NOTICE OF APPEAL

and

STATEMENT OF REASONS

PHOENIX PROJECT

TAHOE NATIONAL FOREST

SIERRAVILLE RIVER RANGER DISTRICT

SAM J. WILBANKS, DISTRICT RANGER, DECIDING OFFICER

STEVEN T. EUBANKS, FOREST SUPERVISOR, APPEAL DECIDING OFFICER

January 22, 2008

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Notice of Appeal and Statement of Reasons
Phoenix Project, Tahoe National Forest, Sierraville Ranger District
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Appellants Sierra Forest Legacy, Sierra Club, Center for Biological Diversity and Forest Issues Group hereby appeal the Record of Decision ("ROD") and Final Environmental Impact Statement ("FEIS") approving the Phoenix Project signed by District Ranger Sam J. Wilbanks on November 20, 2007, pursuant to 36 C.F.R. Part 215. Public notice appeared in the Mountain Messenger on December 6, 2007, and this appeal is timely filed. Appellants filed timely and substantive comments on this project and have standing to appeal the project pursuant to 36 C.F.R. § 215.13(a).

Appellants have a long history of involvement with this project as well as its predecessor projects, Euro and Checkmate. With respect to Euro, we submitted scoping comments and filed an administrative appeal; the Euro project was subsequently withdrawn and incorporated as part of the Phoenix project. We submitted comments on the Checkmate project before it too was withdrawn and incorporated as part of the Phoenix project. With respect to Phoenix, Sierra Forest Legacy filed scoping comments (November 18, 2005), comments on the draft EIS (May 8, 2006), and comments on the revised draft EIS (July 9, 2007). Forest Issues Group independently filed comments as well. In these comments and appeals (which we hereby incorporate by reference), we raised substantial concerns regarding the project's environmental impacts and the inadequacy of the environmental disclosure and analysis. Despite these comments, the final Phoenix decision appears to be essentially unchanged from the original proposed action. In important respects, the Forest Service has failed to respond to our comments and to the scientific opinion and information presented in our comments. Although the Forest Service has supplemented its environmental analysis, the FEIS continues to fail to provide essential information and analysis that would allow for careful consideration of the project's environmental impacts.

We are concerned about the Phoenix project's impacts to sensitive species, management indicator species, and species at risk, including the California spotted owl, the American marten, and the northern goshawk. Below we set forth the specific grounds for this appeal. In addition, the Phoenix project implements the 2004 Sierra Nevada Framework ROD (USDA Forest Service 2004a), and tiers to the accompanying FSEIS (USDA Forest Service 2004b). As demonstrated in our appeal of the 2004 ROD and FSEIS (Sierra Nevada Forest Protection Campaign et al. 2004), both the 2004 plan and the FSEIS fail to comply with the National Forest Management Act, the National Environmental Policy Act, and other environmental laws. A lawsuit challenging the 2004 Framework is currently pending in federal court. Therefore, for the programmatic reasons set forth in our appeal of the 2004 ROD and FSEIS,[1] the Phoenix project is also contrary to law.

[1] A copy of the appeal was attached to our earlier comments on this project and is hereby incorporated into this appeal by reference.

I. GENERAL NEPA ISSUES

The Sierraville Ranger District has made a mockery of NEPA by jumping through the statute's procedural hoops without giving serious consideration to public comments. The Phoenix project as approved in the ROD is essentially identical to the previous Euro and Checkmate projects and to the proposed actions in the draft EIS and the revised draft EIS. Our detailed scoping comments on the earlier projects, the additional information included in our appeal of the Euro project, and our comments on the DEIS and revised DEIS all raised significant environmental concerns about the projects. In many cases, these concerns still have not been addressed in the FEIS. Despite our comments and those of others, no meaningful changes have been made in the project to address environmental concerns and respond to the public. This violates NEPA. As the CEQ has emphasized, "[u]ltimately, of course, it is not better documents but better decisions that count." 40 C.F.R. § 1500.1(c). "[T]he comprehensive 'hard look' mandated by Congress and required by the statute … must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made." *Metcalf v. Daley,* 214 F.3d 1135, 1142 (9th Cir. 2000). Here, it is apparent that the Forest Service reached its decision regarding the Phoenix project without regard to public comments or the results of the NEPA process.

In addition, as detailed below, the Phoenix EIS consistently belittles the project's negative impacts while overemphasizing its claimed benefits. To satisfy NEPA, the Forest Service must take a "hard look at the environmental consequences of [its] actions . . . that does not improperly minimize negative side effects." *Earth Island Institute v. United States Forest Serv.*, 442 F.3d 1147, 1159 (9th Cir. 2006). Moreover, the Forest Service must provide a "full and fair discussion" of the proposed action's environmental impacts, 40 C.F.R. § 1502.1, rather than offering "general statement[s] regarding the possible impact and risk involved." *Ecology Ctr. v. Austin*, 430 F.3d 1057, 1067 (9th Cir. 2005). By sweeping adverse impacts under the rug and, at most, acknowledging the possibility of negative effects without analyzing them in detail, the Forest Service violated NEPA.

II. CALIFORNIA SPOTTED OWL

A. The EIS Incorrectly Assumes that No Spotted Owl Habitat Will Become Unsuitable.

The Phoenix Project and FEIS are based upon the fundamental premise that none of the alternatives would render *any* habitat for the California spotted owl unsuitable. *See, e.g.,* FEIS at 2-19 ("None of the three action alternatives … would render any suitable CSO habitat unsuitable."); ROD at 14 ("**All** suitable habitat will be retained….")(emphasis in original). Specifically, the EIS concludes that DFPZs will maintain suitable owl foraging habitat because they retain a minimum of 40% canopy cover, FEIS at 3-30 to 3-31, and that group selection logging will not only retain foraging habitat but "may increase foraging opportunities" for owls, FEIS at 3-33, 3-38 ("group selection units would not cause the reduction of suitable CSO habitat at the stand scale"), 3-40. The assumption that DFPZs and group selection maintain suitable owl habitat is contrary to the best available science, as the Forest Service has recognized with respect to other, similar projects.

