California red-legged frog should be maintained or improved through implementation of RCAs" (p. 238). Analysis in the FSEIS discloses that spring and fall prescribed burning periods "may overlap with the dispersal period for this species and therefore may adversely affect it. Because the known or suspected distribution of populations on the national forests is small, the risk posed to this species by individual projects is limited and would be evaluated site-specifically and through consultation with the FWS, as needed" (FSEIS, pp. 238–239). The FSEIS does address threats to the frog's viability, includes adequate protection measures, and states effects to the California red-legged frog under Alternative S2 are likely negligible because site-specific analysis, project mitigation, and consultation are all required prior to project implementation.

## **Species Diversity**

### Contentions

Appellant contends the 2004 SNFPA violates NFMA because it does not "...promot[e] and restor[e]...native perennial plant species..." a requirement that "...legally supercedes perceived obligations to provide ongoing economic support to the cattle industry..." (NOA #0047, pp. 32–33).

## Discussion

There is no specific requirement in NFMA or its implementing regulations to provide for native perennial plant species or native shrub communities. NFMA implementing regulations at 36 CFR 219.27(g) addresses the composition of native plant communities:

Management prescriptions, where appropriate and to the extent practicable, shall preserve and enhance the diversity of plant and animal communities, including endemic and desirable naturalized plant and animal species, so that it is at least as great as that which would be expected in a natural forest and the diversity of tree species similar to that existing in the planning area. Reductions in diversity of plant and animal communities and tree species from that which would be expected in a natural forest, or from that similar to the existing diversity in the planning area, may be prescribed only where needed to meet overall multiple-use objectives.

Likewise, the composition of native plant communities is addressed in the Diversity subsection of 36 CFR 219.26:

Forest planning shall provide for diversity of plant and animal communities and tree species consistent with the overall multiple-use objectives of the planning area.

As the implementing regulations demonstrate, consistent with multiple use objectives in the planning area, the composition of native plant communities will be provided for.

## **Aquatic, Riparian and Meadow Ecosystems**

### Contentions

The appellant contends, “The standards and guidelines for Alternative S2 represent an unacceptable implementation of the Framework’s Aquatic Management Strategy...” because they lack: a) Definitive guidance as to what scale the Range of Natural Variability evaluation should occur; b) Guidance as to “what defines consistency” and requirement that projects be consistent with objectives; and c) Clear definition and consistent protection of RCAs [riparian conservation areas] and CARs [critical aquatic refuges]” (NOA #0044, pp. 6–8). In addition, the appellant avers, “the FSEIS and ROD offer illegally weak watershed and aquatic ecosystem protections” (NOA #0044, p. 9).

### Discussion

The Forest Service’s implementing regulations for NFMA require “all management prescriptions shall conserve soil and water resources and not allow significant or permanent impairment of the productivity of the land...[and] protect streams, streambanks, shorelines, lakes, wetlands, and other bodies of water...” (36 CFR 219.27 (a)(1)(4)).

The appellant is correct in that there is no new definition of range of natural variability or defined standards or evaluation criteria listed for range of natural variability within the document related to aquatic and riparian standards in Alternative S2. However,

definitions of riparian conservation area and critical aquatic refuge are found in the original FEIS and are carried forward to the FSEIS. Additionally, critical aquatic refuges are defined in the ROD on page 43 as “subwatersheds generally ranging between 10,000 to 40,000 acres, with some as small 500 acres and some as large as 100,000 acres, that contain either:

- known locations of threatened, endangered, or sensitive species,
- highly vulnerable populations of native plant or animal species, or
- localized populations of rare native aquatic- or riparian-dependent plant or animal species.”

Riparian conservation objectives and associated standards and guidelines associated with Alternative S2 and are carried forward from the original FEIS with some exceptions and provide consistent direction. Standards and guidelines for riparian conservation areas and critical aquatic refuges are found in the 2004 ROD on pages 63–66. In addition, project-level NEPA analyses “...would be completed to assess the potential impacts of proposed activities on water quality and aquatic and riparian systems...[and] would also include an assessment of cumulative watershed effects relative to thresholds of concern established for watersheds in the project analysis area” (FSEIS, Volume 2, p. 125).

The overall SNFPA goal of protecting and restoring desired conditions of aquatic, riparian and meadow ecosystems and providing for the viability of species associated with those ecosystems remains unchanged under the FSEIS. The fundamental principle of the Aquatic Management Strategy is to retain, restore, and protect processes and landforms that provide habitat for aquatic and riparian-dependent organisms, and provide and deliver high-quality waters for which the national forests were established (2001 ROD, p. A–5).

