



# Sierra Forest Legacy

*Protecting Sierra Nevada Forests and Communities*



January 29, 2012

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Sent via U.S. mail and email: [comments-pacificsouthwest-sierra@fs.fed.us](mailto:comments-pacificsouthwest-sierra@fs.fed.us)

**Re: Comments on the Draft Environmental Impact Statement for the Greys Mountain Ecological Restoration Project**

Dear Scott:

These comments on the Draft Environmental Impact Statement (DEIS) for the Greys Mountain Ecological Restoration Project are submitted on behalf of Sierra Forest Legacy and the Sierra Club.

The Greys Mountain project proposes to harvest commercial sized trees and remove other vegetation from 3,575 acres on the Bass Lake Ranger District. This project is located north of Bass Lake and occurs within an area that is currently inhabited by Pacific fisher and California spotted owl. The project is located between the Cedar Valley project, nearing completion, and the Whiskey Ridge project, a project in the planning stage. The Greys Mountain project occurs along a narrow elevational band of fisher habitat that stretches from Yosemite National Park south towards Sequoia National Forest. In the region between the southern boundary of Yosemite National Park and Bass Lake five vegetation management projects covering over 10,000 acres have been proposed or will be proposed within a short period of time. We recognize that the Greys Mountain project includes design measures intended to reduce impacts to fishers and spotted owl. However, the ability of these measures to compensate for reductions in habitat loss has not been demonstrated. Moreover, the Proposed Action estimates removal of a significant number of trees greater than 20" dbh and significant removals of trees over 25" dbh. These tree removals, as noted in the BE and DEIS, reduce overstory canopy in the largest size class in the stand. The project specific impacts to fishers and spotted owl combined with the extensive cumulative impacts from near simultaneous implementation of vegetation management on over 10,000 acres leads us to find that the Proposed Action would jeopardize the persistence of California spotted owl and Pacific fisher. Furthermore, the analysis for this project and the decision that amended the forest plan for the Sierra National Forest (USDA Forest Service 2004a) relies on the implementation of adaptive management and monitoring to ensure that viable populations for California spotted owl and Pacific fisher are maintained. Because the Forest Service has failed to adequately fund and implement the adaptive management and monitoring programs required by the forest plan, population viability for these species can not be assured, in violation of the National Forest Management Act (NFMA).

We also object to the Greys Mountain project to the extent that it deviates from the standards and guidelines contained in the 2001 Record of Decision for the Sierra Nevada Forest Plan Amendment (USDA Forest Service 2001) and implements the 2004 Record of Decision for the Sierra Nevada Forest Plan Amendment (“2004 ROD”; USDA Forest Service 2004a). In *Sierra Nevada Forest Prot. Campaign v. Rey*, 573 F. Supp. 2d 1316 (E.D. Cal. 2008), the court held that the Forest Service violated the National Environmental Policy Act (NEPA) in adopting the 2004 Framework by failing to consider any reasonable alternatives. Because the Forest Service violated NEPA in adopting the 2004 Framework, logging projects that implement and rely upon the 2004 Framework are also contrary to law [see e.g., *Klamath Siskiyou Wildlands Ctr. v. Boody*, 468 F.3d 549, 562 (9th Cir. 2006), *Northwest Ecosystem Alliance v. Rey*, 2006 WL 44361, at \*8 (W.D. Wash. 2006), *Citizens for Better Forestry v. USDA*, 2009 WL 1883728, at \*13 (N.D. Cal. 2009)]. Thus, to the extent that the Greys Mountain Project implements any of the changes to the 2001 Sierra Nevada Forest Plan Amendment made by the 2004 ROD, the project is contrary to law.

Our concerns about the Greys Mountain project and DEIS are described in detail below. We ask that you revise the Proposed Action and environmental analysis to address these issues and recirculate a new DEIS for public review.

## **I. The Greys Mountain Project Violates the National Forest Management Act (NFMA)**

### **A. Adaptive Management and Monitoring Commitments for the Forest Plan Are Not Being Met.**

The Record of Decision for the Sierra Nevada Forest Plan Amendment (USDA Forest Service 2004a) relies on the implementation of an adaptive management program to ensure that population viability for fisher and California spotted will be maintained as a result of the decision. The Chief of the Forest Service affirmed the 2004 ROD and stated:

I find that managing habitat to maintain viable populations of the California spotted owl, the Pacific fisher, and American marten can only be assured by using subsequent site-specific evaluations and the adaptive management and monitoring strategy. The strategy emerges as a centerpiece of the decision. Commitment to an adaptive management and monitoring strategy convinces me that the NFMA requirement to manage habitat to provide for viable populations can be met. I believe that commitment will translate into a treatment, feedback, and adjustment system to carefully manage risks to habitats.

(USDA Forest Service 2004b, pp. 74-75) To fulfill the commitments to implement adaptive management in the 2004 ROD, the Forest Service must design, adopt and fund a program to evaluate the site specific effects of management on Pacific fisher and California spotted owl. As promised in the 2004 Framework (USDA Forest Service 2004a, p. 66-67) and affirmed in the appeal decision, this adaptive management strategy must address:

... how the timing of treatments and the feedback and adjustment loop will work. What is meant by “implementing through incremental steps” and completing treatments “over a

limited number of landscapes,” and how will individual forests know their role in the treatment and feedback strategy?

(USDA Forest Service 2004b, p. 75) To date, the Forest Service has never defined what was “meant by ‘implementing through incremental steps’ and completing treatments “over a limited number of landscapes,’ or how “individual forests know their role in the treatment and feedback strategy.” Eight years have passed and many thousands of acres of suitable habitat for spotted owl and fisher have been logged, yet little to no information has been gathered on the effects of these treatments on these at risk species. The alteration of thousands of acres of habitat in the absence of a strategy to examine the effects of management incrementally over a limited number of landscapes is a violation of the 2004 ROD.

