# Notice of Appeal

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| The Sierra Nevada Forest Protection Campaign, The Sierra Club, and the Plumas Forest Project | ) | Notice of Appeal of the Record of Decision and Final Environmental Impact Statement for the Freeman Vegetation Management Project on the Beckwourth Ranger District, signed 7/28/06. |
| v. | ) | Responsible Official: James M. Peña, Forest Supervisor, Plumas National Forest, Quincy, CA.) |
| Jim Peña, Forest Supervisor Plumas National Forest<br><br>Responsible Official | ) | Appeal Deciding Officer: Bernard Weingardt, Regional Forester, USDA Forest Service--PSW 1323 Club Drive, Vallejo, CA 94592 |
| _____ | ) | Appeal Date: November 20, 2006 |

**Notice of Appeal**
**And**
**Statement of Reasons**
**Pursuant to 36 CFR § 215**

Appellants:


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November 20, 2006

## I. Description of Appeal.

The Sierra Nevada Forest Protection Campaign, The Sierra Club, and the Plumas Forest Project (hereafter, "the Campaign") Appeal and Request Relief from Regional Forest Bernard Weingardt, Regional Forester, Region 5-PSW from the Record of Decision (ROD) and Final Environmental Impact Statement (FEIS) for the Freeman Project on the Beckwourth Ranger District of the Plumas National Forest, signed September 13, 2006 by Mr. Jim Peña, Forest Supervisor, Plumas National Forest, the Responsible Official. The Campaign's prior comments on this project, and its Appeal of the 2004 Framework decision (SNFPC et al. 2004), submitted with the Campaign's scoping comments, are hereby incorporated by reference into the body of this Appeal.

The Campaign's Appeal is timely, having been filed on or before November 20, 2006, on the first day of federal business following 45 days from the publication of the Notice of Decision in the paper of record, the Feather River Bulletin, in Quincy CA.

## II. Description of Appellants.

The Sierra Nevada Forest Protection Campaign is a 98-member group environmental coalition focused on the conservation, enhancement and protection of old growth forests, wildlands, at-risk species, rivers and streams and the ecological processes which shape the forests of the Sierra Nevada. We have standing based upon substantive comments on the Freeman proposed action and draft environmental impact statement. We have made a site visit to the areas proposed for treatment and have read the Freeman Project Proposed Action, Draft EIS, Final ROD and FEIS, and the key specialists reports.

The Sierra Club-Mother Lode Chapter encompasses the Sierra Nevada and Cascade ranges from Yosemite to the Oregon boarder. The chapter's 18,000 members desire that our National Forests be managed to enhance forest ecology and provide appropriate fuels treatments near communities.

The Plumas Forest Project is a non-profit grassroots environmental organization formed in 1989 to monitor activities on the Plumas National Forest. The Plumas Forest Project focuses primarily on logging, with its main goal being to ensure that forest Service projects protect all old growth stands as well as individual, larger, fire-resilient trees important to wildlife and watersheds. Throughout the 1990s, Plumas forest Project cooperated with other groups interested in similar protections for the Sierra Nevada through its public involvement in the Regional planning process that culminated in the 2001 Sierra Nevada Forest Plan Amendment, otherwise known as the Sierra Framework. Plumas Forest Project seeks to ensure that the best science available is used by the Forest Service to address concerns about wildlife, watersheds, and wildfire.

## III. Project Description

The Freeman FEIS and ROD choose Alternative 4, which involves construction of 3,037 acres of defensible fuel profile zones (DFPZs), 458 acres of which are located in the Wildland

Urban Interface ("WUI"). Alternative 4 also involves 174 acres of group selection logging, and 2,419 acres of thinning treatments (FEIS, pp. 60-61.) Overall, Alternative 4 treats approximately 5,792 acres, (FEIS p. 57),

The project area is approximately 14,950 acres and ranges in elevation from 5,600 feet to 7,693 feet at Smith Peak. (FEIS, p. 152). The project area provides important habitat for sensitive and imperiled species including the California spotted owl, the American marten, and the Pacific fisher. The Freeman Project is located in the vicinity of Area of Concern (AOC) Nos. 1 and No. 2 for the California spotted owl, meaning that it is "characterized by habitat fragmentation that decreases the density of owl pairs, makes successful dispersal more difficult, and reduces the likelihood of quick replacement of owls in vacated habitat." (Verner et al. 1992, p. 45). Any further reduction of habitat in this region thus threatens long term owl viability.

The FEIS states that the Freeman Project Wildlife Analysis Area includes 41,388 acres of Forest Service land, (p. 152), containing 24,900 acres of suitable habitat, (p. 211). However, the Freeman Project proposes to eliminate over 3,000 acres of this habitat through logging within DFPZs, thinning areas and groups that will remove trees up to 30" diameter in many stands. Within DFPZs and most thinning units, canopy cover will be reduced to 40 percent or lower. Large snags and downed wood will also be removed. In sum, by lowering canopy cover and removing co-dominant larger trees and remaining structural characteristics of old forests, the Freeman Project will degrade habitat for old forest associated species like the California spotted owl, American marten and Pacific fisher.

The environmental impacts of this project will be significant. The FEIS (p. 213) estimates that 3,416 acres of nesting and foraging habitat for the California spotted owl, approximately 14 percent of the current nesting and foraging habitat within the Wildlife Analysis Area, will be rendered unsuitable. Alternative 4 will also render 631 acres of owl home range core areas (HRCAs) unsuitable for owl occupancy. (FEIS, p. 215). HRCAs are designed to include "the best available California spotted owl habitat in the closest proximity to the owl activity center." (USDA Forest Service 2004a, p. 39). Extensive logging within HRCAs is likely to adversely affect owl reproduction and occupancy. (Britting 2006a & b**)**. Moreover, the FEIS (p. 220) acknowledges that matrix lands between existing owl PACs and SOHAs are currently in poor condition due to past logging and wildfires. Given the poor habitat condition in the Freeman Project area and statistical evidence that owls are likely declining in the region, (Franklin *et. al.*), the Forest Service cannot ensure viability of owls in the Plumas National Forest when it implements aggressive logging projects such as this one that adversely affect owl HRCA habitat. (Britting 2006a & b.**)**

The FEIS (p. 263) also projects that approximately 3,416 acres of habitat for the marten and fisher will be rendered unsuitable, which could destroy den sites and reduce north-south habitat connectivity. This habitat reduction is particularly problematic given that the marten has not been detected in the project area in recent years, thereby raising the likelihood that this area may presently act as a barrier to habitat connectivity within the Plumas National Forest. (Kucera 2006a & b). The FEIS does not provide any analysis how further reductions in habitat may contribute to supporting marten or fishers over their home ranges. (Kucera 2006a & b).

The FEIS argues that the Freeman Project is necessary to reduce the risk of stand-replacing wildfire. Although we support the goal of reducing the risk of catastrophic wildfire, the Forest Service has failed to demonstrate that the intensity of proposed logging is needed to achieve this goal. The Fuels Report provides only a simplistic comparison between the action alternatives – which are nearly identical in their logging intensity of trees up to 30" dbh – and the no-project alternative, which assumes that fuel loads will remain untreated in the project area. As discussed below, this is a false choice since fuel reduction objectives can be met by reducing surface fuel loads and thinning stands. *See* Rice 2006a & b, Britting 2006a & b.

## IV. Appeal Summary

The Campaign appeals the Freeman Vegetation Management Project based upon: (1) violations of the National Environmental Policy Act ("NEPA"), 42 USC 4321-4370, and its implementing regulations, and (2) violations of the National Forest Management Act ("NFMA"), 16 USC 1600 *et seq*., and its implementing regulations, regional and forest plans, as set forth more fully below. This appeal is based on legal inadequacies raised in the Campaign's prior comments.

The Freeman Project's NEPA violations include failure to consider a reasonable range of alternatives, or take a hard look at the alternatives considered, failure to present and analyze necessary and accurate scientific information, failure to take a hard look at the individual impacts of this project, and failure to consider the cumulative impacts of this project in combination with other past, present and reasonably foreseeable future projects (including projects that are foreseeable as part of the QLG pilot project) segmentation of existing projects and use of an analysis area that is too small. The Forest Service lacks information on habitat quality, how the project will impact existing habitat, and how post-treatment habitat will be sufficient for wildlife in the type of fragmented, low canopy coverage forest that will result from this project. Thus, it was unable to take the "hard look" at the environmental impacts of this project, as required by NEPA. *See Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1212 (9th Cir. 1998).

The Freeman Project also violates NFMA since the Forest Service is not insuring the viability of sensitive forest species when it conducts the intensive fuel reduction, group selection and ITS harvesting proposed for this project. *See* 16 U.S.C. 1604 § 6(g) (3)(B), 36 C.F.R. § 219 *et. seq.* The Forest Service's failure to assess project and landscape level impacts to sensitive wildlife species and management indicator species, failure to monitor (at the forest plan or project level) populations of management indicator species and species at risk means it cannot insure that it is maintaining diversity and viability of wildlife in the forest. *See Earth Island Inst. v. U.S. Forest Serv.*, 442 F.3d 1147, 1153 (9th Cir. 2006); *Sierra Nevada Forest Protection Campaign v. Tippen,*, 2006 U.S. Dist. LEXIS 57832 (E.D. Cal. August 16, 2006). Further the Forest Service is violating its own Forest Plan and guidelines by allowing for continued significant impacts to soil, thereby leading to a substantial and permanent impairment of the productivity of the land.

The Freeman Project implements the 1999 Herger-Feinstein Quincy Library Group Forest Recovery Act ("QLG") and tiers to the 2004 Sierra Nevada Framework ROD (USDA

Forest Service 2004a), and accompanying FEIS (USDA Forest Service 2004b). As demonstrated in the Campaign's appeal of the 2004 ROD and FEIS (SNFPC et al. 2004), both the new plan and the FEIS fail to comply with the National Forest Management Act (NFMA), the National Environmental Policy Act (NEPA), and other environmental laws. The Freeman Project as presently proposed is also contrary to law for the reasons set forth in the Campaign's appeal of the Framework decision (a copy of which was provided as part of the Campaign's original scoping comments and incorporated by reference herein).

The Campaign requests that the Forest Supervisor's decision be reversed and that the Forest comply with all applicable laws in completing its review for this project.

## V. Statement of Reasons

### A. The Freeman Project Violates NFMA for Failing to Ensure the Viability of the Spotted Owl and Marten in the Planning Area and Plumas National Forest

The National Forest Management Act (NFMA) directs the Forest Service to "provide for diversity of plant and animal communities" in the planning process. 16 USC 1604(g)(3)(B). The Forest Service's regulations that implement this statutory mandate require that "[f]ish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species." 36 CFR 219.19. "For planning purposes, a viable population shall be regarded as one which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area." *Id*. With respect to Forest Service designated sensitive species, the agency is further required "to insure their viability and to preclude trends toward endangerment that would result in the need for Federal listing." (Forest Service Manual 2672.1.) Through these steps in this process, NFMA imposes substantive constraints on the management of forest lands to insure biological diversity. *See Neighbors of Cuddy Mountain v. United States Forest Service,* 137 F.3d 1372, 1379- 1380 (9th Cir. 1998).

The Freeman Project would threaten the viability and distribution of wildlife species, including the California spotted owl and American marten. The Project continues the Forest Service's approach of intensive fuel reduction and logging despite the science indicating that these species are in decline and that further reduction in quality habitat poses grave risks to their future viability in this area. Moreover, the project would contribute to a trend towards federal listing of these same species, contrary to law. The FEIS and BE rely heavily on the 2004 Framework to conclude that the Freeman Project will not threaten the viability of sensitive species. However, as demonstrated in the Campaign's 2004 Framework Appeal (SNFPC et al. 2004), that conclusion is unwarranted.

#### 1. The Forest Service Is Not Ensuring Viability for the Spotted Owl in the Planning Area or the Plumas National Forest

As described in our prior comments and below, Section V.B.1.a *infra*, the Freeman Project threatens the viability and distribution of the California spotted owl both within the planning area and in the surrounding national forest. *See* Bond 2006a & b; Britting 2006.

The Freeman Project does not ensure viability because, as discussed below and in prior comments: 1) the Forest Service has not provided sufficient information to determine that owls will have enough quality habitat to survive at each of the three relevant spatial scales, nest core, home range core area and home range; 2) the Forest Service lacks sufficient information to determine whether owls have the "estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area;" 3) to the extent such information exists, it suggests that owls lack these numbers and appropriate distribution in the planning area; 4) the Forest Service is not considering the adverse impacts of fuel reduction treatments on owl habitat that the Freeman project documents are characterizing as suitable 4M; 5) the Forest Service has not adequately considered the potential for owl habitat fragmentation or cumulative impacts.

The Science Consistency Review agreed that information on CSO population trends is uncertain...the uncertainty lies in whether populations are in fact declining, not whether they are increasing." (SCR 2005). The SCR explained this point as follows:

> When presenting statistical information, scientists generally choose 95% confidence intervals and test hypotheses with an alpha level of 0.05 (5% chance of committing a Type 1 error...We are making an inference about the degree of difference between the observed population trend and a stationary (lambda = 1) population. When the 95% confidence intervals around lambda overlap 1.0, we are not 95% sure that the population is stable. Instead, we are NOT 95% sure that the population is declining. (SCR 2005)

As discussed below, the quality of owl habitat in the project area is of particular concern given that the owl study areas are typically conducted in areas with higher quality habitat than in Freeman. Thus elimination of further quality owl habitat poses grave risks due to the owl's uncertain viability. As noted by the SCR:

> One might also reasonably ask whether the study areas chosen for conducting demographic studies are representative of CSO populations in general or are at the higher end of quality (although possible, it seems unlikely that these study areas are at the lower end of the habitat quality spectrum for the species. If the reality of CSO populations is that they are declining, activities that further remove their habitat are likely to further contribute to their decline. If CSO populations are in reality stationary, activities that remove their habitat may or may not push the population from stationary to declining, depending on the magnitude of habitat loss and how close to declining the population currently is.

(SCR 2005)

Thus, in considering spotted owl viability, the Forest Service must proceed with extreme caution in implementing any project that adversely affects suitable owl habitat or dispersal matrix lands. Bond 2006a & b. In sum, there is substantial uncertainty, and thus substantial cause for concern regarding the owl's population throughout the Sierra Nevada, within the Plumas National Forest, and within the Freeman Assessment area. *See also* Franklin et. al. 2004

("all demographic evidence available....suggests substantial caution in owl conservation and management efforts.") Bond 2006a & b.

Here, as discussed below, logging in PL 203 and 204 will lead to significant reductions in existing habitat, yet these PLs have not been occupied recently by a reproducing pair of owls. Thus the Forest Service has no basis to conclude that reducing habitat in an area that is likely already on the edge of minimum suitability for owl reproduction and survival will not have significant impacts. Given the level of remaining habitat, is it unlikely this area will be re-occupied in the near future. See Bond 2006a & b.

The FEIS confirms that existing habitat may already be inadequate to support owls in the Wildlife Analysis Area. For example, the FEIS states that although owl HRCAs are well distributed across the wildlife analysis area, they are also confined across the Freeman Project area by large blocks of unsuitable habitat." (FEIS, p. 220.) Thus the FEIS concludes that it is uncertain whether the same number of owl sites occupied in 2002, 2003 and 2004 would be occupied post-project. (*Id*.).

Our review of the Freeman Project documents indicates that the Forest Service appears ready to sacrifice the viability of owl PACs to further other project purposes. The Forest Service acknowledges that logging in the affected PACs 203 and 204 pose "high risk" to future occupancy, yet allows for such logging to occur nevertheless. *See* FEIS, p. 227, This approach contradicts the Forest Service's own reliance on the existence of PACs to support the idea that owl populations are stable or on an "upward trend." As discussed below, the Forest Service relies on the number of PACs designated across the Forest as a measure of owl presence and population. While the Campaign does not agree that this approach is scientifically based, *see* Discussion, Section V.B.1.b, *infra*, this approach is also undermined by the Forest Service's apparent intent to allow PACs to be degraded in a manner which threatens continued owl occupancy and thus distribution in the Forest. As noted by Britting 2006, pp. 3-4:

> Overall, the BE concludes that habitat quality in the project area is low (BE, p. 101) and that the treatments will reduce treated habitat to unsuitable. As a result, the BE concluded that there was a high likelihood of two of the three affected owls sites being abandoned. (Ibid., p. 96). Other projects in the general area have made similar findings. Of the fifteen owl sites directly affected by the Happy Jack, Empire and Freeman projects, 60% of the sites have a moderate or high risk of abandonment and 27% have a high risk of abandonment….Beyond this, the Diamond project (Plumas National Forest 2006) affects a large number of owl sites however that BE did not estimate risk of PAC abandonment. Similarly, the Mabie, Meadow Valley, Watdog, and Slapjack projects may each contribute to the risk of PAC abandonment. Cumulatively, these risks may be significant and should be assessed across the forest.

Given the Forest Service's willingness to allow PACs and surrounding HRCA habitat to become inadequate for owl occupancy and survival, the Forest Service cannot insure viability of the species, either in the planning area or in the Plumas National Forest.

### 2. The Freeman Project Is Not Ensuring the Viability of the American Marten.

As described in our prior comments and below, the Freeman Project threatens the viability and distribution of the American marten both within the project area and in the surrounding national forest. *See also* Kucera 2006a & b; Britting 2006, Figure 3.

The Freeman Project does not ensure viability because, as discussed above and in prior comments: 1) the Forest Service has not considered or explained how marten's can remain viable when they appear to have disappeared from much of the Plumas National Forest; 2) the Forest Service lacks sufficient information to determine whether marten have the "estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area;" 3) to the extent such information exists, it shows that marten lack these numbers and appropriate distribution in the planning area; 4) the Forest Service is not considering the adverse impacts of fuel reduction treatments on marten habitat that the Freeman project documents are characterizing as suitable 4M; 5) the Forest Service has not adequately considered the potential for marten habitat fragmentation or cumulative impacts.

As discussed above and in prior comments, the Forest Service also cannot insure the viability of the marten as it implements the QLG in a manner consistent with the Freeman Project. The Campaign refers the Forest Service to the discussion below on marten impacts, Section V.B.2 *infra,* and cumulative impacts, Section V.B.3 *infra,* and to its prior comments on this project and Appeal on the Framework to support this ground for appeal.

## B. The Freeman Project Violates the National Environmental Policy Act

Under NEPA, the EIS for a major federal action must include "a description and analysis of the environmental impact of the proposed action, any adverse environmental effects that cannot be avoided if the action is implemented, alternatives to the proposed action, the relationship between short-term uses and long-term productivity, and any irreversible or irretrievable commitment of resources that would be involved if the action were to be implemented. *See Sierra Nevada Forest Protection Campaign v. Tippen* quoting *Earth Island Inst. v. U.S. Forest Serv*., 442 F.3d 1147, 1153 (9th Cir. 2006); 42 U.S.C. § 4332(2)(C). "In short, NEPA requires that a federal agency 'consider every significant aspect of the environmental impact of a proposed action' and inform the public that it has indeed considered environmental concerns in its decisionmaking process.'" *Id*.; *see also Kern v. U.S. Bureau of Land Mgmt*., 284 F.3d 1062, 1066 (9th Cir. 2002).