The discussion in the FSEIS acknowledges that there are no firm timelines identified, and that analyses will be completed as funding becomes available. While there may be some concern regarding the elimination of the time component the FSEIS states, “The effects associated with these delays, however, are expected to be limited because funding limitations for implementation of projects identified in landscape analysis exert a much stronger control on the times over which they are implemented” (FSEIS, p. 214).

While some soil quality standards and guidelines are removed under Alternative S2, “project design and implementation would be required to follow Regional Soil Quality Standards. These standards are designed to protect long-term soil productivity and minimize the effects of soil disturbance and compaction. Both Alternatives S1 and S2 would provide the protection necessary for maintenance of soil quality” (FSEIS, p. 233).

## **Suitability for Timber Production**

### Contentions

The appellant contends the Sierra National Forest Plan Amendment (SNFPA) violates the National Forest Management Act (NFMA) because it changes the “...capable, available, and suitable (CAS) determinations in land management plans” even though the Final Supplemental Environmental Impact Statement (FSEIS) claims not to (NOA #0057, p. 6).

Furthermore, the appellant contends the SNFPA Record of Decision (ROD) "...claims to be a revision of forest plans and yet avoids the issue of timber production..." (NOA #0057, p. 7).

### Discussion

The Forest and Rangeland Renewable Resources Planning Act of 1974 (P.L. 93-378, 88 Stat. 476, as amended; 16 U.S.C. 1600-1614) requires that land management plans "...identify lands within the management area which are not suited for timber production, considering physical, economic, and other pertinent factors..." (16 U.S.C. 1604 (k)). In addition, RPA directs that "...timber will be harvested from National Forest System lands only where soil, slope, or other watershed conditions will not be irreversibly damaged..." (16 U.S.C. 1604 (g)(3)(E)(i)).

The implementing regulations for the RPA further elaborate on timber resource land suitability, specifying that land shall be identified as not suited for timber production if: the land is not forest land; technology is not available to ensure timber production without irreversible resource damage to soils productivity, or watershed conditions; there is not reasonable assurance that such lands can be adequately restocked; or the land has been withdrawn from timber production by an Act of Congress, the Secretary of Agriculture, or the Chief of the Forest Service (36 CFR 219.14(a)).

In addition lands are to be considered not appropriate for timber production if: the land is proposed for resource uses that preclude timber production; other management objectives for the alternative limit timber production activities to the point where management requirements can't be met; or the lands are not cost-efficient over the planning horizon in meeting forest objectives (36 CFR 219.14 (c)). The regulations further state "[I]ands identified as not suited for timber production...and lands tentatively identified as not appropriate for timber production...shall be designated as not suited for timber production in the preferred alternative" (36 CFR 219.14 (d)).

The ROD clearly states the "...decision is a significant forest plan amendment" (ROD, p. 20). The management direction described in Appendix A to the ROD is incorporated into existing land and resource management plans, but the "...decision does not change the capable, available and suitable (CAS) lands determination made in forest plans" (ROD, p. 15). As discussed previously in the contention responses under NEPA: Purpose and Need, amendments may be limited in scope. The purpose and need of the SEIS did not include reconsideration of lands unsuitable for timber harvest; therefore, suitability for timber production is not within the scope of this amendment. The FSEIS and ROD clearly state, "Scheduling of regulated timber harvest and its associated Allowable Sale Quantity will be addressed as part of forest plan revisions" (ROD, p. 15; FSEIS, p. 92).

## **Funding and Implementation**

### Contentions

One appellant contends, "The fuel reduction strategy relies on an unrealistic budget and therefore will not be completed" (NOA #4557, p. 7).

## Discussion

The Forest Service's implementing regulations for NFMA (36 CFR 219) speak to budget indirectly and only in regard to development of alternatives. Those regulations state, "Alternatives shall reflect a range of resource outputs and expenditure levels" (36 CFR 219.12 (f)(1)). A land and resource management plan is programmatic in nature and establishes desired conditions, permits types of activities, and estimates the quantities of treatments. The consideration of costs in a land and resource management plan should similarly be of a programmatic nature.

The FSEIS does consider and display the economics of fuels treatments for Alternatives S1 and S2 on pages 222–226 as a means of comparing the alternatives. The comparison notes, "Alternative S2 greatly increases the by-product value that can be derived from most forests in the bioregion (FSEIS, p. 225). In addition; the Regional Forester notes that the modifications Alternative S2 makes to diameter size limits will improve the cost-effectiveness of projects (ROD, p. 9).