As we describe below, adaptive management programs for key species affected by the Greys Mountain project and specifically named in the 2004 Framework appeal decision, i.e., California spotted owl and Pacific fisher, have either not been designed and conducted as identified in the 2004 ROD (e.g., Pacific fisher) or the program is not being funded adequately (e.g., Pacific fisher and California spotted owl). In the absence of adequately funding and implementing the adaptive management program, the claims that viable populations of California spotted owl and Pacific fisher will be maintained can not be supported. Under the 2004 ROD, projects, such as Greys Mountain, that are likely to adversely affect these species in ways that are uncertain depend on adaptive management to address risk and uncertainty. In the absence of the required programs, either through lack of design or failure to fund and implement, the projects themselves can not claim to maintain the viability of these species.

### **1. Funding for Adaptive Management Strategy for California Spotted Owl and Pacific Fisher is in Jeopardy**

Beginning in the fall of 2011, we have heard from Forest Service staff that the demographic monitoring program for California spotted owl has been proposed for termination. This monitoring has been a cornerstone to spotted owl assessment in the region and was identified as a high priority for the adaptive management program in response to the direction in the Chief’s appeal decision (USDA Forest Service 2004c). The demographic studies provide the basis on which to assess the effect of habitat change on species fitness and persistence – factors that address the principle elements of species viability. Termination of this monitoring is especially untimely because, as we note below, population trends for spotted owl are worsening and are not stable. Recently, Dan Jiron, Deputy Regional Forester, indicated verbally that the owl demographic studies would be funded this year. However, he was not able to confirm their status for the years to follow. We are seeking a commitment in writing from the Region to fund the owl demographic studies for the next several years as an affirmation of the adaptive management program established by the 2004 ROD.

The assessment of habitat changes and effects of fitness is an aspect of the owl adaptive management program that has not, to date, been adequately planned or funded. There is no specific adaptive management plan, with timeline for completion and budget, to address how

changes in habitat quality affect species fitness and persistence.<sup>1</sup> The desire to examine the chronic effects of habitat alteration has been mentioned in various monitoring reports (see for example Keane et al. 2011 or UC Science Team 2011), but there is no commitment from the Forest Service to fund and implement such studies. At best, we find statements of desire or intent from scientists connected with the owl demographic studies (see for example, Keane et al. 2011, p. 116-117: “Our biggest challenge to date has been the lack of accurate vegetation information to develop predictive habitat models and to document changes in vegetation due to treatment or disturbance. In 2010 we were able to initiate efforts to develop vegetation maps that will support development of predictive habitat models and be sufficient to document changes in vegetation over space and time that can be used to understand CSO response to vegetation change.”), but no specific commitment from Regional leadership to fund and complete such studies. Recently, Dan Jiron, Deputy Regional Forester, indicated that the Region was looking into this issue, but no details were provided on the issue. We are seeking a commitment in writing from the Region to fund owl habitat analysis studies that use data from the demographic studies to evaluate habitat quality and fitness as an affirmation of the adaptive management program established by the 2004 ROD.

The Sierra Nevada Adaptive Management Project (SNAMP) serves as an example of the failure to implement the adaptive management program and its direct relationship to commitments made in the 2004 ROD that were intended to ensure species viability. The SNAMP was instituted in 2005 in response to commitments made by the Regional Forester in the 2004 ROD and in response to direction in the Chief’s appeal decision. This program was designed as a “collaborative adaptive management program” intended to evaluate the effects of treatments outside the land base affected by the Herger-Feinstein Quincy Library Group (HFQLG) Act. A team of scientists from the University of California and other institutions came together to act as a neutral third party to design and implement a study of the effects of treatments and to engage in the implementation of this study collaboratively with the Forest Service, other agencies and stakeholders. This program required funding over a 7 year period to meet study design requirements. Delays within the Forest Service have led to a delay in the implementation of treatments; this requires an extension of funding at least an additional year to meet study goals. The Forest Service has declined to extend the length of the study (Battles 2011, Sierra Nevada Adaptive Management Project 2011a, b, c, d and e). As a result, a variety of the study goals can not be met, including goals related to assessing impacts of treatments on California spotted owl and Pacific fisher (Battles 2011). Maintaining the necessary yearly funding for the SNAMP has also been an issue. The Forest Service committed to supporting the SNAMP program, but consistently the yearly budget has not been met. This situation was presented at public meetings in July and December, 2011 (Sierra Nevada Adaptive Management Project 2011a, b, c, d and e). Without adequate funding each year, principle scientists implementing the SNAMP have identified that lack of funding inhibits their ability to complete adaptive management and evaluate the effects of treatments on the target species – California spotted owl and Pacific fisher (Battles 2011).

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<sup>1</sup> We are aware of two studies examining treatment effects (Gutiérrez et al. 2008, Keane et al. 2011). The canopy cover study (Gutiérrez et al. 2008) was completed and the results inconclusive. The results from the Meadow Valley study (Keane et al. 2011) also appear to be inconclusive and further funding of this study appears to be suspended. Together these two studies evaluated treatment effects on a limited number of birds.