NEPA ultimately prohibits uninformed agency action. *See e.g., Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350-51* Thus, under NEPA, the Forest Service cannot make conclusory assertions that an activity will have insignificant impact on the environment. *See Alaska Ctr. for Env't v. United States Forest Serv*., 189 F.3d 851, 859 (9th Cir. 1999). Instead, the Forest Service must take a "hard look" at the potential impacts of a proposed timber plan, and must put forth a "convincing statement of reasons" that explain why the project will impact the environment no more than insignificantly. *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1212 (9th Cir. 1998). "General statements about possible effects" and some risk do not constitute a 'hard look' absent a justification regarding why more definitive

information could not be provided." *Neighbors of Cuddy Mountain v. United States Forest Service*, 137 F.3d 1372, 1380 (9th Cir. 1998).

Further, an agency must take a hard look at alternatives to the proposed project, particularly whether such alternatives can achieve the project purposes with less environmental impacts. *See e.g., See Sierra Nevada Forest Protection Campaign v. Tippen.*

An agency's NEPA analysis must also consider cumulative impacts of reasonably foreseeable future actions and impacts from "cumulative actions" as defined under NEPA. *See Native Ecosystems Council v. Dombeck*, 304 F.3d 886, 895-96 n.2 (9th Cir. 2002); *Bayeeper v. U.S. Army Corps of Engineers*, 2006 U.S. Dist. LEXIS 67483 (E.D. Cal. September 20, 2006); *Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 969, 971-73 (9th Cir. 2006) A "cumulative impact is defined as:

> [T]he impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

40 C.F.R. § 1508.7. "[P]roper consideration of the cumulative impacts of a project requires some quantified or detailed information;... [g]eneral statements about possible effects and some risk do not constitute a hard look absent a justification regarding why more definitive information could not be provided." *Klamath-Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 993 (9th Cir. 2004)

An agency cannot simply offer conclusions but must instead identify and discuss the impacts that will be caused by each successive project, including how the combination of those various impacts is expected to affect the environment, so as to provide a reasonably thorough assessment of the projects' cumulative impacts. *Id*. "The analysis must be more than perfunctory," id. at 994, and "must give a sufficiently detailed catalogue of past, present, and future projects, and provide adequate analysis about how these projects, and differences between the projects, are thought to have impacted the environment." *Lands Council v. Powell*, 395 F.3d 1019, 1028 (9th Cir. 2005).

Here, the Freeman Project planning documents fail to include important information and analysis necessary to a full and accurate assessment of the impacts of the project and alternatives that could avoid or lessen such impacts to owls, martens and other sensitive forest species.

### 1. The Freeman Project Fails to Take a Hard Look at Impacts to California Spotted Owls

#### a. Failure to Provide or Analyze Information Regarding Existing Habitat and Habitat Loss

The Freeman Project does not provide enough information or analysis regarding the impacts of Alternative 4 to spotted owl habitat at each of the relevant scales for assessing owls:

the core area around the nest, the area designated as the home range core, the home range area and a larger area analyzing how different owl home ranges interact across the landscape. As noted by Bond 2006b, ["[a]ssessment of impacts at each of these scales is necessary to be biologically valid and based on the best scientific data available."

The Forest Service continues not to provide sufficient information to assess the removal of quality habitat in sensitive areas, including in the vicinity of nests. As the Forest Service has recognized, Blakesley (2005) showed that site occupancy was positively associated with the amount of nest area dominated by larger trees and higher canopy cover (>70%) at a 203 hectar/500 acre nest area, and was negatively associated with non-habitat. In particular, site occupancy was best predicted by the quality of habitat in the nest core area. *See* Blakesley (2005) ("Nest area (203 ha) composition was a much better predictor of site occupancy than core area (814 ha), but relationships to apparent survival and reproductive output were similar at both spatial scales.")

High quality nesting habitat that supports adult survivorship is generally defined as areas of high canopy cover (> 70%) in large size 5 class trees averaging greater than 24" dbh. *See* Table AA-3.28 in the QLG EIS (pasted below):

**Table AA - 3.28**
**Spotted Owl Suitable Habitat Attributes**

| Stand Attribute | Nesting and Roosting | Foraging |
|---|---|---|
| Percent Canopy Cover **1** | 70-95 | 50-90 |
| Total live tree basal area **2** | 185-350 | 180-220 |
| Total snag basal area **3** | 30-55 | 15-30 |
| Basal area of large snags **4** | 20-30 | 7-17 |
| Downed woody debris **5** | 10-15 | 10-15 |

**Footnotes:**
**1** Mostly in canopy >30 feet high, including hardwoods
**2** Square feet per acre
**3** Dead trees >15" dbh and feet tall
**4** Tons per acre
**5 Missing**

However, the FEIS, p. 211, Table 3.38, does not identify the amount of this habitat present. Instead, the FEIS and BE characterize lower quality 5M habitat – which lacks 70% canopy cover includes forest with canopy cover down to 40%, unsuitable for nesting and thus not "nesting habitat" for owls. *See* Bond 2006a & b. Thus the Freeman project presents an inaccurate measure of the current amount of nesting habitat available for owls.

Further, the FEIS presents no information regarding the availability of nesting habitat in the nest core area.

Our comments have previously noted that this habitat is critical to adult survivorship, which is a key to long term occupancy of an area. As noted by Blakesley (2005):

> The positive association we found between habitat classes affecting survival and fecundity contrasts with the trade-off found for northern spotted owls in northwestern California, in which the amount of interior mature and old-growth forest was positively associated with survival and negatively associated with reproductive output (Franklin et al. 2000). Both survival and reproductive output were positively associated with the length of edge between mature/old-growth forest and other vegetation types, including younger forest (Franklin et al. 2000). As a partial explanation of this pattern, Franklin et al. (2000) noted that dusky-footed woodrats (Neotoma fuscipes) are the primary prey of northern spotted owls in northwestern California Ward et al. 1998) and are found in highest densities in sapling/brushy pole timber stands <25 yr old (Sakai and Noon 1993).

Blakesley (2005) concludes that:

> Land managers in the Sierra Nevada region should retain forest stands dominated by large trees with canopy cover >70% and minimize the amount of area unsuitable to spotted owls within 200 ha surrounding potted owl site centers to promote site occupancy. Minimization of non-suitable habitat should also increase spotted owl reproductive output.

*See also* Bart (1995) (owl fecundity and adult survival decreased with decreasing amounts of suitable habitat around the core activity centers and that "removing any suitable habitat within the vicinity of the nest tends to reduce the productivity and survivorship of the resident owls."); USDA Forest Service 1998, p. 24, ("In the absence of clear reasons why these results would not apply to the California spotted owl as well, they need to be considered in planning for the owls in the Sierra Nevada.")

Here, the Forest Service does not provide information regarding the quality of the 500 acre nest core habitat nor the harvesting that will occur within nor any analysis of potentially significant impacts to these areas. In comparison, Blakesley 2003 found that the average nest core area composed of forest stands with >70% canopy cover was 52%. Blakesley 2003; Bond 2006 a & b. Here, GIS data indicates that nesting habitat, as defined by the QLG FEIS, is almost entirely absent from current nest core areas affected by the project. *See* Britting 2006b & Figure 1. Blakesley 2003 also found 38% of the nest core area are in stands with large trees (>24" dbh) and >40% cover and that 24% of the nest core area are in stands with large trees (>24" dbh) and >70% cover, i.e., 5D habitat. Blakesley also found an average of 83% suitable habitat within the 500 acre nest area, with a standard deviation of 12% (Blakesley 2003). *See also Sierra Nevada Forest Protection Campaign v. Tippen, supra.*

Here, the Freeman Project provide no information regarding the average canopy cover, the amount of nesting habitat or any other information that would allow for an analysis of the amount of high quality habitat in the nest core area. As noted by Britting (2006):

> This limited evaluation of activity within nest cores undertaken for the Freeman Project is in conflict with the basic purpose of a nest core analysis. A nest core analysis properly based on Blakesley (2003) and Blakesley et al. (2005) would have evaluated the

condition of the habitat within the entire nest core area and compared this with post-treatment alterations in habitat.

One objective of such an analysis is to assess the present condition of the nest core area and then compare the effects of the alternatives could then be compared to the data observed by Blakesley in her review of 67 owl territories to assess the potential effects on site occupancy from this project. *See* Britting 2006. Instead, the project documents do not assess the impacts of harvesting in this extremely sensitive habitat nor how the resulting habitat compares to the standards identified by Blakesley as typical of owl territories in her study. *See e.g.*, FEIS, p. 217. Instead, the project documents present the amount of logging of the area of overlap between the nest core and HRCA, which is not the relevant inquiry since this comparison ignores nest core acres that do not overlap. *See* Britting 2006 & Figure 1. The Campaign continues to believe that harvesting in the nest core areas without assessing the quality of existing nest core habitat or impacts to that area from logging violates NEPA. *See e.g., Sierra Nevada Forest Protection Campaign v. Tippen, supra.*

The Forest Service also continues not to take a hard look at the impacts to owl home range core areas. As discussed in previous comments, HRCAs are designed to include "the best available California spotted owl habitat in the closest proximity to the owl activity center." (USDA Forest Service 2004a, p. 39). Extensive logging within HRCAs is likely to adversely affect owl reproduction and occupancy. *See e.g.*, Blakesley (2005); Bart (1995).

Here, Alternative 4 proposes to reduce suitable habitat in approximately 631 acres of owl home range core areas. (FEIS, p. 215, Table 3.40.) In particular, the Project will reduce suitable HRCA habitat from 597 to 310 acres in PL203, a reduction of 48%, and from 476 to 134 acres in PL204, a reduction of 72%. (FEIS, p. 215, Table 3.41-4.42.) The remaining suitable habitat in these HRCAs will be 44% (310/700 acres) for PL203 and 17% (134/775 acres) for PL204. *See* FEIS p. 215-216, Tables 3.41-3.42.

The Forest Service concludes that these significant habitat reductions in critical owl habitat pose a “high risk” to PAC viability. *Id.* Further, this habitat loss within the HRCAs poses a real risk to the long-term productivity of owl territories within the analysis area. (*See e.g.*, Bond 2006a, 2006b.) As discussed in prior comments, HRCAs are critical to maintain owl viability, yet the Freeman project documents do not assess the quality of this habitat nor explain how further logging in the HRCAs will not harm owls, particularly given the low levels of suitable habitat in the HRCAs in which logging is proposed.

The FEIS (p. 216, Table 3.42) states that HRCA PL203 only has 23% (171/700) 5M or 5D habitat, and HRCA PL204 only 1% (9/775) 5M or 5D habitat. As discussed above, the project documents incorrectly refer to this habitat as “nesting habitat.” Even considering Class 5 habitat as a single category, the Freeman numbers indicate an inadequate amount of large trees, yet the Forest Service still proposes to log additional 20-30” dbh trees in these critical habitat areas. Overall, Alternative 4 proposes to eliminate 379 acres of Class 5 habitat, FEIS, p. 213 (Table 3.39) but assumes that this impact will be offset by retention of some quality habitat within owl PACs and SOHAs. This conclusion does not account for the importance of high quality habitat for owl survival. The FEIS shows that none of the HRCAs contain anything near

50% high quality habitat containing trees at least 24" dbh yet the project proposes to remove more nesting habitat from the HRCAs and from the project area.

Blakesley 2003 found that 32% of the larger core area – approximately the same size as the home range core area - were in stands with large trees (>24" dbh) and that 19% of the core area were in stands with large trees (>24" dbh) and >70% cover. Here, the HRCAs have do not provide the amount of 5D nesting habitat in the home range core area but do propose to eliminate size 5 class habitat and remove 20-30" trees which will contribute to future 5D habitat in the future.

More recent research reviewing habitat characteristics of areas similar in size to HRCAs support the critical importance of retaining nesting habitat with large trees and high canopy cover. In Seamans (2005) found that "forests comprised of medium and large trees and having high canopy cover [i.e., CWHR 5D and 4D] were correlated with higher territory occupancy and higher individual survival rates." (*Id*., p. 91). Seamans found that forests with medium (12 to 24 inch) to large (≥ 24 inch) trees and ≥70% canopy cover were positively associated with survival of and probability of site occupancy by adult (≥1 year old) California spotted owls at the 400-ha (988-ac) scale, and amount of hardwood forest, brush-sapling, or pole coniferous forest was negatively associated with these parameters. Contrary to other studies of the northern spotted owl (e.g., Franklin et al. 2000), Seamans found that increasing habitat heterogeneity did *not* positively impact survival and reproduction. Amount of interior forest within an owl territory was important in explaining spatial variation in population vital rates, and habitat fragmentation was either "neutral or negative" for population growth rate, survival, and reproduction. *See also* Bond 2006a & b. Seamans (2005) concluded that "maintaining existing contiguous blocks of forest dominated by medium and large trees with high canopy cover in owl territories, and allowing forests in earlier seral stages to mature, would benefit California spotted owls. This should increase not only survival, but also encourage occupancy of these sites by owls." Seamans (2005) also states that "my results indicated intensive thinning of forest patches within owl territories that results in a lowering of canopy cover may have negative impacts on survival, and may impact occupancy of territories."

Chatfield (2005) examined habitat within circular territories of about 1,135 acres around each nest stand. She found that the relative probability of spotted owl territory occupancy increased with increasing amounts of mid- to late-seral forests having high canopy cover [i.e., 70 percent or greater]." (*Id*., p. 40).

In combination, these studies support the use of 70% as the minimum threshold for nesting habitat and the need to maintain a reasonable percentage of high canopy nesting habitat within owl territories to ensure owl occupancy and persistence. *See* Britting 2006

The 2004 Framework states that desired conditions for California spotted owl 1,000-acre HRCAs are to achieve at least 50—70 % canopy cover, at least 24 inch diameter trees dominating the overstory, and a higher-than-average level of snags and downed woody debris. Treatments must be designed to avoid the highest quality habitat and existing suitable habitat must be retained (although some habitat may be modified to meet fuels objectives). 2004 ROD p. 46, Table 1. *See also* Bond 2006a, 2006b,

Here, the project documents do not explain whether or how this desired condition is being met. The project documents do not discuss the amount of canopy cover that will occur within the HRCAs, either in the treatment or outside the treatment acreage. The public is unable to ascertain what levels of canopy cover occur currently and post-treatment from the information provided within the BE. *See* Bond 2006a, 2006b; Britting 2006

Logging in PL 203 and 204 will lead to significant reductions in existing habitat, yet these PLs have not been occupied recently by a reproducing pair of owls. Thus the Forest Service has no basis to conclude that reducing habitat in an area that is likely already on the edge of minimum suitability for owl reproduction and survival will not have significant impacts. Given the level of remaining habitat, is it unlikely this area will be re-occupied in the near future. *See* Bond 2006a & 2006b.

As discussed below, the Campaign does not agree that the protection of PACs and SOHAs standing alone is adequate is adequate to ensure owl survival in the area. Instead all the studies on HRCAs suggest that the HRCA area of 1,000 acres is critical habitat within an owl's home range that must be protected to insure viability. *See* Blakesley (2005) ("Within owl core areas (814 ha), increased amounts of habitat used by spotted owls for nesting, roosting and foraging should increase owl survival"); Bond 2006a & 2006b. Further, as discussed below, it may be that in some PACs, the current nest core habitat is already degraded such that the HRCA habitat is critical to maintain to avoid an isolated "island" surrounded by unsuitable habitat. Bond 2006a & 2006b.

Finally, the Freeman project documents continue not to provide necessary information and analysis regarding the adequacy of current owl home ranges within the assessment area. In the QLG EIS the Forest Service adopted a 50% suitable habitat threshold for owl home ranges based on results from Bart (1995). Based on this threshold, the Forest Service analyzed the percentage of suitable habitat within each owl home range, compared to a desired goal of 50 percent suitable habitat. (USDA Forest Service 1999, pp. 76-82). The Forest Service then estimated the number of owl home ranges that would have less than 50 percent suitable habitat after project implementation as part of the assessment of likely impacts on the owl population.

The Freeman Project documents still do not provide information about the current extent of suitable habitat within owl home ranges, nor the amount of suitable home range habitat post-treatment. The FEIS notes that logging within HRCAs and home range areas may increase competition among remaining owl pairs, but offers no analysis of why such loss of quality habitat does not pose a high risk for the owl. There is considerable evidence that owls require home range habitat to retain certain minimal habitat components such as interior forest habitat, multiple canopy layers and minimum canopy coverage.

Here, the Forest Service appears satisfied to relegate owls to 300 to 500 acre habitat blocks, the size of the PACs and segments of remaining HRCAs that are to be protected. The FEIS confirms that existing habitat may already be inadequate to support owls in the Wildlife Analysis Area. For example, the FEIS states that although owl HRCAs are well distributed across the wildlife analysis area, they are also confined across the Freeman Project area by large

blocks of unsuitable habitat." (FEIS, p. 220.) Thus the FEIS concludes that it is uncertain whether the same number of owl sites occupied in 2002, 2003 and 2004 would be occupied post-project. (*Id*.) Yet despite these findings, the Forest Service states:

> Because PACs and SOHAS are avoided by treatments and the majority of the habitat within the 700 acre plus HRCAs would not be affected by treatments, it seems reasonable to assume that occupancy would be maintained.

(FEIS, p. 220.) The fragmentation of the resulting owl habitat areas can be seen in Britting 2006, Figure 1. *See also,* Discussion, *infra.*

As noted by the 2001Framework:

> PACs alone are not an adequate conservation strategy for maintaining a viable population of owls. They are important because they do provide protection to nest sites. However, the distribution and abundance of owl habitat around PACs and across the landscape are critical considerations that will determine the ultimate adequacy of a PAC-based conservation strategy for maintaining owl viability in the Sierra Nevada.

(USDA Forest Service, 2001a, Chap. 3, part 4.4, p. 85.) This finding is a continuation of the prior rejection by federal scientists of the SOHA strategy of isolating blocks of habitat from each other, which was found not to be a viable strategy for preserving owl populations. (See Verner et al. 1992, p. 15 ("We expect that owl pairs in SOHAs would disappear at a relatively high rate, leaving the SOHAs unoccupied and at least temporarily nonfunctional.")

