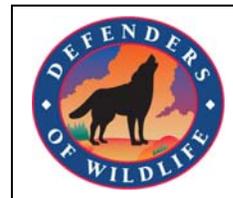




Forest Issues Group



January 21, 2014

Sent via the Internet to:
objections-chief@fs.fed.us

Mr. Tom Tidwell, Chief (Objection Reviewing Officer)
USDA, Forest Service
1400 Independence Ave, SW
Washington, DC 20250

RE: Statement of Objections for the Lake Tahoe Basin Management Unit Forest Plan, FEIS, and Draft ROD with recommendations for specific improvements 36 CFR § 219.54 (c). Mr. Randy Moore, Regional Forester, Region-5 PSW, is the Responsible Official.

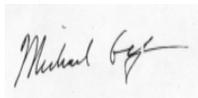
Standing Statement: This objection letter is submitted on behalf of: Sierra Forest Legacy, Sierra Club, Friends of the River, California Wilderness Coalition, Snowlands Network, Sierra Nevada Alliance, Earthjustice and others listed below, and the members and supporters we represent (hereafter, the Coalition).

The Conservation Coalition listed above has maintained a long and sustained interest in the issues in the Lake Tahoe Basin dating back to the previous 1988 Forest Plan revision; the 2001 and 2004 Sierra Nevada Forest Plan Amendments; various projects on the Lake

Tahoe Basin Management Unit such as the Ward Canyon and South Shore projects; and the on-going forest plan revision process. We submitted comments on March 19, 2007 for the Comprehensive Evaluation Report; a comment letter on December 5, 2008 regarding Desired Conditions on the Lake Tahoe Basin Management Unit planning area; Scoping Comments on April 26, 2010 for the Lake Tahoe Basin forest plan revision; and Comments of the Draft Plan and DEIS on August 29, 2012. We have attended various meetings during that timeframe both as a coalition and as individual groups, plus several public meetings focused on the plan revision process.

We hereby file the following objections to the 2014 Proposed Lake Tahoe Basin Management Unit Forest Plan, FEIS and Draft ROD. We include reasonable and feasible recommendations for improvements to the proposed Forest Plan. We request a conference with the Forest Service regarding suggested improvements that will add scientific credibility, build broader social acceptance and lower risk from unexpected outcomes.

Sincerely,



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In our view, the Plan, FEIS and draft ROD arbitrarily chose to focus on forest-related disease, pathogens and fire effects and intensive recreation – all of which the Forest Service failed to appropriately analyze and address while still ignoring the loss of biodiversity at the plan scale. Biodiversity loss and increased human impacts are a far greater concern than any of the local or regional stressors to our forests in California, but this loss of diversity continues to be minimally addressed on the Forest Plan and FEIS and draft ROD.

An EIS is not an opportunity to justify an action, but rather a forum to "provide full and fair discussion of significant environmental impacts and to inform decision makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment." 40 C.F.R. §1502.1. For this plan revision, the Forest Service avoided analyzing, in sufficient detail, the feasibility of high controversial alternatives that remove larger, older trees for the purpose of restoration. Late seral, closed canopy forests are in short supply on the LTBMU due to past logging history and fire suppression. Species dependent on these values are at serious risk in the short and long term.

Our Objections to the Final Plan and FEIS/ROD are set forth below. As discussed, we have concerns that the LTBMU's preferred alternative "E" does not ensure that wildlife and sensitive habitats in the Tahoe Basin will be protected. In particular, the draft Plan reduces protections for sensitive species and habitats, lacks clear standards, rigorous broad-scale monitoring, arbitrarily rejected increased wilderness and wild and scenic river recommendations, failed to consider appropriate over-snow recreation limitations and did not provide an accurate, detailed and scientifically sound NEPA analysis.

Objection Summary

The Coalition objects to the following issues, all of which were raised in the Forest Planning process during scoping and through the Draft EIS:

- 1) Inadequate analysis of impacts to California spotted owl and failure to maintain viable populations of California spotted owls 36 CFR § 219.19 (from 1982 planning rule)
- 2) Inadequate analysis of impacts to Pacific marten and failure to maintain viable populations of Pacific marten 36 CFR § 219.19 (from 1982 planning rule)
- 3) Violation of 1982 Planning Rule Requirements; Failure to maintain viable populations of MIS (spotted owl, marten, flying squirrel).
- 4) Failure to analyze the unlimited discretion in the removal of trees greater than 30 inches and resulting impacts to wildlife dependent upon this structure, including species needing late-seral, closed canopy forests.
- 5) Failure to appropriately consider Wild and Scenic River designations and to protect of Wild and Scenic River values.
- 6) Failure to appropriately consider Wilderness values and Wilderness designation.
- 7) Failure to provide an adequate, science-based monitoring and adaptive management plan responsive to the critical issues on the LTBMU.
- 8) Failure to adequately assess the impacts of over-snow vehicle use.
- 9) Failure to adequately consider and respond to the Sierra Forest Legacy Conservation Coalition's science-based Conservation Strategy.

Recommendations for improvements (36 CFR § 219.54 (c) (6) follow, or are included in, each objection section.

Objection Issue 1--Inadequate analysis of impacts to California spotted owl and failure to maintain viable populations of California spotted owls 36 CFR § 219.19 (from 1982 planning rule)

A. The Impacts to Owls Have Not Been Adequately Assessed.

The FEIS and Appendices do not provide an adequate assessment of the impact of the project on the continued viability of owls in the Tahoe Basin. As discussed below, the informational deficiencies in the EIS process do not meet NEPA's hard look standard.

1. Failure to Take a Hard Look at the Current Regional Population Decline of Spotted Owls

The FEIS continues to proceed on a false assumption that owl populations are stable. As discussed in our comments, the regional demographic studies indicate that owl populations on Forest Service lands are declining, precisely as the National Forests in the Sierra are implementing more aggressive logging treatments. As noted by John Keane in the 2013 PSW Science Synthesis (Keane, 2013):

Ongoing research of recent population trends indicates increasing evidence for population declines on the three studies on National Forest Service lands and a stable/increasing population on the National Park Service study area, and it is providing new approaches for evaluating spotted owl population trends and interpreting the probability of population declines...

In particular, in the closest study area to Tahoe, the El Dorado National Forest, owls have declined substantially over the last decade. Tempel and Gutierrez 2013 determined in a tracking methods-model performance study that territory occupancy declined during their study ($t = 0.702$, 95% CI 0.552–0.852) due to increasing territory extinction rates and decreasing colonization rates. The project manager of the Eldorado Spotted Owl Study, Doug Tempel, observed, “a significant population decline, as evidenced by the geometric mean of the finite rate of population change ($\hat{\lambda} = 0.969$, 95% CRI 0.957, 0.980) and the resulting realized population change (proportion of the initial population present in 2012; $\hat{\lambda}^{2012} = 0.501$, 95% CRI 0.383, 0.641). During the study period 1990-2012 there has been nearly a 50% loss of site occupancy. See Temple 2013.

Despite the findings of population decline by the research scientists who conducted the demographic studies, the FEIS relies on an inappropriate interpretation of the demographic results from Conner et al. (2013) to assert that the owl population decline is still in question. In discussing the declining owl population, the FEIS (p. 3-326) recounts a simplified view of statistical significance as applied to estimates of population decline. What the FEIS fails to acknowledge in reporting the results of Conner et al. (2013) is that the paper specifically sets out to develop an approach that provides a

more informed and useful interpretation of estimates of population change derived from the demographic studies. As stated in Conner et al. (2013):

In the past, the confidence intervals (CI) for estimates of mean λ and of λ_t were used to evaluate population decline. That is, if the CI included 1, even if just barely, the conclusion was that there was no evidence for a decline. However, with this methodology, the influence and probability of a Type II error (inability to detect a decline or change) cannot be eliminated from the interpretation of no decline. The key element missing in this approach was the ability to estimate the probability of decline. Using Bayesian Markov chain Monte Carlo (MCMC) methods, a posterior distribution of λ_t can be used to estimate any probability of decline.

Conner et al. developed this new method to evaluate the probability of decline for three study areas and found that:

Results from λ_t analyses highlight that small differences in mean λ from 1.0 (stationary) can result in large differences in population size over a longer time period; these temporal effects are better depicted by λ_t .

These results form the basis for the conclusion that the population is declining. Further, Conner et al. reported on the probability of a decline of certain magnitude:

Results from a Bayesian approach using MCMC simulations indicated that the probabilities of a >15% decline over 18 years were 0.69, 0.40, and 0.04 for the 3 study areas, whereas the probabilities the populations were stationary or increasing were 0.07, 0.22, and 0.82.

When we examine the results from the specific study areas, we find that the studies occurring on the national forest (LAS and SIE) indicate that the probability of a decline greater than 15% was substantial ($p=0.69$ and 0.40 , respectively) compared to the study in the national park (SKC) that has a very low probability of the same degree of decline (i.e., $p=0.04$). This suggests that management practices on national forest lands, which are very different on national park lands, are likely contributing to the population decline.

One aspect of the discussion in the FEIS that we find so disturbing is the lack of understanding about the relevance and application of this new study. In the discussion of Conner et al., the FEIS concluded by stating:

Therefore, although there is concern that there may be localized declines in the spotted owl populations, the confidence intervals overlapping one (1) makes it difficult to assess the probability of a decline.

Conner et al. (2013), in fact, evaluated the probability of decline and found it to be significant in the two study areas on national forest lands. Furthermore, the scientists concluded that:

For retrospective analyses of monitored populations, using Bayesian MCMC methods to generate a posterior distribution of θ_t is a valuable conservation and management tool for robustly estimating probabilities of specified declines of interest.

Failing to appropriately disclose the results of scientific studies is contrary to NEPA and contrary to sound science.

At best, the Forest Service's approach is highly risky. Seamens and Gutierrez 2007 show that reductions in higher quality habitat due primarily to logging are correlated with site occupancy declines in the El Dorado National Forest. Yet, the FEIS Response to Comments (p. 144) still states that "additional information on specific vital rates is necessary to understand what is driving lambda and ultimately, the mechanisms driving population dynamics. Causation for any potential decline in occupancy is unknown."

We disagree that there is any uncertainty over whether habitat quality reductions in the El Dorado caused by logging projects are contributing to the decline of owl populations. As discussed, the LTBMU owls are embedded in a bioregional population context which is displaying a declining realized population trend with negative occupancy responses to aggressive logging.

At the level of forest planning, the population declines in the three Sierra Nevada study areas, as well as the study from Meadow Valley discussed in our comments, all occurring during the time that the Forest Service has been implementing its fuels reduction strategy, demonstrate that fuel treatments are likely contributing to loss of quality owl habitat, leading to changes in owl reproductive success in PACs. As discussed below, the Forest Service's approach of relying on the low chance that owls are stable in the face of considerable documented risk and uncertainty does not ensure the viability of spotted owls in the future in the Tahoe Basin.

2. The FEIS Habitat Categories Do Not Correspond with Accepted Standards for Owl Habitat.

The FEIS continues to rely on habitat categories that do not correspond to the standards set forth in the 2004 Framework to identify owl nesting habitat and overall suitable habitat.

a. The Categories Frustrate Analysis of Loss of Owl Nesting Habitat.

The 2004 Framework defines owl nesting habitat as CWHR type 5M (with canopy cover >50%) and 5D and 6 (with canopy cover above 60 percent) in mid-elevation forests such as in the mixed conifer forests of the Tahoe Basin. The BE acknowledges this but then goes on to describe owls nesting in 4M and 4D habitat in the Basin as a reason to consider such habitat as moderate quality nesting habitat. BE, pp. 73-74.

The FEIS relies on a different classification system to evaluate seral stages and habitat condition than the CWHR type system. For example, Late Seral Closed Canopy ("LSCC") is defined as stands with average tree size >24" and canopy closure of 50% and greater for white fir-mixed conifer and red fir types and of 40% and greater for pine types. However, because there is no direct crosswalk between the standard CWHR classifications and the one developed for the FEIS, the actual data used in the modeling relies on CWHR categories and does not actually evaluate changes in LSCC. Instead, any changes reported in habitat quality evaluate a change from >40% canopy cover to <40% canopy cover. In practice, this underestimates the changes in habitat since a change from 50% canopy cover to 40% canopy cover is not disclosed.

The FEIS classification system also fails to delineate the loss of 4M and 4D habitat due to its inclusion of Class 3 size trees (6-12" dbh) within the definition of "mid-seral." The best science does not support the idea that Class 3 forest offers suitable habitat for owls. As discussed below, the logging proposed in the Plan will cause substantial reductions in suitable habitat in the size class 4 stages, see Tables 1 and 3 below, but this change is not necessarily identified by the FEIS' mid-seral stage definition. Here, the LTBMU is questionably relying on Class 4 forest to provide suitable owl nesting habitat while utilizing a habitat classification system that does not accurately measure the loss of this habitat in the Basin.

b. The Categories Falsely Inflate Suitable Owl Habitat

The BE and FEIS define suitable habitat for owls as including 3M, 3D, 5P and 5S habitats. But there is no support for this assumption. Instead, suitable habitat is defined in the current forest plan as follows:

Based on the above studies, suitable owl habitat, as described using CWHR classification, is identified as 4M, 4D, 5M, 5D and 6 in mixed conifer, red fir, ponderosa pine/hardwood, foothill riparian/hardwood, and the east side pine forest (USDA Forest Service, Pacific Southwest Region 2001a). Nesting habitat is further defined as CWHR classes 5M¹, 5D and 6. [Footnote 1: Because the canopy cover within the "M" class ranges from 40 to 59%, not all CWHR class 5M should be considered nesting habitat. The threshold between canopy cover values that contribute to or detract from occurrence and productivity is a value near 50% (USDA Forest Service, Pacific Southwest Region 2001a, Hunsaker et al. 2002).

(USDA Forest Service 2004, p. 267) Here, the FEIS defines open canopy as CWHR P & S, which could mean that logging resulting in stands with 10% canopy cover would still maintain suitable habitat. Similarly, as discussed above, logging that reduced mean tree diameter to between 6-12" (CWHR 3M and 3D) would also fit this definition of suitable habitat, yet these types are not suitable habitat for owls.

c. CWHR 4M Forests Do Not Provide Adequate Nesting for Owls.

The FEIS makes a highly questionable assumption that lower canopy 4M forests can provide suitable nesting habitat for owls:

[S]potted owl PACs in the Basin are comprised primarily of what is considered 'moderate capability' nesting habitat (including 4M) but have no data to suggest that this influences reproductive success since PACs with moderate capability habitat have produced young.

See Response to Comments, p. 118. We do not agree that the Forest Service is justified in assuming that 4M habitat can provide adequate nesting habitat for owls.

The US Forest Service EIS for the 2001 SNFPA cites six studies, most of which are found in Verner's 1992 technical report which summarize spotted owl nesting habitat preferences as follows: 1) two or more canopy layers; 2) dominant and co-dominant trees in the canopy averaging at least 24" dbh; 3) 70-95 percent total canopy cover (including hardwood component) (see also: Bias and Gutiérrez 1992, Moen and Guteirrez 1997, Steger et al. 1997a, pg. 30, Steger et al. 1997b, pg. 357, North et al. 2000, Bond et al. 2004, Blakesley et al. 2005, Gallagher et al. 2008, Keane 2008); 4) higher than average numbers of very large, old, trees with high crown volume; 5) higher than average levels of snags and downed woody material. See (Britting et al. 2012, p. A-77.) Canopy cover in nest stands averaged more than 70 percent in most studies, again pointing toward an association with dense, mature conifer stands. Blakesley et al. (2005) reports that canopy cover at nest sites is "virtually always more than 80 percent (pg. 1560). Keane (2008) reported an average of 64 percent canopy cover. *Id.*

None of these studies suggest that the 4M habitat where owls have been detected in Tahoe provides suitable nesting habitat. This is borne out by the record, which shows that current levels of habitat do not support a population that consistently fledges young. The BE shows that only six of the 21 PACs have produced fledglings since 2003 and even fewer in the last 5 years. This poor performance suggests that owls lack sufficient habitat for reproduction, a point also demonstrated by the correlation between the low amount of "high capability" nesting habitat (555 acres) out of 154,000 acres of National Forest land in the Basin. See BE, p. 73 ("The following CWHR classes provide high capability nesting habitat for this species: Montane Hardwood and Red Fir

(5D); and Montane Hardwood-Conifer, Montane Riparian, Sierran Mixed Conifer, and White Fir (5D and 6).")

The FEIS never defines how "moderate quality" nesting habitat contributes to reproductive success for owls. This does not meet the hard look standard in light of the relevant studies that have been done on the adjacent El Dorado Forest, showing that owl survivorship and territory persistence is positively correlated with the amount of forested habitat with high density cover. See Seamans (2005, p. 90: "The total forest area comprised of medium-sized (30.4 - 60.9 cm dbh) and large trees (trees >61 cm dbh) with high canopy cover (>70%), and the amount of interior forest having these same structural attributes, were positively related to survival and territory colonization probability, and negatively related to territory extinction probability.")

The FEIS's assumption that owls may nest successfully in forest habitats down to 4M is contrary to accepted science and not based on any information in the record. Here, the relevant inquiry is not presence or absence but rather reproductive success. See 36 CFR 219.19. The fact that owls may "occur" in these habitats does not equate to reproductive success. The FEIS's assumption that this habitat may be considered as "nesting habitat" for owls simply because owls have been detected in these habitats ignores the fact that recent nesting owls in the Basin have been largely unsuccessful.

d. The FEIS Does Not Account for the Loss of 4D Habitat.

Due to its high canopy levels (>60%), 4D habitat may provide owls with important overhead forest cover, particularly in the larger size trees (>20" dbh) within the Class 4 stage. See Seamans and Gutierrez (2007) (owl territories (500 acre areas around a nest tree) with more mature conifer forest (defined as forest with greater than 70% canopy cover and trees size greater than 12" in diameter (i.e., 4D, 5D and 6 CWHR types) had a higher probability of being colonized and a lower probability of becoming unoccupied.) This may be particularly true given the low amount of 5D habitat in the Basin and the low amount of overall high quality habitat in owl PACs and HRCAs. See Table 2, below.

e. The Data Show Substantial Impacts to Owl Habitat.

To examine the impacts of the proposed Plan on owl habitat, we examined the modeling results for the SPECTRUM outputs for Alternative B/E included in the project record (B-altlb_v3.xlsx). Our review focused on the changes in CWHR type for forest types white fir-mixed conifer, red fir, and Jeffrey pine types from Decade 2¹ to Decade 6. We applied the definitions of suitable habitat presented in the most recent forest plan

¹ We report in this table values for Decade 2 as the first time point since the modeling results presented in the FEIS dropped the first decade results.

amendment for the LTBMU (USDA Forest Service 2004, p. 267). The following table reports those changes in suitable habitat.

Table 1. Summary of changes in spotted owl habitat conditions between Decade 2 and Decade 6 under Alternative B/E. Data summarized from SPECTRUM output file: B-altlb_v3.xlsx.

Model label	CWHR type	Suitable owl habitat	Suitable nesting habitat	Total Area Decade 2 (acres)	Total Area Decade 6 (acres)	Change Decade 2 to Decade 6 (acres)	Change in Suitable Habitat (acres)	Change in Suitable Nesting Habitat (acres)
H-4M SM SAW MOD	4M	x		7,563	2,840	-4,723	-10,466	n/a
H-4D SM SAW DENSE	4D	x		8,953	6,089	-2,864		n/a
H-5M LG SAW MOD	5M	x	x	18,506	17,367	-1,139		-2,879
H-5D LG SAW DENSE	5D	x	x	174	2,878	2,704		
H-6 MULTI-STORIED	6	x	x	6,512	2,068	-4,444		
Total				41,708	31,242		-25%	-11%

This review indicates that suitable nesting habitat, as defined by the forest plan, declines by 2,879 acres or about 11% over a ten year period. If one extends the definition of nesting habitat to include CWHR types 4M and 4D, as the FEIS does, the decline in “nesting” habitat is even greater. During this same time period, a loss of 10,466 acres of overall suitable habitat is estimated, which amounts to a decline of about 25%.

These losses are not quantified in the FEIS. As set forth below, when one adds in the first decade of logging that was modeled, the results are even worse, with a 29% decline in suitable owl nesting habitat and a 44% decline in suitable owl habitat since 2003 and through 2063. See Table 3 and discussion, below.

3. The FEIS Presents a False Trend for Late Seral Closed Canopy Habitat.

As noted in our prior comments, the DEIS found that under Alternative B, the “amount of late seral closed canopy forest was expected to *decrease* by approximately 15 percent from 32,233 to 27,293 acres as it is actively converted into late seral open

canopy forest (DEIS, p. 3-311). However, after the close of comment, the FEIS states that the results of the modeling were reinterpreted, as follows:

There is a first decade adjustment for treatments and fires (e.g., Angora Fire of 2007) that occurred between the time of the inventory (2003) and the running of the model (2011). For this analysis and since this period of 10 years has past, the first decade has been dropped from analysis.

See FEIS, p. 3-239. As a result, the FEIS now states that this habitat type will be stable:

Regarding the results of the SPECTRUM model, we incorrectly stated in the DEIS that late seral closed canopy would decrease as a result of thinning this seral stage to create late seral open canopy habitat. We also incorrectly interpreted the model output in the DEIS. We have reviewed and clarified the model data source and parameters (prescriptions, disturbances, restrictions) and can now more accurately explain the model output. The model output indicates that during a fifty year period following Plan implementation (excluding decade 1) late seral closed canopy forest for all of the major forest types combined would not change from current condition under Alternatives B and E.

See Response to Comments, p. 117. The FEIS's assertion that late seral close canopy forest will be stable is misleading in three ways.

First, the graphs presented in the FEIS actually show that late seral closed canopy forest is declining, even without counting the first decade of logging. See FEIS, p. 3-265 (Figure 3-49 All Forested trends over time for each seral stage in Alternative B.); p. 3-282 (Figure 3-76. All Forested trends over time for each seral stage in Alternative E.) We also verified this by examining the SPECTRUM modeling results. As can be seen in Table 1, above, there is a decline in the amount of 5M, 5D, and 6 habitat of 2,879 acres between Decades 2 and 6.

Second, the models *do not account* for trees over 30" being removed to achieve "restoration" goals. As discussed in our prior comments and below, there are little to no restrictions on the Forest Service's ability to remove this large tree component, which could substantially reduce the LSCC habitat type, particularly where such habitat occurs outside of PACs and HRCAs, where canopy could be reduced down to low canopies corresponding to desired conditions for general forest.

Finally, and most concerning, our review indicates that the new habitat trend results presented in the FEIS appear to be based on the same model runs conducted for the DEIS, only this time, the Forest Service is simply not considering the results from the

first decade, which show clearly a precipitous decline in late seral closed canopy forest.² As explained to us by forest staff on January 10, 2014, the modeling for the first decade was used to accomplish the following:

- Adjust the 2003 inventory to reflect current conditions;
- Account for changes in stand conditions resulting from treatments from 2003 to 2011; and
- Account for changes in stand conditions resulting from the Angora Fire.

By this explanation, the significant changes in LSCC conditions between Decade 1 and 2 are the cumulative result of growth, treatments and the wildfire. If correct, this recent history is a significant concern since it reflects dramatic changes in stand conditions since 2003. For instance, the results indicate that LSCC forests of the white fir-mixed conifer type declined by nearly 4,000 acre or about 25% from Decade 1 to Decade 2 (Project record, SPECTRUM output file: B-altlb_v3.xlsx). Since the stands affected by the Angora Fire were not dominated by trees >24" (Safford et al. 2009) and the Angora Fire itself was about 3,100 acres, it is likely that changes in LSCC would be largely due to treatments.