In summary, the consequences of not adequately funding or implementing the agreed upon adaptive management programs are wide-ranging. First, the 2004 ROD was structured in a manner that relies on adaptive management to satisfy the Forest Service requirement to maintain viable populations of California spotted owl, Pacific fisher, and American marten. As such, failure to meet the commitment to conduct the adaptive management program violates Forest Service direction and the NFMA. Second, these examples illustrate the degree to which the Regional Forester underestimated the time and funding necessary to properly implement the 2004 ROD. If the scope of the adaptive management program was beyond what could be supported financially, then the decision should have been structured in ways that were less risky to imperiled species and that would require less reliance on adaptive management. Lastly, the Region's failure to meet their adaptive management commitments undermines relationships developed to date with scientists, agencies, and other stakeholders. These participants have invested time and resources in the process promoted in the 2004 ROD as the best approach to addressing a variety of resource concerns posed by scientists and others. The Forest Service's failure to implement its adopted adaptive management program will result in an enormous waste of valuable time and resources invested by participants and serve to alienate stakeholders. Such a result is the antithesis of the claim made by the Forest Service that "concepts of collaboration 'working together' and adaptive management 'do, learn, adjust' are parts of the foundation of the Sierra Nevada Framework" (USDA Forest Service 2004c).

## **2. Adaptive Management for Pacific Fisher Has Not been Implemented.**

There is limited empirical information on the effects of vegetation management activities on fishers in the Sierra Nevada. The effects of treatments, including mechanical removal of trees up to 30" dbh, hand removal of smaller material, mastication, and prescribed burning, on fishers are largely unknown or believed to be detrimental. Concerns about the persistence of fishers as a result of implementing the SNFPA were raised by scientists during the development of the amendment (Guldin et al. 2003; Barrett 2004). These concerns led to recognition in the Chief's appeal decision that site specific evaluations and adaptive management would be necessary to ensure the viability of Pacific fisher (USDA Forest Service 2004b). Since that time, the SNAMP effort and other studies of fisher ecology have been undertaken on the Sierra and Sequoia national forests to assess habitat relations at the home range, rest site and den site scales (see for example Sweitzer 2011 and Thompson et al. 2011), and to model the probability of occurrence (Spencer et al. 2010). These studies, with the exception of SNAMP and a couple of unfunded proposals, have not been designed to assess the direct effects of treatments on habitat quality or to assess the response of fishers to treatments.

The original adaptive management strategy described for the SNFPA established the need to assess the effects of treatment on Pacific fisher (USDA Forest Service 2001) and this was reaffirmed in the 2004 ROD. The SNAMP effort is based on a study design that expects to yield information about the effects of management on fishers in 2014 or 2015. Beyond this, no steps have been taken by the Region to define a program or study to effectively assess treatment effects on fishers in the interim. This means that information about the effects of treatment on fishers is not expected to be used to evaluate these management actions until at least 10 years after adoption of the 2004 ROD. During the 8 years since the 2004 ROD, thousands of acres of suitable habitat for fishers are being modified in ways that the 2004 ROD identified as risky or

detrimental to fishers.<sup>2</sup> The following table identifies a number of projects for which decisions have been made or that are in the planning stage. With a few noted exceptions, the decisions for these projects were made after 2004. As proposed by the Forest Service, these projects will be implemented prior to gaining any knowledge about the effects of management on fishers and their habitat.

**Table 1. Projects being undertaken or proposed within fisher habitat on the Sierra National Forest.**

<b>Project<sup>a</sup></b>	<b>Ranger District</b>	<b>Decision Date</b>	<b>Treatment Area (acres)</b>
Cedar Valley	Bass Lake	8/2/07	1,765
Sugar Pine	Bass Lake	2/22/10	1,923
Dinkey North	High Sierra	11/23/10	1,617
Dinkey South	High Sierra	8/7/10	1,375
Fish Camp	Bass Lake	5/18/11	1,201
KREW (fisher habitat portion only)	High Sierra	4/7/11	1,346
Greys Mountain	Bass Lake	est. 2012	3,575
Soaproot	High Sierra	est. 2012	2,279
Whisky Ridge	Bass Lake	est. 2013	2,000
Sonny Meadows (north and south)	Bass Lake	not known	1,560
Grizzly Road/ Long Meadow	Bass Lake	not known	125
Graham Mountain/Central Camp	Bass Lake	not known	1,580
Benedict/Whisky Clearwater	Bass Lake	not known	not known
Minarets/Little Jackass	Bass Lake	not known	not known
Teaford Saddler/Goat Mountain	Bass Lake	not known	not known
Road Hazard Removal	Bass Lake	not known	not known
<b>Total Area (acres; underestimate, data missing)</b>			<b>20,346</b>

<sup>a</sup> The projects listed above include a variety of treatments, such pre-commercial and commercial thinning, mastication, prescribed burning, etc.

Roughly 20,000 acres of treatment in areas utilized by fishers has been completed or is planned for completion in the short term on the Sierra National Forest. This reflects a substantial area of fisher habitat that will be affected. Moreover, many of the projects are adjacent to each other geographically and collectively will be implemented over a narrow time frame. In the absence of an adaptive management strategy for fishers that affects a limited portion of the landscape and examines treatment effects in a timely manner to allow adjustment to management, projects like Greys Mountain must adopt a less risky alternative to vegetation management such as one based

<sup>2</sup> We will discuss elsewhere in these comments the adverse cumulative effects of past and ongoing projects on fishers.

on the 2001 ROD in order to maintain viable populations of fisher and meet the requirements of the NFMA planning rule.