As noted by the Sierra Nevada Framework, "[p]rotecting occupied, as well as suitable but unoccupied habitat, over the long term is important to insure species viability. (USDA Forest Service, 2001a, Chap. 3, part 4.4, p. 82.) According to the Framework:

> [C]onservation efforts should therefore consider not only occupied habitat, but also suitable unoccupied habitats, in developing conservation strategies for species for which dispersal may function as a primary limiting factor. (*Id.*)

Indeed, Framework scientists specifically found that timber harvesting poses serious short term risks to the owl due to habitat fragmentation:

> [R]etaining existing suitable habitat and improving habitat conditions over the next couple of decades may be particularly important for stabilizing owl populations. Research into population dynamics at larger scales has suggested the possible existence of habitat thresholds, below which populations may go extinct in the presence of suitable habitat due to constraints on successful dispersal. With current population declines, vegetation treatment impacts over a short time period may involve risks to the spotted owl population that are not evident by considering longer-term habitat projections alone.

(See e.g., USDA Forest Service, 2001a, Chap. 3, part 4.4, p. 95. *See also id.* at p. 96 ("[W]here a greater proportion of owl home ranges have less than desired amounts of habitat to begin with,

reducing the amount of habitat within the few home ranges that exceed the habitat threshold, prior to increasing amounts of habitat in other owl home ranges, could increase the risk of worsening conditions and increasing nearest neighbor distances for owl sites within these areas.") *See also* Bond 2006b.

Here, the Forest Service does not acknowledge that reduce quality habitat in owl home ranges will increase the risk of worsening conditions and increasing nearest neighbor distances for owl sites within these areas. As noted by Bond:

> Although the Freeman Project would avoid Protected Activity Centers (PACs) and Spotted Owl Habitat Areas (SOHAs), these areas constitute a small fraction of the habitat required by owls to successfully forage, breed, and survive. Estimated spotted owl home-range sizes in Sierra Nevada conifer forests from radio-telemetry studies are highly variable, but are on the order of several thousand acres.

(Bond 2006a). Rather than protecting these home range and matrix habitat, Freeman Project "would greatly increase nearest-neighbor distances and habitat fragmentation." (*Id*.)

The lack of information provided regarding the amount of suitable home range habitat available for owls is exacerbated by the lack of any analysis about the quality and spacing of available habitat within owl home ranges within the Assessment Area. Another problem, discussed in our prior comments and below is that the Freeman Project appears to rely on low quality habitat as a basis for finding that the owl will not be significantly adversely affected. In sum, the Forest Service failure to present necessary information regarding the amount and quality of habitat as spatial scales relevant to the owl's life history renders the NEPA analysis flawed.

**b. The Forest Service is Not Correctly Analyzing the Risk to Owls from Intensive Logging in Their Habitat**

In several ways the Forest Service is not correctly analyzing the risk to owls from the proposed project.

First, the Forest Service is not acknowledging the continued uncertainty regarding the owl's status, particularly in the northern Sierra and in the Freeman Analysis area. The FEIS does not discuss the owl's imperiled status in the northern Sierra Nevada, based on the best available information. Rather, the FEIS erroneously concludes that "the California spotted owl populations are either relatively stationary or increasing on the four study areas." However, the draft 2006 meta-analysis did not conclude that populations were increasing and clearly pointed to serious concerns about the Lassen study area – the closest owl study area to the Freeman Project – which appears to be faring considerably worse than owls elsewhere in the Sierra Nevada. (Blakesley et al. 2006). The 2006 owl meta-analysis showed that lambda – the predicted rate of population change – was .973 on the Lassen study area, indicating a likely population decline, with a 95 percent confidence interval of .946 to 1.001. (*Ibid.,* p. 3). Moreover, the Lassen study area exhibited a 64 percent likelihood of experiencing a 10 percent or greater population decline within the next seven years. (*Ibid.,* p. 4). Other information further indicates that the Lassen owl

population is declining. Thus, for example, site occupancy declined between 1991-1994 and 2001-2004, with several owl territories becoming abandoned following logging. (Blakesley et al. 2005). This information needs to be fully disclosed in the EIS, and its implications for management need to be weighed.

Second, the Freeman project appears to assume in the absence of any demographic data, that the "spotted owl population on the PNF appears to have an upward trend." FEIS, p. 205; BE, p. 86. This conclusion appears to be based on a limited assessment of owl occupancy data collected from the PLAS study which is then imposed on the total number of protected activity centers (PACs) designated for the Plumas National Forest. Such occupancy data alone can not be used to evaluate population trend. It was for this precise reason that the owl demographic studies were developed also to consider data related to reproductive success and survival over a sufficient period of time to estimate population trend. Bond 2006b.

Further, as explained in greater detail in the section on monitoring, the BE seems to have confused the cumulative identification of "owl sites" on the national forest as an indication that owl numbers are increasing. This is precisely the inference that the USFWS cautioned against when they stated that "the number of territories should not be viewed as a population estimate for the taxon." As discussed below, Section VI.B.3, the analysis of population trend in the BE and Management Indicator Species (MIS) Report for the Plumas National Forest misapplies the PLAS data by failing to take into account the fact that some of the owl sites are not occupied in given years. Further, there has been no systematic survey completed each year for all owl territories (or for even the same subset of territories) designated on the Plumas National Forest. Finally, the PLAS data set in itself is insufficient to estimate population trend. There are only two years of data which is too few time steps from which to make estimates of population trend. This situation is confirmed by the absence of any calculation or estimate of population trend in the 2005 annual report for the PLAS. (USDA Forest Service 2006a).

In sum, the occupancy data that is reported is not adequate to assess population trend. *See* Bond 2006b. The Forest Service should also acknowledge that there is no population trend data available for the Plumas National Forest and that the Lassen Study area, which strongly suggests a declining population, provides the closest and most relevant population data.

Third, the Forest Service does not assess impacts in a manner that takes into account the relationship between the absence of owls from formerly occupied habitat and the overall poor habitat conditions in the project area. Table 3.37 in the FEIS shows that the PACs in the Project Area have not been consistently occupied and rarely with an adult pair. To the extent that more relevant population trend data exists, it shows that owls are not fully occupying the Freeman project area. Bond 2006b. Thus, based on current population monitoring, the Forest Service cannot rely on the preservation of PACs to ensure that owls are surviving in the project or Assessment Area.

As discussed above, Section V.A.1 *supra,* the Forest Service also does not assess owl viability correctly, since it relies on existing PACs to justify overly optimistic owl population estimates while at the same time approving projects with "high" or "medium" risk to owl PACs. *See* Britting 2006; FEIS, p. 215 (Table 3.41.) The Forest Service may not allow logging to go

forward that will threaten PACs, based on population estimates that assume that PACs are being fully protected.

Further, Table 3.41 (p. 215) assesses risks to owl PACs by assigning a "low risk" to PAC PL 274 logging will be less intense, even though this PAC has not been occupied by a reproductive pair in all recent surveys. For PACs that are no longer occupied, it is not clear how the Forest Service can assign a value of "low risk" to loss of PAC viability. The project documents note that logging within HRCAs and home range areas may increase competition among remaining owl pairs, but does not discuss the fact that such over-competition has likely already begun in the Freeman project area. The use of more space by owl suggests that habitat quality is low and they need to forage more area to get enough food, thereby indicating that habitat quality in general in the area may be of poor quality. Rather than assess the condition of these PACs and their surrounding HRCAs, the Forest Service responds by saying that only a small percentage of this habitat will be adversely affected by logging. This reasoning avoids the point that if already inadequate habitat is further reduced in quality, viability for local owl populations is not ensured. (Bond 2006a, 2006b,).

The lack of full occupancy for these PACs suggests that the overall habitat quality of the PACs and surrounding core areas is currently inadequate, before treatment, to ensure owl survival. *See* Britting 2006 & Figures 1 & 2.

As discussed in our prior comments, the Forest Service characterizes habitat mapped through aerial photos as 4M, including trees down to 11" dbh as "suitable" for owls, though it is uncertain at best whether such lower quality 4M stands provide usable habitat for owls However, the FEIS still concludes that for "the Freeman Project analysis, all class 4M is considered owl foraging habitat.

The relationship between lack of quality foraging and nesting habitat is not considered by the Forest Service as a reason that owls are sparsely populated in this region. A hard look under NEPA requires the Forest Service to provide some explanation for why such PACs in the planning area are no longer occupied and whether it is related to the lack of overall high quality. Such an analysis would require the Forest Service to present information regarding the amount and quality of suitable habitat at each of the 3 relevant spatial scales described above. For example, as discussed above and in prior comments, the Freeman Project does not provide any discussion of how the HRCAs function as a necessary habitat complement to the PACs in the project area. The Freeman BE offers the simplistic total acres reduced and an average per HRCA but the impacts occur not on average values but specific harvest units and existing conditions in owl home ranges. This lapse is critical, however, due to the importance of this habitat to owl survival and the owl's precarious viability in this Forest. *See* Blakesley 2005; Verner 2003; Blakesley and Noon 2003; Noon 2004; Peery 2004; Bond 2003; Franklin et al. 2003.

As discussed, the FEIS notes that logging within HRCAs and home range areas may increase competition among remaining owl pairs, but does not describe the significance of this fact. Given that existing PACs are not supporting owls, the FEIS must analyze how further logging in HRCAs, including the removal nesting habitat, will not have significant impacts on

owl populations. Rather than assess the condition of these PACs, the home range core area, and their surrounding HRCAs, the Forest Service responds by saying that only a small percentage of this habitat will be adversely affected by logging. This reasoning avoids the point that if already inadequate habitat is further reduced in quality, viability for local owl populations is not ensured. (*See* Bond 2006a & 2006b).

Another example is provided by the Forest Service's failure to describe the character of individual home range habitat. As discussed in prior comments, many owl home ranges in the project area have had marginal habitat quality. Here, the Freeman FEIS and BE acknowledge the poor habitat quality for sensitive forest species between owl PACs and SOHAs, yet do not provide adequate information as to overall quality of home range and HRCA habitat for owls existing in the Assessment Area. (Bond 2006a & 2006b). An example of what kind of information is needed is set forth by Britting:

> Owl sites PL203 and PL204 are embedded within the treatment areas. See Figure 1 attached. The area surrounding these habitat areas will be intensively harvested and habitat quality will be degraded. Further, many of the areas outside of the treatments units are not presently suitable habitat. Several of the owl sites in the analysis area have not been occupied in recent years. This suggests that poor habitat quality may already be an issue that limits owl reproductive success in this area.

Britting 2006 & Figure 1. A similar analysis should have been undertaken by the Forest Service for the Freeman Project. Instead, as Britting concludes: "The FEIS and BE fail adequately to assess the impacts to the owl and mature forest habitat of reducing suitable habitat in a setting where such habitat is already seriously limiting." (Britting, 2006).

Finally, the results of the Lassen Study demonstrate there is cause for concern for owl populations in the QLG pilot project areas. The Lassen Study area is north of the Freeman Project but also guided by the 1999 H-F QLG logging plan. The Lassen study area is part of the overall QLG Administrative Study monitoring effort and is immediately adjacent to the area where owl demographic monitoring has occurred for approximately 15 years. Thus, this decline suggests that owl decline may be occurring in the QLG area given the projected trend on the Lassen, the low quality habitat in the Freeman area and the Plumas NF in general (USDA Forest Service 2001, Volume 2I, Chapter 3, part 3.2, p.138) and the over-reliance on poor quality 4M/4D habitat in the effects analysis, as mentioned above and discussed in prior comments. The Forest Service has not adequately explained why the Freeman project area is different from the Lassen Study, except to interpret the PLAS Study discussed above in a manner contrary to sound science.

Each of these factors dictate that the Forest Service continue to exercise caution when planning timber harvests in this area to ensure the maintenance and recovery of the spotted owl population. *See* Bond 2006a & 2006b. *See* SCR 2005 (given the uncertainty regarding the quality of available habitat and potential impacts on owls, the Forest Service should limit its suitable habitat categories to 4D, 5M and 5D.) Instead the Forest Service is applying the maximum intensity harvest permitted under the 2004 Framework and QLG Act, as if the owl population was flourishing. However, management that consistently relies on maintaining *minimum* levels of size or canopy cover within a range of habitat type does not insure viability

for the owl, particularly given the data showing that owls prefer to forage in canopy cover greater than 50%. *See e.g.*, Bond 2006b As discussed below, alternatives with lesser intensity harvest can meet the project purposes. Given the impacts to owls from this level of harvesting, the Forest Service cannot ensure that owls are surviving on the forest and that such further reductions in habitat quality will not threaten owl viability in the project area. *See* Bond 2006a & 2006b.

### c. The Forest Service is Not Taking a Hard Look at the Possibility of Fragmenting Owl Habitat

As discussed above, the Freeman project documents do not provide critical information on availability and quality of habitat for spotted owls at three spatial scales, nest core, home range core area and home range. In the absence of any analysis to determine whether adequate habitat exists at these scales, the Forest Service cannot accurately assess the potential for future habitat reduction to fragment owls. *See* Britting 2006 & Figure 1, Bond2006a & 2006b. *See also* Campaign comments on Freeman DEIS.

There is considerable evidence that owls require home range habitat to retain certain minimal habitat components such as interior forest habitat, multiple canopy layers and minimum canopy coverage. Yet here, the Forest Service appears satisfied to relegate owls to 300 acre habitat blocks, the size of the PACs that are to be protected. As noted by the 2001Framework:

> PACs alone are not an adequate conservation strategy for maintaining a viable population of owls. They are important because they do provide protection to nest sites. However, the distribution and abundance of owl habitat around PACs and across the landscape are critical considerations that will determine the ultimate adequacy of a PAC-based conservation strategy for maintaining owl viability in the Sierra Nevada.

(USDA Forest Service, 2001a, Chap. 3, part 4.4, p. 85.) This finding is a continuation of the prior rejection by federal scientists of the SOHA strategy of isolating blocks of habitat from each other, which was found not to be a viable strategy for preserving owl populations. (See Verner et al. 1992, p. 15 ("We expect that owl pairs in SOHAs would disappear at a relatively high rate, leaving the SOHAs unoccupied and at least temporarily nonfunctional.”))

As noted by the Sierra Nevada Framework, "[p]rotecting occupied, as well as suitable but unoccupied habitat, over the long term is important to insure species viability. (USDA Forest Service, 2001a, Chap. 3, part 4.4, p. 82.) According to the Framework:

> [C]onservation efforts should therefore consider not only occupied habitat, but also suitable unoccupied habitats, in developing conservation strategies for species for which dispersal may function as a primary limiting factor. (*Id.*)

Indeed, Framework scientists specifically found that timber harvesting poses serious short term risks to the owl due to habitat fragmentation:

> [R]etaining existing suitable habitat and improving habitat conditions over the next

> couple of decades may be particularly important for stabilizing owl populations. Research into population dynamics at larger scales has suggested the possible existence of habitat thresholds, below which populations may go extinct in the presence of suitable habitat due to constraints on successful dispersal. With current population declines, vegetation treatment impacts over a short time period may involve risks to the spotted owl population that are not evident by considering longer-term habitat projections alone.

(See e.g., USDA Forest Service, 2001a, Chap. 3, part 4.4, p. 95. *See also id.* at p. 96 ("[W]here a greater proportion of owl home ranges have less than desired amounts of habitat to begin with, reducing the amount of habitat within the few home ranges that exceed the habitat threshold, prior to increasing amounts of habitat in other owl home ranges, could increase the risk of worsening conditions and increasing nearest neighbor distances for owl sites within these areas.")

The Freeman Project documents do not take a hard look at the likelihood that owl habitat is being fragmented by past and current logging projects, including this one.

First, the FEIS states that the Forest Service need not consider past projects when assessing ongoing impacts, since such past projects will be adequately characterized by the describing the existing environment. However, NEPA still requires the Forest Service to take a hard look at the effects of these past projects. Here, as discussed above, the Forest Service has not considered the quality of habitat at the home range scale except to acknowledge that much of the areas located between PACs and SOHAs consistent of degraded habitat. This is not an adequate hard look.

Further, the Freeman Project appears to allow for continuing degradation both to HRCA and to nest core habitat. As discussed, the results of owl monitoring in the project area suggest that existing available habitat may already be below the minimum required to support reproductive pairs. The Forest Service acknowledges that the modeling method used has the potential to overestimate the quality of available habitat. Further, the Forest Service has not assessed the impacts to habitat quality in terms of prey availability by maintaining a cleared understory in the project area DFPZs. In sum, the Forest Service is not taking a hard look that the remaining quality habitat in PACs and SOHAs is being fragmented by logging everywhere else.

Second, the Campaign reiterates its prior comments that the Forest Service has never assessed the potential for group selection implementation to fragment owl (and other wildlife species) habitat. The Forest Service has taken the approach that group selection should be limited to not more than 11.4% of any planning area. The value 11.4% is derived from the HFQLG legislation which directs the implementation of group selection on 175 year rotation cycles based on 20 year reentry intervals. The level of group selection harvest was not set based on a habitat analysis of forest edge versus interior and the amount and arrangement of group selection openings that preserves continuous forest cover habitat created by the forest canopy openings resulting from group selection harvest. Thus, the Forest Service claims to have established a biological threshold of 11.4% above which the adverse impacts to continuous forest cover from group selection must be mitigated, yet they provide no quantitative biological

evidence to support this threshold. Further, the evaluation provided in the FEIS is speculative and overlooks previous analysis completed by their own agency on this topic with findings to the contrary.

The 1999 HFQLG BE found that this intensity of group selection would have significant, potentially destabilizing impacts on the spotted owl, which would preclude the Forest Service from insuring viability. (See Discussion below.) Nothing in the 2004 Framework ROD changes the findings in the 1999 HFQLG BE regarding habitat fragmentation due to group selection logging. In fact, the 2004 Framework FEIS cites to the 1999 HFQLG FEIS to conclude that "the group selection units within the HFQLG Pilot Project Area, in conjunction with the placement of DFPZs, could lead to an increase in habitat fragmentation by 2009 (USDA Forest Service 1999)." (2004 Framework FEIS, p. 274). In addition, the 2004 Framework FEIS projects that 65,000 fewer acres of suitable habitat will be available to spotted owl in Alternative S2 compared to S1 primarily due to implementation of group selection harvest and lack of minimum canopy cover retention values for CWHR type 4M and 4D. (2004 Framework FEIS, p. 269) Thus, recent analyses completed by the Forest Service conclude that group selection logging at a rate of 11.4% in 20 years leads to increased forest fragmentation and substantially reduces suitable owl habitat in the short term.