## Decision on NFMA Compliance

I find the Regional Forester's decision meets the following requirements of NFMA.

- I find that the Regional Forester took the necessary actions to complete the planning process for a significant amendment under 36 CFR 219.12 (b) through (k).
- The Regional Forester properly elected to amend the forest plans for 11 Sierra Nevada national forests pursuant to the 1982 planning regulations and NFMA requirements, and the 2000 regulation is not applicable.
- I find that the Regional Forester provided sufficient disclosure of why the decision maximizes net public benefits. The National Forest Management Act and its planning regulations do not obligate a Responsible Official to choose an alternative with the largest monetary benefits. Therefore, the Regional Forester has not violated NFMA by selecting Alternative S2.
- I find that changes to standards and guidelines were appropriate when dealing with recreation exemptions, aquatic/riparian/meadow ecosystem protections, and road management direction.
- I find that protection of aquatic, riparian, and meadow ecosystems does not violate NFMA law or regulation.
- I find that the Regional Forester has addressed timber suitability sufficiently to meet the NFMA requirement. Law, regulation, and policy do not require that amendments to land and resource management plans address the suitability of lands for timber production or Allowable Sale Quantity. The Regional Forester was within his authority when he limited the scope of the plan amendment and complied with the requirements of NFMA.
- The FSEIS appropriately displayed costs related to the alternatives considered in accordance with NFMA and that the Regional Forester considered those costs appropriately in reaching his decision. There is no additional requirement for consideration of cost or budgets.

I find the Regional Forester's decision meets the requirements of NFMA upon condition that the following actions are completed.

- I find that the threatened, endangered, proposed, and sensitive plant survey standard for early consideration and enhancement in project design was not part of the Regional Forester's decision. In an effort to revise and restructure the standards and guidelines for content and readability, the standard was removed from the FSEIS. Differences exist in the timing and intent of the early consideration and enhancement standard compared to existing direction. The US Fish and Wildlife Service considered it important in their Biological Opinion. Therefore, the Regional Forester is instructed to reinstate this standard and remedy this inadvertent technical error.
- I find that managing habitat to maintain viable populations of the California spotted owl, the Pacific fisher, and American marten can only be assured by using subsequent site-specific evaluations and the adaptive management and monitoring strategy. The strategy emerges as a centerpiece of the decision. Commitment to an adaptive

management and monitoring strategy convinces me that the NFMA requirement to manage habitat to provide for viable populations can be met. I believe that commitment will translate into a treatment, feedback, and adjustment system to carefully manage risks to habitats. The importance of species persistence along with the associated risks requires that your commitment be demonstrated by a clear articulation of the strategy.

- While the initial step of the adaptive management and monitoring strategy is outlined through the questions and hypotheses in the FSEIS, the Regional Forester must communicate more fully how he intends to address these questions. At a minimum, describe how the timing of treatments and the feedback and adjustment loop will work. What is meant by “implementing through incremental steps” and completing treatments “over a limited number of landscapes,” and how will individual forests know their role in the treatment and feedback strategy? Fully develop and provide me with the adaptive management and monitoring strategy component of Alternative S2, as described in the FSEIS on pages 87–88. In addition, outline the involvement of government agencies, the science community, native tribes, local communities, and other interested stakeholders. I expect that your strong cooperative efforts with stakeholders will continue. Also, I expect that more detail in the adaptive management and monitoring strategy will address some concerns raised by the Fish and Wildlife Service, scientists studying the species at risk, and provide broader understanding for the Forest Service about what lies ahead. I expect to have this additional detail within 6 months of the date of this decision.

## **MULTIPLE USE SUSTAINED YIELD AND ORGANIC ACTS**

### Contentions

One appellant contends that the SNFPA, as amended, does not "...comply with the explicit management direction provided by...the Organic Act..." because the selected alternative will not protect the forest from catastrophic events such as fire or epidemic bug kill, and will not improve the forest or furnish a continuous supply of timber (NOA #4556, pp. 2–3).

A second appellant contends that the "long term standards, guidelines and land base designations of the ROD that take effect after the 2009 termination date of the QLG [Quincy Library Group] Pilot Project...are violations of the Organic Act and the Multiple Use Sustained Yield Act" (NOA #4962, p. 1). This appellant contends, "The ROD fails to recognize and establish timber management and timber production as legitimate forest management goal[s] and objective[s]..." (NOA #4962, p. 1) and therefore violates the Multiple Use Sustained Yield Act.