**B. The Proposed Action (Alternative 2) Threatens the Viability of California Spotted Owl**

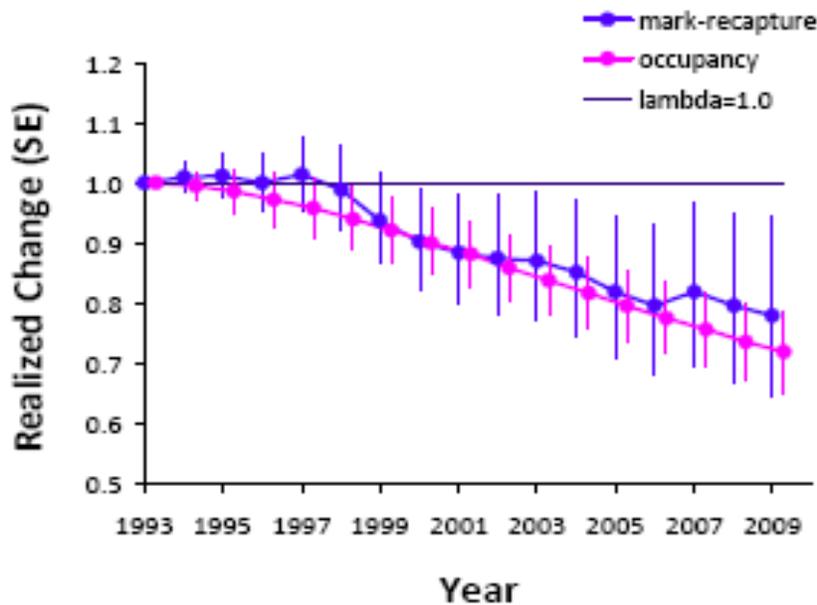
Assumptions about the stability of the California owl populations in the Sierra Nevada have been pivotal to the claim that the nature and intensity of treatments proposed in the 2004 ROD would not lead to a trend toward federal listing for California spotted owl (USDA Forest Service 2004a) or jeopardize the persistence of this species (USDI Fish and Wildlife Service 2006). However, the assumption of population stability is not supported by recent results from the demographic studies.

The most recent report for the Lassen Study found that:

The estimated mean lambda for the Lassen Demographic Study between 1990-2010 was 0.979 (SE = 0.0097), with 95% confidence limits ranging from 0.959-0.999 (Scherer et al 2010). There was no evidence of linear, quadratic or pseudo-threshold trends in lambda, rather the means model was strongly supported by the data. These results suggest a decline in the CSO population within the Lassen study area over the 20-year study period. Annual lambda estimates from the best model ranged between 0.87-1.13. Estimates of realized population change based on the time series of lambda estimates generated from our modeling suggests that there have been declines in the number of territory holding CSOs within the study area (Scherer et al. 2010).

(Keane et al. 2011, p. 119-120; emphasis added). Results from the Eldorado Study show similar trends. We learned at the SNAMP annual meeting that the numbers of territories in the study are declining each year. This downward trend in realized population change is illustrated in the graph below that was presented at the meeting.

Figure 1. Results of population dynamics for California spotted owl from the Eldorado Study presented at the annual meeting October 27, 2011 (Sierra Nevada Adaptive Management Project 2011c).



This sharp decline, using two different metrics to assess population change, is in contrast to previous reports of population stability in the Eldorado Study. This means that 2 of the 3 study areas show a significant decline in the owl population.

The declines noted above have occurred during the time that the 2004 ROD has been implemented. Treatments on national forest lands have been completed within these study areas during the period of decline. Due to the failure of the Forest Service to fund an examination of the chronic effects of treatments on owl fitness, there is little information available to evaluate how various treatments contribute to this decline. Nonetheless, the conclusions in the US Fish and Wildlife Service’s decision not to list the California spotted owl are no longer accurate. For instance, they found that “the best available data indicate that survival of spotted owl populations in the balance of the State of California (the Sierras) has been improving at the population level... We expect this trend to continue as the Forest Service in the Sierras implements its fuels reduction strategy that includes protections for the spotted owl and its habitat” (Federal Register, Vol. 71, No. 100, p. 29901). Contrary to this finding, populations have declined in two study areas within the Sierra Nevada during the time that the Forest Service has been implementing its fuels reduction strategy; there has not been an improvement at the population level. The BE (p. 54) for the Greys Mountain project relies on these assumptions that are no longer correct. The BE should be revised to explain how, given the backdrop of persistent population decline, the adverse impacts to owl habitat will not will not lead to a trend toward federal listing or jeopardize the persistence of spotted owl.

The Proposed Action also includes removing vegetation in the most sensitive owl habitat – the protected activity centers (PACs). The forest plan establishes these areas of spotted owls (USDA

Forest Service 2004a). Outside of the Defense Zone of the wildland urban interface (WUI), treatment in PACs is to be avoided unless doing so would significantly compromise the fuels strategy (Ibid., p. 60). There is no discussion in the DEIS or BE about why avoiding these areas would compromise the fuels strategy. In addition, the intensity of treatment included in the Proposed Action exceeds the direction in the 2004 ROD to treat stands to meet fuel objectives. As disclosed in the discussion of fire and fuels effects (DEIS, p. 240), there is no significant difference in fire effects between the Proposed Action (Alternative 2) and Alternative 3 – both meet the desired fuel objectives. Treatments in Alternative 3 are limited to reducing surface and ladder fuels and do not reduce the number of large trees or the overstory canopy provided by large trees as occurs under the Proposed Action. For instance, Unit 35 and 37 overlap with PAC MAD0026 and 78 acres of this PAC will be treated with “tractor thinning” (BE, p. 51). The BE (p. 137) indicates that 14 or 30 trees per acre over 20” diameter would be removed from these units, respectively. The removal of these trees would result in reductions in the existing canopy cover from 70-75% to 53-62% post treatment. These impacts would be combined with substantial reductions in large trees in home range core areas (HRCAs). For example, Unit 33 occurs with an HRCA (BE, p. 49). There are an estimated 12 trees per acre greater than 25” diameter that would be removed from Unit 33 with an estimated change in canopy cover from 70% to 61% (DEIS, p. 329). Thus, the Proposed Action would result in significant alteration of habitat important for breeding owls.