Group selection harvest was also considered in 1992 by the CASPO technical team (Verner et al. 1992) and in the CASPO interim guidelines environmental assessment (USDA Forest Service 1993). In the CASPO interim guidelines, the technical team proposed a long term strategy for using small, even-aged groups of 0.25 to 2 acres to manage the forest for owl habitat. Their proposal identified a 240-year rotation and suggested entering a stand once each 40 years to make group selection openings in about 17% of the stand. (Verner et al. 1992, p. 272). This equates to making group selection openings on 8.5 % of the stand in 20 years, considerably less than the 11.4% adopted in the Freeman Project. The CASPO environmental assessment also considered the effect of group selection on continuous forest cover. They defined group selection harvests as occurring within stands that retained 50-80% canopy cover in trees > 20 feet tall. (USDA Forest Service 1993, p. IV-65). Group selection openings also were limited to 1,320 acres per year over the seven national forests covered by the decision. (USDA Forest Service 1993, p. IV-74). Based on these limitations, the CASPO environmental assessment determined that this level of group selection would continue to provide continuous forest cover. The national forest also had information available to them from the CASPO technical report regarding the definition of edge versus interior forest habitat yet they failed to use this to quantify the effects of group selection logging on the amount and arrangement of interior forest. (Verner et al. 1992, p. 15). Ultimately, the FEIS fails to draw any conclusions about the absolute effects of the proposed group selection logging on forest fragmentation and instead merely concludes that Alternative 4 will pose "less risk" than Alternatives A and C. (FEIS pp. 3-85, 3-97.)

In light of previous conclusions by the Forest Service regarding the adverse effects of group selection harvest on owl habitat (Verner et al. 1992, USDA Forest Service 1993, USDA Forest 1999, USDA Forest Service 2004), the discussion in the FEIS is not adequate to assess impacts of the proposed action on spotted owl and other species dependent on interior forests or its effect on spotted owl viability. (*See also* Bond 2006a & b).

Further, as noted by Blakesley (2005):

> The positive association we found between habitat classes affecting survival and fecundity contrasts with the trade-off found for northern spotted owls in northwestern California, in which the amount of interior mature and old-growth forest was positively associated with survival and negatively associated with reproductive output (Franklin et al. 2000). Both survival and reproductive output were positively associated with the length of edge between mature/old-growth forest and other vegetation types, including younger forest (Franklin et al. 2000).

In sum, the Forest Service's has simply not provided enough information to determine that the Freeman project is not fragmenting the local owl population leading to its ultimate extirpation from the planning area.

**d. The Forest Service is Not Taking a Hard Look at the Effects of Removing Trees Between 20-30" DBH is Not Discussed**

The Forest Service states that the basic premise that harvesting co-dominant conifers between 20-30" dbh is more adverse to wildlife than retaining such trees is "not supported." *See* FEIS, p. 82. This point does not constitute the required hard look given the current scientific information as set forth in our comments previously raised on the DEIS.

As noted in the Campaign's appeal of the 2004 ROD, research indicates that 20-30" diameter trees are an important component of owl foraging and nesting habitat. For example, Call et al. (1992) showed that owls strongly select stands with a high basal area of trees between 20.7-35.4 inches for foraging. In fact, the basal area of trees in this size class was the second most important variable (out of 54) for discriminating owl foraging stands from random stands. Bias and Gutierrez (1992) found that a greater basal area of trees in the 20.7-35.4 inch size class occurred in owl nest stands than in random stands. Blakesley (2003) documented greater nest success in stands and greater survival in territories dominated by medium and large trees. The 1992 CASPO report found that nearly 25 percent of owl nest trees were less than 30" dbh. (Verner et al. 1992, p. 92). In sum, as the U.S. Fish and Wildlife Service has expressed, "a significant number of potential nest trees could be removed" by logging trees less than 30" dbh. (USDI Fish and Wildlife Service 1999, p. 7).

Other scientists have described the 2004 ROD's proposal to log trees up to 30" dbh as "perhaps one of the most poorly justified components of the new management plan." (Noon 2004, p. 2). "Not only does this exacerbate unnatural stand structures by further reducing the number of large diameter trees and put old growth wildlife species at increased risk, it is not a justified priority under any scientifically credible fuels reduction plan." *Id.* "Without any information to the contrary, management plans should assume that 20-30 inch trees constitute an important component of Spotted Owl habitat and that removing significant numbers of these trees could have a negative effect on Spotted Owl population viability." (Peery 2004, p. 2; Bond 2003).

Removing trees under 30" diameter also has the effect of "making large tree recruitment in the future more uncertain," according to the Forest Service's Washington Office. (Gladen 2003, p. 11). Owl scientists have similarly concluded that new plan "fails to ensure adequate recruitment of large trees, which are a critical component of owl nesting habitat, once the stock of mature and old-growth trees becomes reduced due to natural mortality." (Peery 2004, pp. 2-3; Verner 2003b, p. 3).

In its response to public comments, the Forest Service argued that the new plan's 40 percent basal area retention standard "has the effect of limiting the number of larger trees less than 30" dbh that can actually be removed." (FSEIS, Vol. 2, p. 50). The FSEIS further states that "in most cases, except for previously thinned stands, the basal area retention rule will lead to lower limits than the 30-inch maximum." (FSEIS, App. B, p. 401). However, the FSEIS fails to include sufficient information to allow the reader or the decision maker to translate the basal area retention standard into dbh limits for typical forest stands in the Sierra Nevada. The Science Consistency Review expressed this same concern:

> The effects of the S2 prescriptions are difficult to quantify or interpret. What does retention of 40% of the basal area in the largest trees typically result in? It would be helpful to illustrate this with some examples in different kinds of owl habitat. (Stine and Keane 2003, p. 3).

Similarly, in the Freeman Project, the Forest Service provides no information as to how many larger co-dominant conifers will be removed, except to provide information that over 3,000 acres of suitable habitat will be eliminated. Thus, it is undisputed that the Project proposes logging of a significant proportion of 20-30" trees, which are an important element of owl habitat. As discussed below, the Forest Service's logging of these co-dominant trees with accompanying significant impacts on owls is particularly problematic given that such a level of logging is unnecessary to meet the Forest Service's fuel objective goals.

In sum, the Forest Service is not relying on the best available science when it assigns a "minimal" risk to the Preferred Alternative. Indeed, the Forest Service is not relying on any science, since the best available science says the owl is either declining or marginally stable, not that further logging will pose a low risk to the owl In contrast, Bond concludes:

> The Freeman project's reliance on suitable habitat definitions below the level selected by California spotted owls is problematic and contrary to the recommendations in the 2001 Framework Plan (2001 SNFPA FEIS Vol. 3, Chapter 3, Part 4.4.2.1). In addition, removing trees within the 20"-29"diameter-size class eliminates the future cohort of trees that will fill the canopy layer when older, mature trees die of natural causes. This consistent approach of reducing owl habitat to minimum requirements leaves little room for error and is needlessly risky….
>
> I believe that the preferred alternative poses an unacceptable level of risk to the California spotted owl population within both the Project analysis area and the HFQLG area. This population is already showing strong signs of decline, and further loss of habitat is likely to exacerbate the decline. As noted before, PACs and SOHAs are of

> insufficient size to adequately meet the needs of territorial adult owls, as well as other important segments of the owl population, such as dispersing juveniles and migrating and "floater" adults

(Bond 2006a).

**e. The Forest Service is Not Taking a Hard Look at the Impacts of Treatments On the Suitability of Owl Habitat due to Loss of Prey Species**

As stated in prior comments, the Freeman Project documents do not adequately assess how fuel reduction and other treatments that meet the CWHR 4 and 5 standard will actually retain suitable habitat for owls. The DFPZ and thinning do not leave multiple canopies which are necessary for "suitable" habitat. Bond 2006b. Treatments" may include mastication, burning, and tree removal. These activities may substantially reduce prey habitat, snags, downed wood material and other habitat elements that are not considered in the Forest Service's determination what constitutes "suitable habitat" for owls. However, removal of such elements could have a significant effect on owl habitat quality due to loss of prey species.

DFPZ treatments eliminate understory altogether, thereby eliminating prey species such as dusky-footed woodrats, flying squirrels and other small rodents needing cover and downed woody material. *Id.* For example, evergreen and live oaks and thick-leaved shrubs are important habitat components for the dusky-footed woodrat, a primary prey species for the spotted owl (Williams et al. 1992). It is well-known that removal of shrubs has a negative impact on the woodrat. *See* Britting 2006a & b. Further, as noted by Blakesley (2005):

> The primary prey of California spotted owls on the Lassen study area were northern flying squirrels (Verner et al. 1992). Flying squirrel densities in the Lassen study area were highest in old forest stands, lowest in Blakesley 15 shelterwood logged stands, and intermediate in young forest stands (Waters and Zabel 1995). Although the interspersion of young and old forest stands appeared to benefit spotted owl reproduction where dusky-footed woodrats dominated the owls' diet, young forest stands did not appear to benefit spotted owl reproduction where flying squirrels dominated the diet.

The Project documents acknowledge the impacts of group selection, large scale fuel reduction, and understory elimination on flying squirrels, the preferred prey based of spotted owls in the mixed conifer and red-fir forest habitat above 4,000 feet. (Verner 1992, p.69.) Flying squirrels would likely be absent within the group selection openings and thus these small openings within the forest may be marginal for foraging spotted owls due to isolation from the forest interior. *See* USDI Fish and Wildlife Service 1999, p. 10 ("Due to the level of snag and large woody debris removal as proposed, the Service is concerned that [the pilot project] will remove suitable den sites and food sources of northern flying squirrels and consequently reduce the prey base for California spotted owls.")

Recent research by Meyer (2006) documented decreased probability of flying squirrels capture with decreased canopy cover and decreased litter depth in differentially thinned stands in

central Sierra Nevada and that a conservative goal should be to retain at least 75% canopy cover. *See also* Bond 2006a & b. This research is consistent with Carey *et al*. (1992) which found flying squirrels in both second-growth and old-growth forests, but with population densities in old forest stands consistently higher than in younger managed forests. Further, young stands that had squirrels often had large residual snags. Thus, Carey et al. (1992) reported (at p. 245) that "fragmentation of old forest does reduce overall numbers of flying squirrels." *See also* Bond 2006a & b.

Here, while the Project documents acknowledge that flying squirrels are an important element of spotted owl diet, they do make any determination how flying squirrels will be affected by this project. Thus, the Forest Service has no basis to conclude that impacts to owls will not be significant.

### f. The Forest Service's Presentation of Lee and Irwin 2005 is Contrary to NEPA's Requirement to Present Accurately the Best Available Science

The Freeman DEIS and Biological Evaluation p. 94 claim that Lee and Irwin (2005) *Implications of Forest Thinning on Spotted Owls in Fire-Adapted Forests of the Western United States,* supports the Quincy logging plan and the proposed reductions in suitable habitat. By using the Lee and Irwin (2005) paper the Plumas National Forest replicates the flaws of the paper itself and leads to misinformed and risky conclusions regarding the effects of logging treatments on spotted owls.

First, as shown in the Campaign's appeal of the 2004 Framework revision (cited above) and in Rice (2006) and various cited research papers in the project record, 40% canopy cover is not a significant canopy cover threshold level for effective fuels reduction. Lee and Irwin p. 8 (In Press version), characterize the selection of 40% cc as, "more convenient" and "a useful rule of thumb for distinguishing an upper bound on stands that do not readily carry canopy fires." In fact, the 2001 Framework ROD/FEIS selected 50% canopy as that threshold (USDA, Forest Service 2001), not as a matter of convenience but rather a balance between reaching fuels objectives and protecting suitable owl habitat preference for 50% canopy cover (2001 Framework FEIS Volume 3, Chapter 4.4, p—73). As demonstrated (Rice 2006a & b) significant (positive) fire behavior change can occur with significantly higher canopy retention levels.

Second, the paper is focused primarily on habitat that supports reproduction. Although this habitat element is important for long-term persistence, it is also critical to consider and manage for habitat that contributes to adult survival. The authors identify relationships between owl reproduction and canopy cover but fail to highlight what should be the primary focus for management, that of avoiding "any management actions which further reduce the survival probabilities for adult females (which) will have disproportionately large and negative effects on population growth rate" (Blakesley et al. 2001). In other words, habitat that supports adult survival, not reproduction, is the critical factor for land managers to address.

As stated by leading owl scientists working on the nearby Lassen National Forest, "[G]iven the current trend in California spotted owl populations, the most positive step that can be taken to reverse the apparent decline is to identify, and implement, those actions that will lead

to increases in adult survival probabilities. Owl studies to date suggest that this will occur with increased retention and recruitment of large trees and retention of closed-canopy conditions throughout the Sierra Nevada landscape." (Ibid)

Lee and Irwin (2005) report that there is no evidence of an increasing benefit (of reproduction) of increased amounts of higher canopy cover. Although they do state that the reproductive success does increase with increasing levels of canopy cover, because there are higher numbers of nesting pairs within the denser sites, not because of greater reproduction of those nesting pairs.

Lee and Irwin attempt to make a case for factors other than habitat alteration as the major driver of owl trends. Factors such as weather effects, exceptional reproductive years, and fire certainly play an important role in owl population trends but there is little evidence in Lee and Irwin that suggests higher canopy cover and the increased retention of large trees on the Plumas National Forest, in the Freeman project and elsewhere, would not lower risks to adult survival and therefore increase the likelihood of population persistence.

Although Franklin et al. (2000) is often cited out of context of the actual research, (Northern Spotted owls, in wood rat dominated prey scenarios, with researched focused upon owl reproduction success), he has reported that it would be a mistake to manage only for habitat values that support reproduction. Franklin et al. (2000) have found an interaction between habitat and climate factors suggesting that variation in fecundity may be less in habitats of higher quality. Franklin states, "[A]s habitat quality decreases, the effects of climatic variation on survival increased," and that the "excessive loss of key landscape habitat components, such as mature and old-growth forest, can exacerbate the effects of unfavorable climate conditions on survival," (see *Ecological Monographs* 2000 p. 581-583).

The evidence of declining owl trend (above) and recent research on the Almanor Ranger District suggests possible mitigation of treatment effects will occur by protecting larger trees >20" dbh and maintaining higher canopy cover (>70%) in the treatment units would not increase probabilities for adult survival and reproduction in the Freeman project. In Blakesley (2005), in an analysis representing 2 spatial scales, a (814 ha/2000ac) core area and a (203 ha/500ac) nest area, site occupancy was positively associated with the amount of nest area dominated by large trees and high canopy cover (>70%) and was negatively associated with non-habitat. Reproductive output was negatively related to elevation and lower with increasing amounts of the nest area dominated with small trees or unforested. It is precisely this reliance on lower quality habitat in the Freeman Project that has the greatest potential to threaten long-term persistence on owls in the project area and in the QLG Pilot area in general.

The CASPO Technical Report (Verner et al. 1992, p. 184) discussed the issue of risk to adult survival and relationships to habitat, specifically, that "low fecundity precludes rapid recovery from a population decline." The CASPO owl team warned that, "[A]ny management action that lowers adult survival rate, particularly when coupled with a reduction in population size, markedly increases the likelihood of local extinctions." (Ibid). The Freeman project is headed down the same risky path as seen in various projects elsewhere on the Plumas and Lassen National Forests, where management decisions continue to harvest to the CASPO lower minimum retention levels (for tree size and canopy cover) and bank on lower quality CWRH habitat types to support spotted owl persistence. The specific need examination of habitat quality

(within lower quality strata) is precisely the issue raised by the SCR 2005, which recognized that :

> The California Wildlife Habitat Relationships (CWHR) habitat types (dbh and canopy cover) were used to evaluate the potential effects of the various plan alternatives. We realize that these categories, while standard practice today, represent rough breakdown of appropriate size classes of habitat. Some important distinctions within some size classes of habitat are lost in the gross categorization of habitats.
>
> Site quality in this area appears to be relatively mediocre compared with some other locations in the northern Sierra. Whatever large tree structure may have once existed in this area is largely gone now. Presumably part of the long term objectives of silviculture in this area is to restore the large tree structure of habitat at an appropriate level (i.e. what the site can support without heroic management efforts). If this is true the project plan should more explicitly state this and be more conscious of what silvicultural practices and prescriptions are necessary to achieve this.
>
> Evaluating Risk and Uncertainty with the Data that are Available. One possible way to evaluate risk associated with the uncertainty of habitat typing accuracy and potential impacts to California spotted owls (CSOs), northern goshawks, marten, and fisher is to evaluate only size class 5D or 5D and 4D or 5D and 5M as being suitable habitat. This could be done at the project scale and at a PAC by PAC level (for CSO and goshawk).
>
> As with the CSO and northern goshawk, the DEIS perhaps overestimates the amount of potential fisher and marten habitat by including all CWHR 4M and 5M stands. The appropriateness of all 4M and 5M stands should be discussed more.

The Campaign reiterates its prior concerns that the Forest Service appears to be relying on an acknowledgement of uncertainty, stated over and over, as the standard mitigation of risk to spotted owls from QLG projects. This approach, as opposed to the actually addressing the recommendations by the SCR Team such as, using more cautious suitable habitat definitions, actually examining the quality of the lower CWRH types, and avoiding the risks associated with the "gross categorization of habitats" in the project. Since the Freeman Project includes significant levels of "mediocre site quality" it is imperative that the Forest Service take a "hard look" at the site quality issue and not hide behind timber strata labels to support their conclusions.

### 2. The Freeman Project Fails to Take a Hard Look at Impacts to American Marten

#### a. The Forest Service Has Not Considered or Assessed Impacts to the Marten in Light of the Information Showing the Absence of Marten in the Central Plumas National Forest

The Freeman Project documents still do not take a hard look at the impacts of this project on the American marten. The Forest Service project documents still do not address the impact of this project and other OLG projects on the marten in light of the recent survey

information presented by Zielinski *et al.* (2005) that martens are absent from much of their historic range in the northern Sierra Nevada, especially on the Plumas and Lassen national forests (USDA Forest Service 2001a, Vol. 3, Chap. 3, Part 4.4, p. 22; Zielinski 2002, 2004; Zielinski et al. 2005).

Throughout this process the Forest Service has not addressed this important information. *See Sierra Nevada Forest Protection Campaign v. Tippen, supra.* As a result, the NEPA process is uninformed, and the impacts to marten not properly assessed, despite the fact that the Forest Service is proposing significant reductions in marten habitat in the project area.

Zielinski et al. (2005) found that marten have undergone "substantial changes in distribution" in the northern Sierra, including "large gaps between contemporary detections that were not present historically." The Forest Service's failure to acknowledge and analyze the meaning of the marten population gap in this area renders their NEPA analysis of impacts to marten inadequate. *See* Kucera 2006a and 2006b.

The reduction in overall quality marten habitat is particularly problematic given that the marten has not been detected in the project area in recent years, thereby raising the likelihood that this project may further reduce or eliminate north-south habitat connectivity between the Plumas and Lassen National Forests, thus further isolating marten populations to the north and south. *See* Kucera 2006a and 2006b. Population isolation poses great risk to the marten however, due to its life history qualities. As discussed in prior comments, American martens are inherently vulnerable to local extirpation and extinction, as noted in the Sierra Nevada Framework EIS (USDA Forest Service 2001a, Vol. 3, Chap. 3, part 4.4, pp. 22-23). Martens have low reproductive potential, an affinity for dense overhead cover and tend to avoid forest openings, and very large home ranges relative to their body size. Thus, habitat changes that would alter the marten's preferred habitat, such as the changes that would result from the Freeman Project, could reduce the marten's range and distribution and lead to local extirpation.