As discussed below, the data in the record indicates that since 2003 and with some application of past treatments and possibly those expected under the implementation of Alternative B/E in the first decade, we would expect to see a 29% decline in suitable owl nesting habitat and a 44% decline in suitable owl habitat since 2003 and through 2063. See Table 3, and accompanying discussion.

We assume that the treatments applied since 2003 reflect those completed under the Lake Tahoe Basin Multi-Jurisdictional Fuels Reduction and Wildfire Prevention Strategy ("Fire Plan"). Thus, the modeling result from Decade 1 to 2 seems likely to be a better reflection of the actual implementation of the Fire Plan compared to the post-Decade 1 modeling. Thus, the continued implementation of the Fire Plan as promised in the FEIS could well produce an even more significant decline in LSCC or greater changes to suitable owl habitat compared to those estimated in the FEIS. This is particularly concerning given the foreseeable overlaps between planned treatment areas and owl PACs and HRCAs in Tahoe. See Figure 1, below.

In sum, we do not agree that the FEIS's manipulation of the modelling meets NEPA's standards, which require rigorous scientific accuracy and integrity in the discussions and analysis of environmental impact statements. See 40 CFR § 1500.1 (b); § 1502.24 ("Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements. They shall identify

² By comparing figures on departure from desired condition, it can be verified that the first decade was simply dropped in the FEIS. See for example DEIS, p. 3-248, Figure 3-55 and FEIS, p. 3-265, Figure 3-50.

any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement.")

4. The FEIS Provides No Criteria for Restoring Critical Owl Habitat

As discussed in our prior comments, the Plan's fuel objectives are met by all of the alternatives, including Alternative D, which limits logging to hand thinning of trees up to 12" dbh. Nevertheless, the Plan and FEIS continue to rely on the vague objective of achieving "forest restoration" to justify more aggressive treatments in sensitive areas such as protected activity centers and home range core areas. However, nothing in the Plan or FEIS defines what constitutes forest restoration with respect to spotted owls or what criteria will be used to determine the level of logging necessary to achieve the undefined goal. This violates NEPA, as well as applicable regulations. See 36 CFR § 219.7 (b) (Objectives "are concise statements describing measurable results intended to contribute to sustainability (§ 219.19)... Objectives include an estimate of the time and resources needed for their completion.")

The Plan's desired conditions for owl PACs and HRCA's contain *no criteria* that would relate to forest restoration. Instead, DC72 states that owl PACs shall have a) at least two tree canopy layers, b) dominant and co-dominant trees with average diameters of at least 24 inches dbh, c) at least 70 percent canopy cover, and d) higher than average levels of snags (preferably larger than 45 inches dbh) for the stand type, and downed woody material (preferably larger than 20 inches in diameter at the large end) in diverse decay classes, distributed unevenly. DC73 provides similar criteria for owl HRCAs, with the main difference being a 50 rather than 70 percent canopy cover. See Forest Plan, p. 34. These desired conditions provide no guidance or standard for what criteria will trigger the need for forest restoration in these sensitive areas.

This failure is critical because it is under the guise of "restoration" that the Forest Service may permit logging in PACs and HRCAs down below the minimum canopy standards set forth in Standard and Guideline No. 88 ("Retain canopy cover to maintain at or above a minimum of 50% in PACs and 40% in HRCAs, *except where less is needed to achieve standard and guide for restoration of PACs/HRCAs.*") (emphasis added.) Here the standards and guidelines allow for reducing canopy layers in the name of restoration whenever 1) surveys demonstrate that reproduction has not occurred within the PAC in at least the previous three years; or 2) the PAC is currently unoccupied; and conducting treatments would achieve the desired conditions or shorten the time until those conditions would be expected to occur. See Plan, p. 117 (S & G 90.) But the Plan contains no definition of what constitutes a "restored" PAC or what suite of conditions would trigger the Forest Service to decide to log PAC and HRCA habitat down below minimum canopy standards in the name of "restoration."

The Forest Service's failure to define forest "restoration" according to measurable operational standards undermines the FEIS's analysis of the impacts of

logging on owl habitat and spotted owls in the Tahoe Basin. For example, the FEIS constantly reminds the public of the risk of no treatment leading to catastrophic fire in owl habitat. As discussed in our prior comments, however, the actual choice is not treatment versus no treatment, but rather treatment that contains fire risk versus more aggressive treatments propounded in the name of forest health. Yet here, the lack of parameters for what triggers the need for restoration in owl PACs and HRCAs undermines the FEIS's ability to balance the short term impacts to owl habitat with the long term gains from avoiding a stand replacing fire. In cases where more aggressive treatments would be applied to address "forest restoration," (and at the expense of minimizing impact to critical owl habitat in the Basin), doing so is based not on fire risk concerns, but abstract and undefined standards of forest health. Thus, the FEIS does not coherently evaluate the tradeoffs it purports to be analyzing.

Further, aspects of the Forest Service's restoration goal would appear to conflict with the actual desired condition for PACs and HRCAs, including the desire for large trees with high canopy cover, multi-story canopy and higher than average levels of large snags and downed woody material. See Forest Plan, p. 34. The Plan identifies that mixed conifer forest may have up to 25 medium to large snags and 15 tons of coarse woody debris per acre. See Forest Plan, p. 27 Table 2. Yet the Forest's restoration goals specifically call for removal of trees, including large conifers over 30" dbh, which may be susceptible to disease or subject to beetle attack. The Plan does not define what standards should apply to determine whether a particular stand should be restored in this manner, or how such restoration will lead to the ultimate desired condition for owl PACs and HRCAs as set forth in the Forest Plan.

5. The Plan Contains No Adaptive Management Plan to Avoid Catastrophic Impacts to Owl Habitat.

The Plan proposes presence-absence monitoring in owl habitat over the next decade, but beyond that does not commit to any adaptive management that would ensure that adverse habitat effects to owl habitat would lead to less intensive treatment prescriptions. As discussed in our prior comments, a functional adaptive management program requires triggers for actions, based on habitat or other scientifically based thresholds that can be measured. Yet, here the absence of owls in a PAC, or the failure of a nesting pair to reproduce successfully triggers no action on the part of the Forest Service.

As discussed, the FEIS states with respect to owl declines that "additional information on specific vital rates is necessary to understand what is driving lambda and ultimately, the mechanisms driving population dynamics. Causation for any potential decline in occupancy is unknown." Response to Comments, p. 144. However, neither the Plan nor the FEIS propose a solution to remedy this stated lack of understanding of how fuel treatments are affecting spotted owl viability. In our view, record shows that presence absence monitoring in the Basin has shown a decline in occupancy and

reproductive success by owls over the last decade, precisely the time in which the LTBMU has been increasing the level of fuel treatments in owl habitat. Yet these monitoring results have led to no changes in the LTBMU's fuel treatment program, nor any analysis of how such treatments may have played a role in owl declines.

In sum, there is no adaptive management/monitoring mechanism in this case for the LTBMU to identify the effects of potentially intensive logging treatments in old forest habitat, and to take appropriate conservation action when needed. *See also* Discussion below.

6. The informational Deficiencies in the EIS Process Lead to a Flawed NEPA Effects Analysis.

The lack of clear, relevant and coherent information in the FEIS precludes a meaningful analysis of the impacts of the Plan on spotted owls in the Basin, as set forth below.

a. The FEIS Does Not Consider the Low Habitat Quality of Existing Owl PACs and HRCAs in the Basin as Part of its Cumulative Impact Analysis

The FEIS does not present and consider the existing low habitat quality of many owl PACs and HRCAs in the Basin, and how that low habitat quality translates to reproductive failure for nesting owls.

We examined information reported in the BE on habitat quality and reproductive success in PACs and HRCAs within the forest plan area. We focused our analysis on habitat as characterized by the BE that most closely reflects the definition of suitable habitat in the most recent forest plan. Roosting habitat, as defined in the BE, most closely approximates the CWHR types defined as suitable habitat. The table below reports the amount of roosting habitat for each PAC and HRCA as well as the last time these activity centers fledged owls.

Table 2. Area of suitable habitat within protected activity centers (PACs) and home range core areas (HRCAs) for owl sites detected on the LTBMU. Data summarized from the BE, pp. 76085.

Owl Site	PAC	HRCAs	Most Recent Year Owls Fledged
Twin Peaks	114	606	
Twin Craggs	237	668	
Stanford Rock	198	863	
Painted Rock	252	845	2002
Page Meadows West	257	1311	
Page Meadows East	253	863	1992
Blackwood Creek	88	347	2002
Burton Creek	222	650	2009
Carnelian	262	722	2004
General Creek	24	262	2004
Griff Creek	258	551	2009
Mount Pluto	341	878	
Spring Creek	259	518	2002
Tahoe Mountain	225	372	
Echo Lake	251	792	
Hawley Grade	147	552	1999
Round Lake	105	450	
Upper Saxon Creek	206	430	1999
Lower Saxon Creek	266	813	2009
Hellhole	42	399	
Cold Creek	191	395	2012
Cookhouse Meadow	259	747	
Total	4,457	14,034	

This summary indicates that on average PACs have about 203 acres of roosting habitat. Given that the definition of roosting habitat includes CWHR types 4M and 4D which are atypical nest stands (and do not meet the desired conditions in the forest plan for PACs) these PACs on average contain less than 68% of their area in suitable nesting habitat (CWHR 5M, 5D and 6) and even less in high quality nesting habitat (CWHR 5D and 6). Many of the HRCAs also currently have significantly less suitable habitat than is desirable. Because there are no specific standards for treatments in HRCAs and because the revised forest plan proposes to target closed mid-seral stands (i.e., CWHR 4M and 4D) for treatment with the objective to reduce canopy closure to less than 40% (Project

record, LTB_Appendix_SPECTRUM_Modeling_09-05-2013rls.docx), we expect that the forest plan is likely to significantly reduce the habitat quality in HRCAs that are already of marginal quality today. This expectation is also reinforced by the significant overlap between areas to be treated in accordance with the Fire Plan and HRCAs. (See Figure 1, below).

Habitat alterations in sensitive owl areas (HRCAs and PACs) may also worsen the already poor reproductive output of owls in the LTBMU. The table above (Table 2) reports the most recent year that owls were fledged in a given owl site. Of the 22 sites, only 6 since 2003 have produced young that fledged and only one site has fledged young since 2009. These reproductive results do not indicate that reproduction is strong in the project area. This information may also suggest since implementation of the Fire Plan beginning in 2007, the fledging success may be even lower than previous years.

b. The FEIS Presents No Information on the Impact of the First Decade of LTBMU Fuels Treatments on Owl Habitat in the Tahoe Basin.

As discussed above, the modeling for the impacts to forest habitat from LTBMU's fuel treatments was "reinterpreted" in the FEIS by dropping the first decade of the treatment. See FEIS, p. 3-239; Response to Comments, p. 117. This means that the treatments recently completed under the the Fire Plan were excluded along with the results from the first Decade modeling. As a result the modeling presented in the FEIS suggests a false picture that the LTBMU's fuel treatments will retain late seral closed canopy forest in the Basin.

The FEIS contains no alternate discussion or analysis whatsoever of the logging that did occur during that time, and/or whether it corresponded to the model predictions. Instead, all that the public is provided is background information set forth in monitoring reports and appendices, that a potentially significant amount of owl habitat has been logged in the first decade, without any analysis of corresponding impacts. See *e.g.*, 2012 Monitoring Results for Region 5, p. 17 (LTBMU has conducted 944 acres of fuel treatments in owl PACs in the Basin since 1994.); FEIS, p. 3-587 (prior to the Fire Plan, the LTBMU had completed approximately 16,000 acres of fuels reduction and thinning treatments around the Basin. Under the Strategy the LTBMU has completed approximately 12,000 acres of thinning and fuel reduction.")

This cryptic information does not meet NEPA's informational standards, particularly where the WUI fuel treatments conducted since 2004 form the basis for the treatments that will continue over the life of the plan. Here, the modeling is based on a hypothetical logging that has in fact already occurred, but has not been disclosed, in the first decade since 2004. Further, as demonstrated below, the Forest Service could have provided considerable information about the effect of such treatments on owl habitat, *including 944 acres of logging in owl PACs*, yet this did not occur in the FEIS. This

information was readily available to the Forest Service and should have been evaluated. Further, as discussed below, based on the logging that can be inferred from the record, these impacts are likely to be significant.

To look at these impacts we first examined the changes in habitat conditions from Decade 1 to 6 to evaluate the sum total of change to habitat estimated since 2003 and projected forward 50 years. As set forth in Table 3, below, these cumulative changes are significant.

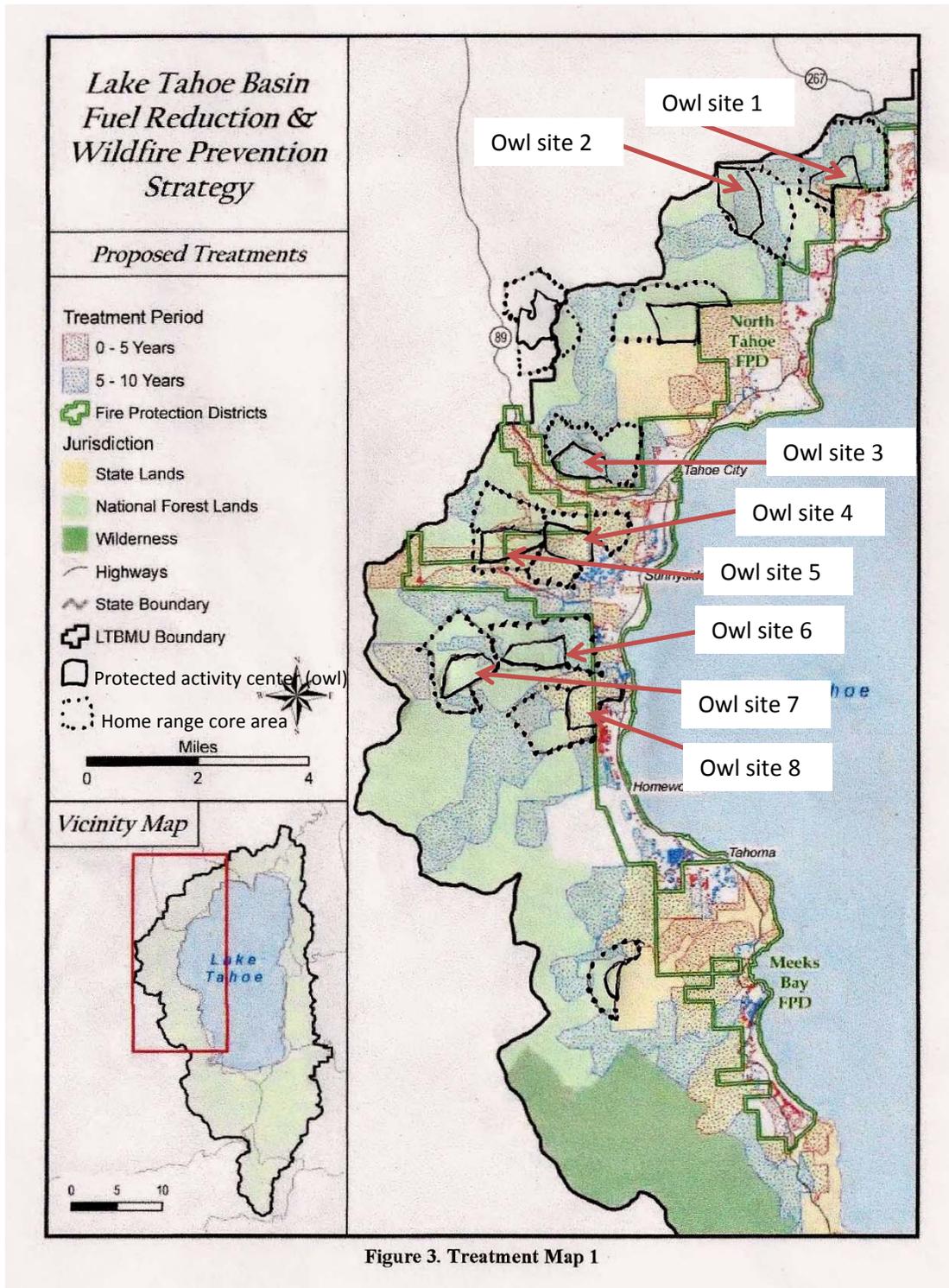
Table 3. Summary of changes in spotted owl habitat conditions between Decade 1 and Decade 6 under Alternative B/E. Data summarized from SPECTRUM output file: B-altlb_v3.xlsx.

Model label	CWHR type	Suitable owl habitat	Suitable nesting habitat	Total Area Decade 1 (acres)	Total Area Decade 6 (acres)	Change in Suitable Habitat Decade 1 to 6 (acres)	Change in Suitable Nesting Habitat (acres)
H-4M SM SAW MOD	4M	x		12,875	2,840	-24,131	n/a
H-4D SM SAW DENSE	4D	x		11,239	6,089		n/a
H-5M LG SAW MOD	5M	x	x	20,429	17,367		-8,946
H-5D LG SAW DENSE	5D	x	x	180	2,878		
H-6 MULTI-STORIED	6	x	x	10,650	2,068		
						-44%	-29%

This summary indicates that since 2003 and with some application of past treatments and possibly those expected under the implementation of Alternative B/E in the first decade, we would expect to see a 29% decline in suitable owl nesting habitat and a 44% decline in suitable owl habitat since 2003 and through 2063.

To show how this logging is likely overlapping with critical owl habitat, we compared the area proposed for treatments in the Fire Plan with maps of the PACs and HRCAs for spotted owls provided in the forest plan. As shown below, our comparison suggests that significant overlap exists between areas to be treated under the Fire Plan compared to these sensitive habitat areas for spotted owls.

Figure 1. Spotted owl habitat areas compared to Fire Plan treatment areas. Significant overlap between PACs/HRCAs and areas to be treated in the Fire Plan are indicated by the red arrows. Maps taken from the Fire Plan and the final forest plan for the LTBMU.



As can be seen by Figure 1 above, the PAC and HRCA areas for eight owl sites include significant areas proposed for treatment in the Fire Plan. The representation above is just an example of the overlap between the Fire Plan and affected owl sites. There are an additional eleven owl sites that occur on the LTBMU that are not represented here. These too may have significant overlap with treatment areas included in the Fire Plan. As discussed, the 2012 monitoring reports states that the LTBMU has logged approximately 944 acres in PACs in Tahoe since 2004. But this information is not presented or analyzed in any way except through the initial modeling which was then dropped from the analysis at the FEIS stage.

c. The FEIS Does Not Adequately Analyze the Impacts of Future Fuel Treatments on Spotted Owl Habitat in the Basin.

As discussed, the FEIS does not analyze the loss of nesting habitat and suitable habitat in owl PAC and HRCAs as a result of the fuel treatments conducted over the last 10 years and in the life of the Plan. As noted in Table 1, above, our review of habitat information and estimated changes as a result of the forest plan indicates that suitable habitat, as defined by the previous forest plan, declines by 10,466 acres; this amounts to an additional decline beyond the first decade of about 25%.

Studies have shown that survivorship and territory persistence is positively correlated with the amount of forested habitat that meets the definition of suitable habitat (i.e., CWHR 4M, 4D, 5M, 5D, and 6). Blakely et al. (2005) found that the amount of non-habitat within spotted owl nest areas was negatively associated with reproductive output for 67 territories on the Lassen National Forest over a 6 year period. This study also found that site occupancy and apparent survival increased with increasing amounts of surrounding habitat classes, such as 4M and 4D, known to be selected by the owl at the landscape scale. Seamans and Gutierrez (2007) found that owl territories (500 acre areas around a nest tree) with more mature conifer forest (defined as forest with greater than 70% canopy cover and trees size greater than 12" in diameter (i.e., 4D, 5D and 6 CWHR types) had a higher probability of being colonized and a lower probability of becoming unoccupied.

These studies emphasize the importance of mature and dense forests to owl occupancy and reproductive success. The FEIS indicates that significant alterations in key habitat for owls may occur under the revised forest plan, but the plan failed to relate such changes to the potential for spotted owls to abandon territories or fail to reproduce.

7. The Plan Does not Ensure the Viability of Spotted Owls in the Tahoe Basin.

The Plan does not ensure the future viability of spotted owls in the Tahoe Basin. The Plan proposes considerable logging in owl PACs and HRCAs, which will contribute

further to their already low habitat quality resulting in continued reproductive failures for owls.

Meanwhile, the most robust and relevant study on the effect of logging on owl survival and reproduction taking place on the adjacent El Dorado National Forest has identified that the loss of dense overhead forest cover due in part to logging impacts is positively correlated with the disappearance of owls from their historical nesting areas. The studies show that the El Dorado population is in decline, potentially catastrophically and that its decline is consistent with the other two ongoing owl studies on other National Forest lands where logging is also occurring. We do not agree that the Forest Service's approach of relying on the low chance that owls are stable in the face of considerable documented risk and uncertainty does not ensure the viability of spotted owls in the future in the Tahoe Basin.

The Plan does not ensure that suitable nesting and foraging habitat will remain for spotted owls in their territories. As discussed, beginning with 2003 inventory, the Forest Service assumed a loss of 29% decline in suitable owl nesting habitat and a 44% decline in suitable owl habitat over the over a 50 year period, with the most significant losses coming in the first few decades. The LTBMU proposes to implement this high level of logging at precisely the time that the studies are suggesting that logging treatments are harming owls. Yet the plan proposes no adaptive management program, save for recording the presence or absence of owls in the future. Over the last decade of treatments, owls have disappeared from PACs or been unsuccessful in nesting attempts without the Forest Service taking any action other than to authorize more treatments. One may expect this pattern to continue in the future.

The Planning regulations require the Forest Service to ensure viability for spotted owl through clear objectives supported by standards and guidelines, but here the Plan allows potentially substantial logging in PACs and HRCAs, including reducing canopy levels below minimum standards based on a vague objective to achieve "restoration." Once owls depart a PAC or HRCA, the Plan allows for conversion to general forest. As owl territories become unoccupied in light of ongoing logging, the Plan makes no commitment to ensure owl viability in the Forest. The Plan contains no cumulative thresholds - relating to canopy cover, average tree size or any other relevant habitat measure - that must be met across the home range, home range core, or core area for owls. There is no explanation for how viability can be assured.

Recommendations for Improvements to protections of California spotted owl

Treatments should be guided by Seamans and Gutierrez (2007) and designed to minimize the probability of territory abandonment by spotted owls.

Limit restoration and fuels management in protected activity centers (PACs) and home range core areas (HRCAs) to surface and ladder fuels treatments that maintain high quality habitat immediately post-treatment.

Adopt a monitoring and adaptive management program that has clear thresholds and triggers to monitor the effects of treatments on owl occupancy and reproduction with an annual review of status.

Complete a scientifically accurate accounting of impacts from the draft plan on spotted owls that discloses the past and current state of PACs and HRCAs and evaluates the potential impacts of future projects.