The factors above combined with the underestimate of impacts on spotted owls we describe in the sections below indicate that the negative effects from the Greys Mountain project and the adverse cumulative effects from past and ongoing projects on public and private lands are likely to lead to a trend toward federal listing for California spotted owl. Such a trend is in violation of Forest Service direction.

### **C. The Proposed Action (Alternative 2) Threatens the Viability of Pacific Fisher**

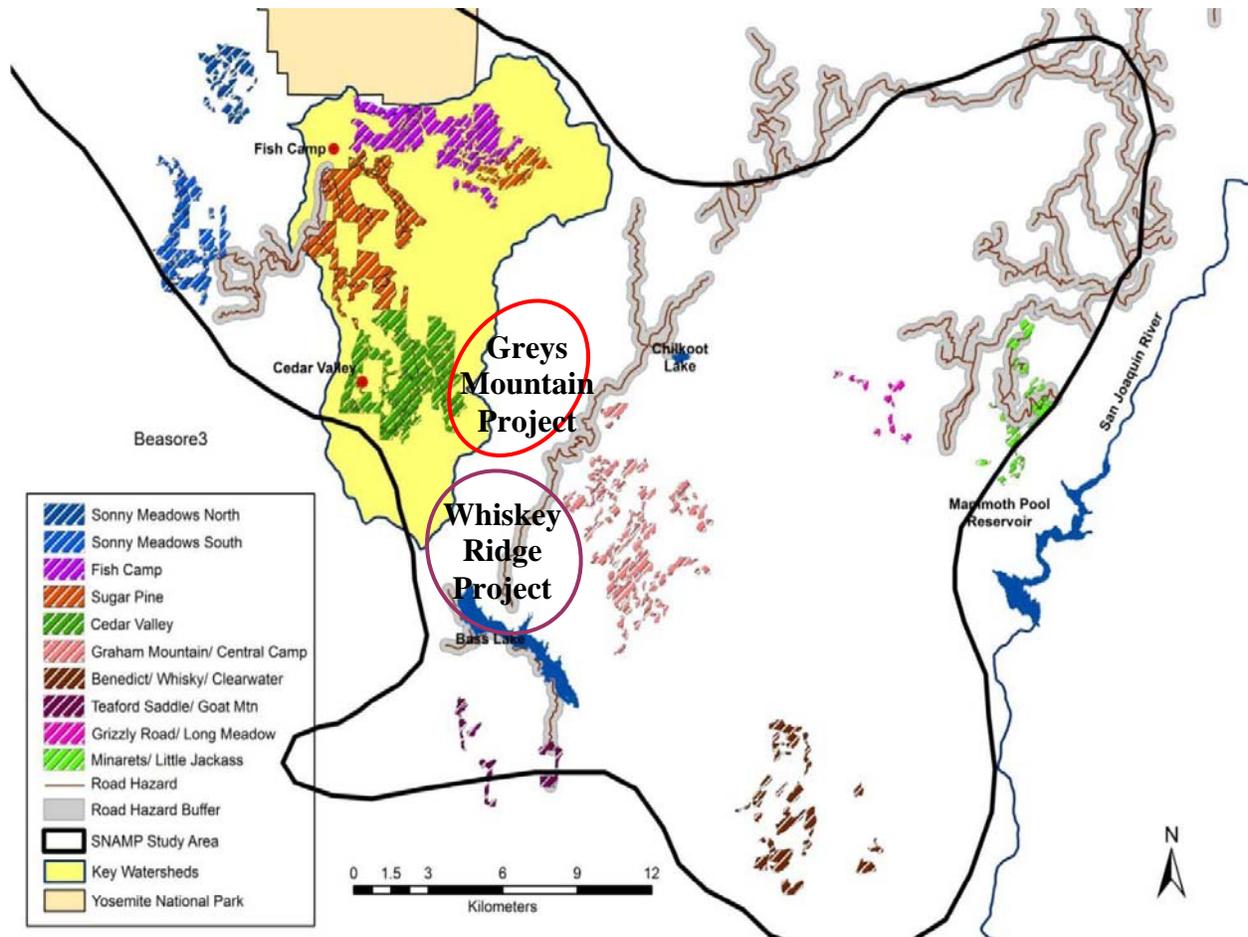
The US Fish and wildlife Service found in 2004 that listing of Pacific fisher was warranted but precluded by other priorities. Among other things, alteration of habitat from vegetation management was identified as a threat to fishers. Wildlife scientist Dr. Reginald Barrett, in his review of the 2004 Framework, found that:

Based upon the small population size, the high rate of adult mortality, the isolation of the population, and other aspects of fisher demography, the existing population in the southern Sierra is probably not viable over the long term in the absence of efforts to improve habitat and expand the existing range, especially to the north.

(Barrett 2004) Dr. Barrett found that the 2004 Framework would substantially weaken “protection for fisher habitat, further threatening the fisher’s viability and distribution and contributing to the present trend towards extinction” (Ibid.)