With respect to DFPZs, the FEIS acknowledges that 40% canopy cover provides, at best, "marginally suitable foraging habitat," and that the CWHR "vegetation classification does not consider other habitat attributes important to CSO other than tree size and canopy cover and therefore it cannot accurately determinate different levels of habitat quality." FEIS at 3-30 to 3-31. In addition to tree size and canopy cover, suitable owl habitat includes "a minimum of two canopy layers," FEIS at 3-29, as well as "presence of snags, down wood, brush, etc.," FEIS at 3-31. Because DFPZs eliminate canopy layering and reduce snags and down wood, the Forest Service has acknowledged with respect to similar QLG logging projects that DFPZs that reduce canopy cover to 40% likely do not provide suitable owl habitat. Thus, for example, with respect to the similar Freeman Project on the Plumas National Forest the agency stated:

> Changes to suitable habitat as a result of implementing fuels treatments in all action alternatives would occur due to the removal of large structural components and reduction in canopy cover to 40 - 50%. *The more open canopied forested stands still retain the minimum canopy cover for suitable habitat but become unsuitable due to the removal of the needed structural components (snags, vertical and horizontal layering, down woody debris, etc.)*

USDA Forest Service 2006b at 93; *see also id.* at 94 (Table 3.21, n. *) (stating that "the removal of understory structural components" with DFPZ logging leads to "unsuitable foraging and nesting habitat"). Similarly, with respect to the Slapjack Project on Plumas National Forest, agency biologists stated that "[b]ecause most of the understory will be reduced in the stands, retaining a minimum of a 40% canopy cover may not maintain even minimal quality foraging habitat for mature and old-forest dependent species." USDA Forest Service 2006c at 102-03, 135-36.

The Forest Service asserts that "thinning prescriptions for all alternatives would retain sufficient large snags and logs to provide structural diversity needed for [owl] prey habitat." FEIS at 3-32. However, much of the Phoenix area "generally lacks large logs and large snags." FEIS at 3-78. In addition, "most of the white fir and Sierran mixed conifer (non red fir) stands exhibit a single-layered canopy of trees." FEIS at 3-53. Therefore, there is good reason to conclude that merely maintaining 40 percent canopy cover, in the absence of adequate snags, down logs, and understory, does not constitute suitable owl habitat.

The assumption in the FEIS that groups will retain suitable owl foraging habitat is similarly flawed. Notably, the assumption is contrary to analysis for the 2004 Framework, which concluded that full implementation of the QLG project will result in "fewer acres of suitable owl habitat" due in large part to "implementation of group selection harvest." USDA Forest Service 2004b at 269. Beyond that, the claim in the Phoenix FEIS that groups "may increase foraging opportunities" for the owl because "prey species abundance and diversity are expected to increase" as "edge habitat is created," FEIS at 3-33, appears contrary to the best available science, as the Forest Service has acknowledged with respect to other QLG projects. For example, with respect to the Slapjack Project on Plumas National Forest, agency biologists stated that group selection openings "may be marginal for foraging spotted owls due to the

isolation from the forest interior (Glenn et al. 2004)," and that "[e]dges created by groups in suitable owl habitat may reduce the use of foraging habitat by spotted owls and increase use by great horned owls (an effective competitor of the spotted owl and predator of spotted owl young)." USDA Forest Service 2006c at 138-39. Moreover, contrary to the assertion in the Phoenix FEIS, neither of the owl's primary prey is likely to utilize group selection openings in the short-term:

> It is currently not known how the prey species preferred by spotted owls (dusky-footed woodrats and northern flying squirrels) would respond to group selection and DFPZ construction. Following treatments, the habitat in most group selection units would be classified as Sierra mixed conifer (SMC) 1-2 (seedlings and saplings). As the SMC 1-2 habitat matures, woodrats may recolonize sooner than flying squirrels because they are known to use earlier successional habitats (Zeiner et al. 1990). A study in northwestern California showed that woodrat density was low until previously cut stands reached the sapling/brushy pole timber stage (15–40 years after timber harvest) (Sakai and Noon 1993). Flying squirrels would likely be absent from the group selection openings (Waters and Zabel 1995).

Id. at 139.

In sum, with respect both to DFPZs and group selection, the Phoenix FEIS is based on the overly optimistic assumption that neither type of logging will render owl habitat unsuitable. This assumption is contrary to other Forest Service analysis and the best available science. By sweeping these potential adverse impacts to owl habitat under the rug, the Phoenix EIS fails to comply with NEPA's full disclosure requirement. *See, e.g., Earth Island Institute v. United States Forest Serv.*, 442 F.3d 1147, 1159 (9th Cir. 2006)(agency may not "improperly minimize negative side effects" of its actions).