A third appellant contends implementation of the new grazing standard and guideline (#52) is likely to promote meadow degradation, in violation of the Multiple Use Sustained Yield Act requirement that "...requires the agency to allow only that combination of uses that will best meet the needs of the American people...without impairment of the productivity of the land..." (NOA #0047, pp. 20–21).

### Discussion

The Organic Administration Act (Organic Act)(16 U.S.C.473–475, 477–482, 551) and Multiple Use Sustained Yield Act (MUSYA)(16 U.S.C. 528(note), 528–531) establish general guidelines for National Forest Management. The Organic Act states the purposes of National Forests, which include "...securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States..." (16 U.S.C. 475). The Organic Act goes on to provide that the Secretary of Agriculture shall make rules and regulations that provide "...for the protection against destruction by fires and depredations upon the...national forests..." (16 U.S.C. 551).

The MUSYA establishes "...that the national forests...shall be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes" (16 U.S.C. 528) and that "...due consideration shall be given to the relative values of the various resources in particular areas" (16 U.S.C. 529).

In accordance with the Organic Act the Forest Service has promulgated more than a dozen regulations to guide management of the national forests and to protect those forests. The regulations include rules on cooperating with states and other entities to provide fire prevention, detection, and suppression (36 CFR 211.3–5); rules for timber management planning (36 CFR 221); rules for land uses (36 CFR 251); and prohibitions (36 CFR 261).

All of the rules cited above except 36 CFR 221 provide for protection of the national forests from fires and depredations and are implemented outside the scope of a Forest Plan. The rule for timber management planning which is related to Forest Planning specifies that management plans for timber resources “...aid in providing a continuous supply...of timber”; “...be based on the principle of sustained yield...”; “...provide as far as feasible, and even flow of national forest timber...”; coordinate timber production with other uses; and establish “...the maximum amount of timber which may be cut...” (36 CFR 221.3(a)).

According to the FSEIS “...only the Big Valley Sustained Yield Unit of the Modoc National Forest would produce regulated timber yields” (FSEIS, p. 316). The FSEIS also displays expected average annual sawtimber harvest from the national forests of the Sierra Nevada on pages 316 through 319. Those displays show a decrease in yield over 5 years as a result of terminating the Herger-Feinstein Quincy Library Group pilot project and continuing through the first two decades as the forests shift from initial fuels treatment to maintenance of previously treated areas (FSEIS, p. 317). The ROD states regulated timber harvest, determining allowable sale quantity, and addressing long-range forest sustainability will be addressed as the Land and Resource Management Plans for the Sierra Nevada forests are revised (ROD, p. 9).

While the MUSYA provides for multiple uses on National Forest Land it does not require all the uses on all acres. The FSEIS and the ROD clearly indicate the Regional Forester considered multiple uses and selected Alternative S2 for implementation because he felt it best meets the needs of the American people. The Regional Forester’s reasons for selecting Alternative S2 are discussed on pages 5–13 of the ROD.

### Decision

The Organic Act and Multiple Use Sustained Yield Acts generally guide the direction of national forest management, but they and their implementing regulations contain little in the way of specific requirements for land and resource management plans. Based on my review of the FSEIS and the ROD it is clear that the Regional Forester considered all of the resources, the values of those resources, the needs of the American people, and the productivity of the land. I find the Sierra Nevada Forest Plan Amendment complies with both the Organic Administration Act and the Multiple Use Sustained Yield Act.

## **HERGER-FEINSTEIN QUINCY LIBRARY GROUP FOREST RECOVERY ACT**

### Contentions

The appellant contends the “rationale for fully implementing the resource management activities of the HFQLG [Herger-Feinstein Quincy Library Group] pilot project is in error and must be withdrawn” (NOA #0069, p. 8). The appellant further contends “there is no need to adjust existing management direction to better reconcile the goals for the HFQLG pilot project with those of the SNFPA and its Adaptive Management theme and assumptions [since] [i]t has already been reconciled to the extent deemed appropriate by direction given in the pilot project itself” (NOA #0069, p. 8).