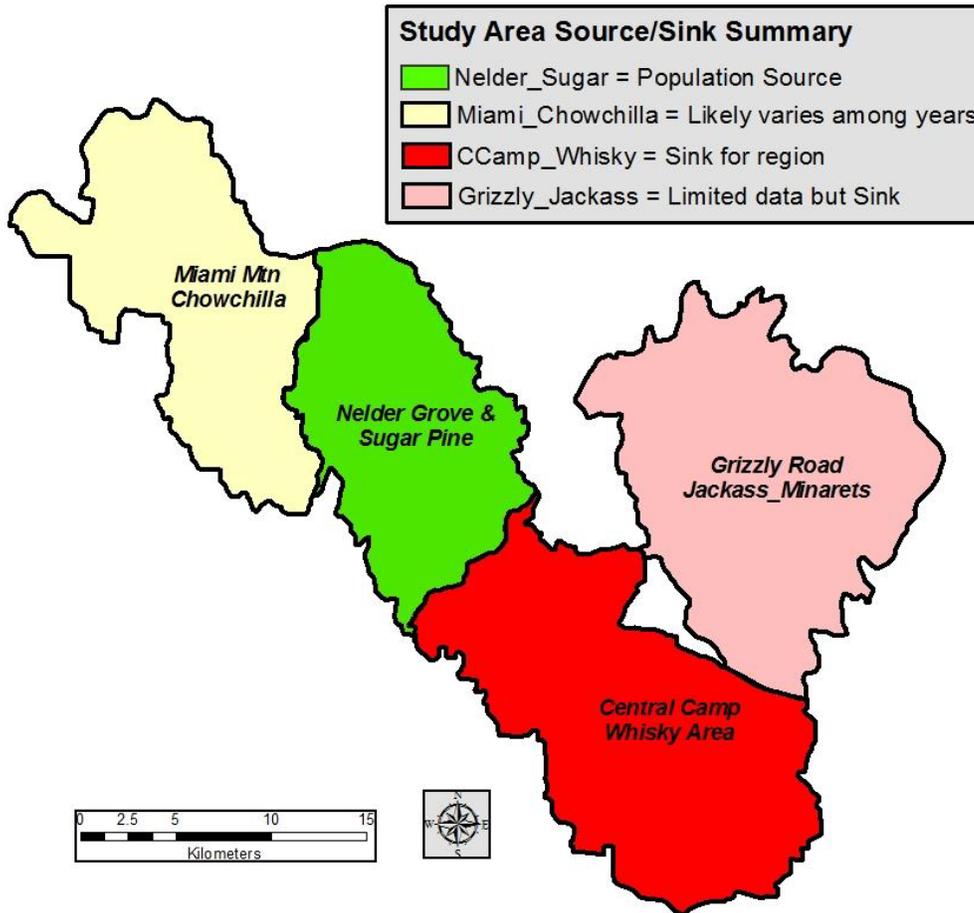
The fisher subpopulation being examined in the SNAMP study occupies much of the area depicted in Figure 1. This subpopulation represents the northern most extent of the fishers in the southern Sierra Nevada. There are few fishers north of Fish Camp and none have been found north of the Merced River and Yosemite National Park.

Figure 1. Map of project areas within the SNAMP study area. Annotations for Greys Mountain and Whiskey Ridge projects added (Barrett 2011).



The dynamics of this subpopulation were examined in recent analyses presented by SNAMP scientist Dr. Rick Sweitzer in 2011. He examined source-sink dynamics for the population and found that the area overlapping to some extent with the yellow polygon in Figure 1 (the “Key Watersheds”) represented a source of animals and that other areas in the vicinity functioned as sinks or inconsistent sources of animals (Figure 2).

Figure 2. Source-sink parameters estimated for the fisher subpopulation in the SNAMP study area (Sweitzer 2011).



This means the area providing the strongest source of fishers to this sub-population will be subjected to approximately 3,100 acres of habitat alteration due to vegetation treatments associated with the Sugar Pine and Fish Camp projects. Because the effects of treatments on fisher persistence are unknown or believed to be detrimental, the risk to fisher productivity is high in this area that currently functions as a strong source of individuals. Given the high risk of decline in the strength of the source in the “Nelder Grove & Sugar Pine” region (noted above) it is critical to examine the potential to compensate for this decline elsewhere in the region.

The units adjacent to “Nelder Grove & Sugar Pine” currently are either population sinks or inconsistent population sources (Figure 2). This pattern of source-sink distribution suggests reductions to the source strength in “Nelder Grove & Sugar Pine” could not be compensated for by adjacent regions. Moreover, the Greys Mountain project and the nearly completed Cedar Valley project are in the “Central Camp Whisky Area” noted in Figure 2. These projects, totaling about 5,340 acres, have the potential to reduce habitat quality for fishers in the short term. This additional habitat degradation in the region has the potential to create an even stronger sink in the “Central Camp Whisky Area” if mortality increases or reproductive success declines as a result of treatment. Based on the population dynamics in the area, the near

simultaneous<sup>3</sup> reduction in habitat quality that would occur from treatments in these two source-sink units could destabilize the population and result in overall declines in the subpopulation. In addition to the Greys Mountain project, Whisky Ridge is an additional project now being planned south of Greys Mountain (Figure 2). The estimated size of this project is 2,000 acres, and the Ranger District estimates making a decision on this project in 2013. This would add a fifth project to be completed in the general vicinity of the Greys Mountain project in a short time span.

The potential adverse cumulative effects on population dynamics due to habitat alteration from the Greys Mountain project and other recently approved or to be approved projects has a high likelihood of contributing to the present trend toward extinction and to threaten the viability of fishers.