B. The FEIS Fails to Address Research Emphasizing the Importance of CWHR 4D Nesting Habitat.

The FEIS generally assumes that all forest stands with trees greater than 12" dbh and 40% canopy cover (i.e., CWHR 6, 5D, 5M, 4D, and 4M) constitute "suitable" habitat, and thus there will be no impacts to owls as long as habitat is retained at these levels. However, owl scientists have documented that highly suitable habitat for nesting, roosting, and foraging consists of dense, multi-storied stands dominated by trees $\geq$ 24 inches, high numbers of snags and downed logs, and canopy cover $\geq$ 70%. Lower-quality habitat suitable for foraging and sub-optimal roosting and nesting typically consists of multi-storied stands dominated by trees 12-24 inches and canopy cover 50% - 70%, with a minimum of about 40%. The FEIS continues to fail to differentiate between percent of high-quality and lower-quality owl habitat within PACs and HRCAs. The methodology of combining all levels of "suitable" habitat together into one broad category obfuscates important information that is necessary for an accurate and complete portrayal of the project's real impacts.

As we pointed out in our comments on the RDEIS, the best available research supports the critical importance of retaining high quality habitat with high canopy cover surrounding owl

activity centers. 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." (*Ibid*., p. 91). Further, 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. Seamans (2005) also states that "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]." (*Ibid*., p. 40). The Phoenix EIS fails adequately to respond to this research.

The FEIS cites Blakesley (2005) for the proposition that 4D habitat is negatively associated with owl occupancy. FEIS at 3-32. However, in Blakesley's study area, there was a significant amount of higher quality owl nesting habitat, i.e., CWHR 5D and 6. The Phoenix EIS does not disclose how much high quality nesting habitat exists surrounding owl activity centers, but the available information suggests that the amount is relatively small. *See* FEIS at 3-15 (only 11% of the Phoenix analysis area consists of CWHR 6, 5D, and 5M). Therefore, in the absence of higher quality 5D habitat, 4D habitat is likely to play a more important role in the Phoenix area than in Blakesley's study area, as it does in the Eldorado study area. The Phoenix EIS fails to consider the impact of reducing existing 4D habitat to low quality 4M foraging habitat in close proximity to owl activity centers, contrary to NEPA.

C. The FEIS Fails to Consider Impacts to Small Old Forest Stands

The FEIS fails to take a hard look at how proposed logging is likely to eliminate small pockets of larger trees important to the California spotted owl. As stated in our previous comments, California spotted owls use small aggregates of large trees for nest sites, even within larger stands that do not constitute old growth. (Blakesley 2003; Moen and Gutierrez 1997; USDA Forest Service 2001, Volume 2, Chapter 3, part 3.2, p. 131). Although our comment letter requested information on the acreage and location of old growth stands one acre or larger that will be logged, the FEIS does not disclose this information. Current owl science strongly suggests that a failure to protect small but important old forest stands could degrade potential owl nesting habitat and reduce the likelihood of nesting success (Verner 2003, p. 4; Blakesley and Noon 2003).[2] In fact, both the USDI Fish and Wildlife Service and the Forest Service's Washington Office have expressed concern about the elimination of protection for these stands under the 2004 ROD. (USDI Fish and Wildlife Service 2003b, pp. 4-5; Gladen 2003, pp. 10-11). Therefore, the failure of the Phoenix FEIS to analyze impacts on small old forest stands violates NEPA.

[2] Because of their ecological importance, the 2001 Framework protected these small old growth stands from intensive logging. In the 2004 Framework process, the FWS concluded that the removal of protections for these pockets of denser forest could "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 2003b, pp. 4- 5).

III. AMERICAN MARTEN

The Forest Service has not taken a hard look at the impacts of proposed logging on the American marten. Instead, the EIS lacks important information and analysis and consistently minimizes the project's likely adverse impacts, contrary to NEPA.

The FEIS asserts that "marten appear to be well distributed throughout the suitable marten habitat on the District." FEIS at 3-73. However, as explained by Dr. Kucera and Dr. Britting, the information in the EIS is insufficient to support such a conclusion. As they explain, the EIS should provide detailed information on marten observations, by year and location, including both detections and non-detections. In particular, the EIS should provide information "to allow an assessment of … whether there has been any trend in the marten's distribution and population over time." (Kucera 2006, p. 3). The dates of the detections are critical to evaluating any notion of population trend. For example, marten are known to disperse 24 to 60 miles. (USDA Forest Service 2001, Volume 3, Chapter 3, part 4.4, p. 22). The Phoenix analysis area at its greatest extent is about 28 miles wide. Numerous detections across the landscape could reflect a small subpopulation of martens that moves regularly throughout the area. Population monitoring to characterize trend is required to be obtained and analyzed by the Framework monitoring plan. Despite the repeated request in our comments, the FEIS fails to provide this information.

As with the owl, the EIS assumes that all suitable marten habitat will remain suitable after logging occurs. FEIS at 2-20. This assumption is unsupportable and is contrary to the agency's prior analysis, as well as conclusions reached by the U.S. Fish and Wildlife Service. According to the Forest Service's analysis of the QLG plan, DFPZs are expected to result in "relatively open stands" in which "the forest floor would usually be relatively open, with the exception of occasional large logs" (USDA Forest Service 1999b, p. 2-20), which is antithetical to suitable marten resting and foraging habitat. (Barrett 1999, p. 6). DFPZs in eastside forest types atments "would likely compromise later seral values." (USDA Forest Service 1999b, pp. 3-58, 3-59). In general, "the creation of DFPZs could potentially decrease denning and foraging habitat within the Pilot Project Area. With DFPZ maintenance, this decrease in habitat would be perpetuated." (USDA Forest Service 2003, p. 83). The Fish and Wildlife Service expressed concerns that "marten may not move across linear DFPZs, limiting population expansion and colonization of unoccupied habitat … thus precluding future recovery options." (USDI Fish and Wildlife Service 1999, p. 12). As a consequence, "the pilot project could lead to the isolation and local extirpation of marten." (Barrett 1999, p. 6).