A second appellant contends the logging ‘sanctioned’ under the 2004 SNFPA for the QLG pilot project area does not comply with the interim CASPO guidelines or any subsequently issued owl guidelines contrary to the Act (NOA #0040, p. 123)

### Discussion

The Herger-Feinstein Quincy Library Group (HFQLG) Forest Recovery Act (16 U.S.C. 2104 note) provides that the Forest Service “...shall conduct a pilot project...as recommended in the Quincy Library Group Community Stability Proposal” (16 U.S.C. 2104 note, sec. 401(b)(1)). The HFQLG Forest Recovery Act further states that all resource management activities shall be consistent with “...the standards and guidelines for the conservation of the California spotted owl...” (16 U.S.C 2104 note, sec. 401(c)(3)).

The HFQLG Forest Recovery Act and the reasons for adjusting management direction to allow for full implementation of the HFQLG Forest Recovery Act are discussed on page 29 of the FSEIS. The HFQLG is one of the issues that shaped development of Alternative S2. Although an appellant contends “...analyses did provide information needed to reduce scientific uncertainty...” (NOA #0069, p. 7), the Regional Forester states “...there is still much more to learn and understand about the linkages between management activities, and their effects on owl habitat and population dynamics” (ROD, p. 6). He goes on to say, “Science alone, does not provide a solution to this long-standing management dilemma...” (ROD, p. 6) and that he “...selected Alternative S2 in part because Alternative S1 “...eliminated our ability to study and understand the consequences of certain forest management practices in the Pilot Project Area” (ROD, p. 11).

The 2001 ROD “...replac[ed] all previous California spotted owl management direction [i.e., CASPO]” (2001 ROD, p. 17), and the 2004 ROD “...replaces the January 2001 ROD for the Sierra Nevada Forest Plan Amendment in its entirety” (2004 ROD, p. 3). Therefore, the standards and guidelines for Alternative S2 as displayed in the 2004 ROD constitute the most current direction for conservation of the California spotted owl.

### Decision

I find the Regional Forester was clearly within his authority when he chose to consider and to select an alternative that fully implements the HFQLG pilot project. The FSEIS adequately discloses the effects of implementing the HFQLG pilot project and appropriately references analysis from the FEIS for the HFQLG pilot project. The Regional Forester’s decision is consistent with the requirements of the HFQLG Forest Recovery Act.

## **HEALTHY FOREST RESTORATION ACT AND NATIONAL FIRE PLAN**

### Contentions

One appellant contends the ROD establishes only a “1/4–mile wide protection buffer zone which is inadequate for community protection and is inconsistent with the Healthy Forest Restoration Act [HFRA]” (NOA #4557, p. 1). The appellant also contends, “the effectiveness of the 1/4 mile defense zone is conditioned on the questionable effectiveness of the SPLAT [Strategically Placed Area Treatment] strategy” (NOA #4557, p. 2).

Another appellant contends the 2004 SNFPA is “inconsistent with both the language and intent of the HFRA,” which intends for “logging to emphasize removal of brush and small trees, not logging of medium-large and large trees as allowed by the revised plan” (NOA #0040, p. 124). A third appellant contends the FSEIS and its ROD do “...not recognize or clearly establish the role of communities at risk as intended under HFRA” (NOA #0057, p. 10).

One appellant contends, “The FSEIS states a priority for the National Fire Plan ‘emphasizes the protection of communities’, which the FSES fails to do because it fails to focus fuels treatment in the 200 feet immediately adjacent to structures to protect the structures, as the California Department of Forestry and Forest Service fire science specifies” (NOA #0031, p. 26).

### Discussion

The Healthy Forests Restoration Act of 2003 (HFRA)(Public Law 108–148; P.L. 108–148) authorizes alternative project analysis procedures to those specified by the implementing regulations for NEPA provided the project meets certain requirements of purpose, location and collaboration.

The National Fire Plan is a strategic tool intended to promote cooperation, communication and efficient use of resources in preventing the loss of life, damage to and loss of natural resources, loss of property and economic impacts from wildfire, as well as to plan for and implement measures to restore damaged ecosystems in the aftermath of fire events. One of the five key components of the National Fire Plan is Community Assistance which encompasses working with communities on reducing fire risk, involving the public in NEPA for hazardous fuels reduction projects, creating jobs in restoration and fuels reduction, providing defensible space information, assisting volunteer and rural firefighters, and implementing economic action programs. The National Fire Plan does not discuss or prescribe where hazardous fuels projects should be accomplished. Neither HFRA nor the National Fire Plan applies to Land and Resource Management Plans or the content of such plans.