In light of the population gap for marten in this area, the Forest Service's conclusion that further reductions in marten habitat will not cause significant impacts does not constitute the requisite hard look under NEPA. Zielinski et al. (2005) describes areas such as the Freeman Project where marten are now absent as having " relatively little forests with late seral/old growth attributes," which is probably due to "the influence of timber harvest and forest management during the historical and contemporary periods." However, Alternative 4 of the Freeman Project reduces 1,549 acres of 4D, 5D to unsuitable and reduces 1,867 acres of 4M, 5M to unsuitable. FEIS, p. 263. The FEIS (p. 258) and BE cite 24,826 acres of suitable foraging habitat available with no discussion of the spatial arrangement of that habitat nor any statement regarding the on-the-ground quality of the 4M, nor any explanation of the amount or spatial arrangement of older, high quality forest with "late seral/old growth attributes."

The gap in marten distribution raises a serious and unexamined concern that the current north-south habitat corridor for marten is not adequate. As noted by *See* Kucera 2006a & b:

> I believe that the current absence of marten in the planning area, despite its historical presence, is proof of the inadequacy of the present carnivore network to preserve

sufficient amounts of connected, high quality habitat for this species**.**

The Forest Service states that the north-south corridor network for forest carnivores running through the project area is designed to allow for an unimpeded carnivore corridor between home ranges and allow for habitat population connectivity between the Tahoe NF and Lassen NF. The Forest Service describes this corridor as "running southeast to northwest along Grizzley Ridge composed primarily of white fir and red fir habitat." This network "provides connectivity from the Beckwourth Ranger District to the south and connects with the Mt. Jura connection to the north." *Id*.

In light of the population gap for marten in this area, the Forest Service has not adequately considered why the current corridor network has not been adequate to maintain marten connectivity between the Lassen and Tahoe National Forests. Here, all that appears to be known is that the Plumas has become a habitat gap that threatens to isolate the northern and southern populations. As stated by Kucera:

> The apparent absence of the marten within the Freeman planning area raises a broader concern regarding the marten's viability and distribution in the surrounding area and in the northern Sierra Nevada more generally. The marten's absence in the planning area is likely linked to the history of extensive logging in the area, which has substantially reduced the amount of large trees and large snags. Protection and restoration of marten habitat within the Freeman planning area would increase the likelihood of marten becoming reestablished in the area. In contrast, the Freeman Project will further degrade remaining potential marten habitat, reducing the possibility of marten reoccupying the area and diminishing the connectivity of marten habitat in the region.

Kucera 2006a.

Despite these concerns, no information is presented why this is so or what can be done to correct this problem. Instead, the Forest Service simply relies on its reference to the existing network, without considering how the Freeman project area might provide corridor habitat for the marten critical for future survival. Meanwhile, the Forest Service allows such habitat to become further fragmented, thereby decreasing the likelihood that effective connected marten habitat can be successfully established.

> [The Freeman Project] will "break up larger blocks of contiguous habitat" thereby creating more small-habitat blocks. I believe this approach risks fragmenting marten habitat even more than already exists in this area. However, without more information such as how these habitat blocks function across the landscape, it is impossible to evaluate this important aspect of marten ecology. ...

Kucera 2006a. However, as discussed in prior comments, no information is given in the Freeman Project documents regarding the percentage of open habitat in areas that would be assumed to function as marten home range were martens again to occupy this region.

Rather than respond to these concerns, the Forest Service continues to state that the

Freeman Project area "may not support habitat attributes needed to contribute to the potential recovery" of these species. However, this does not constitute the hard look under NEPA to determine what measures are necessary to avoid long term fragmentation of northern and southern marten populations. According to Kucera, the Forest Service should be assessing why marten are unable to disperse north or south through the corridor area. If the project area represents a critical bottleneck, the Forest Service must consider the necessity of adding more habitat, including habitat in the Freeman Project area, to the existing north-south corridor network. *See* Kucera 2006a & 2006b. The Freeman Project documents state that the project area may not support habitat attributes needed to contribute to the potential recovery for forest carnivores. However, if this is true, the Forest Service has not taken a hard look at how the Project area will be able to provide adequate habitat for the marten, or how further reductions of such habitat will not have significant adverse effects

As described by Dr. Kucera, 2006a, the project area appears to be extremely important to the marten population at a landscape scale. Given the absence of marten in the region, Kucera notes:

> [T]he Forest should be increasing, not decreasing, the area of its forest carnivore network. In light of the apparent decline of marten in this area, I question how the Forest Service can find that over 5,000 acres of marten habitat can be rendered unsuitable, without similar significant impacts on the habitat "network" that would be required for marten to recover and regain viability as a species in this region.

(Kucera 2006a.) Instead of protecting and enhancing such habitat, Alternative 4 will treat approximately 1,000 acres of the forest carnivore network will be treated and 897 acres of this habitat rendered unsuitable. In sum, Kucera notes that:

> Given that there is no evidence that the current forest carnivore network has provided adequate protection for marten habitat within the Freeman project, any implication that the network will be adequate in the future to provide necessary habitat connectivity appears to be unfounded.

(Kucera 2006a). Kucera concludes that further logging within the present carnivore network "would have the effect of making an already inadequate system 'designed to provide a habitat connectivity corridor' more ineffective. Management direction should be toward increasing the viability of rare species; this does the opposite. (*Id.*)

In addition to not considering the implications of the current inadequacy to the north-south habitat corridor, the Forest Service has failed to consider the cumulative impacts of other projects to the existing corridor. The planning documents [do not] analyze the amount of marten habitat that will be lost if other present and planned projects are implemented. Similarly, the FEIS does not disclose the extent to which these projects will create additional forest openings, thereby contributing to the problem identified earlier. *See* Kucera 2006a & b.

Despite the Forest Service's reliance on the stated habitat corridor to ensure long term north south connectivity, the Freeman project documents in fact do not assess the cumulative

effects of different QLG projects on this habitat corridor. Instead, the project assesses cumulative effects to the marten using the assessment area derived for spotted owls, thereby ignoring the likely effects of several other QLG projects that will affect the quality and overall suitability of the marten's north- south habitat corridor, including such projects as Happy Jack, Empire, Grizzley and Diamond. *See* Kucera 2006a & b; Britting 2006 & Figure 3. As noted by Kucera 2006b, the Forest Service does not appear to consider or propose any attempt at an adaptive management approach to understand the cumulative effects of this suite of projects, including Freeman, on marten. This is particularly problematic given that harmful effects of both the 2004 Framework and OLG were intended to be avoided through adaptive management. Here, however, the Forest Service is neither considering, collecting nor evaluation the information necessary to determine what is happening. In sum, the Forest Service's claims that mid-course corrections through adaptive management will avoid significant and long lasting impacts to species such as the marten as a result of QLG implementation ring especially hollow.

Kucera 2006b summarizes the concerns previously raised regarding the Forest Service's apparent unwillingness to confront the issue that the marten may be in the process of disappearing from the Plumas National Forest and that the designated corridor to ensure that this result is avoided is no longer reliable:

> Given the recent research on marten distribution in the northern Sierra Nevada and southern Cascade Range, I do not believe that the Freeman Project documents provide adequate information to determine the impacts of future incremental loss of habitat to marten, either within the assessment area or outside it within the ostensible north – south connectivity corridor. The Forest Service's monitoring data do not provide information regarding population trends or any insight into where the bottlenecks may be for marten dispersal and connectivity. Despite this lack of understanding as to what is happening to marten, the Forest Service appears complacent about further incremental loss of marten habitat.
>
> In my opinion, this is a not a scientifically based approach. Due to their specific habitat needs, low reproductive potential, and large home-range requirements, American martens are inherently vulnerable to local extirpation and extinction. To allow further degradation of marten habitat risks isolating populations, thereby increasing the risk of local extirpation. As I have previously commented, a similar phenomenon occurred with the Pacific fisher in California, where overtrapping and habitat loss led to the isolation of fisher in the southern Sierra Nevada, some 250 miles from the nearest population to the north. The marten now appears to be on the same track as the fisher. As such, the Forest Service cannot insure marten viability, either in the planning area or in the Plumas National Forest.

### b. The Forest Service is Not Taking a Hard Look at the Impacts of Treatments On the Suitability of Marten Habitat

Throughout their range, American martens are associated with late-seral coniferous forests with abundant large structure, including live trees, snags, and logs, and relatively closed canopy cover. As described by Dr. Kucera, medium and large trees with diameter 20" and

greater constitute an important structural element of marten habitat. (Kucera 2006a & b). Particularly on the west slope of the Sierra Nevada, martens are closely associated with dense canopy forests. In general, martens prefer dense forests with canopy cover of 70 percent or greater and avoid relatively open forests with canopy cover of 40 percent or less. Research indicates that marten avoid stands with less than 50 percent canopy cover. Reducing canopy cover to 40 percent in such forests is likely to adversely affect the marten's use of the area.

Martens are known to avoid fragmented forest with many open areas. Hargis and Bissonette (1997) and Hargis et al. (1999) found that martens did not occur in forests that contained more than 25% openings, including natural openings and those resulting from timber harvests. Additional research (see e.g., Chapen et al. 1998, Potvin et. al. 2000) also documents the deleterious effects of extensive forest openings on marten distribution and habitat use.

In a similar manner to the spotted owl discussed above, the Freeman project documents do not discuss how DFPZ and thinning activities do not leave multiple canopies necessary for "suitable" habitat can retain "suitable" habitat for marten. DFPZ treatments eliminate understory altogether, thereby eliminating prey species such as dusky-footed woodrats, flying squirrels and other small rodents needing cover and downed woody material. *See* Britting 2006a & b. Further, as discussed above and in prior comments, treatments" such as mastication, burning, and tree removal may eliminate snag retention and recruitment and downed woody materials, all critical habitat components for marten. *See also* Discussion *infra*; Kucera 2006a & b.

**3. The Analysis of Cumulative Impacts is Inadequate.**

As discussed above, NEPA requires the Forest Service to assess the cumulative impacts of a proposed project in light of that project's interaction with the effects of past, current, and reasonably foreseeable future projects. *See* 40 C.F.R. " 1508.7, 1508.25; 1508.27(b)(7). *Native Ecosystems Council v. Dombeck*, 304 F.3d 886, 894-895 (9th Cir. 2002); *Neighbors of Cuddy Mountain v. United States Forest Serv*., 137 F.3d 1372, 1379-80 (9th Cir. 1998); *Muckleshoot Indian Tribe v. United States Forest Serv*., 177 F.3d 800, 809-10 (9th Cir. 1999.) Cumulative impact "is the impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions." 40 C.F.R. " 1508.7 Cumulative impacts "can result from individually minor but collectively significant actions taking place over a period of time." *Id*.

The Ninth Circuit has recently clarified NEPA's cumulative effects analysis requirement as applied to timber sales proposed by the Forest Service. *The Lands Council v. Powell*, 379 F.3d 738 (9th Cir. 2004). As the Ninth Circuit held in overturning a timber sale EIS, "for the public and agency personnel to adequately evaluate the cumulative effects of past timber harvests, the Final Environmental Impact Statement should have provided adequate data of the time, type, place, and scale of past timber harvests and should have explained in sufficient detail how different project plans and harvest methods affected the environment." Here, as in *Lands Counc*il, the FEIS "generally describes the past timber harvests … and asserts that timber harvests have contributed to the environmental problems in the Project area." But, as the Ninth Circuit ruled, such a general discussion is not adequate to satisfy NEPA's cumulative effects requirement.

The Campaign reiterates its prior comments that the Freeman Project documents do not provide an adequate discussion of the cumulative impacts and location of past, present, and planned projects in the vicinity of Freeman that are likely to affect owl or forest carnivore habitat. As discussed above, the BE does not adequately disclose the extent to which such other projects may cumulatively affect the distribution and connectivity of habitat for these species.

First, as discussed above, the Freeman documents still do not assess the cumulative effects of other projects on the habitat corridor designated by project documents to ensure long term north-south connectivity for the marten The Forest Service instead assesses cumulative effects to the marten using the assessment area derived for spotted owls. This ignores the effects of other QLG projects that will affect the quality and overall suitability of the marten's north-south habitat corridor. *See* Kucera 2006a & b; Britting 2006 & Figure 3.

Further, although the BE indicates the amount of marten habitat that may be degraded in other projects, it does not disclose the extent to which these projects will create additional forest openings, thereby potentially exceeding the marten's habitat threshold, blocking dispersal corridors or creating large areas in which marten are not present, thereby isolating populations and increasing the chances of local extirpation. As stated by Kucera, the reduction in overall quality marten habitat is "particularly problematic given that the marten has not been detected in the project area in recent years, thereby raising the likelihood that this project may further reduce or eliminate north-south habitat connectivity between the Plumas and Lassen National Forests, thus further isolating marten populations to the north and south." (Kucera 2006a & b.) However, the Freeman Project does not conduct any meaningful cumulative impact assessment regarding these potential impacts.

Further, the Freeman project does not assess the cumulative impacts of this project in connection with the adjacent treatments, also directly affecting the north south carnivore network, proposed in the Grizz project. Given that a scoping notice has been issued for Grizz and comments have been received, the Forest Service cannot state that the proposed treatments are too speculative for consideration under NEPA.

The Freeman Project's failure to conduct any meaningful cumulative impact assessment regarding these potential impacts in light of the project's interaction with the effects of past, current, and reasonably foreseeable future projects is contrary to NEPA. *See* 40 C.F.R. " 1508.7, 1508.25; 1508.27(b)(7). *Native Ecosystems Council v. Dombeck*, 304 F.3d 886, 894-895 (9th Cir. 2002); *Neighbors of Cuddy Mountain v. United States Forest Serv*., 137 F.3d 1372, 1379-80 (9th Cir. 1998); *Muckleshoot Indian Tribe v. United States Forest Serv*., 177 F.3d 800, 809-10 (9th Cir. 1999.) Cumulative impact "is the impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions." 40 C.F.R. " 1508.7 Cumulative impacts "can result from individually minor but collectively significant actions taking place over a period of time." Id.

Second, the project documents continued to avoid the requisite hard look for cumulative effects on spotted owls. As stated in our previous comments, cumulative impacts analysis is important for species migrate or disperse into and out of the Assessment Area. Juvenile spotted

owls for example move on average 14-16 miles from the nest into new territories which could easily be impacted by additional projects outside the Freeman analysis area that would have a cumulative impact on the subpopulation. *See also* Britting 2006. Unfortunately, the Freeman cumulative effects analysis carries the flawed view that the cumulative effects analysis need not address the impacts of other logging activities outside the Assessment Area defined by the Project, instead of correctly focusing spatially and temporally, on the species of concern in the Project. It is likely that logging adjacent to the Freeman Project area will exacerbate the north-south habitat connectivity problem identified in the BE. However, the BE does not include the information that would be necessary to assess this issue. (Britting 2006).

Further, as previously discussed, the Forest Service has implemented or is planning to implement a at least ten large (~1,000 acres) fuel reduction projects in the region, treating a total of 52,675 acres would be treated (*See* Table 2, below.) Most of these acres would be turned into DFPZs where canopy cover in forest types suitable for CSO use can be reduced to 30 percent. Forest stands with canopy cover less than 50% are recognized in the Freeman BE as being marginally to unsuitable for CSO foraging and nesting. (BE, p. 27). Thus, the cumulative effect of these projects, which are proposed for implementation at approximately the same time as the Freeman Project, is to reduce the suitability of many thousands of acres of nesting and foraging habitat for CSO.

Table 2. Summary information for seven timber EAs and EISs that cover more than 1,000 acres and that have decision documents signed or for which scoping has been initiated since the 2004 Record of Decision of the SNFPA.

| Project | Total Area Treated (ac) | Group Selection (ac) | DFPZ Thinning (ac) | Individual Tree Selection (ac) | Status of Project |
|---|---|---|---|---|---|
| Freeman DFPZ/GS | 5,792 | 175 | 3,066 | 2,727 | NOI issued 8/25/05 |
| Happy Jack DFPZ/GS | 6,256 | 91 | 2,866 | 2,262 | Decision to Implement 6/1/05 |
| Mabie DFPZ | 7,185 | | 7,185 | | Decision to Implement in 2004 |
| Basin Group Selection | 1,750 | 1,750 | | | Decision to Implement 8/30/04 |
| Watdog DFPZ/GS | 4,260 | 260 | 4,000 | | FEIS Issued 6/24/05 |
| Slapjack DFPZ/GS | 4,800 | 240 | 3,872 | 148 | NOI issued 9/16/05 |
| Empire Project | 11,900 | 1,300 | 6,600 | 4,000 | FEIS Issued 08/06 |
| Meadow Valley DFPZ/GS | 6,435 | 735 | 5,700 | | Decision to Implement 4/16/04 |
| Grizzly DFPZ | 3,482 | | 3,482 | | Planned 2004/Proposed for 2006 |
| Greenhorn | 815 | | | | Planned 2004/Proposed 2009 |
| **TOTAL** | **52,675** | **4,551** | **36,771** | **9,137** | |

In addition, the Forest Service is still not conducting a meaningful assessment of the Freeman project in combination with other projects within this region containing Areas of Concern within or adjacent to the Plumas National Forest. The projects set forth in Table 2 above are located directly between Areas of Concern identified in the CASPO Report (Verner et al. 1992). Concern for these areas includes known low densities of CSO, fragmented habitat,

and impediments to north-south travel for owls and forest carnivores. (*Id*., pp. 45, 48). The timing and scale of habitat degradation proposed in the projects listed in Table 2 could well lead to an expansion of existing AOCs 2 and 3 that are to the north and south of this area or the creation of a new AOC. This potential cumulative effect is not considered in the FEIS. Instead, the FEIS concludes that since the project area is not itself located in an AOC, the nearby presence of AOCs are not a concern and need not be addressed in the NEPA document. This does not constitute the required hard look.

The presence of AOCs and potentially limited amounts of regional habitat demonstrate that the Forest Service needs to conduct a cumulative impact assessment to assess impacts to species due to activities occurring outside the Assessment Area. *See Native Ecosystems Council, supra*, 304 F.3d at 897 ("Because the amendments are reasonably foreseeable and may have cumulative impacts within the Gallatin National Forest, the Forest Service has a duty to consider them in its analysis of impacts within the Darroch-Eagle EA."); *Kern v. U.S. Bureau of Land Management*, 284 F. 3d 1062, 1078-1079 (9th Cir. 2002) (holding that cumulative impact analysis must include "reasonably foreseeable future actions" outside the geographic area but within the range of the Port Orford Cedar, the affected resource at issue); 40 C.F.R. ' 1508.7.