The QLG administrative record emphasizes that the QLG project "has the potential to fragment high elevation red fir vegetation with linear DFPZ's located within checkerboard ownership lands on the Sierraville District. <u>This increased fragmentation of habitat could create open forest conditions that are no longer suitable for marten, and are large enough to serve as potential barriers to movement.</u>" (USDA Forest Service 1999a, p. 123, emphasis added). This conclusion directly contradicts the assertions in the Phoenix EIS that proposed logging will not fragment marten habitat, disrupt habitat connectivity, or render habitat unsuitable.

Multi-layered stands with a developed understory have been identified as important habitat elements of suitable habitat for marten. (Buskirk and Ruggiero 1994, USDA Forest Service

2001, Volume 3, Chapter 3, part 4.4, p. 19). The group selection and DFPZ treatments in the Phoenix Project will eliminate this type of habitat. DFPZ treatments eliminate understory altogether, thereby eliminating habitat for prey species such as tree squirrels and small rodents needing cover and downed woody material. *See* Kucera 2006, Bond 2006. Furthermore, vegetation treatments such as mastication, burning, and tree removal may eliminate snags and trees for future snag recruitment, and downed woody materials – all critical habitat elements for marten. For example, the RDEIS fails to address marten's need for up to 10 snags over 24" and down wood over 15" per acre. Instead, the proposed action includes removing 1 snag per acre as hazards. The project proposes retention of more snags per acre in units with a marten LOP, however marten were found throughout the project area. Despite these expected habitat changes, the Phoenix BE concludes that suitable habitat will be maintained. This statement is not supported by the analysis. The conclusions should be revised to reflect that currently suitable habitat will be degraded as a result of timer harvest. (Kucera 2006).

The EIS fails to address the importance of maintaining high quality denning and resting habitat, but instead lumps all "suitable" marten habitat together. In the southern Sierra Nevada, Zielinski et al. (1997) found that canopy cover in the vicinity of track plates where marten were detected averaged 85.8% with conifer basal area that averaged 190.5 ft^2/acre. This study determined that "martens most frequently rested in size class 4, 5, and 6 Sierran Mixed Conifer (SMC) stands with >60% cover." A study in Yosemite National Park found that martens preferred areas with 100 percent cover overhead, especially when resting (Hargis and McCullough 1984). Thus, it is apparent that both DFPZs and groups will degrade suitable marten denning and resting habitat. The FEIS fails to disclose this impact.

The FEIS also asserts that forest stands as sparse as CWHR 2P – i.e., characterized by trees as small as 1" diameter and canopy cover as low as 25% – provides "movement and dispersal habitat" for marten. FEIS at 3-69. This claim is unfounded. According to Freel (1991), even low quality marten foraging habitat should be a minimum of CWHR 3, and canopy cover within low quality marten travel areas should have at least 40-50% canopy cover. *Id.* at 6-7. By assuming that CWHR 2P constitutes sufficient marten dispersal habitat, the FEIS is impermissibly minimizing the project's likely adverse impacts to marten.

As stated in our comments on the DEIS, "the Forest Service should disclose the impact of group selection openings on the marten. Given the marten's sensitivity to forest openings, the Forest Service should analyze the percentage of openings within the project area before and after project implementation with respect to a threshold of 20-25 percent forest openings." Such an analysis requires an assessment of the spatial location of the groups selection units and an evaluation of the habitat condition of the stand in which the group selection units will be placed. As shown by Britting (2007), the site specific density of the group selection units is of particular importance in such an analysis. The EIS should be revised to address this issue.

Marten habitat on private timber lands in the project area is degraded from a paucity of large logs and snags during past timber harvest activity completed since 1990 on a significant portion (42%) of the analysis area (BE pg. 108). Salvage and sanitation harvest on these lands has removed key habitat components required by the marten. (Britting 2006). The habitat has also been degraded from extensive clearcut and shelterwood harvest prescriptions (6,949 acres, Britting 2006, p. 3) undertaken in the analysis area. Such prescriptions remove all or nearly all

the trees from the harvested area and create canopy openings in the stand. Potvin et al. (2000, p. 854) found that marten were "fairly intolerant of fragmentation and can not tolerate more than 30-35% cutovers (OR + CR) in its home range." These results led them to recommend that less than 30% of the area managed for martens be "clearcut over a 30-year period." (*Ibid*.) The Phoenix project in combination with future projects in the analysis area proposes a reduction in habitat quality on 6,414 acres, or an additional 17% of the project area. (RDEIS pg. 3-66). Combined with past projects, the implementation of the Phoenix Project with future private land activities will result in 59% of the analysis area being subjected to significant reductions in habitat quality and quantity since 1990. Marten habitat in the project area has already surpassed the threshold of 20-25 percent forest openings with degraded habitat lacking key habitat elements such as large down logs and snags. Given the marten's sensitivity to forest fragmentation and habitat degradation, implementation of Alternative 1 would threaten marten's viability and restrict its distribution. (Kucera 2006). The Phoenix documents fail to take a hard look at these likely impacts on the viability of marten in and adjacent to the project area.