#### **D. The Management Indicator Species Approach Fails to Meet the Intent of NFMA.**

The implementing regulations for the National Forest Management Act direct that “population trends of the management indicator species will be monitored and relationships to habitat changes determined (36 CFR 219.19(a)(6)). The recent forest plan amendment to identify management indicator species (MIS) for the national forests in the Sierra Nevada stated that “MIS monitoring tests the assumption (of the forest plan) that if a habitat is managed a certain way, all the species associated with that habitat will be maintained over time” (USDA Forest Service 2007, p. 6). Furthermore, the MIS amendment states that “The species were selected as MIS because their population changes are believed to indicate the effects of land management activities (1982: 36 CFR 219.19 (a)(1))” (USDA Forest Service 2008, p. 2).

The California spotted owl was selected as one of the MIS for national forests in the Sierra Nevada, and it was identified as MIS for the Greys Mountain project (DEIS, p. 134). According to protocols associated with the MIS amendment, the MIS monitoring relies on assessing trends in habitat and the distribution of species across the ten national forests in the Sierra Nevada. It is obvious from the MIS amendment that a plan area of such enormous size, over 10 million acres covering ten national forests, was selected so as to dilute and make biologically irrelevant the assessment of indicator species. The California spotted owl and the Greys Mountain project serve as a case in point.

As an MIS, the California spotted owl is intended to serve as an indicator for species associated with closed canopy late seral habitat (USDA Forest Service 2007b, p. 3). The implementation guidance for the MIS amendment indicates that closed canopy habitat is represented by “ponderosa pine (PPN), Sierran mixed conifer (SMC), white fir (WFR), red fir (RFR), tree size 5 (canopy closures M and D), and tree size 6,” and population trend for spotted owl is assessed using owl demographic results.

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<sup>3</sup> We consider the timing of projects in sequential years to be simultaneous since there is no opportunity for adjacent areas to recover before the next treatments are applied. Also, the implementation of timber contracts generally extend over a several year period of time resulting in the over lap in implementation from a variety of decisions.

The MIS report for 2010 states that the amount of closed canopy forest is increasing and that population trends for California spotted are stable (USDA Forest Service 2010). This information is not consistent with recent assessments (noted above) that indicate that the population decline in the Lassen Study has been persistent over the last 20 years and additional declines have been detected in the Eldorado Study. In this case, we have declines in populations in the face of reportedly increasing amounts of the closed canopied late-seral habitat that is intended to indicate the health and status of the species (USDA Forest Service 2010). The MIS amendment attempts to skirt the issue by focusing on rangewide effects and adopting a planning area that is so expansive that the collapse of the species, i.e., its extinction, would be required to indicate a need to change management. This result is clearly not the intention of the planning rule for the NFMA.

Another problem with the MIS monitoring program is that it makes meaningless comparisons between population trends and habitat since the time periods examined are not comparable. The period for the demographic studies reported is through 2010, yet the habitat information presented is very old (i.e., ranging anywhere from 1999 to 2008 depending on the national forest). It is not credible to make inferences about population trend and habitat changes between data sets that do not cover similar time periods. The monitoring protocol established for the MIS amendment can not possible satisfy the requirement that "population trends of the management indicator species will be monitored and relationships to habitat changes determined" (1982: 36 CFR 219.19(a)(6)).

Sadly, the Greys Mountain project illustrates the degree to which the MIS amendment makes a sham of monitoring. The MIS amendment is a costly effort that is unlikely to ever detect the need to change management until species declines are so extreme a change course would have no benefit. Further, it provides nothing to advancing the direction to maintain viable populations of species across the planning area as directed by the NFMA planning rule.

## **II. The Greys Mountain Project Violates the National Environmental Quality Act (NEPA)**

### **A. Effects of the Proposed Action on California Spotted Owl Are Not Disclosed Adequately.**

The Proposed Action would remove commercial sized timber and other vegetation on 1,084 acres within PACs and HRCAs (BE, p. 51-52). These areas were established in the forest plan as management areas primarily for the conservation of spotted owl. Desired conditions for these areas emphasize high levels of canopy cover, two layered stands, and at least >24" diameter in the dominant and codominant trees (USDA Forest Service 2004a). These desired conditions are also supported by habitat recommendations in Verner et al. (1992).

Table 2. Recommended habitat characteristics for California spotted owl (Verner et al. 1992, p. 96).

Attribute	Nesting and Roosting	Foraging
Percent canopy cover <sup>1</sup>	70-95	50-90
Total live tree basal area <sup>2</sup>	185-350	180-220
Total snag basal area <sup>2,3</sup>	30-55	15-30
Basal area of large snags <sup>2,3</sup>	20-30	7-17
Downed woody debris <sup>4</sup>	10-15	10-1-5

<sup>1</sup> Mostly in canopy > 30 feet high, including hardwoods

<sup>2</sup> Square feet per acre

<sup>3</sup> Dead trees >15" dbh, 20 feet tall

<sup>4</sup> Tons per acre

The BE (p. 53) appears to assume that if canopy cover in PACs and HRCAs is maintained at 60% and 50%, respectively, the design criteria included in the alternative will be sufficient to provide other desirable characteristics. The analysis, however, does not address the effect of removing large numbers of trees greater than 20" dbh, with a significant number of trees proposed for removal that area greater than 25" dbh. Our review of the unit table provided in the DEIS (p. 328-329) suggests that large tree removal will reduce canopy cover in dominant and codominant trees that exceed 25" dbh.

The table below summarizes the larger trees estimated for removal under Alternative 2.

Table 3. Stand attributes for units in spotted owl habitat areas: protected activity center (PAC); home range core area (HRACA). Taken from DEIS (p. 328-329) and BE (p. 51-52).