In addition to the particular sensitivity of this region containing AOCs and limited quality habitat, the life history of sensitive species such as the spotted owl indicates the need to assess the impacts of logging activities outside the Assessment Area. *See NRDC v. Hodel*, 865 F.2d 288, 299 (D.C. Cir. 1988); *Save the Yaak Comm. v. Block*, 840 F.2d 714, 720-721 (9th Cir. 1988); *Washington Trails Association v. United States Forest Service*, 935 F. Supp. 1117, 1122-23 (W.D. Wash. 1996).

Finally, as discussed above, the Forest Service's failure to provide spatially relevant habitat information for the owl renders its cumulative impact analysis, even within the Assessment Area, invalid. *See e.g.*, Britting 2006 & Figure 1. The failure to obtain and analyze this important information violates the Forest Service's duty under NEPA to gather missing information or to analyze likely environmental consequences if the data cannot reasonably be obtained. 40 CFR 1502.22.

As discussed in prior comments, the Sierra Nevada Framework found that the California spotted owl utilizes and selects habitat at three different spatial scales: nest, roost, or foraging stand; home range or core area; and landscape. (USDA Forest Service 2001a, Volume 3, Chapter 3, part 4.4, p. 72. See also id. at 82 ("Conservation measures must consider habitat distribution, abundance, and quality at the landscape, home range, and stand-level scales.") The Sierra Nevada Framework also found that timber harvesting could have significant impacts only detectable at the home range scale:

> Reproduction would drop below replacement rate at some threshold percentage of suitable habitat between 30 and 50 percent in home ranges and in the larger landscape in general. Recently completed analysis in the Sierra National Forest demographic study area concludes that canopy cover composition within owl home ranges is significantly correlated with owl occurrence and productivity .... Productivity was positively correlated with the proportion of the analysis area having greater than 50% canopy cover and

> negatively correlated with the proportion having less than 50% canopy cover. The values ranged from 75% of the smallest analysis area (178 acres) with greater than 50% canopy cover to 60% of the largest analysis area (1,062 acres) having greater than 50% canopy cover.

(USDA Forest Service, 2001a, Chap. 3, part 4.4, p. 76.)

At the landscape scale, suitable habitat must be distributed across the Sierra Nevada in a manner that is consistent with spotted owl life history. The spatial distribution of owl home ranges was an important consideration in the development of both the conservation strategy for the northern Spotted Owl (Thomas et al. 1990) and the interim guidelines for the California Spotted Owl (Verner et al. 1992). Both plans considered it important that enough home ranges be located in close proximity so that dispersing juveniles had a high probability of locating vacant territories and recruiting into the population.

The Framework states the importance of assessing impacts to the owl at a regional landscape level:

> At the landscape scale, the issue is to provide for sufficient amounts and distribution of high quality habitat to facilitate natal and breeding dispersal among territories and to maintain California spotted owls well-distributed throughout their historic range in the Sierra Nevada. For this purpose, protecting occupied, as well as suitable but unoccupied habitat, over the long term is important at this scale. A species with obligate dispersal and experiencing habitat limitation would be expected to show a pattern of less than full occupancy of habitat due to the uncertainty of the search process and the survival costs associated with searching for low-density habitat. [] Conservation efforts should therefore consider not only occupied habitat, but also suitable unoccupied habitats, in developing conservation strategies for species for which dispersal may function as a primary limiting factor.

(USDA Forest Service, 2001a, Chap. 3, part 4.4, p. 82.) The need for a landscape level identification of suitable habitat is in part due to the recognition by federal scientists that owls may disperse across large areas encompassing many watersheds and that such dispersal can be expected to occur "in random directions, with no relation between dispersal direction and the geographic orientation of drainages or ridges." (See e.g., Verner et al. 1992, p. 66 (Technical Report describes dispersing juvenile owls ranging from 2.1 to 68 miles from natal area). Recent FWS data suggest that the median dispersal distance of 42 juvenile owls within the HFQLG area was 14 miles for males and 16 miles for females (Federal Register 2005). *See also* Blakesley 2006. The success of such dispersal may depend on the quality of matrix habitat between owl home ranges. Additionally, adult owls in the Sierra Nevada may migrate to lower elevations during winter for distances up to 36 miles (Laymon 1989). All of these factors reinforce the need to maintain habitat quality on matrix lands outside of designated HRCAs. *See* Verner et al., 1992, p. 66.

Third, the Freeman Project planning documents avoid assessing the habitat quality, and activities affecting such habitat quality, outside the Assessment Area by tiering to the 1999 QLG

FEIS and 2004 Framework FEIS. Thus, the Freeman project documents continue to avoid a cumulative effects assessment of implementing the OLG project on owls, marten and other wildlife as further information is known about how such projects will be implemented with respect to the current population's status of these sensitive species. As discussed in prior comments, however, the Framework's analysis is incomplete and uncertain, and, moreover, cites the need for further regional cumulative impact assessment at the project level. For example, the Administrative Study, designed to assess impacts of the QLG Pilot Project, acknowledges the necessity of assessing impacts from forest management at the landscape level.

> Landscape fuels treatment strategies are implemented at large spatial scales and will be the dominant management activity affecting CSOs and the forest landscape. Resulting changes in vegetation structure and composition from treatments may affect [California spotted owls] and their habitat at multiple spatial and temporal scales. Key uncertainties regard the effects of landscape-scale fuels treatments strategies that thin large areas of forest on CSO density, population trends, and habitat suitability at the landscape scale and how thinning effects habitat quality at the core area/home range scale....It is necessary that research address management effects on CSOs at the appropriate scales at which management is being conducted. Proposed landscape treatments may have effects at either, or both, the individual territory or owl site scale as expressed through change in occupancy, diet, use of vegetation patches, survival or reproduction, or at the population level as expressed through change in the density or spatial distribution of territorial breeding pairs at the landscape-scale. The individual site scale and population level perspectives are complementary in that the population level provides context for interpreting change at the site scale. Most importantly, both perspectives are required by managers concerned with managing for high habitat quality sites, as well as, well-distributed, viable populations across landscapes while implementing management strategies to deal with large-scale fire and fuels issues.

(USDA Forest Service 2003.)

> Further, the QLG EIS also acknowledges the potential for cumulative impacts from implementation of logging projects under the QLG plan, stating that "[f]urther cumulative effects analysis on wildlife habitat will be conducted at the project level.

(USDA Forest Service 1999b.)

Fourth, the Cumulative Impacts analysis in FEIS is flaw and contains the same NEPA violations and failure to take a "hard look" at impacts. To reiterate prior findings by the Forest Service, "merely listing past, present, and reasonably foreseeable future actions does not constitute adequate cumulative effects analysis." *See* Empire Appeal Decision.

Although the list of projects has been embellished, the Freeman SFEIS still fails to explain how various past, present and future activities cumulatively impact wildlife in the analysis area and beyond. The FEIS appears to list effects by activity type rather than disclose effects in combination…that is cumulatively.

In sum, the cumulative effects analysis in the Freeman Project FEIS, with respect to past, present, and reasonably foreseeable future logging, fails to comply with NEPA.

### 4. The Freeman Project Fails to Take a Hard Look at Alternatives

NEPA and the CEQ regulations require that the Forest Service "[r]igorously explore and objectively evaluate all reasonable alternatives." 40 C.F.R. § 1502.14(a). The requirement that agencies consider all reasonable alternatives "is at the heart of the environmental impact statement." 40 C.F.R. § 1502.14. The purpose of this requirement is to "sharply defin[e] the issues and provid[e] a clear basis for choice among options by the decisionmaker and the public." *Id.; see also Kootenai Tribe of Idaho v. Veneman*, 313 F.3d 1094, 1120 (9th Cir. 2002). "The existence of a viable but unexamined alternative renders an EIS inadequate." *Natural Resources Defense Council v. U.S. Forest Service*, 421 F.3d at 813. The "touchstone" for courts reviewing challenges to an EIS under NEPA "is whether an EIS's selection and discussion of alternatives fosters informed decision-making and informed public participation." *Westlands Water Dist. v. U.S. Dep't of Interi*or, 376 F.3d 853, 872 (9th Cir. 2004). The Ninth Circuit has held that an agency's consideration of alternatives is inadequate where it does not examine a viable alternative using correct scientific analysis. *Natural Resources Defense Council v. U.S. Forest Service*, 421 F.3d at 814; *see also Alaska Wilderness*, 67 F.3d at 730-31.

As discussed in prior comments and further below, due to the real potential for significant impacts to wildlife, including the inability to ensure viability of such species as the spotted owl and marten, as discussed below, the Forest Service has an obligation to take a "hard look" at alternatives that will meet project objectives, but with less harmful impacts to wildlife. As stated by the Northern District Court in its recent decision in *Sierra Club v. Bosworth*, USND Case No. 05-00397, regarding the tradeoff between certain project purposes (in this case fuel reduction benefits) and the Forest Service's mandate to ensure wildlife diversity and viability:

> There can be little dispute that fire poses a threat to the fisher and must be considered in an environmental analysis. However, the proper question given all the available science is not only whether a project protects the Forest from catastrophic fire, but also whether it does so in a manner that has the *least impact* on sensitive species. For example, a reasoned analysis likely would revisit the original canopy cover and tree diameter restrictions to determine--in light of all the new information--whether restrictions set at other levels would still protect the forest from fire while better protecting important habitat features.

Opinion, p. 14:9-17. *See also Sierra Nevada Forest Protection Campaign v. Tippen, supra.*

#### a. The Forest Service Has Not Considered a Reasonable Range of Alternatives

The Forest Service has not considered a reasonable range of alternative treatments in this project. An EIS is not an opportunity to justify an action, but rather a forum to "provide full and fair discussion of significant environmental impacts and [to] inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance

the quality of the human environment." 40 C.F.R. § 1502.1. Here, the Forest Service appears committed to avoid considering or discussing the feasibility of alternatives with less intensive fuel treatments which retain substantially more medium to large diameter trees and higher canopy cover, to the benefit of wildlife. As discussed in prior comments and highlighted again below, since the present proposed action threatens the viability of several of these species, the Forest Service must not only consider these alternatives under NEPA, it is required to choose an alternative with less harmful environmental effects to ensure compliance with NFMA.

The Campaign reiterates its prior comments on this point. Given the potentially significant and at best uncertain impacts on sensitive wildlife such as the owl and marten, the Forest Service must review in detail potentially feasible alternatives to determine the extent to which adverse environmental impacts can be achieved consistent with project purposes. Instead, the Freeman Project proposes a set of action alternatives that are essentially identical in terms of the intensity of logging allowed.

In *Sierra Nevada Forest Protection Campaign v. Tippen, supra,* the Eastern District rejected this overly narrow approach to considering alternatives under NEPA:

> To the extent that defendants assert that the 2004 Framework supersedes the 2001 Framework such that implementation of a plan in accordance with the 2001 Framework would be inconsistent with the 2004 Framework, they are mistaken. The 2004 Framework amended the 2001 Framework to provide the Forest Service with increased flexibility, but did not mandate more intensive logging measures. CR 00119-20 (setting more flexible maximum guidelines for logging, but not mandating minimum requirements). ….As such, an alternative applying the 2001 Framework would not necessarily be inconsistent with the 2004 Framework.,,

The Campaign reiterates its prior position that the Forest Service should consider a fuel reduction and forest regeneration alternative that meets the less intensive logging that was permitted under the 2001 Framework. Implementation of a 2001 Framework alternative could have considered alternatives in which group selection and ITS units are confined to areas of lesser habitat quality, as opposed to the critically sensitive habitat for owls, marten and other species that will be treated under Alternative 4.

**b. The Freeman Improperly Rejects Alternatives With Less Harmful Impacts**

Alternatives must be considered in light of “the underlying purpose and need" for the project, which must be specified in the EIS. 40 CFR 1502.13. The DEIS for this Project must suggest and analyze the environmental impact of alternatives to the Preferred Alternative that can meet the project purpose . 42 U.S.C. " 4332(C) & (E); 40 C.F.R. 1508.9(b.) *See Native Ecosystems Council v. Dombeck*, 304 F.3d 886, 895-896 (9th Cir. 2002.) *Muckleshoot Indian Tribe v. United States Forest Serv.*, 177 F.3d 800, 810 (9th Cir. 1999) ("Forest Service failed to consider an adequate range of alternatives. The EIS considered only a no action alternative along with two virtually identical alternatives.")

As raised in prior comments, the Campaign requests that the Forest Service consider a less harmful treatment alternative, one which limits harvest to 20" dbh and/or retains canopy cover at 50% or greater, particularly in the most sensitive nest core or HRCA habitats. In the alternative, the Forest Service should consider an alternative that implements the 2001 ROD standards to determine whether project objectives can be met with less significant impacts on wildlife. Here, in contrast, the Forest Service's alternatives analysis establishes a false choice between 3 similar "action" alternatives and no treatment whatsoever. This is not a reasonable approach under NEPA.

Our review of the FEIS indicates that the Forest Service appears to have abandoned its previous grounds for rejecting consideration of alternatives with less impact to wildlife based on 1) fire risk; and 2) forest health. The Campaign Service reiterates its prior points on these issues and submits the further declaration of Rice 2006b to support what appears to be the indisputable fact that the Forest Service can meet relevant fuel reduction goals without resorting to intense logging of medium to large trees and 40% canopy cover.

On each of these points, the Forest Service implies that more intense treatments will be more effective in controlling fire and improving forest health, but these assertions are not based on any reasonable measures to gauge success or failure. As stated in prior comments, the Forest Service must assess alternatives in relation to project purposes according to measurable comparable standards. In the absence of a rationally based, measurable standard of success, it may not reject less harmful alternative, particularly in the face of potentially significant and at best uncertain adverse impacts to wildlife. The Forest Service cannot dismiss an alternative, without any discussion, based on a conclusory statement that the higher diameter limit meets other project objectives "more effectively." Under NEPA, an alternative either meets or does not meet a project objective. The Forest Service cannot avoid assessing alternatives based on its own conclusory analysis, not subjected to public scrutiny, that the Forest Service's objectives are not being met as effectively as possible *See e.g. Lands Council v. Powell*, 379 F.3d 738 (9th Cir. 2004) (NEPA was passed by Congress to protect the environment by requiring that federal agencies carefully weigh environmental considerations and consider potential alternatives to the proposed action before the government launches any major federal action.)

The Freeman FEIS does add more discussion of its economic basis for not considering any alternative short of maximum harvesting under the 2004 Framework and OLG project. However, this analysis was not presented at the DEIS stage, and thus the public has not had an adequate opportunity under NEPA to review and consider the data allegedly supporting the Forest Service's findings.

In addition, the Forest Service's analysis relies on a conclusory comparison with other projects that allegedly demonstrate that economic objectives cannot be achieved using less intense treatments and/or treatments based on the 2001 Framework. For example, the Forest Service states that it has already determined that this alternative does not meet its purposes and needs in prior Forest Service projects Happy Jack, Empire and Watdog. However, the Forest Service cannot simply refer to other projects' alternatives analysis and assume that this closes the door on the Service's NEPA responsibilities to consider a reasonable range of alternatives for individual projects. The Forest Service provides no information that the factual circumstances of

the Freeman Project and the other cited projects are identical. Since impacts to wildlife and effectiveness in achieving project purposes necessarily vary from project to project, the Forest Service must consider a reasonable range of alternatives in for this Project as well. Further, as far as the Campaign is aware, the cited projects did not in fact come to the conclusions on which the Forest Service now erroneously relies.

Second, the Campaign submits that economic profit cannot be grounds to rule out consideration of otherwise feasible alternatives that substantially less the potential for significant environmental impacts. Again, the Forest Service has identified no threshold to determine whether the economic benefits of different proposed alternatives meet or do not meet the stated project purpose. The Campaign notes that all considered alternatives create full time jobs and generate income, thereby contributing to community economic stability. Thus the Forest Service is again rejecting alternatives based on the idea that one alternative goes farther in achieving a particular purpose than another. But this is not the standard for assessing alternatives under NEPA, particularly in the context of economics where the 9th Circuit has recently expressed its disapproval over "a disturbing trend in the Forest Service's recent timber-harvesting and timber-sale activities:"

> It has not escaped our notice that the USFS has a substantial financial interest in the harvesting of timber in the National Forest. We regret to say that in this case, like the others just cited, the USFS appears to have been more interested in harvesting timber than in complying with our environmental laws.

*Earth Island Inst. v. U.S. Forest Serv.*, 442 F.3d 1147, 1178 (9th Cir. 2006). The Campaign also notes that under NFMA, economics cannot override other statutory mandates to maintain species viability and diversity on the Forest. *See e.g.*, 36 CFR 219.27(b)(3).

Finally, the Forest Service's statement that there is no difference in impacts to wildlife between harvesting trees up to 20" dbh versus 30" dbh is contrary to sound science and the record in this proceeding. As discussed above, old forest wildlife such as owls, marten and fisher all utilize trees between 20" to 30" dbh. *See* Call *et al*. (1992) (owls strongly select stands with a high basal area of trees between 20.7-35.4 inches for foraging) Bias and Gutierrez (1992) ((greater basal area of trees in the 20.7-35.4 inch size class occurred in owl nest stands than in random stands) Blakesley (2003) (greater nest success in stands and greater survival in territories dominated by medium and large trees.) (see Blakesley 2005) Verner et al. 1992, p. 92 (nearly 25 percent of owl nest trees were less than 30" dbh.) USDI Fish and Wildlife Service 1999, p. 7 (In sum, as the U.S. Fish and Wildlife Service has expressed, "a significant number of potential nest trees could be removed" by logging trees less than 30" dbh.).

Further, such co-dominant conifers provide the needed canopy cover and future recruitment for larger old forest that these species will require for long term viability on the Plumas National Forest. *See* Gladen 2003, p. 11 (Removing trees under 30" diameter also has the effect of "making large tree recruitment in the future more uncertain.") Peery 2004, pp. 2-3; Verner 2003b, p. 3 (harvesting trees up to 30" dbh fails to ensure adequate recruitment of large trees, which are a critical component of owl nesting habitat, once the stock of mature and old-growth trees becomes reduced due to natural mortality.)

As discussed above and in the Kucera 2006a & b Declarations, the same applies to the marten and fisher.

The need for consideration of alternative management approaches is particularly apt given the Forest Service's acknowledged uncertainty regarding implementation of different strategies. For example, the Forest Service's QLG Administrative Study for the pilot project states that "key uncertainties" remain regarding "the effects of landscape-scale fuels treatments strategies that thin large areas of forest on CSO density, population trends, and habitat suitability at the landscape scale and how thinning effects habitat quality at the core area/home range scale." (USDA Forest Service 2002). The Forest Service's uncertainty regarding the proper course of action makes its review of alternatives that propose different approaches to meeting Forest Service goals all the more important.