Changes to specific standards:

From Draft Forest Plan	Resolution to Objection
SG87. Vegetation treatments in PACs and HRCAs should maintain suitable habitat structure and function following implementation. [Guideline]	<p>Suitable habitat, as defined in the FEIS, includes 3M, 3D, 5S, and 5P. These are not suitable habitat types as defined in the current forest plan (revised 2004). The definition of “suitable” should be revised to follow the current forest plan. A distinction should also be made between nesting and foraging habitat. Logging should not be allowed to degrade nesting habitat to foraging habitat.</p> <p>This standard does not address how suitable habitat relates to desired conditions for these habitat areas.</p>
SG88. Where canopy cover in PACs and HRCAs exceeds desired conditions, maintain current cover unless reduction would improve habitat conditions to meet life history needs of the species or reduce the risk of stand-replacing wildfire. Retain canopy cover to maintain at or above a minimum of 50% in PACs and 40% in HRCAs, except where less is needed to achieve standard and guide for restoration of PACs/HRCAs. [Guideline]	The objective of “restoration” is unclear and potentially allows extensive alteration to sensitive owl habitat. “Risk of stand-replacing wildlife” is also undefined and conflicts with reference conditions that indicate high severity fire is within the range of variability that is expected.
SG89. Design management activities (e.g. vegetation treatments, recreation or access expansion or improvements) to	The characteristics of “connected habitat” are not defined so it is not possible to determine how to maintain connected

From Draft Forest Plan	Resolution to Objection
minimize potential for creating isolated PACs and HRCAs by maintaining habitat connectivity of the PACs/HRCAs with the adjacent forest. [Guideline]	habitat.
SG90. Allow vegetation treatments in PACs for the purposes of PAC restoration when both of the following conditions apply: a) Surveys for the target species conducted to meet Region 5 protocol demonstrate that reproduction has not occurred within the PAC in at least the previous three years; b) The PAC is not currently occupied; and either i. Desired conditions within the PAC are not being met and conducting treatments would achieve the desired conditions or shorten the time until those conditions would be expected to occur; or ii. Desired conditions are currently met but vegetation treatments are required to maintain desired conditions over the next 15 years. [Standard]	Restoration objectives are undefined. There is too little guidance about what actions and over what time frame would be suitable for restoration. This standard combined with SGs 91 and 92 allow unlimited action. This is especially the case since very few of the area with in any PAC or HRCA meets the desired conditions, a condition reported to us in the FEIS.
SG91. Allow vegetation treatments in PACs To address wildland fire risk within the Wildland Urban Interface (WUI): a) In the Defense Zone, where an unacceptable risk to communities is demonstrated at the stand level (e.g., when wildland fire behavior models predict crown fires); or b) In the Threat Zone, where the overall landscape level fire and fuels strategy would be ineffective. [Standard]	Need to apply treatment in insufficiently defined. See above.
SG92. Allow vegetation treatments in PACs to reduce threats (e.g. pathogens, insects, disease and/or stand-replacing wildfire) to the persistence of forested stands in or adjacent to PACs. [Standard]	Need to apply treatment in insufficiently defined. See above.

Objection Issue 2-- Inadequate analysis of impacts to Pacific marten and failure to maintain viable populations of Pacific marten 36 CFR § 219.19 (from 1982 planning rule)

A. The Impacts to Pacific Marten Have Not Been Adequately Assessed.

The FEIS and Appendices do not provide an adequate assessment of the impact of the project on the continued viability of Pacific marten in the Tahoe Basin. As discussed below, the informational deficiencies in the EIS process do not meet NEPA's hard look standard.

1. Failure to Take a Hard Look at the Loss of Suitable Habitat for Marten.

We are concerned that the Plan proposes substantial logging that will eliminate suitable habitat for marten, particularly on the west shore where most of the marten population in Tahoe is thought to occur.

The current forest plan considers CWHR 4M and 4D forest as moderate quality and 5M, 5D and 6 as high quality habitat for marten. See USDA Forest Service 2004, p. 256. As discussed above, the Plan's modeling shows the elimination of 2,879 acres of high quality habitat for marten in the larger Class 5 stands between decades two and six of the modeling run, with an additional loss of 4,444 acres of Class Six forest, the highest quality denning and resting habitat for marten. See Table X, above. If one incorporates the first decade of modeling, the overall loss of high quality habitat will be 8,946 acres, a large number given the small acreage of forest in the Basin, approximately 29% of the total.

In addition, the models suggest an even larger loss of 10,466 acres of moderate quality habitat in decades two through six, and 24,131 acres of such habitat in decades one through six, an overall 44% reduction. See Tables 1 and 3, above.

At present the Basin offers relatively little high quality habitat for marten, which likely requires marten to utilize and rely on moderate quality habitat in size Class 4 forests, particularly denser 4D habitat. However, FEIS does not conduct any analysis of the loss of this habitat on marten populations in Tahoe. As discussed, the Plan does not set any limits on the amount of canopy reductions that may occur in the moderate quality 4M and 4D habitat, allowing overall canopy reductions down to 10 percent, well below that found necessary to support marten in mixed conifer habitat. Further, as discussed, the FEIS' inclusion of Class 3 forest as "mid-seral" habitat undermines its ability to analyze how much "moderate quality" marten habitat will be logged or the suitability of remaining forests for marten survival.

Other aspects of the Plan create further risks to marten. The Plan proposes substantial understory clearing to eliminate fire danger, but the FEIS continues to provide no assessment of how the loss of understory cover may substantially affect whether marten can use the forest for successful foraging and reproduction. As discussed in our prior comments, Hargis and McCullough (1984), in their study in Yosemite National Park, found that marten strongly selected for low overhead cover. Slauson et al. (2006), in their study in northwestern California, found that “dense shrub cover was the most consistent habitat element at sites selected by martens.” (p. 465). Slauson and Zielinski (2007) reported a strong marten preference for dense (greater than 80 percent) shrub cover in the same study area. Buskirk and Ruggiero (1994) concluded that the marten’s “preference and apparent need for structure near the ground, especially in winter, appears universal,” likely due to protection from predators, access to subnivean (below snow) space, and thermal regulation.

The FEIS provides little to no information about the level of cover that would be provided in the lower stories of the forest, but the implication is that these areas would be cleared as potential ladder fuels, particularly within the WUI. Yet this loss of lower story cover could render marten habitat unsuitable in the absence of a high overhead canopy.

Finally, the FEIS contains no analysis of the effects of creating large group openings up to 10 acres in size on marten habitat functionality. The FEIS acknowledges studies showing that marten will avoid large openings in the forest, and that cumulative openings within a given landscape may render the area unsuitable as marten habitat. See BE, p. 90 (“Martens are very sensitive to habitat loss and fragmentation and rarely occupy landscapes after >30% of the mature forest has been harvested (Zielinski 2013). Martens tend to avoid clear cut openings or will cross only small openings (e.g., < 500 feet).”) However, the potential impacts of locating large openings in marten habitat is not addressed.

Our review of the Plan and FEIS does not reveal an assessment of how much suitable habitat is required for marten, or even how the FEIS is analyzing the loss of suitable habitat as part of its review process. In our view, the Plan and FEIS are just guessing as to whether the substantial opening of the forest will ensure continued marten occupancy. As noted by the Response to Comments, p. 119-120:

We acknowledge the request for more information regarding marten habitat associations... With reference to the commenter’s concern about the appropriateness of 4M habitat for marten, Moriarty et al. (2011) (Table 1) indicates that various 4M habitat types (lodgepole pine, montane riparian, red fir, subalpine conifer, and white fir) are considered “high quality habitat” for marten. We have found marten denning with kits in 4M habitat in the LTBMU. Marten have been found elsewhere in habitat types not normally associated

with their normal features such as closed canopy and complex understory (Green 2007).

We do not believe this is a serious assessment of the impacts of the Plan on marten. The fact that marten have been detected in areas of low habitat quality does not mean such habitat types provide suitable habitat or support a marten home range. As discussed below, the best available science does not support the position that 4M habitat is high quality or otherwise adequate as marten denning and resting, instead showing that marten tend to avoid forests with less than 50% canopy.

Further, as discussed above in reference to the spotted owl, even considering the value of 4M habitat, the FEIS does not specifically analyze the loss of CWHR Class 4 habitat, instead including size classes 3 & 4 within the "mid-seral" stage for purposes of impact evaluation.

2. The FEIS Ignores the Best Available Science Showing a Correlation Between Fuel Reduction Treatments in Sagehen and Marten Population Decline.

As discussed in our comments, Moriarty (2009) recently completed a resurvey of the Sagehen Creek Experimental Research Station and found that over that 28-year period there was a "dramatic decline in marten occurrence since they were first studied in this area" In particular, no martens were detected in the lower elevations where previous logging activities had occurred. Moriarty identified fuel reduction logging that has been conducted extensively in the Sagehen Experimental Forest area over the last several decades as the most likely cause of the marten decline in this area. The Sagehen research is the closest, most relevant study regarding the impacts of fuel reduction logging on marten survival in the local region. Yet in response, the FEIS states:

Only in the case of the decline at Sagehen Experimental Forest (SEF) has a correlation been considered plausible – habitat fragmentation from harvest activity (Zielinski 2013), particularly salvage logging and clear cut or shelterwood harvest (Moriarty et al. 2011). We should note that SEF is an experimental forest where treatments occur in close proximity to one another. The proposed plan provides standards and guidelines to protect late seral habitat as well as connectivity between them.

See Response to Comments, p. 123. Meanwhile, the final BE (pp. 90-91) states:

The effect of thinning treatments (including fuel reduction treatments) on marten in the Sierra Nevada is currently being studied. The effects can be positive and negative for marten; positive if treatments set the trajectory toward historical conditions while retaining key habitat features (e.g., snags, large and complex trees, coarse woody debris), and if unsuitable stands are treated to

accelerate the recruitment of mature forest characteristics and reduce the chance of catastrophic wildfire (Slauson and Zielinski 2008). The effects can be negative if the treated habitat increases the risk of predation by reducing canopy cover significantly, removing resting and denning structures and escape cover (e.g., tree boles), and/or reducing the complexity of the understory (clear cutting from below). Treatments effects can also be negative if habitat patches require a lot of energy and risk to travel between (increased fragmentation), if treatment has adversely effected prey resources, and if den structures are reduced or altered in a way that reduces the survival of young (Slauson and Zielinski 2008).

In our view, the studies from Sagehen identify a substantial risk to marten survival and viability from fuel reduction logging, particularly given that the Forest Service lacks information about the location of denning and resting areas, or other aspects of habitat utilization by marten in the Tahoe Basin. Yet the Plan and FEIS provide no analysis of the level of logging that "increases the risk of predation by reducing canopy cover significantly, removing resting and denning structures and escape cover," reduces "the complexity of the understory" or causes habitat fragmentation by producing isolated habitat patches that require energy and risk to travel between. The FEIS instead presents these questions as unknown quantities, even while at the same time the Plan proposes to move forward with considerable logging on the west shore, as described. See Figure 1, above.

In fact, the existing Sagehen study provides information that could be utilized by the Plan to guide logging projects in marten habitat. As Moriarty (2011) describes:

[W]e estimated that the percent cover of high quality marten habitat in SEF declined from approximately 27 percent in 1978 to 15 percent by 1990. A number of other studies suggest that martens tend to disappear from an area after the percent of total forest cover is reduced below 45–75 percent.... Sagehen Experimental Forest currently falls within this range as 42 percent of the marten habitat in SEF changed from a suitable to unsuitable class from 1978 to 2007.

The FEIS does not provide information on the percent of high quality marten habitat that will remain after logging, or whether the total forest cover across a home range territory would result in less than 45% as suitable habitat. Yet these are relevant thresholds that should have been analyzed in the FEIS. As set forth above, the Forest Service has good information about its areas and schedule of logging at least through 2017. See Figure 1, above, Fire Plan, pp. 7-10, 17.

3. Failure to Assess Potential Impacts Due to the LTBMU's Lack of Knowledge of the Location of Marten Den Sites.

As discussed in our comments, a critical aspect of marten biology are denning and resting sites and surrounding forest, which comprise the reproductive habitat whose quality will determine whether marten remain a viable species in the Basin. Slauson (2011) found that there are likely >30 breeding females in the LTBMU in any given year, but "no one knows where they are." Our comments pointed out that one of the greatest threats to marten from the logging proposed in the draft Plan is due to the high likelihood that unidentified marten den sites and the surrounding habitat will be logged, without recognition of the valuable habitat that is being lost.

The FEIS does not resolve this impact. Instead the Response to Comments (p. 121) state:

We acknowledge the commenter's concern regarding level of marten den information. The Plan focuses on the protection of habitat because the USFS manages habitat.We have added a number of standards and guidelines for the protection of late seral closed canopyWe believe that our desired conditions, objectives, strategies, and standards and guidelines in the Plan will assist in maintaining and enhancing the highest quality marten habitat, including resting and denning habitat.

We disagree that the standards and guidelines adopted for the Plan will suffice to protect high quality marten habitat needed for successful denning and resting. As discussed, to protect marten den sites, the 2004 SN Forest Plan Amendment (Record of Decision, p.39) (USDA 2004a) required a 100 acre buffer around all marten dens with the protection of the highest quality habitat surrounding den site in CWHR types 6, 5D, 5M, 4D, 4M in descending order of priority, based on availability. This den buffer represents the best thinking on protection of important areas for marten and is the Regional direction. Here, the Plan provides no special protections for any of these habitat types. The Response to Comments (p. 135) states:

The Plan does not assume any critical thresholds for canopy cover. However, we do understand the value of dense canopy and mature forest structure to late seral species and have amended many of our standards and guidelines, and strategies to clarify the protection of this habitat.

We disagree that the Plan will be protective of marten habitat. The Plan establishes no desired conditions for marten denning and resting areas -- and thus no protection -- unless such habitat happens to overlap with an existing PAC or HRCA. But this is not adequate. As discussed in "National Forests in the Sierra Nevada: A Conservation Strategy," (Britting et al. 2012):

Denning and resting habitat are described as follows (Spencer et al. 1983, Hargis and McCullough 1984, Ellis 1998, Ruggiero et al. 1998, Bull and Blumton 1999, Bull and Heater 2000, Bull et al. 2005, Slauson and Zielinski 2008): .. Late successional, old forests .. CWHR 5D and 6 .. Canopy cover of at least 50 percent, mostly 60 percent and greater on the Westside Sierra Nevada .. Presence of large snags and logs on ground (coarse woody debris) Bull and Blumton's (1999) study evaluated the impacts canopy cover reduction on marten and marten prey in eastern Oregon and found marten avoided areas with less than 50 percent canopy cover. Similarly, Bull and Heater (2000) suggest marten avoid stands with less than 50 percent canopy cover. Many marten experts report that martens select 60 percent or greater canopy cover for resting and denning (Ellis 1998, Ruggiero et al. 1998, Slauson and Zielinski 2008).

The FEIS claims the Plan "includes standards and guidelines for the protection of late seral closed canopy habitat, snags, coarse woody debris, and other key habitat elements that are considered important to marten." See Response to Comments, p. 121. However, the Plan does not provide any management plan or explanation of how the retention of such important habitat items will be coordinated with a concomitant retention of suitable surrounding habitat to provide adequate denning and resting habitat for marten.

The Plan's approach for protecting marten denning and resting sites is casual, with a general guidance to retain habitat elements when not in conflict with the Forest Service's potentially contrary goals of fuel reduction and habitat "restoration," objectives not tied to any particular retention of surrounding high quality habitat. As discussed above, the LTBMU has conducted, and is proposing to conduct, intensive logging in marten habitat without any knowledge of how marten – or its most critical habitat – is being affected. See Figure 1, above.

In our view this approach violates NEPA. To alleviate impacts to marten, Moariarty (2011) recommended: (1) retain the remaining contiguous large patches of predicted marten reproductive habitat, (2) maintain corridors of dense, multilayered vegetation between the contiguous habitat patches, and (3) retain varied amounts of canopy and shrub cover for visual camouflage between habitat patches. Here, the FEIS has not identified marten reproductive habitat, habitat corridors or even discussed the retention of canopy and shrub cover for visual camouflage. The Plan contains no monitoring or mitigation plan to prevent the inevitable loss of these critical habitat areas due to logging, nor any proactive program designed to identify the best areas of marten habitat requiring appropriate protection.

4. Failure to Take a Hard Look at the Regional Impacts of Habitat Fragmentation in Marten Habitat on the West Shore of Tahoe.

Our prior comments pointed out that importance of maintaining Tahoe's west shore forests as unfragmented habitat for marten. Due to the lack of marten on the east side or at lower elevations on the west side of the Sierra, Tahoe's west-side marten population is a critical population segment connecting marten populations in the south to the dwindling population in the north. See Slauson (2008): "The west shore population represents the only known contiguous linkage for marten populations to the north and south of the Lake Tahoe Basin."

In our view the Forest Service has failed to take a hard look at the importance of this habitat to ensure marten presence in Tahoe, as well as assure north-south regional linkages. Instead, the FEIS states:

We acknowledge the request for greater information about the west shore habitat and regional connectivity for marten. We have supplemented our information in the FEIS and Biological Evaluation (BE) regarding the west shore marten population to more clearly emphasize the importance of this area to marten from a regional connectivity perspective and also provide recent information from a publication by Spencer and Rustigian-Romsos of Conservation biology Institute (2012). The publication results (modeling) indicate that the west shore of the Basin is part of a corridor but is not a sole corridor.

See Response to Comments, pp. 118-119. The BE (p. 93) provides further information that:

Consistent with Slauson et al. (2008), there is a gap in marten occupancy and habitat just west of the Basin but suitability increases again just west of this gap, creating another parallel habitat corridor (Spencer & Rustigian-Romsos 2012) that may not have been identified in Slauson et al. (2008).

These explanations do not meet NEPA's informational standards. The CBI study does not in any way contradict Slauson's finding that the west shore habitat represents an essential north-south linkage and is critical to ensuring continued marten viability in the Basin. In addition, the study itself provides no information about the nature of "other" corridors that marten might use. Instead, the study simply acknowledges that at this time, marten habitat south of Plumas County continues to function in an unfragmented form. The BE provides more information, but in the end simply states that there is suitable marten habitat west of the area identified by Slauson as a gap in marten occupancy and habitat just west of the Basin.

We do not agree that these explanations satisfy NEPA's requirement to take a hard look at the potentially catastrophic cumulative impacts of creating further habitat fragmentation along this north-south corridor within the Basin. Nothing in the FEIS -- or the CBI study -- demonstrates that marten are actually using corridors far to the west of the Basin as habitat linkages. Slauson identified that such lower elevation habitat may

not be acceptable for marten and the FEIS presents no information that would counter this point. In sum, nothing in the Plan or the FEIS erases the substantial risk that the logging proposed in the Plan will not alter that equation by rendering large amounts of suitable marten habitat unsuitable in the coming decades.

We note further that although the FEIS proposes to retain habitat linkages, there is nothing in the Plan that would make it likely that this will occur. For example, the FEIS states that "the Plan emphasizes the protection of habitat connectivity which is critical to the maintenance of suitable marten habitat since this species is known to be highly sensitive to habitat fragmentation." See Response to Comments (p. 121). However, more is needed than simply emphasizing the importance of avoiding the fragmentation of marten habitat. The Plan and FEIS provide no explanation for how this will occur, how quality marten habitat will be identified, or how connected habitat will be retained.

The FEIS defends the lack of information provided based on the Forest Service's purported lack of knowledge about where logging will occur. See *e.g.*, Response to Comments, p. 119 ("[T]he concern for the west shore habitat is noted, but we are not in a position to evaluate effects from specific actions to this exact portion of the LTBMU since it is not yet known where vegetation treatments, or any potential projects, would occur.") As discussed above, we disagree that the Forest Service lacks knowledge about where its treatments will occur. See *e.g.*, Fire Plan, p. 17 (map showing area and timing of treatments through 2017.) Given the existence of a definitive approach to fuel reduction treatment, the FEIS errs in failing to identify connected areas of marten habitat that need to be preserved.

5. Informational Failures in the EIS Process Undermine the FEIS's Analysis of Impacts to Marten from Fuel Reduction Logging.

The informational failures in the FEIS discussed in the spotted owl Section above all apply to the marten as well. As discussed, the FEIS does not distinguish between Class 4 and Class 3 size trees in categorizing mid-seral habitat, meaning it cannot identify the extent suitable marten habitat that is available or which will be logged.

Further, the FEIS' assertion that late seral closed canopy forest -- considered high quality marten habitat under the existing forest plan -- will remain unchanged is flawed, given that the modeling runs actually show substantial losses of this habitat type in the last decade and over the life of the plan and beyond. See Tables 1 & 3, above.

In addition, as also discussed, the LTBMU has been conducting logging projects to reduce fuel loading over the last decade but provides no information about how such projects have affected existing marten habitat. The modeling suggests a large reduction of high quality marten habitat in this time frame, but the FEIS contains no discussion of this loss. Meanwhile, the record suggests substantial logging has already occurred, or

will occur, in precisely those west-shore forests found to be most critical to ensure continued marten viability in Tahoe. See Figure 1 above.

Finally, we reiterate our objections again to the Forest Service's vague and undefined Plan objective to "restore" late seral stands by logging larger trees beyond the levels necessary to achieve fuel reduction goals. As discussed above, there is no science that would suggest that the removal of large and/or "diseased" trees will benefit the marten, which is contrary to numerous literature that dead and dying trees – whether due to disease, beetles etc – provide numerous habitat opportunities for marten and their prey species. In PSW-GTR-203 Alan Taylor (2007) recommends that ecological restoration of the Lake Tahoe Basin should focus on reduction in basal area of mostly smaller trees and the reintroduction of frequent fire in the vegetation types of the Lake Tahoe Basin. The recommendation is based on the accepted science that this path is best suited to adequately reduce fire risk, while minimizing impacts to late seral species. The Plan adopts a more aggressive approach, but without any standards or clearly delineated objectives to guide projects in the future.

6. Failure to Assess Recreational Impacts on Marten.

The FEIS provides no further information on the effects of expansion of recreational activities including ski-area, off road vehicles and snowmobiles on marten. As discussed in our prior comments, these activities have the potential to fragment marten populations. Female martens exhibit higher sensitivity to forest fragmentation from ski-run creation than males, avoiding areas highly fragmented by ski runs (K. Slauson, unpubl. data.) Further, marten are active in winter, but the FEIS contains no analysis whatsoever of the effects of increasing snowmobile activity in remote areas on marten.

7. The Plan Has No Monitoring or Adaptive Management Plan for Marten.

As discussed above and below, the Plan does not contain any local monitoring of marten populations, or adaptive management plan that would ensure the retention of necessary habitat in the face of the considerable logging that has occurred and will occur in the future.

8. Failure to Ensure Marten Viability.

We continue to believe that the Plan does not ensure the long term viability of the marten in the Tahoe Basin. The Plan proposes significant decreases in high and moderate quality marten habitat, rendering large areas of forest potentially unsuitable for marten use. The Plan proposes no particular protections for important marten reproductive habitat, and the LTBMU lacks knowledge of where martens occur and have denned successfully. The Plan does not identify or plan to establish any habitat corridors for marten, responding instead that marten may be able to utilize some

unidentified corridor to the west of the Basin for north-south movement in the future. There is no Tahoe monitoring proposed for marten or plan for adaptive management.

In light of the information coming out of Sagehen, the most relevant and closest study that has occurred on the impacts of fuel reduction logging on marten, the Forest Service cannot simply assume that the logging proposed in this Plan -- including undefined objectives to "restore" habitat -- will ensure marten viability over the life of the Plan. As discussed in our prior comments, given that range-wide marten populations are in decline, aggressive action should be deferred until a regional conservation strategy is in place in the Sierra Nevada.

Recommendations for Improvements for protection of Pacific Marten

Utilized similar monitoring techniques as done elsewhere, on the LTBMU to monitoring presence/absence for 2 years (track plates, scat-sniffing location dogs, baited camera stations) prior to treatment implementation. Limit impacts and degradation in high use areas.

Initiate a monitoring and telemetry study so as to locate and protect marten natal and maternal dens with a 100 ac buffer and more protective standards for canopy reduction near dens and rest sites, including shrub enhancement, meadow restoration and an assessment of uncharacteristic predation risks, limits on further fragmentation in denning, resting and travel-ways, a noise pollution assessment and road density-related impacts.

Use the PSW-GTR-237 and Dinkey CFLRP fisher marking guidelines to key staff and marking crews into important structure component. In Red fir, consult with key researchers (Keith Slauson, Katie Moriarty and others) to help define common habitat features. Document photos of features and marking strategy for training crews. Treatments should be guided by studies showing that marten need overhead canopy and high numbers of downed woody material in their denning and resting areas.