The BE (p. 107) states that "It appears that actual habitat fragmentation (that which would cause marten use to decline and/or cause a gap in habitat or marten distribution) within the Phoenix analysis area is not occurring." This statement in made based on a visual assessment of a map on connectivity included with the BE. This map shows two classes of habitat: "Denning Habitat" (CWHR type 4M, 4D, 5M, and 5D) and "Movement and Dispersal Habitat" (CWHR type 2P and greater). There is no data presented that support these classifications. According to data collected in the Sierra Nevada, resting habitat for marten occurs in stands with canopy cover greater than 60% (Zielinski et al. 1997). Freel (1991) classified denning/resting habitat as having greater than 70% canopy cover and dominated by trees greater than 24" in diameter. This information indicates that denning habitat should at a minimum focus on habitat with canopy cover greater than 60%. As to "Movement and Dispersal Habitat," this appears to be a term invented for the analysis, yet the rationale for the inclusion of all forest types with tree diameters greater than 1" in diameter (CWHR 2 label) with 25% canopy cover or greater (CWHR P label) is not disclosed. The inclusion of habitat types with CWHR 2 and 3 with any level of canopy cover as "travel" habitat contradicts Freel (1991) which identifies travel habitat as having >40% canopy cover and large live conifers. The effect of including such low quality habitat is to give the "appearance" that habitat is connected across the analysis area. At best, this map identifies in the lightest green and white areas, places that marten would likely avoid. This map also indicates that habitat used for denning, resting and foraging (i.e. those areas with CWHR 4M, 4D, 5 M and 5D) is quite fragmented across the analysis area.

Based on the conclusions in Zielinski et al (1997) that "martens most frequently rested in size class 4, 5, and 6 Sierran Mixed Conifer (SMC) stands with >60% cover," Britting (2007) completed an analysis of CWHR 4D, 5D and 6 habitat in the analysis area. These CWHR types represent areas with canopy cover of 60% or greater and tree diameters 12" and greater. Given that resting habitat must contain large trees, inclusion of all 4D habitat is a fairly liberal interpretation of resting and denning habitat and likely overestimates its abundance. About 7% of the analysis area has habitat suitable for resting and denning. As can be seen in Britting (2007, Figure 2), this habitat (CWHR 4D, 5D and 6) occurs in small patches dispersed across the landscape. The RDEIS fails to address the fragmented existing condition and as a result underestimates the impacts of further reducing the quality and quantity of resting habitat.

IV. FAILURE TO CONDUCT REQUIRED WILDLIFE MONITORING

The Forest Service is required by its own regulations and management plans to monitor the populations of management indicator species (MIS) and other wildlife. For instance, 36 C.F.R. § 219.19 requires that the population trends of MIS be monitored. In addition, the 2004 Framework, which amended the Tahoe LRMP, requires annual monitoring of population trends for many MIS, Forest Sensitive Species (FSS), and Species At Risk (SAR).[3] The Forest Service failed to obtain this required information. As a result, the project documents also failed adequately to assess the project's environmental impacts to these species and their habitat, because "project-level effects analysis for … MIS" is supposed to be "informed by population monitoring data." FEIS at 3-141.

A. The Annual Monitoring Required By The Forest Plan Has Not Been Completed

The Tahoe LRMP, as first adopted in 1990, requires that population trend be assessed annually for a number of species that are potentially affected by the Phoenix project. Appendix E of the 2001 ROD (USDA Forest Service 2001, Volume 4, Appendix E) was adopted by the 2004 ROD (USDA Forest Service 2004a, p. 70). This appendix outlines additional monitoring requirements for a variety of species including management indicator species ("MIS") and species at risk ("SAR"). Ten species were identified in Appendix E as being of particular concern and their monitoring requirements were addressed individually in the narrative. The monitoring requirements for the remaining species are summarized in a series of tables. Appendix E makes clear that annual population monitoring data must be obtained for most of the MIS and SAR. *See Earth Island Institute v. U.S. Forest Service*, 442 F.3d 1147 (9th Cir. 2006).

In Table 1 we review the forest plan monitoring requirements and compare the requirements to the information provided in the EIS.

Table 1. Species considered in the Phoenix project for which the monitoring requirements in the Tahoe Land Management Plan (1990 and as amended 2004) have not been addressed.

Species	Forest Plan Monitoring Requirement	Frequency	Monitoring Reported in Phoenix Documents
California spotted owl	"Population trends" (USDA Forest Service 1990, p. VI-8).	Annually	No monitoring data provided.
Northern goshawk	Population monitoring required. (USDA Forest Service 2004)	Annually	Reports of nesting observations; Christmas bird counts
Blue grouse	Population monitoring required. (USDA Forest Service 2004)	Annually	Breeding bird survey data
Mountain quail	"Nest site use" " (USDA Forest Service 1990 p. VI-11).	Annually	No monitoring data provided.

[3] A recent forest plan amendment purports to modify and/or eliminate the monitoring requirements set forth in Appendix E. USDA Forest Service 2007. We believe that the decision is invalid because it violates NEPA and NFMA. We intend to administratively appeal and, if necessary, litigate the decision to amend the existing monitoring requirements.. Because the plan amendment is illegal, the requirements of Appendix E remain in effect.

Species	Forest Plan Monitoring Requirement	Frequency	Monitoring Reported in Phoenix Documents
	Population monitoring required. (USDA Forest Service 2004)	Annually	Breeding bird survey data
Prairie falcon	"Nest site use" " (USDA Forest Service 1991, p. VI-11).	Annually	No monitoring data provided.
	Population monitoring required. (USDA Forest Service 2004)	Annually	No monitoring data provided.
Western red bat	Population monitoring required. (USDA Forest Service 2004)	Annually	No monitoring data provided.
Pallid bat	Population monitoring required. (USDA Forest Service 2004)	Annually	Survey information limited to small area outside of Phoenix Project (BE, p. 129)

The BE and MIS reports do not present the information required by the forest plan on population monitoring or population trend for these species or the type of information presented is not adequate.