Unit	Owl Habitat Area	TPA >10" dbh		TPA Removed			Basal Area (ft <sup>2</sup> /acre)		Canopy Cover	
		Before	After	16"-19"	20"-25"	26"-29"	Before	After	Before	After
8	PAC/HRCA	105	81	3	1	0	192	167	74(D)	70(D)
9	PAC/HRCA	124	74	8	8	2	278	207	79(D)	71(D)
16	HRCA	120	72	13	9	1	294	220	77(D)	67(D)
18	PAC	79	64	6	4	0	205	180	77(D)	73(D)
33	HRCA	105	60	9	8	3	273	208	70(D)	61(D)
35	PAC	117	51	24	8	5	334	225	75(D)	64(D)
37	PAC	76	61	5	4	0	240	210	69(D)	53(M)

Significant numbers of trees >20" dbh are proposed for removal in these owl habitat areas and canopy reductions are significant. The removal of 5 trees per acre greater than 25" dbh in Unit 35 is of particular concern. The comparison of the existing condition with the recommendations in Verner et al. (1992) indicates that these habitat areas are currently within desired conditions. The BE seems to justify the removal of large trees to create heterogeneity, but no measures or

assessment of this condition are provided and no discussion about how removal of large trees would create heterogeneity is provided. There is some discussion about loss of larger trees due to stand density concerns. The loss of larger trees due to density induced mortality has the potential to provide additional larger snags to these owl habitat areas. Current numbers of large snags are less than recommended by Verner et al. (1992) and habitat conditions could benefit from increases in larger snags and large down wood. The effects of reducing habitat conditions in sensitive area that are already within recommended ranges was not disclosed in the BE. Furthermore, the reduction of large trees (and future large snags) in the habitat areas was not discussed.

The BE also does not discuss the existing condition of the habitat areas and the degree to which management will reduced the currently favorable conditions. This information needs to be provided to create a baseline condition for comparison of how the Proposed Action affects habitat quality.

### **B. Effects of the Proposed Action on Pacific Fisher Are Not Disclosed Adequately.**

Fishers are positively associated with high levels of biomass; the positive correlation does not plateau or diminish as biomass increases (Spencer et al. 2010). This suggests that maintaining a high level of biomass available to fisher on a given site contributes to the likelihood of occupancy. This strong association with increasing biomass is not discussed in the BE. The primary means to assess habitat quality used by the BE is based on a habitat relationship model called "CWHR 2.1" (BE, p. 124). The BE does not provide occupancy or fitness data to support the use of this model for assessing impacts to fishers. As a general matter, the habitat modeling undertaken by Spencer et al. (2010) indicated that the CWHR habitat ratings, the same used in the Greys Mountain BE, did not strongly predict the occupancy of fishers and this attribute was not included in any of the top ten models (Ibid., p. 796).

The use of the CWHR model in the Greys Mountain project underestimates the changes to habitat condition because its application in the BE assumes that one can maintain habitat conditions even if significant biomass has been reduced, i.e., as long as the CWHR class (e.g., 4D) is maintained, conditions are equally favorable pre and post treatment. This is an assumption that has not been tested for the CWHR system or for fishers. The positive correlations of fisher occupancy with increasing biomass (Spencer et al. 2010) suggests that reductions in the number of large trees can reduce the probability of occupancy regardless of the canopy cover retained post-treatment. The removal of larger trees >20" dbh (and especially those >25" dbh) will result in large decreases in biomass. The removal of the significant numbers of large trees and reductions in canopy cover should be more fully evaluated in the BE.

The BE also should examine the effects of the Proposed Action on fragmentation of habitat in the project area. Zielinski et al. (2004) found that on average home ranges had 67% on their area in dense canopy (>60%). The degree to which the proposed treatments reduce home range quality as it relates to canopy closure should be examined in the BE. Fragmentation in this case is not focused on the movement of fishers, as assessed in the BE, but rather on the potential to fragment or disrupt the habitat that exists in the home range.

## **F. The Cumulative Effects of the Project Are Not Adequately Disclosed.**

As discussed above, the potential adverse effects of the Proposed Action (Alternative 2) on California spotted owl and Pacific fisher are underestimated, in part, because the regional context for these species was not closely examined. Because the BE does not adequately assess existing concerns about these species population status and distribution and the baseline condition is not accurately described or evaluated. Moreover, the BE does not examine potential cumulative effect of serial projects located closely on the landscape and sequenced for implementation over a short length of time.

In assessing cumulative effects for both spotted owl and fishers, the BE asserts that because these proposed, ongoing and recent projects have design measures intended to retain habitat features for the benefit of spotted owls and fishers “it is unlikely” that the projects will have a significant detrimental effect. This reasoning overlooks the primary concern when assessing cumulative effects – that the effects of a project by itself may not be significant<sup>4</sup>, yet the incremental effects of numerous projects over time and space can result in significant cumulative effects. The BE fails to integrate information about population status and threat, current conditions, and habitat changes from a variety of projects in the assessment of cumulative effects. This section of the BE should be revised to integrate these aspects and evaluate the cumulative effect on population stability and species persistence in the assessment area and the region.

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<sup>4</sup> We note that based on our review, we find that the effects of the project in itself are significant and contribute to significant adverse cumulative effects.

### III. Conclusion

We find that the Greys Mountain DEIS fails to comply with the National Forest Management Act, the National Environmental Policy Act, and other federal laws. We ask that the DEIS be revised to comply with NEPA, and the revised DEIS circulated for additional public comment.

Thank you for considering our comments. Please contact Susan Britting (530-295-8210; [britting@earthlink.net](mailto:britting@earthlink.net)) if you would like to discuss our concerns.

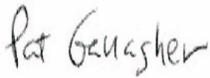
Sincerely,



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