Identify a habitat corridor system for marten on the LTBMU in which restoration and fuels management would be limited to the minimum surface and ladder fuels treatments needed to avoid significant fire risk and which would maintain high quality habitat immediately post-treatment.

Adopt a monitoring and adaptive management program that has clear thresholds and triggers to monitor the effects of treatments on marten occupancy and reproduction with an annual review of status.

Complete a scientifically accurate accounting of impacts from the draft proposed plan on marten habitat, comparing it to the habitat corridor system discussed above.

Objection Issue 3--Violation of 1982 Planning Rule Requirements; Failure to maintain viable populations of MIS (spotted owl, marten, flying squirrel).

A. The Plan is Violating the 1982 Rule Requirements to Ensure Diversity of Wildlife in Tahoe.

Forest plans must “provide for diversity of plant and animal communities.” 16 U.S.C. § 1604(g)(3)(B). To implement the statutory directive, the 1982 NFMA regulations require the Forest Service to “maintain viable populations of existing native and desired non-native vertebrate species in the planning area.” *Id.* § 219.19. A “viable population” is defined as “one which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area.” *Id.*

To ensure that the Forest Service meets the diversity and viability requirement, the 1982 Regulations require monitoring “[a]t intervals established in the plan” to evaluate “how well objectives have been met and how closely management standards and guidelines have been applied,” at which point “the interdisciplinary team shall recommend to the Forest Supervisor such changes in management direction, revisions, or amendments to the forest plan as are deemed necessary.” *See* 36 CFR 219.12(k). Monitoring requirements identified in the forest plan shall provide for “a quantitative estimate of performance comparing outputs and services with those projected by the forest plan and “[d]ocumentation of the measured prescriptions and effects, including significant changes in productivity of the land.” *Id.*

The 1982 regulations also direct the Forest Service to identify “management indicator species” (“MIS”) whose population changes “are believed to indicate the effects of management activities.” *Id.* § 219.19(a)(1). The 1982 regulations require that “population trends of the management indicator species will be monitored and relationships to habitat changes determined.” *Id.* § 219.19(a)(6). The 1982 regulations further provide that, in the development of forest plans, proposed forest plans and forest plan alternatives must establish “objectives” for the maintenance and improvement of habitat for MIS; prescribe measures to mitigate adverse impacts on MIS; and state and evaluate planning alternatives in terms of the amount and quality of habitat and of population trends of MIS. *Id.* § 219.19(a)(1)-(7).

We do not believe the LTBMU is meeting these statutory and regulatory objectives.

1. The FEIS Does not Purport to Ensure the Viability of Wildlife in Tahoe.

The FEIS does not purport to ensure the viability of wildlife species in Tahoe:

The design of the Revised Forest Plan (LRMP) was created to maintain species viability where that is possible and it is based on the best available science at the time of writing. The LRMP's standard and guidelines (S&G) with associated desired condition, strategies, objectives, and limited operating periods (Appendix E - E.2.5) have been developed for maintaining viability *but effects on viability cannot be determined at this programmatic scale since the plan does not authorize any activities that might actually cause adverse impacts to species or habitats* (refer to Appendix O).

See FEIS, App. E, p. E.5 (emphasis added.) We strongly disagree with this assertion that the FEIS for the Plan cannot assess how the Plan will meet the 1982 Rule standards for viability. Indeed, the Plan itself states: "A project or activity is consistent with the Forest Plan with respect to MIS and species viability *if* it is consistent with the Standards and Guidelines." The Plan's assertion that compliance with standards and guidelines *of the Plan* constitutes de facto compliance with the viability and diversity requirements of federal law demonstrates that the FEIS must assess how the Plan will meet these standards.

2. Compliance with the Plan's Standards and Guidelines Does not Ensure Species Viability.

We see no support for the Plan's present assertion that the Standards and Guidelines in this case will ensure wildlife diversity and viability. In many respects, as discussed above, the Standards and Guidelines are inadequate to protect wildlife. At the least, they are based on questionable assessments regarding what constitutes adequate habitat for wildlife. Many standards are driven by uncertain estimates of historic forest conditions, that are highly speculative. The Standards and Guidelines themselves are subject to numerous exceptions in the name of abstract and undefined concepts such as forest health and restoration.

As discussed, the Plan does not necessarily ensure that adequate habitat will remain for wildlife, nor is there adequate monitoring or any adaptive management plan to ensure that adverse effects of logging will be identified on a timely basis and lead to changes in management standards.

3. The Plan Does not List Management Indicator Species.

The Plan still does not identify any MIS, and thus does not present a strategy to ensure that viable wildlife populations are maintained in the Basin. Instead, the draft Record of Decision ("ROD") appears to be stating that "[d]etails regarding the identification and selection of these MIS, including the reasons for their selection, as required under the Planning Rule" as set forth in the 2007 MIS Amendment, "are hereby incorporated by reference." See ROC, p. R-22. The ROD explicitly does not incorporate the MIS identified in the MIS Amendment into the Plan. Meanwhile, the Plan itself

makes no other mention of management indicator species except for the assertion that they are monitored at the regional level. See Plan, p. 9.

As discussed in our comments on the DEIS, the Plan's failure to list MIS as part of the plan violates the 1982 Regulations, which require the Forest Plan to contain MIS so as to ensure the protection of these species over the life of the plan. We see this as a legitimate concern in this case, given that the LTBMU will be required to transition to the 2012 planning rule within two years by 2016 . The 2012 Planning Rule does not utilize monitoring MIS in measuring how management actions leading to changes in habitat effect wildlife populations. Instead, the ROD refers to the 2012 Planning Rule (36 CFR 219.11(d)) in describing how monitoring will assure the achievement of desired conditions. See ROD, p. R-3. The problem with this is that the LTBMU has elected to proceed under the 1982 Rule, not 2012.

Under NFMA and NEPA, the Plan must disclose how the Forest Service is going to ensure viability and diversity of wildlife within the Tahoe Basin, which begins with an explanation of how it will comply with the 1982 Rule, and then the 2012 Rule to protect wildlife in the Basin. Here instead, the Plan does not list the MIS required under the 2012 Rule, while committing to follow a totally different Rule the parameters of which are not disclosed, much less explained in the Plan, nor analyzed in the FEIS.

4. The Forest Service Cannot Rely on Regional Monitoring to Ensure the Viability of Wildlife Species in the Basin.

The Plan and FEIS continue to assert that MIS monitoring to ensure wildlife diversity and viability in the LTBMU will be accomplished by the Sierra-wide bio-regional monitoring adopted in the 2007 MIS amendment. See FEIS, App. A, p. A-3 (Habitat & Species Diversity: DC53, DC61. What are the trends for Management Indicator Species at the bioregional (Sierra Nevada) scale?.)

As discussed, this approach conflicts with the 1982 Rule, which requires the LTBMU to conduct monitoring to ensure that species viability and diversity is being maintained in the planning area, i.e., the Tahoe Basin. 36 CFR § 219.19. The FEIS provides no response to this point, focusing instead on a discussion of the black-backed woodpecker. See Response to Comments, pp. 109-115.

In our view, relying on monitoring in other National Forests to assess the cause and effect of management activities in the LTBMU is contrary to the 1982 Rule's requirements to monitor at "intervals established in the plan...how well objectives have been met and how closely management standards and guidelines have been applied." 36 CFR § 219.12(k). Here, the objectives of the Plan must include the preservation of viable and diverse wildlife populations. Yet the bioregional monitoring does not satisfy this requirement because it does not assess the effects of the LTBMU Plan implementation on wildlife in the planning area. Bioregional monitoring may provide information about the effects of forestry activities in the Lassen or southern California

forests, for example, but it provides no information about the specific effects on the implementation of "management standards and guidelines" including " quantitative estimate of performance comparing outputs and services with those projected by the forest plan" or "[documentation of the measured prescriptions and effects, including significant changes in productivity of the land." 36 CFR § 219.12(k).

Bioregional monitoring does not meet these standards because it measures the effects of a different forest plan on wildlife in that different forest. We note that at the time of the 2007 MIS Amendment, all the Sierra Forests were subject to the same management standards and guidelines, which at the time was an argument in favor of a regional monitoring system assessing the effects of similar management direction under the 2004 Framework. However, the Plan establishes a new direction for the LTBMU, based on standards and guidelines specific to Tahoe. Here, instead of analyzing this change the FEIS simply relied on the 2007 MIS amendment to find that wildlife would not be adversely affected. However, the Region has never previously conducted NEPA review to determine whether regional monitoring will be adequate to detect population trends of wildlife species in the LTBMU where a suite of different logging treatments are being applied. Given the LTBMU's new and unique standards and guidelines, regional monitoring can no longer meet the requirements of the 1982 Regulations, if it ever did.

5. Bio-Regional Monitoring is Not Ensuring the Viability of Wildlife Species in Tahoe.

Even if bioregional monitoring technically satisfy the 2007 MIS Amendment, in this case the Forest Service cannot claim that such monitoring is assuring the continued diversity and viability of wildlife in Tahoe, as required by the planning rules. This is particularly true with respect to three Management Indicator species for the late seral, closed canopy forest in Tahoe, the California owl, Pacific marten and Northern flying squirrel.

a. Spotted Owl.

As discussed above, the bioregional monitoring that has been done for owls is showing a correlation between Forest Service fuel treatments and owl population declines that may be significant. In the closest area, the El Dorado National Forest, the studies show that reducing the amount of dense forest cover is correlated with reductions in owl occupancy in PACs. In the Basin, in areas where fuel treatments have been ongoing over the last decade, owls have had poor reproductive success and many PACs are unoccupied due potentially to a lack of quality larger forest habitat.

Despite these results showing a nearby and local population decline, the LTBMU has not taken any action towards a more cautious approach in implementing fuel treatments in owl habitat. The Plan proposed monitoring the effects of logging on owl

PACs and HRCAs in Tahoe, but there are no standards or timelines for action or triggers that will require management change should the recent declining trends continue.

b. Marten.

The Plan proposes no monitoring for marten, relying instead on regional studies in the far northern and southern Sierra which state that the population trend for marten "is slightly increasing over the last two decades." See 2010 Sierra Nevada Forests Bioregional MIS Report (USDA Forest Service 2010a). p. 24. However, as discussed above, the studies that have occurred within and in the vicinity of Tahoe -- i.e., Sagehen -- demonstrate that marten may be extremely susceptible to the aggressive forest thinning proposed in the Plan, new management standards that, as discussed above are being implemented nowhere else but in the LTBMU. This is particularly true given the LTBMU's lack of knowledge about marten denning and resting sites in the Basin. In this case, regional monitoring does not meet the 1982 Rule standards for monitoring or preserving wildlife diversity and viability in the planning area.

c. Northern Flying Squirrel

The Northern flying squirrel is another MIS for late seral close canopy forest for the LTBMU, for which the LTBMU is relying on regional monitoring. However, the 2010 MIS report states the last detection of this species as occurring in 2003. See USDA Forest Service 2010a) p. 89, (Table NOFLS-IV-1. Summary of northern flying squirrel detections from studies in the Sierra Nevada.) The FEIS quotes from the 2010 Report that the trend for this population is increasing, but this is not backed up by any monitoring data conducted within the LTBMU.

6. Dropping MIS Will Not Ensure Wildlife Viability and Diversity in Tahoe Basin.

As part of our objection in this section, we re-raise our prior objections set forth in our comment letter, Section B.1.b , that Plan and EIS do not identify MIS based on criteria specific to the LTBMU Planning Area and thus miss the potential impacts of management activities on existing MIS and their specific habitats, including the bald eagle, peregrine falcon, mule deer mallard, willow flycatcher and black bear.

Recommendations for Improvements

Include Plan level presence/absence monitoring for MIS in the LTBMU

If, populations are decreasing for MIS regionally or locally, include monitoring for MIS in the Basin that assess before and after changes to MIS occupancy.

Review post-project habitat change for MIS in an adaptive management framework to ensure viability and diversity of MIS.

Retain the bald eagle, peregrine falcon, mule deer, mallard, willow flycatcher and black bear as MIS on the LTBMU. Engage partners in monitoring designs and tracking to lower costs.

Present a plan for how viability and diversity will be assured before and after the transition to the 2012 Planning Rule.

Objection Issue #4--Failure to analyze the unlimited discretion in the removal of trees >30 inches and resulting impacts to wildlife dependent upon this structure, including species needing late seral, closed canopy forests. We also object to the potential result of this 30" removal discretion which can lead to the lack of protection for large trees clumps within stands and at the landscape level which will lead to forest simplification and loss of heterogeneity. See North et al. 2009.

A. The Plan Provides the LTBMU Unlimited Discretion to Remove Large Trees.

The Revised Forest Plan (Vol II) p. 110 -- set forth below -- describes the exceptions to allow removal of trees >30" diameter. Trees of this diameter have been protected from harvest since 1993 (CASPO Interim Guidelines 1993; SNFPA 2001; SNFPA 2004) in the Sierra Nevada to preserve their ecological contribution to forest structure and function. The larger structures are rare on the Sierra Nevada landscape due to past management and the targeting of old growth trees over the past century, especially true in the LTBMU (FEIS Vol. 1 p. 3-243) as a result of Comstock Era logging.

- SG33.** Retain trees 30 inches dbh or larger. Where trees greater than 30 inches DBH need to be removed, ID Team members (e.g., vegetation management specialist, wildlife biologist, scenic specialist, recreation management specialist) will propose trees to be removed, girdled for snag creation, or felled for coarse woody debris during project development. Exceptions under which a tree 30 inches dbh or larger can be removed include the following: [Standard]
- a)** The tree(s) larger than 30 inches dbh presents a safety hazard, or prevents equipment operability.
 - b)** The tree(s) larger than 30 inches dbh is a host/source of insects or disease or where stands are at a high risk of beetle outbreak and/or disease transmission
 - c)** The preponderance of overstory trees within the stand are greater than 30 inches dbh and at high densities, the selection for removal or snag creation would allow competitive release for growth of the largest trees
 - d)** Shade tolerant trees larger than 30 inches dbh are increasing the rate of mortality or out-competing preferred species
 - e)** When necessary to support aspen, meadow or stream restoration
 - f)** When managing for blister rust resistant sugar pines that require removal of competing trees within a sufficient radius to improve health of the sugar pine.

Exceptions b, c, and d, encompass a very wide breadth of circumstances, which come close to capturing any tree in a particular stand. While we understand the reasoning for some of the exceptions, the fact that SG 33 speaks only to criteria for removal, and is

silent on criteria for not removing these important structures for biodiversity and habitat function values, is an unacceptably loose approach.

As discussed on p. 14 above, neither the Plan or the FEIS provides a clear and precise definition of what constitutes "restoration" as a forest-wide Plan objective. Exceptions (b) through (f) cited above each are elements of forest restoration, but since this term is left undefined in terms of measurable standards, the Forest Service's discretion in implementing these provisions is basically limitless. For example, within any given stand in the forest, there will be competition around trees such that removal of one will allow for "competitive release" of others. Large trees -- especially older ones -- will always be a possible host for insects or disease. At a fundamental level, the Forest Service has not defined the relationship between forest "restoration" and these elements of forest decay that also happen to be a primary characteristic of high quality wildlife habitat for many species.

In our view, the potential for abuse of the undefined restoration objective is real, particularly given the admitted lack of certainty about historic conditions in Tahoe. For example, we note the density of large trees averaging 39 and 43 stems/ha > 30 " dbh in mixed conifer and red fir, respectively at the Teakettle research site suggests big trees are underrepresented by current stand conditions in the Sierra Nevada (North et al. 2002).

The problem can be illustrated by white fir in Tahoe. It is common knowledge that larger, aging white fir often has multiple disease characteristics is shade tolerant and can be found in dense clumps with other trees. While exceptions b, c, and d call out the potential negative possibilities (disease or insects, competitive densities, share tolerance and competition with other species), the Plan is silent about the very high ecological values associated with large, decadent white fir. Dwarf mistletoe, fir canker, and a variety of decay fungi are common disease processes in white fir.

[http://www.fs.fed.us/database/feis/plants/tree/abicon/all.html#MANAGEMENT CONSIDERATIONS](http://www.fs.fed.us/database/feis/plants/tree/abicon/all.html#MANAGEMENT_CONSIDERATIONS). One-third of the white fir stands in California are severely infested by dwarf mistletoe

http://www.na.fs.fed.us/pubs/silvics_manual/Volume_1/abies/concolor.htm

While these conditions can become issues for silviculture those very processes also provide unique habitat value to at risk species.



Large White Fir with broken top, mistletoe and fir canker that has large wildlife cavity below the cathedral top.

Wildlife often hide and hunt in these mistletoe “brooms”.

This tree could be targeted for removal under SG 33 (b)



A group of large, old growth trees, including white fir, forms a rare and critical large tree clump, a key element of heterogeneity, that is rare on the LTBMU and across the Sierra Nevada.

SG 33 (c) would allow removal for density reduction



A diseased white fir in high stand density with a large cavity containing juvenile CA spotted owl.

Could be removed under SG 33 b, c, d.



Mistletoe “broom” in sugar pine. an active Mistletoe “broom” in sugar pine, an active fisher rest site 2013.

Tree could be removed under SG 33 (b)

PSW-GTR-237, co-authored with the Forest Service, PSW, University of California, Sierra Forest Legacy and others, contains an appendix (Walsh and North 2012) supporting retention of the vary conditions such as disease-created structures and shade tolerant trees targeted in the LTBMU Plan Standard and Guide 33.

The same issue would apply to any other tree species in Tahoe (Jeffrey pine, red fir etc), whose larger trees might somehow be eligible for logging under these provisions. In our view, this Standard SG 33 needs significant revision and clear language that the wildlife biologist will make the determinations regarding tree removal and the determination will include a detailed and rigorous examination of the ecological value of all trees > 30”

diameter. The Standard should include language that this type of removal is expected to be rare and incidental to general management prescriptions.

B. Failure to analyze impacts associated with removal of this cohort of trees.

The LTBMU FEIS did not model and analyze in any other manner the removal of trees > 30 inch diameter and this failure is contrary to NEPA's requirement to take a "hard look" at potential environmental impacts.

As discussed, while the FIES and supporting documents state that > 30" trees will only be removed in "certain limited and specified conditions" the rules for removal are unbounded given a common sense understanding of the prescribed conditions in SG 33 a-f. It is reasonable on a small forest the size of the LTBMU (154,850 ac) that the ID Team could have easily sampled past treatment units such as Ward Canyon, or Kingsbury, current projects underway such as the South Shore project or projects in planning such as Blackwell Canyon to get a reasonable sample of sites with variable conditions that would have given the public a quantified sampling of the levels of 30" tree removal in the planning area. This information was not presented. Due to the significance of these important larger trees and the fact that a level of reasonable sampling could have occurred in a matter of days-weeks during the life of this 8-year planning process it is a violation of NEPA 40 CFR § 1500.1 (b)'s requirement for accurate, accurate scientific information.

Given that the new additional 30" tree removal exemptions provide much more discretion (potentially limitless) than the previously amended plans (2001/2004 SNFPA) -- which were limited to hazard removal for public safety, aspen restoration, and operability concern -- it is even more relevant that the density, forest heath and competition exceptions in SG 33 for removal based of common landscape conditions be rigorously analyzed and controlled with clear language that supports consideration of the positive values associated with characteristics mentioned about and not solely silvicultural issues related to disease and density control. See Discussion above regarding the Plan's failure to clearly delineate the "Restoration" objective.

C. Recommendation for Improvement

The following conditions are applied to SG 33:

- A certified wildlife biologist will make the final determination as to the retention, removal or girdling of all trees > 30" in SG 33 b, c, d, e and f regarding retention of trees with important habitat value for wildlife.
- SG 33 should state that the exception for large tree removal > 30" diameter is limited in use and incidental for forest management.

- All large tree removal of trees > 30” diameter we be documented (numbers and justification) and tracked in the LTBMU Monitoring Plan for the first 5 years at which time the issue of removal and tracking will be revisited.
- Wildlife biologist will include language for retention of important wildlife structures in ID Team planning meetings and marking discussions. Use of the PSW-GTR-237 appendix and the Dinkey Fisher Marking Guidelines (attached) shall be included in these planning and marking training sessions.

Objection Issue 5--Failure to appropriately consider Wild and Scenic River designations and to protect of Wild and Scenic River values. The administrative record fails to document that a systematic inventory and comprehensive evaluation of all potential wild & scenic rivers was ever conducted on the Lake Tahoe Basin Management Unit (LTBMU).

A. Forest Planning Rule And Forest Service Handbook Requirements

The Forest Planning Rule requires the Forest Service to conduct in the Forest Plan Revision a systematic inventory of rivers eligible for inclusion in the National Wild and Scenic Rivers System, “...unless a *systematic inventory* has been previously completed and documented and there are no changed circumstances that warrant additional review.”³

The Forest Service Handbook requires that the land management process include a *comprehensive evaluation* of potential wild and scenic rivers. The evaluation includes an inventory of eligible river segments documented in the plan EIS.⁴ This same section of the Handbook also requires the Forest Service to collaboratively involve the public throughout the evaluation process.

B. 1999 Eight Eastside Rivers Report

The Forest Service claims that an initial analysis of 600 potential wild and scenic rivers coordinated by the Tahoe National Forest in 1990 as part of the 1998 Eight Eastside Rivers Wild and Scenic River Study and FEIS, and 1999 Record of Decision (ROD) included streams and rivers on the LTBMU. Out of this inventory, 30 rivers and streams were

³ 36 CFR Ch. II § 219.7(2): In developing a proposed new plan or proposed plan revision, the responsible official shall...(vi) Identify the eligibility of rivers for inclusion in the National Wild and Scenic Rivers System, unless a systematic inventory has been previously completed and documented and there are no changed circumstances that warrant additional review.

⁴ FS1909.12, § 81.2: The land management planning process includes a comprehensive evaluation of the potential for rivers in a plan area to be eligible for inclusion in the National System (36 CFR 219.7(c)(2)(vi)). Complete an inventory of eligible river segments and document this in an appendix of the environmental impact statement (EIS) for a plan revision or for the development of an initial land management plan. Sources of information for identifying the significance of river-related values include the Nationwide Rivers Inventory; State river assessments; Tribal governments, other Federal, State, or local agencies; and the public. Collaboratively involve the public throughout the evaluation process.

determined eligible, including segments of the upper and lower Truckee River, and one segment of the upper Truckee River was determined suitable for designation. Because the agency believed that a systematic inventory/comprehensive evaluation of streams was completed, the Forest Service limited its consideration of wild and scenic rivers in the LTBMU LRMP to determining whether any changed circumstances warranted additional review (per the Forest Planning Rule).⁵

In response to the LTBMU Draft LRMP, Friends of the River, California Wilderness Coalition, and Sierra Forest Legacy filed joint and separate comments expressing their collective belief that the 1998 Eight Eastside Rivers Report documented the eligibility and suitability the upper and lower segments of the Truckee River, but it did not include a systematic inventory or comprehensive evaluation of all potential wild and scenic rivers on the LTBMU. The SFL/Friends of the River comments noted that the administrative record for LTBMU Revised LRMP should either confirm or deny the conflicting claims and that the record was not made available to the public during the Draft Revised LRMP comment period.⁶

After the release of the LTBMU Final LRMP/FEIS, Friends of the River and the California Wilderness Coalition filed a Freedom Of Information Act (FOIA) request on 12/10/2013 with the LTBMU and the Tahoe National Forest specifically requesting "...any and all material from Forest Service planning files that identifies the 600 rivers initially analyzed in the study process conducted by personnel from the Lake Tahoe Basin Management Unit (LTBMU) and Tahoe National Forest in the early 1990s."⁷ In its response to the FOIA request, the Forest Service in a letter dated 01/16/2014 stated, "[A]fter conducting searches, both the Tahoe National Forest and LTBMU found no records responsive to your request." In its response the Forest Service admits that it cannot find any documents identifying the 600 rivers initially analyzed in the 1998 Eight Eastside Rivers Report.⁸ As a result, it seems clear that there is no administrative record supporting the Forest Service's claim that the initial analysis of 600 streams included any streams or rivers on the LTBMU other than the upper and lower segments of the Truckee River.