For several species covered in the project documents, the monitoring data provided was not adequate to access trend. These species are addressed below.

The forest plan directs that "population trends" of California spotted owl will be determined annually for the forest. (USDA Forest Service 1990, p. VI-8). The project documents report on survey results for owl demographic studies on the Lassen, Eldorado and Sierra National Forests but do not provide data for trend on the Tahoe National Forest.

A summary of goshawk sightings is provided in the MIS report, but these project driven observations are variable in time and place and can not be used to monitor the population. Data collected from the Christmas bird count is referenced, but this information pertains to California as a whole and is not bioregional as required by the forest plan. Data on the number of goshawk PACs is provided, but the EIS acknowledges that "[n]ot all PACs are monitored within a given year." FEIS at 3-149. Therefore, this information is not adequate to evaluate trend as required by the forest plan.

Breeding bird survey data were used to assess trends for mountain quail and blue grouse. For a number of reasons, the use of breeding bird surveys is unacceptable to meet population monitoring requirements in a forest plan. First, breeding bird surveys are located on roads and span both national forest and private land. The purpose of monitoring population trend is to determine the effect of Forest Service management on the selected species. Data from routes that traverse private land are confounded by the effects of private land management and are limited in their use for assessing national forest land. Thus, it is arbitrary to suggest that the data is representative of population trends on lands governed by the forest plan.

Second, the BBS Program itself identifies that there are limitations to the dataset related to the geographic area covered. The BBS Program notes that:

> "Trends are always specific to the areas surveyed.

> Roadside biases-The BBS is a roadside survey, and a major criticism of the survey has been that habitat changes along roadsides may not be representative of regional habitat changes. Trends from the BBS may therefore reflect only populations along roads rather than regional bird population changes.
>
> Habitat biases-Within the range of the BBS, many habitats are not well covered, and species that specialize in those habitats are poorly sampled. Wetland birds and species occupying alpine tundra habitats are examples of groups thought to be poorly represented in the survey."

(Sauer et al. 2005). Even if the routes occurred entirely on the national forest, they would still be limited to assessing trend near the road and not across the forest. Because of these and other limitations, the courts have found that "the BBS alone cannot satisfy the population monitoring requirement, and the USFS has acted arbitrarily and capriciously under the NFMA in relying upon it." *Earth Island Inst. v. U.S. Forest Service*.

There are additional SAR that may occur in the project area, based on their geographic range and the association of habitat types affected, for which the monitoring required by Appendix E has not been reported. These species are listed in Table 2 below. These species and their monitoring results also were not discussed in the Phoenix project analysis.

Table 2. Species at risk (SAR) from Appendix E (USDA Forest Service 2001) that require population monitoring and that may be affected by the Phoenix project. These species were not addressed in the environmental analysis.

CWHR #	Common Name	Habitat Type[1]
B129	Peregrine falcon	Woodland, forest riparian
B233	Forster's tern	Reverie
B251	Band-tailed pigeon	Hardwood, hardwood-conifer and conifer
B272	Long-eared owl	Riparian, dense tree
B309	Olive-sided flycatcher	Mixed conifer, montane hardwood-conifer
B385	Swainson's thrush	Riparian and dense shrub
B510S1	Mountain white-crowned sparrow	Open montane 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
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

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

In sum, the Forest Service has failed to obtain and disclose annual population monitoring data for MIS and SAR, contrary to law. In addition to violating monitoring requirements, this failure to monitor population trend also renders the NEPA analysis of effects to these species inadequate. As identified in the Regional direction on the analysis of management indicator species and documentation in project level NEPA (USDA Forest Service 2006a), "when the governing

LRMP requires population monitoring or population surveys, the MIS effects analysis for the project must be informed by population monitoring data."

V. THE ANALYSIS OF CUMULATIVE IMPACTS IS NOT ADEQUATE

NEPA requires that federal agencies consider the cumulative impacts of their actions, defined as the project's impacts "when added to other past, present, and reasonably foreseeable future actions." 40 C.F.R. § 1508.7. In *Klamath-Siskiyou Wildlands Ctr. v. United States Bureau of Land Management*, 387 F.3d 989, 993 (9th Cir. 2004), the Ninth Circuit held that adequate consideration of cumulative "requires some quantified or detailed information; . . . [g]eneral statements about possible effects and some risk do not constitute a hard look." Specifically, the EA must include a "quantified assessment of [the] combined environmental impacts" of past, current, and future logging within the analysis area. *Id*. at 994. For example, the EIS must quantify the cumulative amount of spotted owl habitat that will be lost or degraded, taking into account not only the proposed action, but also other current and future projects in the area. *See id.* at 994 n.1 ("Factors such as amount of suitable and dispersal spotted owl habitat . . . are clearly variables that can be quantified."). The EIS must also analyze "the effect of this [cumulative habitat] loss on the spotted owl throughout" the planning area. *Id*. at 997. *See also Oregon Natural Resources Council Fund v. Brong*, 492 F.3d 1120, 1133-35 (9th Cir. 2007).

The analysis of cumulative impacts in the Phoenix FEIS is inadequate in several respects.

A. Cumulative Impacts from Private Land Logging are not Adequately Considered.

First, the EIS fails adequately to consider the cumulative impacts of logging on private lands. "The Phoenix analysis area is generally characterized by a checkerboard pattern of ownership," with private lands constituting approximately 41 percent of the area. FEIS at 3-2. Over 90 percent of the private lands are "managed for forest products." *Id.* "In the past 5 years, private timber lands within the red-fir zone have seen a dramatic increase in timber harvest activities." *Id.* at 3-1. NEPA requires that the Forest Service carefully consider the cumulative impacts that will result from logging on private lands. *See, e.g., Oregon Natural Resources Council Fund v. Brong,* 492 F.3d 1120, 1133-35 (9th Cir. 2007).