Here, the Freeman FEIS concedes that the population status of old forest dependent species in this area is highly uncertain and that the Preferred Alternative will remove significant amounts of suitable habitat. For that reason, it is arbitrary and capricious and a violation of NEPA for the Forest Service nevertheless to forge ahead without any public discussion of why a more intensive and more harmful level of logging is necessary for this Project. As stated by Dr. Blakesley states in her comments on the Creeks Project in the Lassen National Forest:

> The choice to be made should not be whether to do one thing or do nothing. Rather, a variety of treatment options should be presented, including at least one that retains at least 40-50% canopy cover in all suitable owl foraging habitat, at least one option that limits the diameter of harvested trees to 20" or less, and at least one that does not include group selection harvesting. In particular, the EIS should model an alternative based upon the 2001 SNFPA, which incorporates several of these features. This would allow decision makers and the public to fairly evaluate a variety of timber harvest alternatives with respect to fire, insect pests, mistletoe, wildlife, recreational, and other considerations.

(Blakesley 2005, p. 4).

### 5. The Freeman Project Fails to Take a Hard Look at Impacts to MIS and Other Sensitive Species

As discussed below, the Freeman Project fails to comply with monitoring requirements for MIS and other sensitive species. However, population and other monitoring information is needed as a baseline in order to fully evaluate fully the effects of the Freeman Project on the environment. Without such data, the Forest Service cannot present adequate information to determine what the impacts of the project will be on such species. In addition to being a NFMA violation, these failures constitute a failure to take a hard look under NEPA.

#### a. The analysis of effects to management indicator species is inadequate.

Section VI.B.3 below identifies a number of species for which the population monitoring was not completed or the data collected or analysis completed was inadequate. Among these

species are numerous management indicator species (MIS) species for the Plumas National Forest. As identified in the Regional direction on the analysis of management indicator species and documentation in project level NEPA (USDA Forest Service 2006b), "when the governing LRMP requires population monitoring or population surveys, the MIS effects analysis for the project must be informed by population monitoring data." Since the population monitoring data are absent or inadequate for many of the MIS species the effects analysis for these species is also inadequate.

**b. Snag levels in the project area are not evaluated.**

Large snags are an essential habitat element for many wildlife species that occur in the Freeman Project area including California spotted owl, northern goshawk, marten and woodpeckers. However, no assessment of the quality, density, and distribution of snags in the Freeman Project area or the Plumas National Forest as a whole has been disclosed in the environmental analysis. Aside from such assessment being required by the forest plan monitoring requirements (*see* above discussion on this point), a baseline assessment of snag levels is necessary to understand the context for the effect that further reductions in snags will have on numerous species.

The FEIS states that "past silvicultural and timber sale actions on both National Forest and private land described under cumulative effects...has contributed to a decline in snag and down log abundance across the wildlife analysis area." FEIS, p. 162. The FEIS continues this discussion in stating that "it is suspected" that snag recruitment has increased in the area since the mid-1990's. *Id*. There is, however, no data presented on the size and density (units per acre) of snags in the Freeman project area or the Plumas National Forest. Any conclusions about snag size and density are speculative and not supported by evidence.

The FEIS relies on the notion that some level of snags (where they exist in the project area) will be retained, but that this alteration will have a negligible effect on snag abundance in the assessment area since other areas remain untreated. This reasoning is unsound for several reasons.

First, we know nothing of the abundance of snags in the untreated areas except that their abundance has declined due to past practices. *Id*. Further, some of the past practices (i.e. clearcutting on private land) have resulted in the total loss of snags on the affected land. If these areas have levels of large snags that are lower than densities needed by the affected species, additional losses of large snags resulting from the project will contribute to an already degraded habitat condition. Thus, knowledge of the existing setting is essential to judging the relative effect of the Freeman Project on the environment.

As early as 1988, the importance of snags on the forest was recognized. The PLRMP (p. 5-12) requires that snags be inventoried annually "during timber sale planning, compartment exams, or fuel reduction programs." The failure to gather and report information on snag densities is a violation of the forest plan. The failure to consider this information in the environmental analysis is also a violation of NEPA since in its absence, the quality of the available habitat can not be known nor can mitigation measures that might improve poor

conditions be identified. Thus, the FEIS conclusion in the project will have minimal effects on habitat trend is not supported by site specific data on snag conditions

Second, large snag requirements for some species are considerably higher for species not evaluated by Bull et al. (1997). For instance, Verner et al. 1992 recommends retaining 8 of the largest snags per acre with the condition that snags less than 15" dbh do not count as large. (Verner et al. 1992, p. 22). Additionally, snag densities of 5 snags greater than or equal to 24" dbh per acre are considered necessary for suitable resting and denning for marten. (USDA Forest Service 2001a, Volume 3, Chapter 3, part 4.4, p. 20). Thus, reliance on Bull et al.'s suggestion that 4 large snags per acre are sufficient to provide for habitat needs applies to a limited number of species. Further, there are large areas (i.e. the fuel treatments and group selection units) within the Freeman Project that intend to retain far fewer than 4 large snags per acre.

Third, the FEIS implies that since the snag retention applied in the Freeman Project will result in 2 to 6 snags per acre retained in the treated areas, habitat needs will be met for cavity nesting birds such as woodpeckers (MIS analysis) and other species. This assumption, however, does not take into account that it is likely that no snags will be retained on the areas proposed for group selection. If group selection units are located in snag rich areas and are adjacent to snag poor areas, the effect of group selection on snag abundance could be disproportionately high. Similarly, the importance of snags relates to a combination of their abundance, size and distribution[1] -- such information is lacking in the project analysis. Overall, the lack of site specific information on snag quality, quantity and distribution make it impossible to evaluate the likely effect of the project on habitat quality.

### 6. The Freeman Project Fails to Take a Hard Look at the Freeman Project's Failure to Meet Regional Standards for Soil Quality

As discussed more fully below, Section VI.B.4, the Freeman project documents fail to explain or discuss how the analysis or the project as designed meets the Region 5 soil quality standards with respect to a number of relevant soil standards. In addition to being a NFMA violation, these failures constitute a failure to take a hard look under NEPA.

### 7. The Freeman Project Fails to Present Adequate Information to Determine the Effects of Group Selection in Critical Habitat Areas

The Freeman Project documents do not specify the location of Group Selection units, and thus the public is unable to assess the impacts of this treatment method in critical habitat areas such as within owl nest cores, home range core areas or home ranges, or marten carnivore networks. The location of GS unit placement could have significant spatial impacts, however, to the extent they reduce core habitat below certain minimum thresholds, fragment habitat, cut off dispersal or movement corridors or open up the forest to predators such as the barred owl. Further, as discussed above, if group selection units are located in snag rich areas and are adjacent to snag poor areas, the effect of group selection on snag abundance could be

[1] As an example, this relationship was emphasized by Bull et al. (1997) in their review of snags and cavity nesting birds.

disproportionately high.

The absence of information regarding GS placement location undermines the public's ability to review and assess the impacts of the Freeman Project because research indicates that small pockets of large trees and old forest are important for associated wildlife like the California spotted owl (Blakesley 2003; Moen and Gutierrez 1997), Pacific fisher (USDA Forest Service 2004b, p. 139), and American marten. "Pacific fishers, American martens, and California spotted owls use small aggregates of large trees for denning, resting, and nesting sites," even within larger stands that do not constitute old growth. (USDA Forest Service 2001a, Volume 2, Chapter 3, part 3.2, p. 131). Failure to protect these small but important stands could degrade potential owl nesting habitat and reduce the likelihood of nesting success (Verner 2003, p. 4; Blakesley and Noon 2003) and eliminate potential denning and resting sites for fisher (Barrett 2004).

Because of their ecological importance, the 2001 Framework protected these small old growth stands from intensive logging. The 2004 Framework's removal of protection for old growth stands of 1 acre or larger was strongly criticized by the Fish and Wildlife Service and by the Forest Service's Washington Office. The Washington Office specifically cited this weakening of the Framework as a factor in its conclusion that the new standards "do not maintain owl habitat and substantially increase the risk that self sustaining owl populations will not be maintained." (Gladen 2003, pp. 10-11). According to the Fish and Wildlife Service, this change may "have significant effects on old forest habitats used by the owl" by allowing "reduction of structural complexity within treated habitats," which "could allow stands of potential owl nesting habitat to be removed." (USDI Fish and Wildlife Service 2003, pp. 4- 5). Therefore, it is critically important that the Freeman project documents contain accurate information and analysis regarding these small old growth stands and how they will fare if the Freeman Project is implemented. Without information indicating how such quality stands are being avoided by groups, the public is unable to adequately assess whether this treatment is having significant impacts.

### 8. The Freeman Project Fails to Take a Hard Look at the Threat Posed to Spotted Owls by the Increasing Presence of Spotted Owl Predators in the Planning Area

The Campaign incorporates its prior comments on this issue. The Freeman project does not adequately address the potential for significant impacts from creating a mosaic of forest openings to which barred owls, a spotted owl predator, are better adapted. Barred owls have been detected in the area and the potential for barred owls to become established and compete with California spotted owls within the Freeman project area is a potentially significant cumulative effect, which is not meaningfully discussed in the planning documents. Here, the Forest Service has confirmed increased sightings of barred owl recorded on the Plumas National Forest since 1992. Further, the Freeman Project documents refer to a recent barred owl detection in the planning area, but do not further consider the extent to which the intensive logging proposed for this project will further exacerbate this threat to spotted owls.

An increase in barred owls due to forest fragmentation in combination with reduced

habitat could cumulatively reduced spotted owl numbers in the area. The reduction of spotted owl numbers in the area is a significant impact. Increased forest fragmentation in the Freeman Project is likely to facilitate the invasion of barred owls and lead to potentially significant impacts to spotted owls in the planning area and beyond. Since the evidence demonstrates the potential for significant impacts, which may place the local spotted owl population at risk, from this invasive species, further analysis is required for this project.

The Freeman Project also fails to analyze the potentially significant impacts of increasing predation by Great Horned Owls. (*See* Verner et al. 1992, p. 67) *See* Prior Campaign comments & Appeal.

## C. The Forest Service is Not Complying with its Legal Obligations to Monitor for Wildlife

The Campaign incorporates its prior comments on this issue and in addition submits the following to further clarify how the Forest Service is currently violating its legal obligations to monitor for MIS and applicable sensitive and at risk species.

Management to achieve well distributed populations of desired native and non-native species across the planning area is a fundamental goal of the National Forest Management Act (NFMA). This goal is intended to be achieved through planning and monitoring. The Plumas Land and Resource Management Plan (PLRMP) (as amended in 2004), the NFMA, and other federal laws and regulations provide a framework to direct the achievement of this goal. The PLRMP (amended 2004) provides specific direction on the required monitoring for selected species in connection with the Freeman Project.

As described below, the Freeman Project fails to meet the monitoring requirements in the PLRMP in a number of ways including failure to collect and report monitoring data and failure to make estimates of population trend that are based on monitoring data. Disclosure of the monitoring data and the assessment of population trend are essential for two reasons. First, it is required by the forest plan and therefore required by law. Second, this information is necessary in order to evaluate fully the effects of the Freeman Project on the environment as required by law. The failure to collect and disclose this information is significant and should be corrected in a revised analysis and re-circulated for public comment.

Lastly, we raised these same issues in our comments on the Freeman DEIS, Freeman appeal (2005) and on the DSEIS (2006) and the forest has failed to address these deficiencies.

### a. Monitoring required by the forest plan was not completed for 23 species evaluated in the Freeman Project and additional species affected by the project.

The PLRMP was first approved in 1988. This plan was subsequently amended in 1992, 2001 and 2004. The amendment in 2004 adopted an adaptive management and monitoring program that is described in Appendix E of the FEIS issued in 2001. (USDA Forest Service 2001a). The PLRMP as amended in 2004 includes the monitoring originally specified in the

PLRMP as well as the additional monitoring identified in Appendix E. For twenty-three of the species analyzed in the Freeman Project, the monitoring required by the original PLRMP or the plan as amended in 2004 has not been completed. (Table 2). As can be seen from a review of Table 2, the type of monitoring required or the frequency specified in the original PLRMP has not been achieved for four of the species. Also, the population monitoring specified in the amended PLRMP (i.e. Appendix E) has not been reported for all twenty-three of these species. Beyond this, there are sixteen species that may be affected by the Freeman Project and are listed in Appendix E as requiring annual population monitoring. (Table 3). These species and their monitoring results were not discussed in the Freeman Project analysis.

Table 2. Species considered in the Freeman Project for which the monitoring requirements in the Plumas Land Management Plan (PLRMP) (amended 2004) have not been addressed in the environmental analysis.

| Species | Forest Plan Monitoring Requirement | Frequency | Monitoring Reported in Freeman Documents |
|---|---|---|---|
| Canada goose | "Counts of adults and young on selected sites." (PLRMP 1988) | Not specified. | Monitored from 1989 to 1990 (MIS report, p. 14) |
| | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided since 1990.(MIS, p. 14) |
| Golden eagle | "direct counts of adults and young on selected nest sites" (PLRMP 1988) | Annually | No monitoring in last 10 years. (MIS report, p. 15) |
| | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring in last 10 years. (MIS report, p. 15) |
| Prairie falcon | "direct counts of adults and young on selected nest sites" (PLRMP 1988) | Annually | Monitored from 1979 to 1990; in 1992, 1996, 2006. (MIS report, p. 16) |
| | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided. |
| Largemouth bass | "Verify trend in habitat quantity, quality, population size and distribution of key populations." (PLRMP 1988) | 20% of identified monitoring sites annually and 5 year trend analysis. | Unspecified monitoring from Lake Davis. (MIS report, p. 27) |
| | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided. Downward trend based on Lake Davis. |
| Gray squirrel | "Summarize acreage, species composition, existing and desired basal area of hardwoods in stands being managed to meet hardwood standards as planned on a compartment basis." (PLRMP 1988) | Annually | Addresses oak habitat generally; specific attributes not directly addressed. |
| | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided. |
| California spotted | "population trend and habitat trend in | Annually | Trend not determined. |

| Species | Forest Plan Monitoring Requirement | Frequency | Monitoring Reported in Freeman Documents |
|---|---|---|---|
| owl | network territories" (PLRMP 1988) | | |
| | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided. |
| Northern goshawk | "Survey of designated habitat to determine occupancy and reproductive success" (PLRMP 1988) | "Survey for occupancy in 25% of established nest groves annually" (PLRMP 1988) | No monitoring data provided. |
| | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided. |
| Fisher | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided. |
| Marten | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided. |
| Sierra Nevada red fox | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided. |
| Townsend's big-eared bat | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided. |
| Western red bat | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided. |
| Pallid bat | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided. |
| Swainson's thrush | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided. |
| Hairy woodpecker | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided. |
| Pileated woodpecker | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided. |
| Williamson's sapsucker | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided. |

| Species | Forest Plan Monitoring Requirement | Frequency | Monitoring Reported in Freeman Documents |
|---|---|---|---|
| Red-breasted sapsucker | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided. |
| Osprey | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided. |
| Yellow warbler | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided. |
| Olive-sided flycatcher | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided. |
| Mountain white-crowned sparrow | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided. |
| Band-tailed pigeon | Population monitoring required. (Amended PLRMP 2004) | Annually | No monitoring data provided. |

Table 3. Species from Appendix E (USDA Forest Service 2001a) that require population monitoring and that may be affected by the Freeman Project. These species were not addressed in the environmental analysis.

| CWHR # | Common Name | Habitat Type[1] |
|---|---|---|
| B134 | Blue grouse | Open, medium to mature-aged stands of conifers |
| B141 | Mountain quail | Open, brushy stands of conifer and deciduous forest and woodland, and chaparral |
| M151 | Black bear | Dense mature forest of many types |
| B129 | Peregrine falcon | Woodland, forest riparian |
| M025 | Long-eared myotis | Brush, woodland, forest; crevices, bark, snags |
| M026 | Fringed myotis | Hardwood-conifer; crevices, mines |
| M027 | Long-legged myotis | Woodland , forests, chaparral; rock tree bark, snags |
| M029 | Small-footed myotis | Arid wooded and brushy uplands near water |
| M030 | Silver-haired bat | Conifer, montane riparian |
| M034 | Hoary bat | Dense foliage of medium to large trees |
| M049S1 | Sierra Nevada snowshoe hare | Montane riparian with thickets of alder/willow; young conifer with chaparral |
| M050 | White-tailed hare | Early successional stages of various conifer |
| B138 | Turkey | Riparian, oak and oak-conifer forests |
| B272 | Long-eared owl | Riparian, dense tree |
| B079 | Mallard | Lakes, rivers |
| FN02 | Pacific lamprey | Stream |

[1] Extracted from "California's Wildlife" edited by Zeiner, D.C. et al. 1988-1990.

The failure to conduct and report monitoring for the species referenced above should be remedied for the Freeman Project.

**b. The assertion that there is an upward trend on the Plumas National Forest for California spotted owl is not supported by monitoring data.**

As discussed above, the PLRMP requires that the "population trend and habitat trend in network territories" be determined for California spotted owl annually. (PLRMP 1988, Table 5-1). The last year there was a complete survey of the owl territories on the Plumas National Forest was in 1991-1992.[2] Since that time, whenever new owls were detected, protected activity centers (PACs) were established around them. There was however, no systematic survey completed each year of all territories designated on the Plumas National Forest. Each year, the only owl territories that were surveyed were those that were expected to be affected by projects. For example, the list of owl territories affected by the Empire or Diamond Projects in their respective biological evaluations (Plumas National Forest 2006a and b, Attachment 5 for each) indicates that there are owl sites for which surveys were not completed in 2005. Thus,

[2] This survey effort was required for the planning undertaken to support the CASPO interim guidelines.

monitoring data is not available for all of the owl territories for each year since 1988 when the Plumas forest plan was adopted.

The Plumas Lassen Administrative Study (PLAS) has been collecting monitoring data on some number of owl territories on the Plumas NF since 2004. The analysis of population trend in the Management Indicator Species (MIS) Report for the Plumas National Forest uses PLAS data collected in 2004 and 2005 to "adjust" the PAC numbers and "correct" them to reflect a "projected" occupancy status of each owl PAC. This is a misuse of the data for two reasons. First, the MIS report seems to have confused the cumulative identification of "owl sites" or PACs on the national forest as an indication that owl numbers are increasing. This is precisely the inference that the USFWS cautioned against when they stated that "the number of territories should not be viewed as a population estimate for the taxon." (Federal Register Volume 71, number 100, p, 29889). Second, the PLAS data can not be used to "estimate" the occupancy of the PACs since that data fails to take into account the fact that some owl PACs are not occupied in given year. For instance, the Diamond BE (Plumas National Forest 2006b, Attachment 5) shows that nine of the thirty-three PACs surveyed in the project area had no owls present in 2005. There is every reason to expect that this situation in Diamond – that not all PACs are occupied in a given year or for many years in a row – is present elsewhere on the forest. [3] However, the data manipulation to assign an occupancy status to PACs did not take this into account. This is clearly an improper use the PLAS data. In her review of the Empire Project, owl scientist Monica Bond reviewed the same MIS report that was included in the Freeman Project. She found the analysis lacking for the reasons stated above and concluded that "the occupancy data reported is not adequate to assess population trend." (Bond 2006a, p. 4).[4]

Furthermore, PLAS data set in itself is insufficient to estimate population trend. There are only two years of data which is too few time steps from which to make estimates of population trend. This situation is confirmed by the absence of any calculation or estimate of population trend in the 2005 annual report for the PLAS. (USDA Forest Service 2006a).