### Decision

Since HFRA and the National Fire Plan do not impose any requirements on Land and Resource Management Plans I find there can be no violation of law, regulation, or policy.

## **CLEAN WATER ACT**

### Contentions

The appellant contends, “the FSEIS fails to analyze the impacts of activities in these (RCAs and CARs) lands and assessing compliance with Clean Water Act water quality standards, antidegradation statutes...” (NOA #0044, p. 8). The appellant further contends the “designation of a CAR or RCA does not guarantee protection or preclude detrimental management” (NOA #0044, pp.7–8).

### Discussion

In the FSEIS, the following standard and guideline from the 2001 SNFPA ROD is retained under Alternative S2:

Identify existing uses and activities in CARs and RCAs during landscape analysis. Evaluate existing management activities to determine consistency with RCOs during project-level analysis. Develop and implement actions needed for consistency with RCOs (SNFPA ROD, p. A-54).

Since the proposed activities will generally be varied in their scope and intensity, more site-specific analyses will be conducted under NEPA at the project level. If water bodies are impaired under Section 303d, actions will require “execution of applicable components of the TMDL implementation plans” (FSEIS, p. 215).

Standard and guideline #113, cited by the appellant in their contention, states that the forest can: “Allow hazard tree removal within RCAs or CARs. Allow mechanical ground disturbing fuels treatments, salvage harvest, or commercial fuelwood cutting within RCAs or CARs,” but clarifies these activities to include when they are compatible with RCOs. It also states, “Ensure that existing roads, landings, and skid trails meet Best Management Practices” (ROD, p.65).

### Decision

Impacts of activities in RCAs and CARs and the subsequent compliance with the Clean Water Act and antidegradation statutes are most appropriately analyzed and determined at the site-specific level. Direction clearly requires management activities be compatible with RCOs, and that existing roads, landings, and skid trails meet Best Management Practices. I find the FSEIS appropriately analyzes and addresses programmatic compliance with the Clean Water Act and anti-degradation statutes.

## **ENDANGERED SPECIES ACT**

### Contentions

The appellant contends under the Endangered Species Act (ESA) a new listing is required for the CASPO since “USFWS’s [US Fish and Wildlife Service’s] listing decision anticipated the full implementation of all of the 2001 Framework S&Gs [standards and guidelines] for owl protection, generally and also within the Quincy Pilot Project area. The listing decision explicitly stated that significant changes to the 2001 Framework would necessitate further evaluation for listing” (NOA #0053, pp. 37–38). Appellants further contend, “[the] USFWS must revisit its conclusion that listing of the owl is not warranted,” and that the SEIS fails to mention listing for the owl is unwarranted (NOA #0053, p. 38; NOA #4456, p. 8).

### Discussion

The Endangered Species Act at section 4 (b), requires, “The Secretary shall make determinations [listing] required by subsection (a)(1) solely on the basis of the best scientific and commercial data available...” The process for listing or de-listing a species requires that a petition be submitted to the Secretaries to add or move a species from the endangered specs list (Section 4(a) (3) (A)). The Secretaries, within 90 days, shall issue a finding as to whether the petition “presents substantial scientific or commercial information indicating that the petitioned action may be warranted. If such a petition is found to present such information, the Secretary shall promptly commence a review of the status of the species concerned.” The US Fish and Wildlife Service issued a 90-day finding in the Federal Register on a petition to list the California spotted owl as threatened or endangered under the ESA (FSEIS, p. 147; 65 FR 60605). The US Fish and Wildlife Service concluded that the petition presented “substantial information indicating that listing the species may be warranted.” A 12-month status review was initiated.

As identified in the FSEIS, the US Fish and Wildlife Service issued the findings from their status review of the California spotted owl in February 2003, which found, “based on the best available scientific and commercial information available, that the overall magnitude of current threats to the California spotted owl does not rise to a level requiring federal protection” (FSEIS, p.143; AR #512030; 68 FR 7589).

The appellant claims the FWS decision “anticipated full implementation of all of the 2001 Framework S & G’s [standards and guidelines] for owl protection” and therefore, because of the significant changes in the FSEIS, the FWS must revisit their conclusion of the listing of the owl (NOA #0053, p. 38). While the appellant is correct in that the FWS did consider the SNFPA in their 12-month review process, they also acknowledge considerable uncertainty in the decline of owls within certain portions of its range based on demographic results, and that the species may face risk from catastrophic wildfires and habitat loss due to associated fuel treatments (68 FR 7608). The FSEIS discloses the findings from the FWS 12-month review and notes that two efforts could affect their findings: 1) a management review of the SNFPA (leading to this SEIS); and 2) planning for implementation of an administrative study on the Lassen and Plumas National

Forests.” The FWS noted it would monitor and review, if necessary, the development of management direction that could affect the California spotted owl (FSEIS, p. 147).