Britting (2006) analyzed the effects of past and proposed logging on private lands within the Phoenix analysis area using aerial photography, GIS, and an assessment of the forest practice rules governing private land logging. Her analysis shows that past logging has substantially degraded old forest habitat and that proposed logging is likely to result in forest stands that do not provide suitable habitat for either the owl or marten, based on reduction in canopy cover, basal area, and snag and down wood to low levels.

The FEIS fails adequately to address the impacts of proposed logging on private lands. The FEIS mentions "a salvage sale on 10,416 acres within the checkerboard ownership" of SPI.[4] FEIS at 3-55. The assessment of the cumulative impacts of implementing this THP is entirely

[4] The FEIS says that "no THP has been filed at this time," FEIS at 3-55, but then goes on to describe in some detail the proposed acreage and prescriptions. The status of the project, and the source of the Forest Service's information, are not clear.

conjectural and unsupportable. For example, rather than analyzing the amount of suitable owl habitat within the THP boundaries, the FEIS simply assumes, without any basis, that 625 acres of the project area currently constitutes owl nesting habitat. FEIS at 3-55. The FEIS further assumes, without any basis, that logging will reduce this nesting habitat "to foraging habitat," *id.* at 3-56, when Britting's analysis indicates that any suitable habitat will likely be rendered unsuitable. Similarly, the FEIS makes unsupported assumptions regarding the amount of owl foraging habitat within the THP boundary, and then simply asserts – with no analysis or rationale whatsoever – that 440 acres of foraging habitat would be rendered unsuitable, and approximately 3,000 acres of foraging habitat would remain suitable but would be "reduced in quality." *Id.* The FEIS makes similar guesses about the impacts of private land logging on the marten, stating with no support whatsoever that logging on private lands "would be beneficial to martens," FEIS at 3-80, and that "3,440 acres of preferred habitat quality would be reduced," *id.* at 3-81. These conjectural statements are unfounded, conflict with the best available information as set forth in Britting (2006), and do not constitute an adequate cumulative effects analysis as required by NEPA.

At most, the FEIS purports to quantify the number of acres of suitable habitat that will be cumulatively degraded. Lacking entirely from the FEIS is an analysis of "the effect of this [cumulative habitat] loss on the spotted owl throughout" the planning area, as required by NEPA. *Klamath-Siskiyou,* 387 F.3d at 997. For example, the FEIS fails to assess the extent to which private land logging will occur within owl home ranges, or within close proximity to owl activity centers.

Other than the unnamed 10,416 acre SPI project, the Forest Service asserts that "all foreseeable projects on private land (THPs) have been incorporated into the existing vegetation coverage." FEIS at 3-4. However, the FEIS fails to include sufficient information to allow the public to review which projects were included and what assumptions were made in incorporating the projects into the vegetation coverage. We are aware of at least two such THPs, Scraps and Lodge. The FEIS fails to mention these projects specifically, so there is no way of ascertaining whether they were addressed in the data base. Even if the THPs were ostensibly included, the EIS does not explain what assumptions were made in modeling, i.e., how proposed logging will affect existing CWHR types, suitability of habitat for owl and marten, and related issues. Instead, all of these issues were addressed, if at all, outside of the public process, and the public therefore cannot meaningfully comment on or respond to the Forest Service's analysis, contrary to NEPA.

The Phoenix Project, together with Forest Service's Montez Project and SPI's THPs for Lodge and Scraps, all affect the Perazzo Creek watershed. However, the EIS fails to assess the cumulative impacts of implementing all of these projects within the same watershed. For example the reduction of canopy cover (from an existing estimated average of 65% to a residual 40%) proposed for these projects would open these stands to increased insolation and significantly reduce their eco-function to retain early summer snowpack. This would result in accelerated spring runoff from these slopes, increased sedimentation, and unpredictable changes in spatial and temporal distribution of water to downstream habitats. In addition, public funds are being spent in a major effort to improve the trout fishery in downstream waters of Perazzo Creek, which is a highly valued but severely degraded ecosystem. The Phoenix FEIS fails

adequately to assess the cumulative impacts of all these projects on this important area.

B. Cumulative Impacts Analysis Areas are Too Small.

Second, the analysis area for analyzing cumulative effects is too small. With respect to the marten, the FEIS states that, because the marten "is a wide ranging species, and individuals have been known to disperse long distances, the American marten effects analysis was determined to include all potentially suitable habitat within 1 mile of proposed activity units." FEIS at 3-71. This statement is a non sequitur. In fact, research shows that the average marten home range is several square miles, and that the marten dispersal distances range from 24-60 miles. USDA Forest Service 2001, Volume 3, Chapter 3, Part 4, p. 22. Given that the marten disperses from 24-60 miles, it is apparent that the analysis area needs to extend well beyond 1 mile to encompass potentially significant cumulative effects to marten.

Similarly, with respect to the owl's analysis area, the FEIS states that the analysis area "must be large enough to encompass habitat that might be used by owls within the Phoenix project," FEIS at 3-52, but in fact the analysis area is far too small to achieve this purpose. The owl analysis area extends only 1 mile beyond the project boundaries. FEIS at 3-53. By contrast, breeding dispersal[5] distances for spotted owl averaged 4.3 miles and ranged from 0.6 miles to 20 miles. (Blakesley et al. 2006, p. 71). The probability of breeding dispersal was found to be "higher for younger owls, single owls, paired owls that lost their mates, owls at lower quality sites, and owls that failed to reproduce in the year preceding dispersal." Further, such dispersal "resulted in improved territory quality in 72% of cases." Thus, owls that disperse as a result of project-induced effects could range many miles from their nest site in an attempt to find improved nesting habitat. Given that average dispersal distance is 4.3 miles, an analysis area that extends only 1 mile beyond project boundaries clearly does not encompass all the project's likely cumulative impacts on the owl.