A thorough review of the 1999 Eight Eastside Rivers ROD and its 1998 Report and FEIS and the 1999 22 Westside Rivers ROD and FEIS, which together evaluated the 30 eligible streams identified on the Tahoe Forest and LTBMU (including the upper and lower Truckee River segments), failed to find any reference to an "initial analysis of 600 streams." The Eight Eastside Rivers FEIS does list eleven stream segments that were determined ineligible, none of which are located on the LTBMU.⁹

⁵ Revised LTBMU LRMP Appendix B – Wild and Scenic River Evaluation, pages B-1 to B-2.

⁶ See Friends of the River's comments to the LTBMU Draft Revised LTBMU LRMP on page 7, and Sierra Forest Legacy's comments on page 62.

⁷ Friends of the River/California Wilderness Coalition FOIA request dated 12/10/2013 (copy attached).

⁸ Forest Service response to Friends of the River/California Wilderness Coalition FOIA Request dated 1/16/2014 (copy attached).

⁹ 1998 Eight Eastside Rivers Wild and Scenic River Study Report and FEIS Appendix B, pg. B.5.

C. Former Forest Service Staff Recollections

According to Phil Horning, the Eight Eastside Rivers Study ID Team Leader from the Tahoe National Forest (now retired), the Tahoe Forest evaluation process did not include streams on the LTBMU other than the Truckee River segments. He stated that he believed that a separate ID Team on the LTBMU conducted an initial analysis of other streams on the LTBMU.¹⁰

Lisa O'Daly, a former planner for the LTBMU, conducted the initial eligibility and suitability analysis of the upper Truckee River for the LTBMU. According to Ms. O'Daly, an ID Team on the LTBMU completed at least a cursory initial analysis of other streams on the LTBMU. She stated that the initial analysis should be in the LTBMU planning files, although these may have been lost since the Supervisor's office moved to a different location.¹¹ As previously noted, the Forest Service cannot find any documentation in its planning files of the "600 streams" that were initially analyzed or that any LTBMU streams other than the upper and lower Truckee River segments were included in the initial analysis.

D. Eligibility Assessments For the Truckee River Segments

The eligibility assessment for the lower Truckee River was completed by the LTBMU in 1990 and for the upper Truckee River in 1992, several years prior to the 1999 Eight Eastside Rivers Report.¹² It is interesting to note that neither of these individual river study reports were included in the 2013 LRMP administrative record, which may indirectly confirm Ms. O'Daly's hypothesis that the older planning files have been lost or discarded.

In a cover letter to the 1992 Upper Truckee River Eligibility Assessment, LTBMU Forest Supervisor Robert Harris noted that suitability studies for both eligible segments would be included in the Truckee River Operating Agreement (TROA) EIS. Apparently due to delays in the TROA EIS, the suitability determinations for the lower and upper Truckee River segments were incorporated into the 1994 Draft Eight Eastside Rivers Report and DEIS and the subsequent final report and FEIS.

These reports prove that eligibility assessments of the Truckee River were conducted separately from the Eight Eastside Rivers Report. There is no mention in the reports of any other LTBMU streams or indication that the Truckee River segments were part of a more comprehensive inventory of streams. It seems clear that the Eight Eastside Rivers

¹⁰ Phone call with Phil Horning, 01/17/2014.

¹¹ Phone call with Lisa O'Daly, 01/17/2014.

¹² Wild and Scenic River Eligibility Assessments of the Lower Truckee River dated October 1990, and of the Upper Truckee River, dated October 1992, LTBMU, including cover letters signed by Forest Supervisor Robert Harris.

Report was simply used as a convenient NEPA vehicle to document the Forest Service's subsequent suitability determinations for the eligible Truckee River segments. In addition, it made sense to include the eligibility/suitability decisions for the lower Truckee in the Eight Eastside Rivers Report because the LTBMU and Tahoe Forest share administration of this river segment.

E. LTBMU Assessment Of "Changed Circumstances"

Because of its belief that systematic inventory had been conducted for the LTBMU as part of the 1998 Eight Eastside Rivers Report, the Forest Service limited its consideration of potential wild and scenic rivers in the LTBMU LRMP to determining if any "changed circumstances" warranted additional review. This is documented in meeting notes in the LTBMU administrative record.¹³ According to these meeting notes, a team of seven Forest Service planners and resources staff reaffirmed the suitability recommendation for the upper Truckee River and the decision not to recommend the lower Truckee River, as originally documented in the Eight Eastside Rivers Report.

The LTBMU team also discussed whether changed circumstances warranted review of other potentially eligible streams. The notes indicate that the team found no changes to the free flowing status of 63 watersheds in the LTBMU since the 1998 report. In addition, the team discussed seven specific streams on the LTBMU (Taylor, Meeks, Wards, Blackwood, Trout, General, and Secret Harbor Creeks) but the team concluded that there were no changed circumstances nor did the streams possess outstandingly remarkable values. The lack of a systematic inventory and comprehensive evaluation of all potential wild and scenic rivers limited the ability of the public to comment in response to the LTBMU Draft LRMP in support of a more robust wild and scenic rivers component.

In Conclusion

Whether or not a systematic inventory (as required by 36 CFR Ch. II § 219.7[2]) or a comprehensive evaluation (as required by FSH 1909.12, § 81.2) has been completed for the LTBMU, there appears to be no documentation of this essential process in the administrative record. Both the rule and the handbook clearly require that previous inventories must be completed and *documented*. Nor was the public collaboratively involved in this process, if it was indeed completed. Because there is no record of the initial analysis, the Forest Service could not credibly determine whether "changed circumstances" warranted review of other LTBMU streams.

The failure to document a systematic inventory and comprehensive evaluation of potential wild and scenic rivers on the LTBMU seriously compromised the agency's ability to provide and assess a reasonable range of alternatives as required by NEPA and limited the ability of the public to comment on those alternatives. It also made moot

¹³ Meeting Notes – Wild and Scenic River Assessment, LTBMU, 12/10/2011.

public comments in support of a more robust wild and scenic rivers component to the Revised LRMP.

Recommendations For Improvement to Wild and Scenic Rivers Analysis and Recommendations

Convene an ID Team to conduct a systematic inventory and comprehensive evaluation of all potential wild and scenic rivers on the LTBMU. Collaborate with and involve the public in the process (particularly independent resource professionals not employed by the Forest Service). If any streams are identified as eligible, provide interim protection until a suitability study can be completed. If a supplemental or revised LRMP is required for the LTBMU, include the systematic inventory, and any eligibility and suitability decision that may be derived from it, in the supplemental or revised document.

The Forest Service’s wild and scenic river assessment of upper Truckee River tributaries excluded the public, unevenly applied suitability criteria between the main stem and tributaries, and failed to consider all relevant suitability criteria.

In response to public comments to the LTBMU Draft LRMP, the Forest Service assessed the eligibility and suitability of several tributaries to the upper Truckee River during the time period between the draft and final plans. A significant number of public comments asked the Forest Service to consider the eligibility and suitability of upper Truckee River tributaries, particularly those that supported Lahontan Cutthroat Trout and/or provided suitable habitat – a specific outstandingly remarkable fishery value identified for the main stem upper Truckee. These specific comments were not documented or responded to in the LTBMU LRMP/FEIS Appendix N – Response to Comments. But this issue was examined in the LTBMU LRMP/FEIS Appendix B – Wild and Scenic River Evaluation, pages B-2 to B-4.

Eligibility of the Upper Truckee Tributaries

Appendix B documents an “additional analysis” of upper Truckee tributaries. As part of this additional analysis, a Forest Service Inter-Disciplinary Team (IDT) identified “potential” outstandingly remarkable values (ORVs) associated with 9 of the 11 tributaries reviewed. At this point, the narrative in Appendix B becomes somewhat vague and imprecise – perhaps because the IDT was only attempting to identify “potential” ORVs instead of conducting the systematic review required. But the Appendix narrative certainly suggests that nine tributaries of the upper Truckee do indeed possess outstandingly remarkable scenic, fish (including Lahontan Cutthroat Trout populations and habitat), wildlife, and botanical values.¹⁴

¹⁴ LTBMU Revised LRMP/FEIS Appendix B – Wild and Scenic River Evaluation, pages B-2 to B-4.

The appendix narrative is supported in the administrative record by an undated one-page document entitled *Upper Truckee River Tributaries Eligibility Criteria Under Wild and Scenic Rivers Act*. This document consists of a table with ORVs listed on the vertical axis and tributaries unnamed but numbered 1 to 11 listed on the horizontal axis. It shows that nine tributaries of the upper Truckee possess one or more outstandingly remarkable scenic, recreation, geological, fish, wildlife, historic and cultural, and botanical values. Sometime after the development of this document, the IDT apparently revisited the ORVs identified in the table and subsequently determined that some of the potential recreation, geological, and historical/cultural ORVs were not river-related and were therefore no longer considered to be ORVs. This change was subsequently documented in Appendix B.

It should be noted that identification of potential ORVs in Appendix B is also inconsistent with other Forest Service documents. Appendix B states “While the IDT identified several trails that provide outstanding recreation values, these trails were found not to be river related.”¹⁵ This is inconsistent with and directly contradicts the Eight Eastside Rivers Report, which specifically identified the Pacific Crest Trail and the Tahoe Rim Trail as part of the overall “outstandingly remarkable recreational setting.”¹⁶ There is no explanation provided as to why the Forest Service believes that these trails do not contribute to the overall recreational setting in regard to the tributaries, given that the trails cross and parallel short segments of both the upper Truckee and several of its tributaries.

Suitability Findings For The Upper Truckee Tributaries

According to Appendix B, the 9 eligible tributaries with “potential” ORVs were presented to the LTBMU Forest Leadership Team (FLT). The FLT chose not to recommend the eligible tributaries. The FLT’s rationale is explained thusly:

“In considering the suitability criteria in FSH 1909.10¹⁷ Ch. 82.4, the FLT found that additional protection was not needed. The watershed is currently within an Inventoried Roadless Area, and would receive equivalent protection as a Backcountry Management Area in the Revised Forest Plan. This Management Area status would limit uses and activities, thus providing adequate protection for the valued attributes of the watershed. While several tributaries support populations of Lahontan Cutthroat Trout or are proposed areas for reintroduction, the Endangered Species Act provides stronger protection for this species than the Wild and Scenic Rivers Act, so no additional

¹⁵ Appendix B, pg. B-3.

¹⁶ Eight Eastside Rivers Report/FEIS pg. B.19-B.20.

¹⁷ FSH 1909.10 appears to be typo. The correct cite is FSH 1909.12.

protection is needed for this species. An additional factor considered was that some opposition to recommending additional tributaries had been expressed at the county level.” (Appendix B, pages B-2 to B-3)

Essentially, this rationale claims that the location of the upper Truckee and its tributaries in an Inventoried Roadless Area (IRA) and the area’s allocation to Backcountry Management provide protection “equivalent” to wild and scenic river designation. The rationale also posits that wild and scenic protection is not needed because the Endangered Species Act provides “stronger” protection for the Lahontan Cutthroat Trout than what would be provided by wild and scenic designation of the upper Truckee tributaries.

The decision by the FLT to find the upper Truckee tributaries non-suitable is further documented in the administrative record by an undated single-page document entitled *Upper Truckee River Tributaries Suitability Under Wild and Scenic Rivers (sic) Act*. This document consists of a two-column matrix listing suitability criteria outlined in FSH 1909.12, Ch. 82.4 in the left column and IDT Findings for each criterion in the right column. The specific suitability criteria of FSH 1909, Ch. 82.4 cited in the matrix included the four questions that each suitability study must answer, the seven suitability requirements that must be evaluated and documented, and an additional six suitability factors that may also be evaluated. The matrix is both interesting and relevant to the suitability discussion because it reveals both inherent bias and lack of basic knowledge about wild and scenic rivers by IDT members.

The matrix reveals a concern on the part of the IDT that protecting the upper Truckee tributaries could impact grazing – there is a specific note under the findings indicating the “Need to consider vacant grazing allotments.” The next set of findings makes the inaccurate claim that designation “would not add significant protection” and then summarizes the Forest Service’s theory that the IRA under the Roadless Area Conservation Rule and the ESA provide stronger protection. The IDT then contradicts its previously stated concern about grazing by noting parenthetically in the findings column that “Designation would not preclude grazing; FSH only requires ORVs be maintained. Eight Rivers decision approved grazing up to levels at time of designation.”

Nothing in FSH 1909.12, Ch. 82.4 requires or even suggests that the Forest Service should reject wild and scenic river protection in favor of supposed existing “equivalent” or “higher” protections. FSH 1909.12, Ch. 82.4 includes as one of the questions to be answered in the suitability study; “Is designation the best method for protecting the river corridor?” “Best method” of protection is the essential crux of this question. Neither Appendix B or the suitability matrix explain why the Forest Service believes that administrative protection provided by the IRA, Backcountry Management, and ESA are better than wild and scenic protection.

More importantly, the rationale in Appendix B and the suitability matrix fail to explain why the Forest Service feels that wild and scenic protection is apparently the “best method” for the main stem of the upper Truckee River but it is apparently not the “best method” for protecting its tributaries. This tortured rationale seems even more feckless because the tributaries share many of the same ORVs with the main stem. The half-hearted attempt to determine eligibility of the tributaries by identifying “potential” ORVs coupled with the baseless decision to not find any of the tributaries suitable strongly suggests an entirely subjective decision-making process.

There is a stark difference between the protections that the LTBMU claim are equivalent to or higher than the level of protection actually afforded wild and scenic rivers. The Roadless Area Conservation Rule protecting IRAs, the LTBMU’s Backcountry Management Area, and threatened species protection for Lahontan Cutthroat Trout are all administrative decisions that may be changed in the future by agency officials. In contrast, a Forest Service recommendation to designate a wild and scenic river often leads to wild and scenic legislation passed by Congress and signed by the President providing permanent protection for a river. Once this protection is legislated, only Congress and the President may remove the protection.

Two other crucial points not apparently considered in the suitability analysis for the upper Truckee tributaries is the absolute prohibition in the Wild & Scenic Rivers Act against dams and other damaging water resource projects and the Act’s mandate to protect and enhance the free-flowing character and specific ORVs of wild and scenic rivers. No Forest Service administrative management allocation provides the same level of absolute protection against dams and other damaging water resource projects as provided by wild and scenic. Even legislated Wilderness has a loophole allowing the President to approve dams in wilderness areas. While IRA or Backcountry administrative protections may generally protect rivers against activities such as road building and logging that could harm ORVs and water quality, they cannot adequately ensure compliance with the absolute protection and enhancement mandate of the Wild & Scenic Rivers Act.

Providing multiple layers of protection for wild and scenic rivers appears to be the rule rather than the exception on National Forests in California. The Forest Service has recommended for wild and scenic protection many river segments that already enjoy legislated Wilderness protection (see table below). The fact that these segments were already protected in Wilderness did not discourage the agency from complying with the declared policy of the United States “...that certain selected rivers of the Nation...shall be protected for the benefit and enjoyment of present and future generations.”¹⁸

RECOMMENDED RIVER	WILDERNESS	NATIONAL FOREST PLAN
Clear Creek	Siskiyou	1994 Klamath LRMP

¹⁸ 16 USC Ch. 28, Sec. 1271.

Dillon Creek	Siskiyou	1994 Klamath LRMP
Wooley Creek	Marble Mountain	1994 Klamath LRMP
Upper NF Salmon River	Marble Mountain	1994 Klamath LRMP
Elk Creek	Marble Mountain	1994 Klamath LRMP
Grider Creek	Marble Mountain	1994 Klamath LRMP
Kelsey Creek	Marble Mountain	1994 Klamath LRMP
Ukonom Creek	Marble Mountain	1994 Klamath LRMP
SF Russian Creek	Russian	1994 Klamath LRMP
Upper SF Salmon River	Trinity Alps	1994 Klamath LRMP
Canyon Creek	Trinity Alps	1995 Shasta-Trinity LRMP
Upper NF Trinity River	Trinity Alps	1995 Shasta-Trinity LRMP
Virgin Creek	Trinity Alps	1995 Shasta-Trinity LRMP
Upper Middle Eel River	Yolla Bolly	1995 Mendocino LRMP
Balm of Gilead Creek	Yolla Bolly	1995 Mendocino LRMP
Mill Creek	Ishi	1992 Lassen LRMP
Deer Creek	Ishi	1992 Lassen LRMP
NF Mokelumne River	Mokelumne	1991 Stanislaus LRMP
Clark Fork Stanislaus River	Carson-Iceberg	1991 Stanislaus LRMP
NF/MF San Joaquin River	Ansel Adams	1991 Sierra LRMP
Upper SF San Joaquin River	John Muir	1991 Sierra LRMP
Sespe Creek	Sespe	1988 Los Padres LRMP
Sisquoc River	San Rafael	1988 Los Padres LRMP
Big Sur River	Ventana	1988 Los Padres LRMP
Arroyo Seco River	Ventana	2006 Los Padres LRMP

Like legislated wild and scenic rivers, legislated wilderness is much stronger than the administrative protections offered by the LTBMU for upper Truckee tributaries in lieu of wild and scenic protection. Similarly, there are numerous examples of Forest Service recommended wild and scenic rivers that also enjoy administrative protection in LRMP-allocated backcountry non-motorized areas and other protective LRMP prescriptions. It's clear that the Forest Service tends to recommend wild and scenic protection even when existing legislative or administrative designations provide alternative protection. Congress apparently agrees with multi-layered river protection as it has designated 12 wild and scenic rivers in several existing wilderness areas, four of them as recently as 2009.

Another factor offered in Appendix B as to why the upper Truckee tributaries were not found suitable by the FLT is "some opposition... expressed at the county level." The suitability matrix warns that "Alpine County may oppose." Support or opposition to wild and scenic designation is one of the "additional suitability factors (that) may also be evaluated..." found in FSH 1909.12, Ch. 82.4. But a review of the Appendix N – Public Comments found no specific public comments either in support or against designation of the upper Truckee tributaries, representing a shocking failure of the public comment analysis process.

This must be a failure to fully document all public comments, as hundreds of public comments supporting wild and scenic protection for the upper Truckee and its

tributaries (including the detailed written comments submitted by Friends of the River and Sierra Forest Legacy) were emailed and mailed to the Forest Service, and were expressed verbally at the public meetings. At least Appendix B acknowledges that the review of upper Truckee tributaries was in response to public comment and the suitability matrix notes that “Multiple conservation organizations support” protection of the tributaries, but these important comments are not actually acknowledged in Appendix N.

More importantly, a thorough review of the actual written comments from other government agencies reprinted in Appendix N found no county comments opposing or even mentioning wild and scenic protection of the upper Truckee River and its tributaries. These include reprinted written comments from the counties of El Dorado and Placer in California, and Douglas County in Nevada. If Alpine County submitted any written comments, they are not documented in Appendix N.

The suitability matrix is correct in stating the designation would not preclude grazing, but it fails to note that the Forest Service has administratively decided to curtail grazing and courts have eliminated or greatly reduced grazing on wild and scenic rivers in order to protect ORVs and water quality. The matrix also correctly states that the FSH “only requires that ORVs be maintained” (both the verbs “maintain” and “protect” are used in the FSH in regard to ORVs). But the matrix also fails to note that the Wild & Scenic Rivers Act requires the protection and enhancement of ORVs once a river is designated by Congress. This is a considerably higher level of protection than the interim protection provided by the FSH.

The Eight Eastside Rivers Report did not “approve grazing levels at time of designation” as claimed in the matrix. In fact, the Eight Eastside Rivers FEIS anticipated increased potential for conflicts between livestock grazing and recreation use on the upper Truckee River.¹⁹ The Eight Eastside Rivers ROD noted that “existing traditional grazing use in the Meiss Meadow area (through which the upper Truckee flows) may continue, not exceeding present levels of utilization, following designation.”²⁰ This might have been the Forest Service’s understanding at the time of the original suitability recommendation for the upper Truckee River, but as previously mentioned, the agency and the courts have made proactive decisions on other wild and scenic rivers to curtail grazing to protect ORVs and water quality.

According to the LTBMU Final LRMP/FEIS, the 11,275-acre Meiss Grazing Allotment is currently vacant and the past grazing permit for this area was not reissued in 2002 due to resource concerns and inability to meet resource protection standards.²¹ In fact, potential adverse impacts on threatened Lahontan cutthroat trout and their habitat,

¹⁹ Eight Eastside Rivers FEIS, pg. V.9, Tahoe National Forest/LTBMU, July 1998.

²⁰ Eight Eastside Rivers ROD, pg. 8, Tahoe National Forest/LTBMU, February 1999.

²¹ LTBMU Final LRMP/FEIS, pg. 3-371.

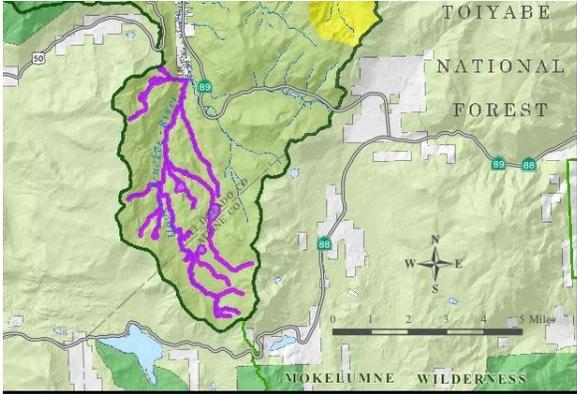
water quality, TES wildlife habitat, and conflicts with recreational use all contributed to the decision not to renew grazing along the upper Truckee River. Whether this decision was the result of its recommended river status or other more technical reasons is simply a matter of semantics at this point.

Friends of the River and Sierra Forest Legacy comments to the LTBMU Draft LRMP cited an important suitability factor listed in FSH 1909.12, Ch. 82.4 that we believe is essential to a fair and balanced assessment of the upper Truckee tributaries. That is the contribution of the upper Truckee tributaries to river system or basin integrity. This factor is particularly applicable to the upper Truckee River and its tributaries. According to FSH 1909.12, Ch. 82.4;

This factor reflects the benefits of a “systems” approach, for example, expanding the designated portion of a river in the National System or developing a legislative proposal for an entire river system (headwaters to mouth) or watershed. Numerous benefits may result from managing an entire river or watershed, including the ability to design a holistic protection strategy in partnership with other agencies and the public.

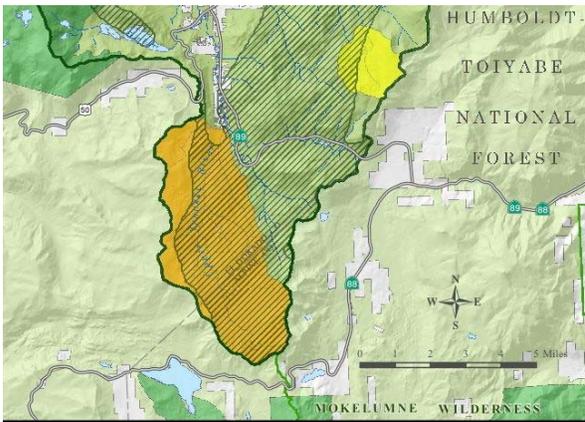
As previously noted, many of the upper Truckee’s documented ORVs are shared by its tributaries. These ORVs include important populations of and habitat for threatened Lahontan Cutthroat Trout, old growth forest habitat for several TES wildlife species, as well as important summer habitat for mule deer, dramatic scenery, and intensive and diverse recreation. Protection of all these values and the stream segments they are associated with would certainly benefit from a “systems” approach that considers the entire upper Truckee watershed, including the river and its tributaries.