An appellant claims, “USFWS must revisit its conclusion that listing of the owl is not warranted” because the 2001 SNFPA has been changed which is outside the authority of the Forest Service (NOA #4456, p. 8). Section 4 of the ESA is the mechanism by which listing and de-listing decisions are made and is within the sole authority of the Secretaries of Interior and Commerce. It’s not the within the authority of the Forest Service to administer any of the provisions set forth in Section 4 of the ESA. While the appellant contends the revised Framework violates ESA, the requirement of Section 4, this Section of the Act is expressed responsibility of the Secretaries of Interior and Commerce to administer. As noted in the 12-month findings, “we [FWS] will continue to monitor the status and management of the species. We will continue to accept additional information and comments from all concerned governmental agencies, the scientific community, industry, or any other interested party concerning this finding” (FSEIS, p. 147; 68 FR 7608).

### Decision

The concerns raised by the appellant relate to processes (Section 4 of ESA) that are not within the authority of the Forest Service to administer. Section 4 of the ESA is the mechanism by which listing and de-listing decisions are made and is within the sole authority of the Secretaries of Interior and Commerce.

## **OTHER LAWS, REGULATIONS, AND ORDERS**

### **E.O. 13112—Invasive Species**

#### Contentions

Appellants contend the Sierra National Forest Plan Amendment Record of Decision and Final Supplemental Environmental Impact Statement violate the Executive Order on invasive species "...by authorizing actions that are likely to cause or promote the introduction or spread of invasive plant species, without making a determination that the benefits of such action outweigh the potential costs" (NOA #0047, p. 33).

#### Discussion

Executive Order 13112 of February 3, 1999 (E.O. 13112) states that a federal agency "...whose actions may affect the status of invasive species shall, to the extent practicable...not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species...unless...the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions" (E.O. 13112, sec. 2(a)(3)).

In the discussion of cumulative effects, the FSEIS states that "[t]he Forest Service will provide programs for reducing the spread of noxious weeds under all alternatives...[which]will lead to better control of noxious weeds in the Sierra Nevada over time" (FSEIS, p. 191). Discussion of the effects of Alternatives S1 and S2 can be found on pages 227–229 of the FSEIS and the effects of Alternatives of F2–F8 are discussed in the SNFPA FEIS in volume 2, pages 321–322. Appendix A of the ROD for the SNFPA contains management direction for the Sierra Nevada forests. Included in that direction are management goals and strategies for noxious weed management that establish priorities for such management (ROD, p. 36). Provisions for implementing the management goals and stated priorities are found in 14 management standards and guidelines that address noxious weed management (ROD, pp. 54–55). Those standards and guidelines address prevention as well as treatment of noxious weeds.

The Regional Forester determined that the selected alternative strikes "...a balance between the needs of people and wildlife" (Cover letter to ROD, January 21, 2004) and will best achieve the goals established by the 2001 SNFPA (ROD, p. 5).

#### Decision

Clearly the Regional Forester considered invasive plant species and the effects of the alternative on those species, selecting the alternative he felt produced the best net public benefit. Therefore, the Regional Forester has met the requirements of E.O. 13112.

## **36 CFR 222—Range Management**

### Contentions

The appellant contends implementing Standard and Guideline 53 “...violates the 12-month notice rule” (NOA #0045, p. 8)

### Discussion

Agency regulations for Grazing and Livestock Use on the National Forest System are found at 36 CFR 222, Subpart A. The regulations provide the Chief, Forest Service authorization to “...modify the seasons of use, numbers, kind, and class of livestock allowed [by grazing and livestock use permits]...because of resource condition...” and that “[o]ne year’s notice will be given of such modification, except in cases of emergency” (36 CFR 222.4(a) (8)). There is no one-year notice requirement pertaining to the Chief’s authority to “[m]odify the terms and conditions of a permit to conform to current situations brought about by changes in...or revision of an allotment management plan, or other management needs” (36 CFR 222.4(a) (7)).

Agency regulations for appeals of decisions related to occupancy and use of national forest system lands are provided for in 36 CFR 251, Subpart C. The rules of Subpart C “...govern appeal of written decisions of Forest Service line officers related to issuance, denial, or administration of... [g]razing and livestock use permits issued under 36 CFR part 222, Subpart A.