The MIS Report should be rewritten to reflect acknowledgement that the occupancy data for the PLAS study that is reported is not adequate to assess population trend on the Plumas National Forest. The MIS Report should also acknowledge that there is no population trend data available for the Plumas National Forest and that the Lassen Study area, which strongly suggests a declining population, provides the closest and most relevant population data.

### c. The finding of an upward trend for the goshawk population on the Plumas National Forest is not supported by the evidence

Similar to the approach with spotted owls, protected activity centers are designated around goshawk breeding territories. The "PACs are maintained regardless of northern goshawk occupancy status." (USDA Forest Service 2004a, p. 38). Thus, as with spotted owl, it is not known whether or not PACs are occupied in a given year since there is no systematic survey to assess the occupancy status of PACs each year. Figure 14 of the MIS report attempts to

[3] See also the Empire BE (Plumas National Forest 2006b, Attachment 5) for a demonstration of lack of occupancy.
[4] Bond (2006) is attached to these comments.

convince us otherwise. Labeled as "goshawk population" this graph shows us a graph of increasing numbers of PACs between 1988 and 2005. The use of this graph to depict an "upward trend" is disingenuous for several reasons.

First, as mentioned above, PACs that are not surveyed annually can not reflect population trend or even a trend in occupancy since it is not known what is happening in the territories year to year. Second, prior to 2001 there was no requirement to survey for goshawks when projects affected suitable habitat.[5] (USDA Forest Service 2001, Volume 3, Chapter 3, part 4.4, p. 124). Instead territories were delineated when goshawks were located "opportunistically." (*Ibid*.) The only direction in the forest plan was to "[p]rovide a network of 60 nest stands containing suitable breeding habitat." (PLRMP 1988, p. 4-33). From the graph, it can be seen that this standard was achieved around 1996. The forest plan amendments in 2001 established survey requirements "for all activities that occur in suitable nesting habitat." (USDA Forest Service 2001, Volume 3, Chapter 3, part 4.4, p. 124). The increase in numbers of PACs designated is not surprising between 1996 and 2004 since the amended forest plan requires that they affirmatively establish presence or absence of goshawks in project areas and that PACs be delineated when territorial birds were located. Thus, they are no longer limited to the identification of 60 territories on the forest. Third, it is pointless to compare the number of PACs located on the forest today with the "PNF mgmt. Objective" and "PNF Capacity." Each of these estimates is based on outdated assumptions from 1988 on goshawk habitat needs and population viability. Since that time, it has been determined that there is not "a scientifically defensible basis regarding the desired density and distribution of northern goshawk pairs and territories to maintain a viable population." (*Ibid*.). Thus, the comparison to estimates that are not supported by current information is arbitrary.

Lastly, the MIS report indicates that monitoring of goshawk occupancy and nesting status has been initiated on a subset of territories on the forest. Two years of data have been collected under this effort. This is an insufficient period of time over which to infer population trend. Furthermore, it is also not clear if the data gathered from this study, which is intended to assess the effects of OHV on nest occupancy and success, can be used to infer population tends for the forest as whole as required by the forest plan.

**d. Monitoring data for snags in the project area was not disclosed.**

Large snags are a critical habitat element for many wildlife species including California spotted owl, northern goshawk, and marten. (See for example BE, pp. 65-69). The Freeman BE failed to assess the present or historic condition of snags in the analysis area and was unable to determine whether or not there was a net loss or gain in snags as a result of the project (BE, p. 36). However, other similar projects on the Plumas National Forest have concluded that that "[p]ast management practices…have probably led to a decline in the number of large diameter snags in the project area, with a detrimental effect on associated wildlife species." (Plumas National Forest 2006c, p. 3-45). Furthermore, other similar projects have concluded that there will be a decline in the numbers of snags in the project area as a result of some treatments. (See

[5] However, the forest plan did require monitoring of 25% of the territories annually. This annual monitoring appears not to have been completed.

for example Plumas National Forest 2006d, p. 56). Despite the recognized importance of snags to wildlife and the likely negative effect of the project on snags, the DSEIS fails to report any monitoring information on the current level and quality of snags in the project area. To evaluate effects on snag retention, the FEIS relies on the notion that the snag retention standards in the proposed action will provide for the necessary levels of snags. (See various citations in the BE/BA including, pp. 37 and 151). However, this approach fails to consider that the standard applies only where such snags presently occur. Further, this assumption indicates nothing about the present level of snags in the project area. An adequate analysis of effects must report both the existing condition and the potential effect of the action on changing that condition. The FEIS fails to provide this.

As early as 1988, the importance of snags on the forest was recognized. The PLRMP (p. 5-12) requires that snags be inventoried annually "during timber sale planning, compartment exams, or fuel reduction programs." The failure to gather and report information on snag densities is a violation of the forest plan. The failure to consider this information in the environmental analysis is also a violation of NEPA since in its absence, the quality of the available habitat can not be known nor can mitigation measures that might improve poor conditions be identified.

### D. The Freeman Project Violates Applicable Regional Standards Ensuring the Protection of Soil Quality and NEPA for Failing to Disclose Relevant and Significant Information Regarding Impacts to Soil Quality

The Region 5 Soil Quality Standards (FSH 2509.18, 2[1]), the service-wide soil management handbook (FHS 2905.18-91-1), and the Plumas forest plan provide the regulatory framework that governs soil management in this project. This framework establishes soil properties, conditions, and associated threshold values that are used to avoid detrimental soil disturbance.

The Freeman Management Project (FEIS) does not adequately disclose the risks of loss to soil productivity through detrimental compaction. Alternative 4 results in increased compaction and loss of soil cover and organic matter in the treated areas of the Freeman project. Mitigation measures have been proposed to reduce the levels of detrimental disturbance, yet these same measures have proved to be ineffective as demonstrated by recent soil monitoring and as disclosed in the FEIS 3-375. The methodology used to assess soils impacts is flawed and fails to follow Forest Service standards of practice. The FEIS fails to adequately discuss the likely consequence of not meeting the relevant standards or the effect that this will have on soil productivity, but instead relies of a misleading and inverted characterization of the facts—i.e., the level of violation is decreasing—to confuse the reader into thinking that a slightly less illegal plan is acceptable.

Failure to accurately discuss the effects is a violation of NEPA and failure to meet the regional and forest plan standards is in violation of the National Forest Management Act. The Freeman project violates NEPA's requirements for accurate information and the requisite "hard look" at potential impacts. The substantive soil quality violations cited above violate NFMA.

*See The Lands Council v. Powell*, 395 F.3d 1019, 1034 (9th Cir. 2005) (Forest Service's approval of logging project in the Idaho Panhandle National Forest was reversed on the grounds that the Forest Service had improperly concluded that the project would comply with the applicable soil quality standard, which prohibited activities "that would create detrimental soil conditions in 15 percent of the project area.") In *Sierra Club v. Bosworth*, 199 F. Supp. 2d 971, 991 (N.D. Cal. 2002), the plaintiffs challenged a logging project in Six Rivers National Forest on the grounds that the final EIS did not disclose or demonstrate compliance with a soil quality standard for soil porosity. In this Region 5 project, Sierra Club required that, "for each timber harvest unit, soil porosity be maintained to at least 90 percent of its natural condition over at least 85 percent of the project area." Id. The court concluded that "[t]o demonstrate compliance with the Forest Plan's requirements, the Forest Service would have to show that, after the Phase 1 project was complete, soil porosity would be maintained in compliance with the Forest Plan's specifications." *Id.*

**1. Improper procedures for soils analysis and inventory**.

The FEIS has failed to accurately characterize site specific soil types. As pointed out by Johansson (2006, p. 2), the site specific analysis and verification of soil type is needed for each proposed treatment unit to accurately assess what the soil attributes are and to assess effects across the project. The Freeman FEIS fails to adequately disclose site-specific soil textures and slope ranges within the harvest units. Compaction ranges varying from slightly-to-highly compactable soils within the various watersheds and mapped units but the FEIS lacks specific information for each unit based on soil type and compactability where treatments are to occur (Ibid).

The Freeman FEIS soils assessment relied upon visual observation methods in place of standard quantitative detrimental soil compaction testing to determine if there is a 10% loss in soil porosity, failed to document slope range > 25% which would better define mitigation effectiveness on steep slopes, and failed to explain why nearly half of the units in the Freeman project had no soil testing whatsoever Johansson (2006 p.2-3). Failure to site-specifically quantify and properly assess impacts to soil resources violates NEPA.

The Freeman FEIS failed to assess compaction in group selection harvest units. Based on the FEIS-Cumulative Watershed Effects Analysis and Soils Assessment p. 20, "Site specific treatment locations within units, such as placement of group selection harvest sites, are currently unknown, which prevented soils assessment in the specific locations where treatment would occur." In what will account for the most intensely logged areas of the Freeman project, the FEIS is completely lacking site-specific data. According to Johansson (2006 p.2), "an informed analysis is not possible and any resulting decision can not be supported when site specific data was not collected."

**2. The potential increase in soil compaction is underestimated**.

Potential for detrimental soil compaction is underestimated due to internal

inaccuracies in the FEIS/Soil Report, the characterization of 50% reuse of skid trails and landings, and the assessment of effectiveness of mitigations absent slope calculations. There is no discussion that the landings and corresponding legacy skid trail pattern tributary to these roads has been factored into the assumption that 50% of legacy skid trails would be reused. According to Johansson (2006 p. 5), "[I]t is more likely that legacy skid trails associated with these activities would not be reused and a new designated system would be generated."

First, the Soils Report Table 9. p. 41 repeats several units in the assessment (units 32, 53, 57 and 67) are listed twice. Given the exiting reporting, 44% of the units measured are in violation of the Plumas Forest Plan under their existing condition. Also, the FEIS p. 377 claims 4 units currently have compaction levels greater than 15%...the Table 9 reports 5 units over the compaction threshold.

The FEIS identified that monitoring of soil compaction completed by Westmoreland and others (1999-2005) on the Lassen, Plumas and Tahoe national forests estimated that on average the area of a unit experiencing detrimental compaction post-treatment was 19%. to 75%. The on-going forest soils monitoring demonstrates increasingly higher percentages of soil compaction (see Johansson 2006 p. 4) It is clear from past HF QLG Pilot Project soil monitoring that there is a high risk for any unit to exceed 15 percent of the area in detrimental compaction. The Freeman FEIS p. 376-Table 3.83 displays 19 units with detrimental soil compaction post-treatment. As explained by Johansson (2006 p.2-3), this estimate may be higher since it is assuming an undocumented 50% skid trail and landing reuse and 66% mitigation effectiveness absent appropriate slope data, group selection treatment locations, and soil texture delineation which could limit mitigation efforts.

Finally, the Freeman FEIS fails to adequately present HF QLG Pilot Project monitoring of soils impacts. The FEIS fails to mention the context of the Westmoreland reference and misrepresents the HFQLG Pilot Project-wide soil compaction problems publicly reported in 2003-2005 Reports to Congress. Johansson (2006) states, "[I]t would lead a casual reader to infer that detrimental compaction can be expected to increase about 8%. What's not stated is the average values of units sampled was 16% prior to the HFQLG entry and 24% after. Both values are over threshold and do not meet standards. Presented another way (and the way it was reported in the Westmoreland report) there was a 50% increase in detrimental soil compaction in the units sampled across the Pilot Project area."

The Freeman FEIS p. 397-398, fails to adequately disclose the soil impacts that are in violation of the Plumas Forest Plan by discussing the effects in terms of lowering (though quite significant) levels of violation. Failure to mention and correctly characterize the HFQLG soil compaction monitoring results from 2003 and 2005 and to properly assess current and post-treatment conditions violates NEPA's requirement take the request "hard look" at impacts to irreplaceable soil resources.

As a result, Johansson (2006, p. 4) concludes that, "this is not meeting the Forest Service's obligation as land stewards or providing the public with a fair and honest evaluation of logging impacts on the ground, as required by law.

### 3. The effectiveness of the proposed mitigation measures has not been properly disclosed.

Under Alternative 4 (selected) 28.5% (range 8%-54%) of the subwatersheds will be logged, totaling 3,507 acres. The soils report claims logging would occur on slopes up to 35% yet the FEIS Table 3.79 reports slope ranges for the various units as much higher. There is no unit-specific compaction potential rating based on soil texture, only a range (slightly to high) of conditions is reported. The assessment fails to explain on what portion of the unit's mechanical equipment will be operating in which hazard rating.

The subsoiling of portions of skid trails and landings is proposed as a measure to reduce the levels of detrimental compaction resulting from the project. (Soils Report, p. 50). Subsoiling is generally excluded from slopes greater than 25%, where there is risk of erosion (Ibid.). Slope limitations severely reduce the effectiveness of subsoiling as a mitigation measure. Lacking this information, the Forest Service can not make an informed decision regarding soil impacts (see Johansson 2006 p.2).

The Freeman FEIS fails to disclose documentation of locations of group selection unit which makes the soil impacts assessment impossible. Further, based on monitoring information collected by the Plumas National Forest (See attachment to Johansson 2006), the "expected effectiveness of mitigation (subsoiling) has been significantly over-stated." Concerns were raised in the soil analysis for the Freeman Project. The Freeman FEIS p. 375 identified that "monitoring on the Plumas, Lassen and Tahoe has shown this subsoiling to be only 66 percent effective." Thus, the presumption in the FEIS that subsoiling will be effective in achieving the forest plan standards can not be supported by recent monitoring.
Subsoiling skid trails and landings as a mitigation measure also does not clearly address the issue that detrimental compaction (i.e. the loss of soil porosity exceeding 10%) presently exists on many of the units. The FEIS p. 377 refers to subsoiling legacy skid trail but since there is no discussion of the location of existing detrimental compaction within a stand, there is nothing to suggest that the areas that will be subsoiled after project implementation are coincident with the same areas suffering from detrimental compaction prior to treatment. Thus, it is not possible to assess if the proposed subsoiling is capable of returning each unit to a state where the applicable standards can be met.

### 4. Regional Soil Quality levels of large downed wood and its impact on soil quality are not disclosed.

The FEIS reports the Regional Soil Quality Standards for Large Woody Material (Soils report, p. 90) and at FSH R5 Supp. No. 2509.18-95-1 ("Region 5 Supplement") at 2.2. The standard for large woody material is, "Large woody material is at least 5 well distributed logs per acre representing the range of decomposition classes." Id. at 2.2(1)(c)(2)(b).

The DEIS states that "[s]oil quality standards and guidelines that apply to this project exist at both the regional level (USDA Forest Service 1995 [i.e., the Region 5 Supplement]) and

the forest level (USDA Forest Service 1988(b) [i.e., the Plumas Forest Plan])." Draft EIS at 318. The FEIS Soils Report p. 89 cites the Regional Soils Quality Standards (1995) as the values utilized to "avoid detrimental soil disturbance." These standards include the retention of large wood mentioned above.

The FEIS p. 388 identifies soil field surveys for fine organic material with 31 units failing to meet the minimum standards. There is no reporting of large woody material on a unit by unit basis. The soils analysis does not disclose this or consider the effect that this condition might have on soil quality and productivity.

The regional standards allow for changes in the thresholds when such physical characteristics do not allow achievement of the fuels treatments. They do not allow for waiving of or elimination of the standards due to the operational challenges of protecting large logs or due to failures in data gathering. The FEIS failure to characterize large logs and their contribution to soil quality is a significant flaw in the NEPA analysis. Further, mitigation measures that assure the conservation of existing large down wood should be adopted for the project.

**5. Failure to disclose HF QLG Pilot Project Soil Quality Monitoring and its relevance to the impacts in the Freeman project.**

In recent HF QLG Reports to Congress (2003-2005) there is record of increasing detrimental soil compaction disclosed in these annual reports required by the QLG Act Sec. 401 (j). Instead of addressing this increasingly significant forest plan violation head-on by ensuring effective mitigation, reducing logging footprints, or changing logging systems, the Plumas National Forest is ignoring the result of the aggressive QLG logging activities and has provided a poor quality soils assessment and a narrow range of alternatives in response to soil impacts, at the project level and forest-wide, that calls for significant project changes to comply with the Plumas forest plan and existing regulations.

According to Johansson (2006 p. 5), "[T]here is a substantive body of soil monitoring data that has been collected over the life of the Pilot Project yet there is only limited mention of it in the soils analysis. There is also effectiveness monitoring data on subsoiling practices for a number of timber sales on the Beckwourth District that I compiled and submitted to the Forest (see attached). The data was also included in an appendix to the white paper the Plumas National Forest requested in 2001, 'Soil Resource Assessment for the Implementation of Project Work on the Plumas'." This information, and the legal violations it represents, continues to be ignored contrary to existing law and regulation.

The Freeman Record of Decision (9/13/06) p. 9 attempts to rectify the flawed Freeman analysis and significant forest plan soil quality violations with a vague promise of non-site specific mitigations aimed at fixing soil quality violations where there is no track record of success either in application of methodology or mitigation results.

**6. NFMA's substantive requirements to protect soil resources (36 CFR 219.27) identifies the need to prevent the permanent impairment of the productivity of the land, including the Freeman project.**

The Freeman FEIS soil impacts violate the substantive requirements of NFMA, the Plumas Forest Plan, and the Region 5 Soil Quality Standards for determining when changes to soil quality becomes detrimental or significant (FHS 2905 18-91-1), in four ways:

1) The project violates the need for effective ground cover in 13 (14%) units (FEIS p. 386).

2) The project violates the need for fine organic matter in 31 (40%) units (FEIS p. 388).

3) The project fails to prevent detrimental soil compaction in 19 (33%) of units (FEIS p. 376).

4) The project fails to disclose impacts to large woody material in violation of the controlling Regional Soil Quality Standards referenced in the Freeman FEIS Soils Report, Appendix D.

## VI. RELIEF REQUESTED:

The Freeman Project fails to ensure viability of sensitive wildlife species in the Forest and fails to supply critical information, use the best available science, consider all reasonable alternatives and assess environmental impacts as required by law. The Campaign thus again requests the Appeal Deciding Officer to set aside the Freeman Vegetation Management Project SFEIS and ROD and remand this project for further public review as required by law.

DATED: November 20, 2006

Respectfully submitted,

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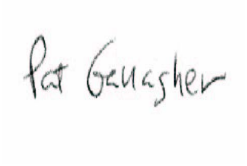

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