The maps below from the LTBMU FEIS prove that the upper Truckee River and its tributaries share the same outstandingly remarkable fishery (Lahontan Cutthroat Trout) and wildlife (old growth forest habitat for spotted owl and goshawk) values. The same area and streams encompassed on these maps are displayed as wild and scenic river corridors in the proposed wild and scenic river corridors map produced by Friends of the River on the following page.



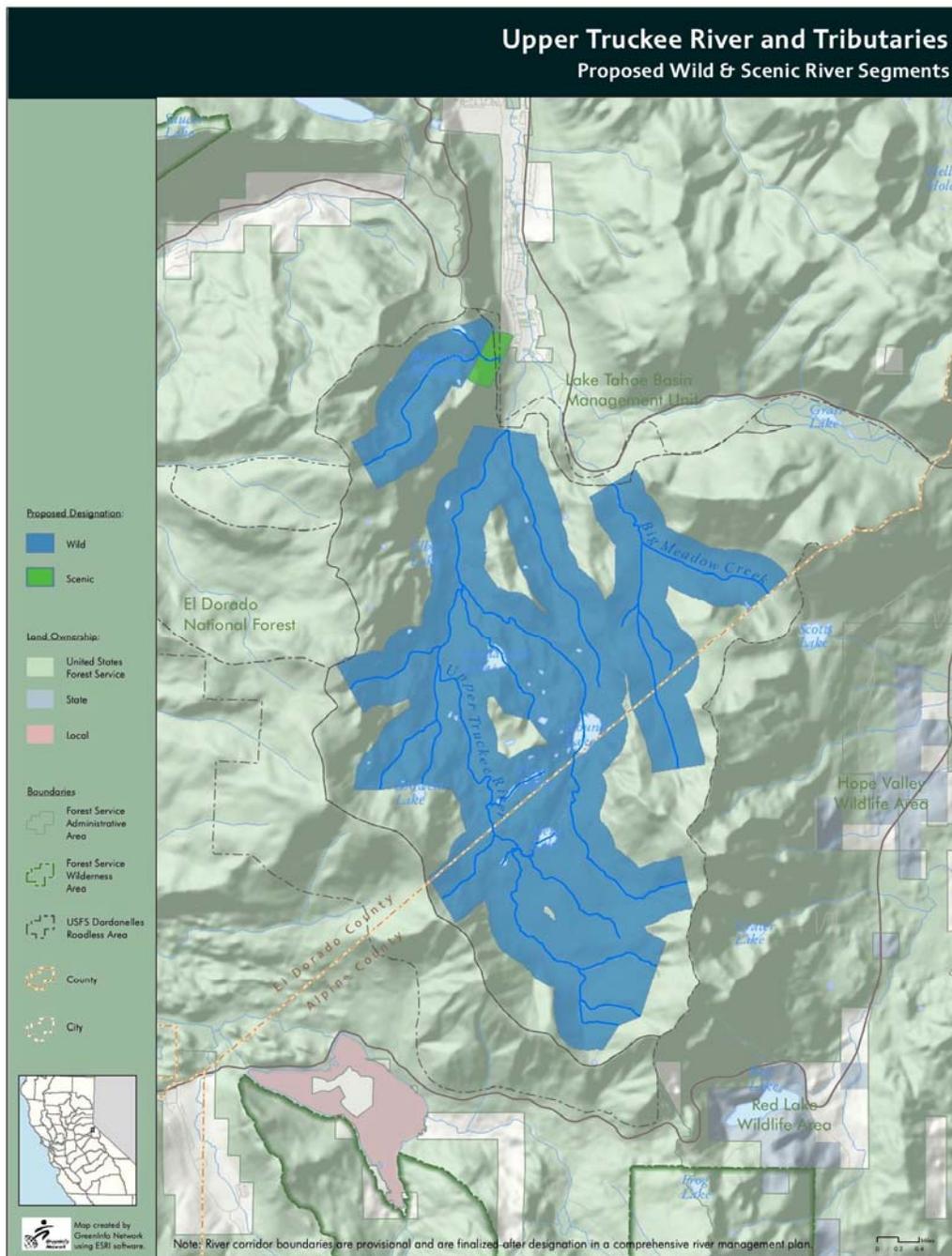
This excerpt from Forest Plan FEIS Map 13 shows that the Upper Truckee River and its tributaries provide important habitat for Lahontan Cutthroat Trout (marked in purple).

Forest Plan FEIS - Map 13



The excerpt from Forest Plan FEIS Map 12 shows that Upper Truckee River watershed is considered a Critical Aquatic Refuge (marked in orange) and an Old Forest Emphasis Area (marked in cross-hatching).

Forest Plan FEIS - Map 12



Perhaps the biggest failure associated with the suitability assessment of the upper Truckee tributaries is the fact that the public, which originally raised the issue of protecting the upper Truckee's tributaries in hundreds of comments in response to the LTBMU Draft LRMP/DEIS, were excluded from the suitability assessment of the tributaries, even though the FSH requires the Forest Service to collaboratively involve

the public throughout the evaluation process. As a result, the suitability assessment is full of inaccuracies and rife with false assumptions, and the quality of the end product is distinctly lacking.

Conclusion

The Forest Service's attempt at determining the suitability of the upper Truckee River tributaries in the LTBMU Final LRMP/FEIS simply raises more questions than it answers. For example:

- Does the identification of “potential” ORVs mean the tributaries are eligible or just potentially eligible?
- Why are some main stem upper Truckee River resources considered to be ORVs and these identical values on tributaries not considered ORVs?
- How can the Forest Service claim that its administrative management prescriptions for the tributaries provides equivalent protection even though the primary protection mandates of the Act to prohibit dams and damaging water resource projects and to protect and enhance the free flowing character and ORVs of the river were discounted in the assessment?
- Why does the LTBMU Forest Service assume that multiple levels of administrative and ultimately legislative protection are not needed for upper Truckee tributaries, when many existing and recommended rivers are located within existing Wilderness areas and in Backcountry management areas?
- Why does the Forest Service apparently apply its “in lieu” protection criteria differently between the main stem upper Truckee River and its tributaries?
- Why is the suitability factor promoting a “systems” approach to watershed protection ignored?
- Why were suitability decisions for the tributaries made by the Forest Service behind closed doors without public input or participation, in violation of the FSH to collaborate with the public?

In summary, the eligibility and suitability assessment of the upper Truckee tributaries appears tentative and uses imprecise and confusing language. The assessment incorrectly applies some suitability criteria while ignoring others and it introduces an extraneous issue (grazing) not now pertinent to the issue. More importantly the assessment was conducted out of public view without any collaboration or participation by the public.

Recommendations For Improvement

Reject the existing tentative and troubled eligibility and suitability assessment for the upper Truckee tributaries documented in the LTBMU Final LRMP/FEIS. Reconvene the IDT in a new process with full public participation and input to clarify the ORVs and overall eligibility of all upper Truckee tributaries. Conduct a rational suitability assessment that fully considers all suitability factors and criteria and seek public input on proposed decisions. If a supplemental or revised LRMP is required for the LTBMU, include the revised eligibility/suitability assessment for the upper Truckee tributaries in the supplemental or revised document.

The LTBMU Final LRMP fails to provide adequate interim protection for the recommended Upper Truckee Wild & Scenic River.

36 CFR Ch. II § 219.10(b)(v) requires that LRMPs include specific components, including standards and guidelines, to provide for the protection of rivers determined suitable for the National Wild and Scenic River System to protect the values that provide the basis for their suitability for inclusion in the system.

Detailed comments submitted by Friends of the River and Sierra Forest Legacy in response to the LTBMU Draft LRMP/DEIS noted the following problems and shortcomings in regard to plan components (or lack thereof) to ensure the protection of the recommended upper Truckee River:

- No standards and guidelines were proposed in the Draft LRMP/DEIS to ensure interim protection of the recommended river segment.
- No management area with a prescribed list of suitable, non-suitable, and restricted uses appropriate to wild and scenic rivers was proposed specifically for the management and protection recommended river segment.
- The recommended river segment was not marked on the Draft Forest Plan Map 1, which delineates management areas on the LTBMU.
- The recommended river segment was not marked in the Forest Plan DEIS Map 1, which depicts the management areas proposed in the preferred alternative.

In response to these comments, the LTBMU Final LRMP was revised to include on page 133 a new section entitled *3.5 Recommended Special Areas Standards and Guidelines* with a specific, if brief, standard and guideline (SG168) to protect recommended segment of the upper Truckee River and its free-flowing status and ORVs. In addition, this new section cites FSH 1909.12, Ch. 82.5 (Interim Management of Eligible or Suitable Rivers) and the National Wild and Scenic Rivers Act as supporting instruments.

Including the new Recommended Special Areas Standard and Guideline only partially rectifies the failure to include in the LTBMU Final LRMP/FEIS sufficient plan components to ensure protection of the recommended river segment.

Inexplicably, no management area is proposed for the recommended river, which means that the river is not delineated on the Forest Plan Map 1 and the Forest Plan DEIS Map 1 (which depicts the management areas proposed under the preferred alternative). These shortcomings are alarming because the Forest Plan maps are the typically the first tool that readers, including future Forest Service managers, will examine to determine how a certain area of the LTBMU is to be managed.

Instead, the recommended river is documented in a somewhat more obscure section of the LRMP on pages 101-103 entitled *2.5 Recommended Special Areas*. This section does include a map of the recommended river but the map does not show the proposed Backcountry Management Area that encompasses the river. This essentially separates the recommended river physically and visually in the LRMP from the proposed management area that encompasses the river.

The narrative description of Backcountry Areas on LRMP page 81 fails to even mention that this management area includes the recommended river. Although the list of suitable, non-suitable, and restricted uses pertinent to Backcountry Areas on LRMP page 86 may provide general protection for the recommended river, they do not necessarily guarantee the protection of the river's free-flowing condition and ORVs as required by the FSH and the Act.

Most existing LRMPs in California with recommended wild and scenic rivers delineate the recommended rivers on the Forest Plan and EIS Preferred Alternative maps. They also provide specific management areas or prescriptions for recommended rivers that list allowed and prohibited activities and they propose explicit standard and guidelines for recommended river management. Because of the wide latitude provided individual forests in the development of their LRMPs, details vary of course, but just a few examples of LRMPs that include some or all of these key plan components for recommended rivers include the Klamath, Mendocino, Lassen, Eldorado, Stanislaus, Sierra, Sequoia, and Los Padres National Forests.

The quality of the LTBMU LRMP's documentation and treatment of the recommended river is important. Forest Service budgets are shrinking and forests are managed by fewer personnel over time. Staff retirement and postings to other forests significantly contribute to the loss of institutional memor. In order to ensure that the recommended river is fully protected, the LRMP needs to be as explicit and fulsome as possible in terms of plan components that spell out the river's management.

Conclusion

Although the LTBMU Final LRMP now includes a brief standard and guideline aimed at providing interim protection for the recommended river, it still lacks a Management Area and Management Area description that ensures protection of the river. Moreover, the Forest Plan Management Area Map and the FEIS Preferred Alternative Management Area Map fail to delineate the recommended river. This lack of basic information in the LRMP could spell trouble in the future as Forest Service personnel retire or move on and the agency loses institutional memory of the recommended river.

Create a management area specifically for the recommended river with identified suitable, non-suitable, and restricted uses that ensure protection of the river's free-flowing condition and ORVs. Delineate the recommended river management area on the appropriate LRMP and EIS maps. At the minimum, revise the existing Backcountry Management Area narrative description to explicitly mention the recommended river and list specific suitable, non-suitable, and restrict uses that ensure protection of the recommended river. Delineate the recommended river in the Backcountry Management Area maps for the LRMP and EIS.

Objection Issue 6--Failure to appropriately consider Wilderness values and Wilderness designation on the LTBMU.

Unfortunately, when it comes to roadless areas and wilderness recommendations, the LRMP and FEIS fall short in many respects.

Please note that for the purposes of these comments the term "roadless area" refers to any wilderness-eligible area of federal public land and it does not refer exclusively to the inventoried roadless areas (IRA) identified during the USFS' Roadless Area Review and Evaluation (RARE) surveys that were finalized in 1979. In the LTBMU, all roadless lands are combinations of IRAs identified during RARE and additional roadless lands identified by the California Wilderness Coalition (CWC). We called the latter "citizen-identified roadless areas" (CIRA).

Unfortunately, despite our requests to do so both during scoping and in our comments on the Draft LRMP, the LRMP and FEIS fail to:

- Identify *all* wilderness-eligible lands in the LTBMU and include them in the analysis and alternatives;
- Thoroughly examine the impacts of placing all or portions of individual roadless areas under non-wilderness prescriptions;
- Offer viable wilderness recommendations; and
- Offer a sufficient range of alternatives to address roadless and wilderness concerns.

In the following pages we will expand upon each of these points.

The USFS has failed to identify and include in the analysis all wilderness-eligible land in the LTBMU

In our scoping comments and comments on the Draft LRMP, we requested that the USFS identify and examine *all* roadless and wilderness-eligible lands in the LTBMU and to not simply confine its examination to IRAs identified during the RARE surveys that were concluded in 1979.

From 1998-2001 the CWC conducted a “Citizens Wilderness Inventory” (CWI) to identify all wilderness-eligible lands in the Golden State. Areas were determined to be eligible for wilderness designation if, as is stated in the Wilderness Act of 1964, they:

- “...generally [appeared] to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable”;
- “...[had] outstanding opportunities for solitude or a primitive and unconfined type of recreation”;
- were at least 5,000 acres in size or are “of sufficient size as to make practicable [their] preservation and use in an unimpaired condition”; and
- “...may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.”

The CWI was the first attempt by any governmental or non-governmental organization to conduct a comprehensive survey of California’s wilderness-eligible lands. It consisted of the following steps:

1. Using all available USFS, National Park Service (NPS) and Bureau of Land Management (BLM) maps to identify the preliminary boundaries of unroaded areas for further review.
2. Reviewing hardcopy aerial photographs of the areas identified in step 1. This required CWC staff to visit the headquarters of every USFS, BLM and NPS unit in the state. Substantially disturbed areas were excluded from the CWI, including many IRAs that had been developed since the RARE surveys.
3. Draft 7.5 minute topographic maps of wilderness-eligible areas were produced after the aerial photo analysis. The boundaries of these draft maps were then verified in the field by staff and volunteers who surveyed them by foot, vehicle, or mountain bike. All human-caused intrusions were carefully documented with notes and photographs. For each intrusion, the surveyor determined whether or not the disturbance was so great that it had to be excluded from the wilderness-

eligible area. In addition to documenting damage, surveyors also noted and photographed positive wilderness attributes such as wildlife, scenery, pristine streams and other features and values. The average wilderness-eligible area required at least 20 hours to survey, and often much more time than that.

4. The data from the field was then used to develop final maps of these CIRAs.

The CWI identified 7.4 million acres of land in over 300 separate areas that still qualify for wilderness designation on federal lands in California. This total included 5,254,228 acres of NFS land, which is 16 percent more than the 4,417,000 acres of RARE IRAs that existed at the time of the 2001 *Forest Service Roadless Area Conservation Final Environmental Impact Statement* (RAC FEIS).

Between 2002 and 2009 the CWI maps were used as the starting point for successful wilderness legislation affecting Sequoia-Kings Canyon National Park, Pinnacles National Monument, Joshua Tree National Park, the BLM's Ukiah, Arcata, Hollister, Palm Springs-South Coast and Ridgecrest field offices and the San Bernardino, Angeles, Inyo, Mendocino, Cleveland, Six Rivers, Humboldt-Toiyabe and Los Padres national forests. Where necessary and appropriate during public comment periods on proposed development projects or management plan revisions CWC and other organizations have asked agencies to protect CIRAs from development. Most notably during the Angeles, San Bernardino, Cleveland and Los Padres land management plan revisions several CIRA lands were designated as "other unroaded areas" by the USFS and some were even recommended for wilderness designation.

With the advent of more accurate agency transportation maps, the easy availability of multiple sources of high-resolution aerial photographs, and improvements in digital cameras and GPS and GIS technology the CWC began updating the CIRA maps in 2011 and plans to complete its resurvey prior to the start of the scoping periods for each land management plan revision in California. This time around the CWC's survey methods include the preliminary identification of potential roadless areas using multiple agency GIS layers, the careful examination of at least two sets of high-resolution aerial photographs per wilderness-eligible area and in using contractors to verify the boundaries in the field. In this analysis the CWC's goal is to exclude all of the following from the CIRAs:

- With some exceptions, all legally-open roads and motorized trails
- Areas that are excessively marred by illegal vehicle use
- Heavily-logged areas
- Large, maintained plantations
- Heavily-developed private land
- Campgrounds
- Reservoirs (not including a few small stock ponds)

- Areas covered by extensive type-conversions
- Maintained fuelbreaks sometimes described as "shaded fuelbreaks" or defensible fuel profile zones (this does not include mere bulldozer lines constructed during fires)
- Helispots
- Drafting sources
- Communication sites
- Heavily mined areas
- Utility corridors

Despite this, some of the CIRAs include:

- A small amount of forest that may have been logged. While the CWC sought to exclude all heavily-logged areas and obvious plantations it is quite possible that a few areas were overlooked. Regardless, it is worth noting that the NWPS includes many areas that were either partially or completely logged, so the Wilderness Act does not require that an area be unlogged for it to be designated as wilderness.
- Minor historic mining disturbances. Major disturbances were excluded. Please note that old mines and other signs of mineral development exist throughout the NWPS.
- Roads and motorized trails that are no longer legally open to the public. For the most part these routes are recovering because they are rarely or never used. However, some of them continue to experience a certain degree of unauthorized use.
- Developments associated with grazing allotments. These features exist throughout the NWPS, so they were not excluded.
- Bulldozer lines constructed during fires. Since bulldozers are allowed in designated wilderness during fires and because there are ridges scarred by these machines throughout the NWPS, CWC did not exclude all of these lines.

The CWI maps of the Meiss Meadows, Granite Chief Wilderness additions, Desolation Wilderness additions and Freel Peak CIRAs were submitted during the scoping period and again in our comments on the Draft LRMP and DEIS they are included again in Attachment 1, below. As you can see, the current roadless lands on the California-portion of the LTBMU consists of 38,460 acres of RARE lands and another 12,570 acres of CIRA roadless lands.

We are quite grateful that the LTBMU designated 3,600 acres of the Granite Chief CIRA and designated it to Stanford Creek Backcountry Management Area. However, we are puzzled as to why the USFS failed to recognize the rest of our CIRAs, such as those in the Freel Peak region.

The LTBMU certainly has the authority to consider the CIRAs along with the IRAs in the forest planning process. For example, the 1982 planning regulations state that:

Sec. 219.17 Evaluation of roadless areas.

(a) Unless otherwise provided by law, roadless areas within the National Forest System shall be evaluated and considered for recommendation as potential wilderness areas during the forest planning process, as provided in paragraphs (a) (1) and (2) of this section.

(1) During analysis of the management situation, the following areas shall be subject to evaluation:

(i) Roadless areas including those previously inventoried in the second roadless area review and evaluation (RARE II), in a unit plan, or in a forest plan, which remain essentially roadless and undeveloped, and which have not yet been designated as wilderness or for nonwilderness uses by law. *In addition, other essentially roadless areas may be subject to evaluation at the discretion of the Forest Supervisor.* [emphasis added]

The Forest Service Manual (FSM) 1923.03 and Forest Service Handbook (FSH) 1909.12, chapter 70, offer more detail regarding the areas that must be evaluated:

3(a). *Newly identified roadless, undeveloped areas* and areas (1) previously identified in the Forest Service Roadless Area Conservation Final Environmental Impact Statement (Volume 2, November 2000), (2) in a unit plan, or (3) in a land management plan, which remain roadless and undeveloped and have not yet been designated as wilderness or for nonwilderness uses by law. [emphasis added]

As both the 1982 planning regulations and the new planning rule clearly indicate, the USFS has the authority to look beyond IRAs at “other essentially roadless areas,” at “Newly identified areas” and at “undeveloped areas.”

It is simply impossible for the USFS to properly discuss roadless area issues without first determining where the roadless areas are. It is critically important that the LTBMU accurately map *all* roadless areas during the LRMP development process because of the many important social and ecological benefits these areas provide. Chapter 3, pages 3-7 of the RAC FEIS offers an excellent summary of these values:

- Clean water for domestic, agricultural, and industrial uses, that helps to maintain abundant and healthy fish and wildlife populations, and that provides the basis for many forms of outdoor recreation;
- Undisturbed or less disturbed habitat that conserves native biodiversity by providing areas where nonnative invasive species are rare, uncommon, or absent;
- Habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land;
- Opportunities for people to enjoy high-quality non-motorized recreation activities, including hiking, camping, mountain biking, picnicking, wildlife viewing, hunting, fishing, cross-country skiing, swimming and whitewater boating;
- “Reference landscapes” that can provide comparison areas for scientists seeking to evaluate and monitor the differences between natural settings and more intensely managed areas;
- High quality scenery that contributes directly to local tourism and to real estate values in neighboring communities; and
- Many important Native American cultural sites and valuable historical resources.

Once again, we respectfully request that the USFS identify and examine *all* of the LTBMU’s roadless lands. If the LTBMU fails to do so, the ROD, LRMP and FEIS will violate NEPA by failing to take a “hard look” at roadless issues, by failing to include a “full and fair discussion” of the topic and by failing to include a “full range” of alternatives that respond to public concerns.

The USFS has failed to thoroughly examine the impacts of placing all or portions of roadless areas under non-wilderness prescriptions

In our scoping comments and in our comments on the Draft LRMP and DEIS we requested that the LRMP and EIS include a thorough examination of the direct effects, indirect effects and cumulative impacts of a proposal to place an IRA or other roadless area in a management zone that allows activities that could impair its wilderness character. The RACR FEIS offers a detailed description of some of the issues that should be studied, described and discussed for each alternative in an LRMP (see page3-21 to 3-242). These issues include:

- The projected amount and impact of road construction in IRAs;
- The costs associated with maintaining new roads in IRAs;
- The risks of reducing water quality in IRAs;
- Impacts to air resources from IRA development;
- Economic impacts;
- Consequences of and for fire and fuels management in IRAs;

- Impacts of insects and disease in IRAs;
- Impacts to the size of roadless areas (as the RAC FEIS states at 3-136, “There is a positive relationship between size of an area protected from human disturbance and maintenance of biodiversity”);
- Impacts to IRAs of development at various elevation distributions;
- Impacts to terrestrial animal habitat, including fragmentation and connectivity, edge effects, habitat suitability and effectiveness, early successional habitat, game species and late-successional habitat;
- Impacts to aquatic animal habitat and species in IRAs, including fragmentation and connectivity, water hydrology and stream channel morphology, habitat complexity, water quality, pools, riparian vegetation, introduction of nonnative species and diseases and over-harvest and illegal introduction;
- Impacts to terrestrial and aquatic plant species in IRAs, including non-native invasives, habitat fragmentation and effects of temporary roads;
- Impacts to threatened, endangered, proposed and sensitive species in IRAs;
- Impacts to research, monitoring and reference landscapes in IRAs;
- Consequences for non-mechanized, mechanized and motorized recreation in IRAs;
- Impacts to scenic quality in IRAs;
- Consequences to heritage resources in IRAs; and
- Impacts from IRA development on existing wilderness and the possibility of future wilderness designation.

Lastly, we asked that if all or part of an IRA or other roadless area is allocated to a non-wilderness prescription, that the LRMP and EIS discuss what mitigation, if any, the USFS proposes for the loss of wilderness characteristics and the effects on plant and animal communities.