It is unclear from the record whether the appellant’s grazing and livestock use permit has actually been modified at this time. Any appeal of the modification should be made under the regulations and through the process at 36 CFR 251. An alternate avenue of appealing project decisions is through the process in 36 CFR 215. Such appeals are not covered by 36 CFR 217.

### Decision

Project-level decisions, such as modification of grazing and livestock use permits, may not be appealed under 36 CFR 217. Changes to a grazing permit can be contested under 36 CFR 251, Subpart C appeal process or the process outlined in 36 CFR 215.

## **APPENDIX A—LIST OF APPELLANTS**

A total of 6,241 appeals were submitted under regulations at 36 CFR 217. Of these, 26 were unique or otherwise individual appeals and 6,215 were nearly identical letters or petitions, raising the same or similar issues. Twelve appeals were dismissed: four were untimely, one was not filed in accordance with 36 CFR 217, and seven were withdrawn by the respective appellants. The remaining 6,229 appeals were considered in my decision. Six requests to intervene were filed by interested persons, or potentially affected persons or organizations. Intervention status was granted for all six timely requests in accordance with 36 CFR 217.14(a).

Due to the large number of appellants, the name and the associated NOA number for each appellant has been posted on the World Wide Web at <http://www.fs.fed.us/emc/applit/nhappdec.htm>.

**APPENDIX B—GRAZING CAPABILITY AND SUITABILITY  
DETERMINATION MEMO**

012

United States  
Department of  
Agriculture

Forest  
Service

Washington  
Office

14th & Independence SW  
P.O. Box 96090  
Washington, DC 20090-6090

File Code: 1920  
Route To : 2200

Date: April 25, 1997

Subject: Capability and Suitability Determinations for Domestic  
Livestock Grazing

To: Regional Foresters

Regional Offices have requested clarification of requirements for determining capability and suitability of lands for domestic livestock grazing in land and resource management planning, especially plan revision.

To promote consistent understanding of the statutes and regulations, we are removing inconsistent direction found in FSM 2210.5, FSM 2211, FSM 2212.11, and FSH 2209.14 from the directives system.

The National Forest Management Act requires the identification of the suitability of lands for resource management (16 U.S.C. 1604(g)(2)(A)). The capability and suitability of lands for domestic livestock grazing is determined at the land and resource management planning level. However, it is not necessary or desirable to identify in the land and resource management plan the capability or suitability of lands for domestic livestock grazing on a site-specific basis.

Land and resource management plan management prescriptions and associated standards and guidelines are derived, in part, from the criteria used in capability and suitability determinations. These management prescriptions and standards and guidelines are applied as part of the environmental analysis when determining whether to authorize domestic livestock grazing on a specific site.

Rangelands identified as capable and suitable for domestic livestock grazing in the land and resource management plan may include areas that are not appropriate for domestic livestock grazing when analyzed at the site-specific level, such as some wetlands or some campgrounds. Therefore, the appropriate site-specific decision would be not to allow grazing on those specific areas.

On the other hand, in some situations domestic livestock need not be prohibited from areas not identified in the plan as capable and suitable. For example, a forested area with insufficient forage to support domestic livestock may not be identified as capable and suitable but the presence of domestic livestock drifting from an adjacent suitable area may not conflict with other uses. In this situation, it would not be necessary to physically prevent access to the forested area by domestic livestock but there would be no forage allocation made.

The following is a summary of the requirements for determining the capability and suitability of lands for domestic livestock grazing during land and resource management plan revision:

1. Use definitions of suitability and capability as defined in the planning regulations. (36 CFR 219.3).
2. Identify the capability of National Forest System rangelands for domestic livestock grazing. Document the analysis criteria used and display the estimated number of acres by alternative. (36 CFR 219.20(a) and 219.12(c)).
3. Of the rangelands identified as capable, identify those that are suitable for domestic livestock grazing. Document the analysis criteria used and display the estimated number of acres by alternative. (36 CFR 219.20(a) and 219.12(c)).
4. Identify the ecological condition and trend of the rangelands suitable for domestic livestock grazing. (36 CFR 219.20(a)).
5. Establish multiple-use prescriptions and associated standards and guidelines for domestic livestock grazing. (36 CFR 219.11(c)).

/s/Janice H. McDougle  
JANICE H. MCDOUGLE  
Acting Deputy Chief, NFS