The analysis area should be expanded to include projects on Plumas National Forest. The Forest Service has implemented or is planning to implement at least nine large (greater than 1,000 acres) fuel reduction projects on the Plumas National Forest, north of the Phoenix project area. A total of 51,860 acres would be treated (Table 3 below). The majority of these areas would be turned into DFPZs where canopy cover in forest types currently suitable for spotted owl, marten or goshawk can be reduced to 30 percent. Forest stands with canopy cover less than 50% are recognized by the Forest Service elsewhere as being marginally to unsuitable for CSO foraging and nesting. (Plumas National Forest 2005, p. 27). Thus, the cumulative effect of these projects, which are proposed for implementation at approximately the same time as the Phoenix Project, is to reduce the suitability of many thousands of acres of nesting and foraging habitat for CSO.

Table 3. Summary information for nine timber projects on the Plumas National Forest that individually 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. (From Britting 2007, Table 3)

[5] Breeding dispersal is defined by Blakesley et al. (2006, p. 71) as "territory or nest change between breeding attempts."

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 5/18/05
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
TOTAL	**51,860**				

Consideration of these projects in the cumulative effects analysis is important for at least two reasons. First, Areas of Concern (AOCs) for spotted owl have been identified on the Tahoe National Forest and the Lassen National Forest with an extension down to a small portion of the Plumas National Forest. (Verner et al. 1992). The Plumas National Forest is, for the most part, the area between AOC 2 and 3. The projects set forth in Table 3 above are located directly between these AOCs. (Britting 2007, Figure 3). Concern for these areas includes known low densities of CSO, fragmented habitat, and impediments to north-south travel for owls. (Verner et al. 1992, pp. 45, 48). The timing and scale of habitat degradation proposed in the projects listed in Table 3 could lead to an expansion of existing AOC 2 to the south or AOC 3 to the north, or to the creation of a new AOC. This potential cumulative effect is not considered in the RDEIS.

Second, the carnivore network on the Tahoe National Forest does not stand alone, but is connected to the network established for the Plumas National Forest to the north. Numerous projects have been located in the eastern portion of the carnivore network on the Plumas National Forest. (Britting 2007, Figure 3) The potential for habitat degradation is similar to that found for the Phoenix Project. The Phoenix Project begins about 9 miles due south of these projects that affect the eastern portion of the carnivore network. The cumulative change to habitat resulting from all of these projects on the persistence and movement of marten has not been addressed in the RDEIS.

By tiering to the 1999 QLG FEIS and 2004 Framework FEIS, the Phoenix Project planning documents avoid assessing the habitat quality, and activities affecting such habitat quality, outside the assessment area. However, such avoidance is not supported by these analyses. In fact, both environmental documents expect that cumulative effects analyses will be conducted at the appropriate scale for each project undertaken. By its own admission, the analysis in the 2004 Framework is incomplete and uncertain, and, moreover, cites the need for further cumulative impact assessment at the project level. (USDA Forest Service 2004b, Response to Comments). Furthermore, 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 2003b.) 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, Appendix AA, pp. 12-13).

C. Proposed Forest Service Projects Are Not Analyzed.

Third, the EIS fails adequately to consider the impacts of planned Forest Service projects within the analysis area. The FEIS refers to the Montez Project, within the Phoenix analysis area, but states that this project is "still in the preliminary planning stages" and that the cumulative impacts of this project will therefore be assessed in the future. FEIS at 3-4 to 3-5, 3-19. This characterization of the Montez Project is incorrect. In fact, according to the most recent SOPA, the Montez Project was circulated for public comment on November 22, 2007, and appellant Tahoe Forest Issues Group submitted comments on the EA. NEPA requires that the cumulative impacts of all proposed projects, including all projects that are at or beyond the scoping stage, be considered. *Lands Council v. Powell,* 395 F.3d 1019, 1022-23 (9th Cir. 2005). Therefore, the cumulative impacts of the Montez Project should have been included in the Phoenix FEIS, and the failure to do so violated NEPA.

D. Impacts of Past Logging are not Adequately Assessed.

Fourth, the EIS fails adequately to analyze the impacts of past logging. In *Lands Council v. Powell*, the Ninth Circuit held that "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.

VI. ANALYSIS OF STAND DENSITY ISSUES IS NOT BASED ON THE BEST AVAILABLE INFORMATION

Forest Issues Group, in its comments on the draft EIS and revised DEIS, demonstrated that the Forest Service's use of the stand density index to support proposed logging does not reflect the best available science. The Forest Service has not adequately disclosed or responded to this contrary scientific opinion, as required by NEPA. Because this information is lengthy and technical, we hereby incorporate the critique by FIG into this appeal and ask that the points raised in FIG's comments be addressed as part of the appeal decision.

VII. CONCLUSION

For the foregoing reasons, the Phoenix ROD and FEIS fail to comply with applicable environmental laws. We request that the decision approving the project be overturned and that the project be reconsidered consistent with NEPA and NFMA.

Respectfully submitted,

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[6] Each of these references is hereby incorporated by reference into this appeal. Please contact us if you need copies of any of the references.

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