Unfortunately, the LRMP and FEIS do not contain even the most basic information on the impacts of the proposed action and the proposed alternatives on the wilderness character of the LTBMU’s roadless lands. For example, the documents do not:

- Consider the impacts of the proposed action and the alternatives on any of the CIRAs we described in our scoping comments;
- Include an acreage breakdown by alternative and by management area illustrating how each IRA and CIRA will be zoned, and the activities that are allowed in each zone that could damage a roadless area’s wilderness character; and

- Thoroughly examine the impacts of each alternative on the 18 issues listed above from the RACR FEIS.

Under all of the alternatives offered in the LRMP and FEIS the LTBMU's roadless lands face threats to their wilderness character from logging (called by various other names, including "fuels reduction" and "vegetation restoration"), the establishment of developed recreation sites, mountain bike use, ORV use (both winter and summer), and the construction of resorts, administrative facilities, roads, ski areas and utilities. Despite this, as is illustrated in Attachment 4, below, the FEIS discusses only a few of these potential impacts, and never in a comprehensive and systematic way.

NEPA, 42 U.S.C. § 4321 et seq., and the CEQ's implementing regulations, 40 C.F.R. §§ 1500-1517, require that each federal agency prepare a EIS for every major federal action significantly affecting the environment. 42 U.S.C. § 4332(C). The purpose of an EIS is to inform the decision-makers and the public of the significant environmental impacts of the proposed action, means to mitigate those impacts, and reasonable alternatives that will have lesser environmental consequences. An EIS must assess the environmental impacts of the proposed action, including direct effects, indirect effects, and cumulative impacts. 40 C.F.R. §§ 1502, 1508.7-1508.8. NEPA also requires federal agencies to use high quality, accurate scientific information and ensure the scientific integrity of the analysis in an EIS. See 40 C.F.R. § 1500.1(b); 40 C.F.R. § 1502.24.

Despite this, the USFS has utterly failed in the FEIS to examine the direct effects, indirect effects, and cumulative impacts of placing the majority of IRAs and CIRAs in zones where development is allowed, despite the fact that some roadless areas could lose their wilderness character over the life of the plan as a result. The FEIS therefore violates FSH 1909.12 by failing to "Include site specific statements of the environmental consequences that a nonwilderness designation would have on...roadless area(s)." Furthermore, the plan fails to "Discuss mitigation measures to avoid or minimize the impact or loss of wilderness characteristics."

The possibility of subsequent NEPA documents fails to address the impacts of placing IRAs in zones where development and other activities are allowed. The FS must comply with NEPA "at the earliest possible time to insure that planning and decisions reflect environmental values." 40 C.F.R. § 1501.2. A project-by-project NEPA analysis will not and cannot address the combined and cumulative regional and local environmental impacts of allowing such development to occur in the first place. As the USFS concludes on page 1-15 in the RACR FEIS:

Regardless of how well informed individual decisions may be at the local level, any new road building in inventoried roadless areas still results in a loss of roadless characteristics. When local officials evaluate the impacts of their decision to build a road into a roadless area, the incremental effect of the decision is considered.

However, when these individual decisions are aggregated over time...the resulting ecological and social outcomes resulting from the loss of roadless areas may become substantial.

The FSH at 1909.12-92-1, 4.19(c)(5) states that a land and resource management plan must “Describe the potential environmental consequences of a wilderness and a nonwilderness recommendation.” At FSH 1909.12-92-1, 4.19(c)(5)(b) the USFS is required to:

Discuss the impact on the roadless area of a wilderness designation and the impact of each nonwilderness prescription. Show the social and economic effects in each case. Include mitigation, if any, for loss of wilderness characteristics and the effects on plant and animal communities.

The FEIS fails to offer this information in any comprehensive way. It is not enough to make “conclusory” or “perfunctory references” to cumulative impacts or to continue to use the same boilerplate language throughout the DEIS. *Natural Resources Defense Council v. Hodel*, 865 F.2d 288, 298-99 (D.C. Cir. 1988). Cumulative effects analysis requires “some quantified or detailed information. . .” *Neighbors of Cuddy Mountain v. U.S.F.S.*, 137 F.3d 1372, 1379 (9th Cir. 1998). “General statements about ‘possible’ effects and ‘some risk’ do not constitute a ‘hard look’ absent a justification regarding why more definitive information could not be provided.” *Id.* at 1380.

More precisely, the FEIS fails to consider the impacts the preferred alternative and the other alternatives would have on the natural integrity, apparent naturalness, remoteness, solitude, special features, manageability, logical boundaries, and special places or values in the LTBMU’s IRAs and CIRAs. Thus, the effect of the proposed action on the wild character of the affected roadless areas was improperly studied in the FEIS (or more precisely, not studied at all) and therefore it does not satisfy the detailed analysis requirements set forth in 36 CFR 219.17.

The USFS has failed to offer a sufficient range of alternatives to address roadless and wilderness concerns

A mere 15.9% of the LTBMU is designated as wilderness. This is rather startling given the ecological importance of the region, the growing demand for non-motorized recreation and the belief many of us hold that America’s great natural treasures should be protected as much as is reasonably possible by our nation’s premier conservation law.

To make matters worse, of the 51,030 acres of wilderness-eligible areas in the California-portion of the LTBMU, under the preferred alternative 100 percent would be included in land-use zones allowing types of development and recreation activities that can degrade their wild character over time.

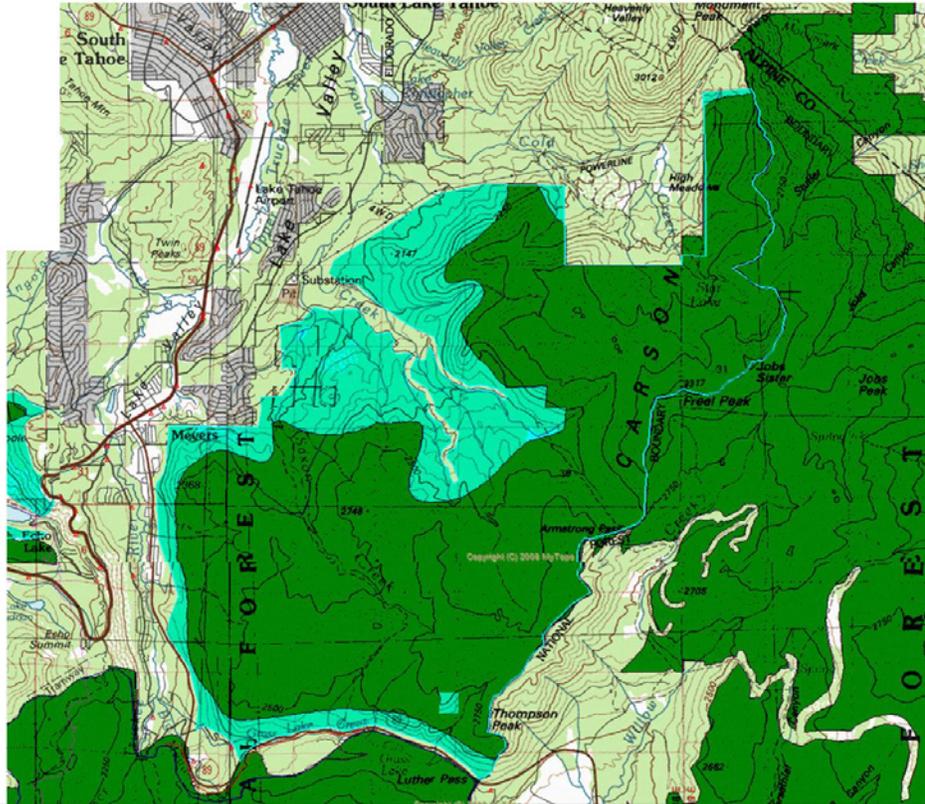
In the alternatives that include wilderness recommendations, the proposals for the Freel Peak IRA and Dardanelles IRA should have been adjusted to exclude the trails where mountain bikes are allowed in order to make them more viable and enforceable. We requested this during scoping and in our comments on the Draft LRMP and DEIS, but the USFS failed to make the effort.

Recommendation for Improvement--Requested corrective actions

(1) In order to properly recognize and manage all of the roadless lands in Freel Peak, and not just the IRA boundaries identified in the 1970s, we request that the areas shown in blue, below, be recognized as roadless.

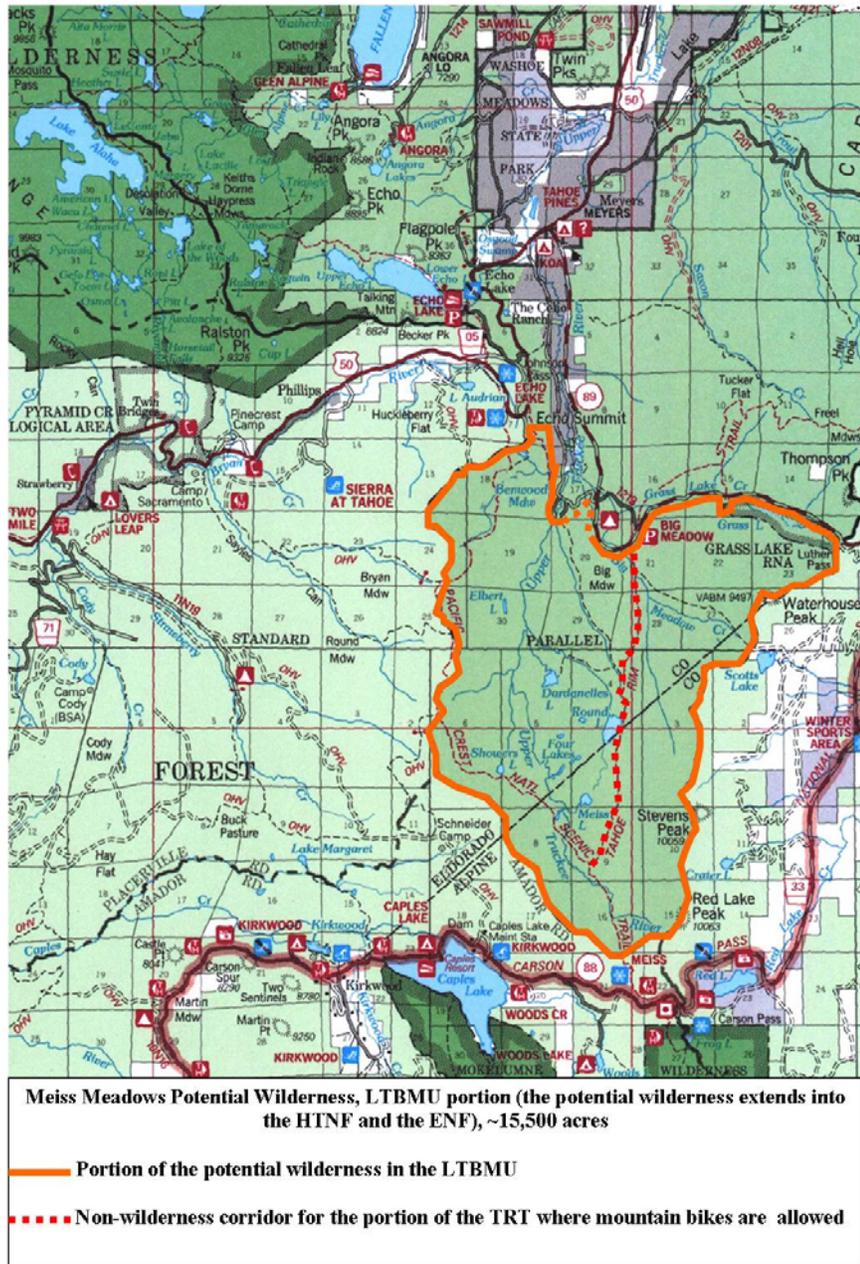
(2) Provide a more comprehensive assessment of the impacts to the roadless lands of the various alternatives described in the FEIS. Use the list of 18 issues from the RACR, listed above.

(3) To both provide a sufficient range of alternatives and to offer more viable wilderness recommendations, please recommend both the expanded Freel Peak Roadless Area shown in green and blue below, and the Dardanelles Roadless Area, as wilderness. However, please exclude all trails from the recommended wilderness areas that are open to mountain bikes. The non-wilderness trail corridors should be managed as backcountry.



FREEL PEAK ROADLESS LANDS

- Freel Peak IRA
- Freel Peak CIRA



NOTE: See Appendix-A (Below) for an additional Objection letter from the Tahoe Area Sierra Club focused on the failure of the Lake Tahoe Basin Management Unit's Forest Plan to include new designated wilderness areas.

Objection Issue 7--Failure to provide an adequate, science-based monitoring and adaptive management plan responsive to the critical issues on the LTBMU.

We have raised these concerns in our Forest Plan Revision Scoping Comment Letter (April 29, 2010) and in our comments on the Draft Plan and DEIS (August 29, 2012).

Volume III, Appendix A-The LTBMU Forest Plan Monitoring and Evaluation Plan ("Monitoring Plan") fails to include components that effectively inform the LTBMU regarding impacts of the new Forest Plan. Below are the key objection points:

1) Lack of any adaptive management program for all aspects of the monitoring programs. The FEIS claims that adaptive management will lead to changes in forest management over the life of the plan. *See e.g.*, FEIS, pp. FEIS 2-254 ("In implementing the revised forest plan, adaptive management may permit for greater flexibility for forest restoration. However, the model does not have the ability to predict such adaptive changes."); 3-333 ("SPECTRUM model does not use an adaptive management framework which would serve as the cornerstone of the management approach under any alternative."); 3-419 ("[T]his prescription may be adjusted and improved through monitoring and adaptive management in the future,"); 3-509 ("Ultimately, restoration of PACs would proceed under an adaptive management framework in which response to restoration would provide insight to the design of potential future treatments."); 3-519 (concept of ecosystem management "aims to protect ecosystem structure and function through adaptive management to maintain both biodiversity as well as adaptive capacity."); 3-545 ("Long term monitoring programs are in place to track effectiveness of existing and future efforts, and to inform adaptive management of the restoration program.")

However, this assertion is wholly illusory given the lack of any adaptive management component in the Monitoring Plan. As set forth in Britting, 2012:

In addition to management prescriptions, essential elements of an adaptive management strategy include (1) a monitoring strategy; (2) a mechanism and schedule for review of monitoring data; (3) a mechanism for public involvement in the adaptive management process; and (4) a clear set of criteria and process by which the management process itself can be evaluated and modified. Additionally, the forest plans should identify the critical research questions guiding adaptive management, recommend management actions to facilitate their experimental approach to adaptation at a landscape scale, and include a detailed plan for accomplishing the necessary research. Adaptive management strategies should be clearly articulated in each forest plan, implementable within existing and foreseeable budgetary constraints, and transparently executed with full public involvement (Nie and Schultz 2011; see USFS 2012 .

The Monitoring Plan contains none of the components of an adaptive management program. Instead, monitoring is infrequent, and the results of the monitoring do not result in any systematic evaluation by the Forest Service that would lead to changes in management techniques that are correlated with potentially significant impacts.

2) Prescriptions in the Preferred Alternative (E) include high levels of logging, as well as treatment options and exemptions to current management not utilized before in the Sierra Nevada. These treatment exemptions cited here and elsewhere in our Objection Letter increase risk to species where population viability and habitat loss is already a concern. These prescriptions and exemptions include:

- Substantial loss of spotted owl nesting habitat including 24,131 of suitable owl habitat (44% of total) and 8,946 acres of nesting habitat (29% of total) over the course of the modeled fuel reduction treatments;
- CSO/HRCA treatment exemptions (SG 88; 90; 91; 92 Forest Plan p. 117)
- >30 tree removal b-c-d-f (SG 33, Forest Plan p. 110)
- Openings from 1-10 acres (SG 31 Forest Plan p. 109)

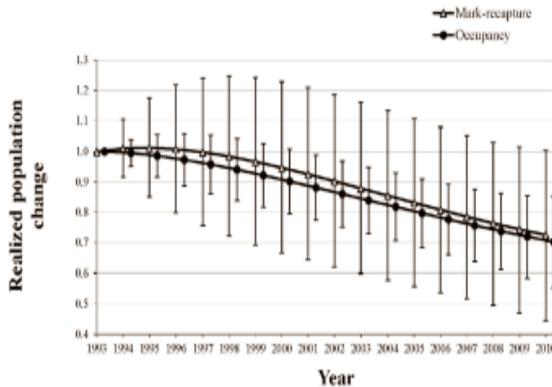
As discussed above, there is no specific indicator or threshold established in the monitoring plan (Appendix A) to track, interpret, review or reconsider actions related to these (above) standards. For example, the Status and Trend monitoring described on A-10 has a reporting frequency of once every 10 years for spotted owl status and trend. This status and trend monitoring requirement will tell the Forest Service nothing about the cause and effect relationship to a change in status or trend. The Forest Service won't be able to determine if the higher risk prescriptions mentioned above had a positive, neutral, or negative effect on spotted owl survival or occupancy. The Monitoring Plan desired conditions for (Habitat & Species Diversity A-8) to be monitored are focused on Objectives to restore 6 Spotted Owl PACS and 7 Goshawk PACs in the planning period. This is a treatment-rate objective that includes the options for high risk treatment exemptions (above) and is absent any metric focused explicitly on the effects of the risk-taking. For example, in *Western Watersheds Proj. v. United States Forest Serv.*, No. 05-189, 2006 WL 292010 (D. Idaho Feb. 7, 2006), and other cases where the courts have rejected plans that rely on ill-defined and unenforceable adaptive management or monitoring plans to protect wildlife. See *Natural Res. Defense Council v. Kempthorne*, 506 F. Supp. 2d 322, 356 (E.D. Cal. 2007) (rejecting an adaptive management plan that had "no quantified objectives or required mitigation measures").

While the Monitoring Plan tracks forest structure, composition, resilience and vegetation diversity (Monitoring Plan A-2), the Monitoring Plan lacks specific measures to assess the impacts of the untested exemptions.

Despite the statements in the Plan/FEIS that the >30" tree removal will be limited, the discretion to use this exception (mentioned in more detail in Objection #4) is limitless,

lacking an effects analysis in the FEIS and is absent any monitoring protocol for how this standard (SG37) will be used. There is no required tracking of how often the >30" tree removal is utilized in project implementation. This ill-defined, unanalyzed and currently untraceable exemption is highly risky and contrary to law.

- CA Spotted owl is in decline in the Sierra Nevada (Keane 2012, Connor et al. 2013, Tempel 2013) and this decline is also represented in the most recent 2012 Forest Monitoring Report from Region 5 for the forest adjacent to the LTBMU.



These significant trends and concerns call for more intensive monitoring to limit population declines and maintain species occupancy in the plan. These issues (population trends, reliance on poor quality habitat, proposed high risk exemptions) must be addressed with explicit protection standards (identified here and elsewhere in our objection). These concerns also need explicit monitoring indicators, triggers or check in points to assess management impacts, and monitoring periods of shorter frequency do to the high risk nature of proposed exemptions and current poor habitat and species risks on the LTBMU.

3) No monitoring or adaptive management for marten: There is no evidence that Pacific marten populations aren't trending toward increased isolation and risk. The new plan will degrade late-seral closed canopy Red fir habitat. SG 68 only protects marten dens when they are accidentally discovered. There is no intentional monitoring of marten to find dens. Monitoring marten occupancy in areas proposed for treatments with track plates, camera stations and "scat dogs" is feasible and has been utilized broadly elsewhere throughout the Sierra Nevada.

4) MIS Monitoring relies on Regional Monitoring efforts but lack specific monitoring for MIS in the LTBMU as required in the 1982 Planning Rule 219.19. The 2007 R5 MIS Amendment suggest regional monitoring efforts will suffice for the selected vegetation types and their wildlife indicators but there is no Regional population monitoring for Northern Flying Squirrel, a LSCC indicator.

5_Lack of monitoring and adaptive management for fire treatments. While we applaud the increase potential for fire use in threat zone of WUI under Alternative E, we also the Forest Service stating that there will not likely be much use of lightning fire in the WUI-Threat Zone.

Vol I. p. 3-219 there are an average annual 350 lightning strikes on the LTBMU in the areas where managed fire could be used for resource benefit. This is a huge opportunity for increasing the pace and scale of restoration in the LTBMU with 130,740 acres available for managed fire use (Vol. p. 3-229). Unfortunately, on the same page, the Forest Service admits that the likelihood for increases for more managed fire is low.

This is another case where the LTBMU Monitoring Plan lacks specific indicators and measures to assess the value and opportunity for more fire treatment in the Threat Zone as a viable restoration tool. Monitoring requirements to 1) have fire plans ready prior to each lightning season, and 2) track lightning fire use in restoration with objectives to increase its use would allow managers to gather information on challenges, teach the public about the value of using fire in this strongly fire associated environment and help managers prepare and refine strategies for managed fire use in the future.

Recommendations for Improvements

1) Make Plan Improvements now. The Final 2012 Planning Rule is effective on April 9, 2012. The LTBMU Forest Plan Revision process won't have a final decision until after this date in 2014. The 2012 Planning Rule § 219.12 (c) requires forest plans developed under a previous rule be updated to 2012 Planning Rule requirements within 4 years of the above date. Given that there is only 2 years left before that new requirements will call for an update in the LTBMU Monitoring Plan is seem prudent to tailor the current effort on the LTBMU to track the 2012 Monitoring requirements in § 219.12 (c).

The 1982 Forest Planning Rule 36 C.F.R § 219.12 (k) states that, "monitoring requirements identified in the forest plan shall provide for –

- (1) A quantified estimate of the performance outputs and services with those projected by the forest plan;
- (2) Documentation of the measured prescriptions and effects, including significant changes in productivity of the land;

The current Monitoring Plan falls far short on the need to track impacts (management-related or not) on at risk species and key ecological indicators for the LTBMU. The fact that the indicator metrics are general and not quantified and lack any mention of important thresholds is not consistent with the best available science. The Monitoring Plan's lack of thresholds of change will provide little solid information to inform the decision maker as to the severity of change (tied to a reasonable benchmark) to judge when and if to take action. The action could to loosen a protection measure, strengthen

it, or change a monitoring frequency, intensity or type of approach. There is no explicit adaptive management strategy in the Monitoring Plan although the words adaptive management are mentioned on page A-1 of the Monitoring Plan. Transparent Adaptive Management requires clear objectives and some setting of thresholds and trigger points that drive a

There are 3 key elements in the 2012 Planning Rule that should be initiated within the LTBMU Monitoring Plan: 1) The identification of focal species to assess ecological conditions within the plan area:

- The Pileated woodpecker, associated with late-successional, closed-canopy forests, should be considered both as a “forest engineer” for its cavity excavation capacity and its ability to facilitate heart rot fungus (PSW-GTR-181 Deadwood Symposium Proceedings 1999, p. 257).
- A second species should be the Northern flying squirrel due to it being a key prey resource for spotted owls and other species in late-successional, closed-canopy forests.
- Third should be the Hairy woodpecker for its association with snags in green forests.

We understand the Hairy woodpecker and Northern flying squirrel are MIS under the 2007 amendment. There is no evidence that the Northern flying squirrel population monitoring requirements are being met. Pileated woodpeckers are not current an MIS species, but have strong support for focal species status in the science community (see Chapter 8, Conservation of Fishers Col. 1 Conservation Assessment 2010; Sierra Forest legacy-Conservation Strategy Species Account_Appendix A-94 Pileated Woodpecker; Coming Home to Roost: Science Findings_PNW_ October 2003). We are requesting the LTBMU identify these species as focal species tied to many important traits and functions within the plan area of the LTBMU.

2) The second important feature of the 2012 Planning Rule, we request you implement in the LTBMU Forest Plan decision is the biennial evaluation of monitoring information (§ 219.12 (d).) The current proposed LTBMU Forest Plan, Monitoring Plan (Appendix-A) only requires a reporting frequency of once every 5-10 years for key species at risk. This timeframe is not the monitoring frequency, but more importantly, the reporting frequency when the Forest Supervisor would get engaged and consider changes in management (Monitoring Plan A-10 monitoring for status and trend for spotted owl and goshawk every 10 years; Black backed woodpecker-no reporting frequency mentioned; Willow Fly-catcher-reporting frequency 5 years (A-6); Lahontan Cutthroat trout—5 years (A-6)).

3) Revise the LTBMU Monitoring Plan by following the recommendations of the Forest Service Research Branch--RMRS-GTR-161--Chapter 7-Critical Elements for Successful Monitoring

The following are key recommendations for continuing improvement of monitoring of terrestrial animals and their habitats:

- Make a national commitment to improve monitoring of terrestrial animals and their habitats.
- Ensure that all monitoring contributes to adaptive management by exploring both the causes for trends and alternative scenarios that could reverse unfavorable trends.
- Ensure that all monitoring complies with USDA Data Quality Guidelines.
- **Implement Regional monitoring strategies that integrate habitat and population monitoring. Monitoring habitat alone will rarely be sufficient for adaptive management because habitat relationships are not well understood and may not be predictable.**
- Adopt and integrate three types of monitoring (context, targeted, and cause-and-effect).
- Use sound ecological principles and risk assessment to prioritize and design monitoring activities.
- Recognize that monitoring is multi-scalar. Coordinate across ecological and administrative scales, with emphasis on the role of the Regions.
- Establish appropriate roles and coordination for NFS and R&D from WO through Forest levels.
- Provide adequate staffing, skills, and funding structures to accomplish monitoring objectives.
- Use partnerships and interagency coordination to accomplish monitoring objectives.
- Ensure that individuals and teams responsible for monitoring, development, and oversight have appropriate skills.

Following these recommendations would allow the Forest Service, in conjunction with partners and collaborators, to identify appropriate monitoring questions and designs for terrestrial animals and habitats and collect data needed for adaptive management over the long-term. Absent these critical elements the current Monitoring Plan fails to meet important criteria for designing adaptive management responses derived from credible and timely monitoring efforts. The LTBMU Monitoring Plan fails to provide key metrics that would address the new risky proposed in the Forest Plan (p. 110, SG 33), such as a variety of unlimited exemptions for harvesting large trees >30" diameter mentioned elsewhere in our objection. Also highly risky, untested exemptions for treatments in spotted owl and goshawk protected activity centers have no specific threshold where consideration of impacts would be reviewed due to reaching a trigger point defined in the Monitoring Plan. This is unacceptable and contrary to law.

4) Utilize the Dinkey CFLRP Monitoring Plan with clear indicators and triggers as a template to redesign the LTBMU Monitoring Plan. This Monitoring Plan was collaboratively developed by the Forest Service, Research Scientists, and various stakeholders as part of the Dinkey Collaborative. The acreage for this plan is nearly identical to the LTBMU (153,000 ac) and on a budget with limited funding.

Attached is a portion of the Dinkey Monitoring Report (attached), on the Sierra National Forest for Sensitive Raptors provided as an example of **specific trigger points** that function as a key part of our annual monitoring review in the Dinkey Collaborative. The full report is submitted as part of our objection.

We request as part of this objection that the LTBMU Monitoring Plan be revised with particular attention to improved designs (with clear thresholds and triggers) to better assess impacts (exemptions to historic protection measures) for at-risk species. It is also important to design

clear measures that track the intensity of use of the >30" diameter tree removal (SG 33) exemption and additions to the exemptions list that include calling out an examination of habitat features that would prohibit or limit removal based on the call of the wildlife biologist.

Forest Sensitive Raptors

CFLRP Goal: Improve fish and wildlife habitat, including for endangered, threatened, and sensitive species.

DRLP Objective: Create a heterogeneous forest stand structure and landscape patterns consistent with sensitive and indicator species' needs.

DLRP Objective: Maintain and restore habitat that promotes a diverse and functional assemblage of wildlife species.

DLRP Objective: Support viable populations of native wildlife in the restored landscape.

Questions	Indicators	Desired Condition	Trigger Point	Data Gathering Methods	Scope of Analysis	At What Point Measured	Party Responsible
Did the occupancy of Northern goshawks within Protected Activity Centers (PACs) change after treatments?	• Site Occupancy of goshawk pairs	• No significant change in goshawk occupancy following treatments	• Site abandoned = one pre-treatment occupied site with no occupancy for 2 yrs in a row post-treatment	• Survey to protocol (USFS 2002) with Keane's modeling method concentrating on high use habitat	• Treatment unit and actual nest site • Landscape (series of project areas)	• Pre-treatment • 1 and 2 years post-treatment • Then, every 5 years	USFS
Did the relative habitat use patterns by Northern goshawks change after treatment?	• Home range size • Habitat use patterns	• No significant change in home range size following treatments • No significant change in habitat use patterns following treatments	• Significant increase in home range size following treatments • Territorial birds avoid previous high use areas following the treatments	• Radio transmitters on all territorial birds in treated areas and untreated (for controls)	• Treatment unit and actual nest site • Landscape (series of project areas)	• Pre-treatment	USFS – not currently doing this work. Requires radio transmitters on birds (~ \$40,000 / year to do this)
Did the occupancy change for Great gray owls with known territories within a treated area?	• Site Occupancy of great gray owls	• No significant change in Great gray owl site occupancy following treatments	• Site abandoned = one pre-treatment occupied site with no occupancy for 2 yrs in a row post-treatment	• Survey to protocol (Beck and Winter 2000)	• Treatment unit and actual nest site • Landscape (series of project areas)	• Pre-treatment • Annually for ≥4 -5 years post-treatment	USFS

Did the relative habitat use patterns by Great gray owl change after treatment?	• Home range size • Habitat use patterns	• No significant change in home range size following treatments • No significant change in habitat use patterns following treatments	• Significant increase in home range size following treatments • Territorial birds avoid previous high use areas following the treatments	• Radio transmitters on all territorial birds in treated areas and untreated (for controls)	• Treatment unit and actual nest site • Landscape (series of project areas)	• Pre-treatment	USFS – not currently doing this work. Requires radio transmitters on birds (~ \$40,000 / year to do this)
Did the occupancy of California spotted owls within Protected Activity Centers (PACs) change after forest treatments?	• Site Occupancy of owl pairs	• No significant change in site occupancy following treatments	• Owl pair abandon PAC following treatment= any 1 site with no occupancy at any time	• Spotted Owl Occupancy Surveys • Demographic data	• Project Area • Landscape (series of project areas)	• Pre-treatment • Annually for ≥4 -5 years post-treatment	PSW -- occupancy and Dinkey Landscape is part of the demography project data
Did the reproductive success of California spotted owls occupying treated areas change after treatments?	• # of young fledged per territorial owl pair per year	• No significant change in annual reproductive output post-treatment	• Significant decrease in annual reproductive output following treatments (needs to be assessed over ≥2 years post-treatment)	• Demographic data	• Project area • Landscape (series of project areas)	• Pre-treatment • Annually for ≥4 -5 years post-treatment	PSW - Dinkey Landscape is part of the demography project
Did the relative habitat use patterns by California spotted owls change after treatment?	• Home range size • Habitat use patterns	• No significant change in home range size following treatments • No significant change in habitat use patterns following treatments	• Significant increase in home range size following treatments • Territorial birds avoid previous high use areas following the treatments	• Radio transmitters on all territorial birds in treated areas and untreated (for controls)	• Treatment unit and actual nest site • Landscape (series of project areas)	• Pre-treatment	USFS – not currently doing this work. Requires radio transmitters on birds (~ \$40,000 / year to do this)

4) Develop specific Spotted owl and Marten marking guidelines (based on principles used for GTR-220 marking (See PSW-GTR-237 Appendix Walsh and North p. 177) and the attached Fisher Marking Guidelines from the Dinkey Collaborative on the Sierra National Forest.

The Forest Plan suggests that PSW-GTR-220 is a guiding document (Draft ROD p. R-7). There are complicated prescriptions for increasing forest complexity and emulating natural disturbance regimes in the Sierra Nevada (see North and Keeton 2008). The Forest Monitoring Plan is absent any specific indicators for insuring the LTBMU project marking will follow the intent of GTR-220 and utilize specific design marking criteria that will increase heterogeneity, retain key habitat attributes, limit even tree-spacing, and identify and protect large tree clumps. These new design principles, in which Sierra Forest Legacy has been a key partner and co-author (PSW-GTR-237), move beyond the simpler stand density-thinning metrics of (Dunning and Renieke 1933) which were designed for younger, fast growing trees and commercial timber production. The new marking direction focuses on disturbance-based ecology and asked the question: How would fire leave its mark on the land under a natural fire regime? It includes newer ideas of individual tree, clump and opening (ICO) design features with a strong emphasis on maintaining habitat for at-risk species.

Sierra Forest Legacy has participated in numerous symposiums, field marking sessions, pre-post treatment discussions with PSW researchers, land managers and marking crews designing and refining projects to ensure outcomes outlined in disturbance-based approaches and the GTR-220/237 reports. This is a reasonable and feasible request to further codify, as a Standard and tracked in the Monitoring Plan, practices already in place in projects throughout the Sierra Nevada. (Examples: Keddie and Jackson projects on the Plumas NF; North 49 project on the Lassen NF; Sagehen project on the Tahoe NF; Grizzly and Blacksmith projects on the Eldorado NF, Reynolds project on the Stanislaus NF; All projects within the Dinkey CFLPR on 150,000 acres).

We request Monitoring Plan measures and indicators that track GTR-220 design techniques where uses in project design, reporting on the specific techniques (written and photographs supporting the design features), and post-treatment effectiveness evaluations for the first 5 years to demonstrate compliance. Review every 5 years and use a threshold response of more training and oversight if the prescriptions and general heterogeneity features are not reliably met at the project level.

Objection Issue 8--Failure to of the LTBMU to reconsider Over Snow Vehicle restrictions and to adequately assess the impacts of over-snow vehicle use on the LTBMU as required under NEPA.

Snowlands Network, Winter Wildlands Alliance object to the LTBMU revised Forest Plan on the grounds that the revised Forest Plan and planning process violates Forest Service

rules and policy on land management, and that the environmental analysis accompanying such plan revision fails to satisfy the requirements of the National Environmental Policy Act (“NEPA”).

In the plan revision process, Snowlands and others asked the LTBMU to review OSV restrictions as part of the plan revision. We have pointed to the many reasons that such review is required under NEPA and Forest Service planning rules. However, the final plan continues LTBMU’s refusal to reconsider OSV restrictions.

Winter recreation impacts – and demand for winter recreation opportunity -- have changed dramatically since OSV restrictions were reviewed in the LTBMU more than twenty-five years ago. The LTBMU’s finding that “no significant impacts that would drive a change in [OSV use] designations were revealed in the analysis”²² is not supported by substantial evidence.

Significant impacts, especially in the area of use conflict, multiple use management, management sustainability and potential impacts to Lake Tahoe water clarity were, in fact, revealed in the analysis but summarily dismissed without the hard look that NEPA requires. Among other deficiencies, the LTBMU failed to analyze or consider (i) OSV impacts on ambient air quality, especially at shared-use trailheads, (ii) the contribution of OSV use to winter recreation overcrowding in the LTBMU, (iii) the displacement of human-powered recreation caused by OSV use, including OSV outfitter-guide use specifically approved by the LTBMU, and (iv) the potential impact of OSV use on watershed quality and on Lake Tahoe clarity.

We appreciate that the LTBMU has facilitated a collaborative effort to resolve OSV-skier-snowshoer conflicts in the Tahoe Meadows. However, such facilitation does not satisfy the responsibility of the Forest Service to manage adverse impacts from OSV use. Following a discussion of our objection, we propose a solution that builds on this collaborative effort and allows the plan revision to be completed. Our proposed solution immediately addresses two particular situations in the basin which concern less than four square miles -- less than 2% of the land owned and managed by the LTBMU. With this limited additional closure, more than half of the LTBMU lands will continue to be open to OSVs pending further consideration of appropriate OSV restrictions through a further public notice and comment procedure.

I. The LTBMU Cannot Rely on the 1988 Designations as Satisfying its Current Obligations to Review Impacts and Manage for Multiple Use and Sustainability

The purpose of a plan revision is to review decisions made in prior plan documents based on changed conditions and new science and understanding. The LTBMU asserts

that there is not an adequate reason to revisit the 1988 OSV use restrictions as part of the plan revision²³, based on (i) a conclusory review of the impact of OSVs to regional air quality, (ii) a brief look at OSV impacts to aquatic systems, and (ii) escapist statements that the issue of OSV restrictions is one on which many users have conflicting views, and most users are satisfied with their recreation experience. The issue of OSV impacts is serious and merits attention and review in this plan revision.

As the LTBMU recognizes, “recreation demands have changed dramatically since 1988 and continue to change”.²⁴ Snowshoeing has emerged as a recreational sport. Backcountry skiing has blossomed with the introduction of light AT (alpine touring) bindings and light powder skis, as well as a variety of avalanche protection gear and systems. Organizations have been created and partnered with the National Forest to provide avalanche forecasting for backcountry ski areas. Since 1988, changes in winter recreation have created the “drama” in “dramatic changes”.

The Forest Service historically has given less attention to winter recreation than summer recreation. This is evident in the ROS mapping tool used by the Forest Service, which ignores snowmobile use in designating lands as “non-motorized.” Whether or not such bias (to more or less ignore winter recreation issues) every had validity, it is no longer valid today, considering both the growth in traditional and nontraditional snow-based recreation, and the fact that climate change is extending “summer” sports such as hiking into the “winter” season.

In addition, land management concerns have changed over the last twenty-five years, including increased attention to noise impacts²⁵ and water quality issues.²⁶ OSVs are a significant contributor to both. Thus both changes in use patterns and changes in our appreciation of impacts require a review of OSV restrictions in this plan revision.

Indeed, the LTBMU previously recognized the appropriateness of considering new OSV use restrictions in this plan revision. In its 2003 decision with regard to approving a North Shore Outfitter/Guide permit for a snowmobile operation, Snowlands urged the LTBMU to consider the impact of such operation on pushing motorized use into an adjoining area that had been used mostly by human-powered recreationists. Snowlands urged the LTBMU to close the Martis Peak area as mitigation of the impact of the outfitter-guide permit in increasing overall OSV usage in the area. In refusing to consider such impact, the LTBMU stated:

Changing the Martis Peak Area (east of Highway 267) to non-motorized use only would require a Forest Plan amendment. The LTBMU Forest Supervisor decided

²³ FEIS 2.5.3 at 2-20.

²⁴ ROD R-8; FEIS 1-6.

²⁵ FEIS 3.4.17 at 3-363.

²⁶ FEIS 3.4.3.2 at 3-85.

not to consider a Forest Plan amendment at this time. This could be addressed in the upcoming Forest Plan Revision....

The upcoming Forest Plan revision is expected to address those other (non-project) areas of National Forest lands within the entire Lake Tahoe Basin.²⁷

This has NOT happened and the specific problem we then foresaw – gradual displacement of skiers and snowshoers from the east side of Brockway Summit, has happened.

In our comments on the plan revision, we raised this exact issue and a number of other OSV impacts that merit further review, including impacts to regional air quality, impacts to ambient air quality and impacts to water quality. In response, the LTBMU looked at impacts to regional air quality and, based in part on one study that actually demonstrated OSV impacts to water quality, declined further review of the water quality issue. The LTBMU did not consider use impacts at all, other than its statement that most visitors are very pleased with their recreation experience. We submit that this high degree of satisfaction is worth protecting. We believe the LTBMU is charged with the protection of one of America’s most cherished bodies of water and recreation areas, and that the LTBMU is not justified in refusing to review all OSV impacts.

User conflicts are an important issue in Forest Service management, especially with regard to a forest such as the LTBMU whose primary use is recreation and where intensity of use mandates a focus on “sustainable recreation opportunities consistent with public desires and natural resource capacities.”²⁸ Under its principles of multiple use and sustainability, the Forest Service is required to consider the extent one activity may be adversely impacting another activity. Since the 1988 Plan Revision, skiers have been displaced from areas in Lake Tahoe, including the Relay Ridge area and on both sides of Brockway Summit. The Forest Service should have considered in this plan revision how non-motorized users are being impacted by OSV use and how growth in winter recreation demand can best be accommodated through additional restrictions on OSVs.

The rather obvious statement of the LTBMU that there are conflicts of opinion on this issue surely is not adequate grounds to dismiss it. The LTBMU has not reassessed the nature, reason and extent of OSV-caused user conflicts in the FEIS. It has not looked at OSV pollution as a source of unhealthy air at heavily used trailheads and other locations. It has not analyzed the extent OSV noise from open areas impacts other users, both within and outside such areas. It has not analyzed how management of this issue affects the recreational capacity of the land and the sustainability of such capacity. It has not analyzed how OSVs consume a forest resource, fresh “powder” snow. It has not

²⁷ North Shore Commercial Outfitter-Guide Snowmobile and Grooming Project Environmental Assessment, Appendix C. Pre-Decisional Comments Response, April 1, 2003

²⁸ Revised LRMP at 12.

analyzed safety with regard to shared use of trailheads and trails by OSVs, which can travel over 60 miles per hour.

The Plan was prepared under the 1982 Planning Rule²⁹ which specifically requires the consideration of impacts from off-highway motorized use, including OSVs, to “minimize conflicts with other uses”. 36 CFR 219.21(g) (1982).

We appreciate the inclusion in the Revised Plan of a mandate to manage user conflicts³⁰, but even that mandate appears to misunderstand that nature of the conflict between motorized and nonmotorized users in winter. The mandate speaks of managing “user interactions” but user interactions are not the issue. The noise and exhaust produced by OSVs, and other impacts, are not personal in nature. Interactions between user groups are, to our knowledge, infrequent and, on the whole, cordial. But that does not deny or mitigate the unavoidable changes to the physical environment caused by OSVs. Such impacts cannot be reduced by any amount of user education.³¹

II. The LTBMU Failed to Consider Significant OSV Impacts as Required by NEPA

The FEIS fails to review, analyze and address the following environmental impacts, each of which is significant in itself:

- The noise pollution produced by OSVs. OSVs are very loud and their noise travels far. The winter landscape is quieter than the summer landscape because the snow muffles ground noise. Motor vehicle noise actually travels farther across the winter landscape than the summer landscape, both because of the reflective capacity of snow surfaces, especially in the spring, and the relative lack of daytime heat waves rising from the ground. The fact that the majority of OSV’s meet single event noise limits is irrelevant, and the LTBMU’s discussion of noise³² therefore fails to address the noise issue. The noise issue is that OSVs are free to travel over 52% of the LTBMU lands, bringing their noise deep into remote territory that is otherwise quiet. It is not sufficient for the Forest Service to simply refer to existing noise limits in review of this process; the issue is WHERE such noise occurs. A primary objective of the LTBMU – distinct from single event maximum noise limits – is to provide for “abundant quiet recreation areas”³³. It is hard to see how this objective

²⁹ Revised LMRP at R-2.

³⁰ Revised LRMP 2.2 at 66.

³¹ We cannot help but see a bias in the LTBMU’s consistent attempts to cast this issue as some metaphysical conflict, whereby skiers and snowmobilers both somehow impact the other’s space. (see FEIS 3.4.19.2 at 3-387, suggesting conflict is two-sided.) The issue is not different user groups but the physical environmental impacts of OSVs: their noise and their emissions most obviously.

³² FEIS 3.4.17.3 at 3-367.

³³ Revised LRMP at 12.

of the Revised Plan is satisfied if one of the most noisy recreational vehicles is allowed to roam over 52% of the forest without analysis of its impact on otherwise quiet environments.

- The ambient air pollution produced by OSVs at trailheads and heavily used areas. In the FEIS the LTBMU analyzed OSV contributions to greenhouse gas emissions³⁴ but did not look at the primary air pollution issue of local concern: the fact that OSVs can generate a toxic cloud at trailheads and other areas where users are trying to engage in cardio exercise, among other activities. Numerous studies, including at Yellowstone National Park, have shown the OSV exhaust can accumulate at unhealthy levels, and this needs to be reviewed in the context that this exhaust cloud is created at some of the exact points where other users are trying to enjoy clean air.
- The impact of OSV pollution in contributing to a decline in Lake Tahoe's clarity. Throughout the planning documents, the LTBMU has recognized the unique importance of protecting the Lake Tahoe watershed and its SEZ's³⁵. The LTBMU misinterpreted one study (McDaniel 2013) of OSV pollution to summarily dismiss such impacts, when, in fact, the study pointed to the need for further review of this issue.³⁶ The discussion of OSV impacts to aquatic environments³⁷ notes a need for concern and monitoring. This is not enough, not for the protection of Lake Tahoe. The LTBMU claims that its objective is to be an "international model for sustainable alpine communities that apply the best-known practices in...environmental protection..." among other things, to maintain "exceptional water quality."³⁸ It is hard to see how the LTBMU fulfills this objective by overlooking OSV impacts and potential impacts.

These impacts go far beyond the "perceived user conflicts"³⁹ that the LTVMU dismisses. Because these impacts were not adequately considered, the finding in the ROD that

³⁴ FEIS 3.4.2.3 at 3-62.

³⁵ See, e.g. DC9, Revised LRMP at 17; FEIS 3.4.3.2 at 3-81.

³⁶ The purpose of the study was limited: to determine whether OSV pollution was entering the watershed. The study found that it was. The LTBMU wrongly took measurements of one pollutant from such study to support a finding that the levels of pollution are insignificant. In fact, the study pointed out that there many different pollutants entering the snowpack and did not purport to calculate the total impact of ALL the pollutants.

³⁷ FEIS 3.4.2.3 at 3-107, 108. This discussion also falsely states that 4-stroke engines are becoming "much more prevalent".

³⁸ Revised LRMP at 12, 13.

³⁹ FEIS 2.5.3 at 2-21,

“OSV use in the current designated OSV use areas does not result in significant impacts”⁴⁰ lacks foundation and is not supported by substantial evidence.

III. The LTBMU Defends its Action Using False Arguments

The LTBMU has consistently disregarded real and significant issues regarding OSV recreation:

- Most significant, as described above, the LTBMU has failed to accept that substantial changes in winter recreation in the last twenty-five years mandate a review of all OSV impacts and reconsideration of OSV restrictions in this plan revision.
- The LTBMU dismisses its allowance of OSV’s on land classified under the ROS system as semi-primitive-non-motorized (SPNM,) on the ground that most OSV areas are located on lands classified as semi-primitive motorized and “some” use occurs on SPNM lands.⁴¹ This is false. It is apparent from an overlay of the snowmobile designation map on the ROS chart included as Map 9 in the Draft Forest Plan that there is, in fact, more OSV play area in lands classified SPNM than in lands classified SPM.
- The LTBMU dismisses winter user conflicts on the ground that most summer trails are mixed use as well⁴². This statement is disingenuous and false. The distinction between motorized and non-motorized use is one of the key distinctions in recreation management. The LTBMU has substantially restricted OHV use in summer and most OHV trails are, in fact, single use. In summer, less than 1% of the LTBMU is open to free-riding OHV’s. In winter, OSVs are able to travel freely across 52% of the forest.
- The FEIS excuses the LTBMU’s failure to consider expanded OSV restrictions on the ground that the LTBMU “received few specific suggestions for changes, and none that we thought would be acceptable to all parties”⁴³. The first part of this statement is wrong: Snowlands has provided the LTBMU specific proposals for OSV restrictions, both in its comments on the plan and in a half-dozen meetings and other correspondence. The second part of the statement is irrelevant and demonstrates the LTBMU’s unwillingness to assume the role of responsible land manager. If all changes were easy and unopposed, we would have little need for decision-makers in the Forest Service. Taken as a whole, the statement is disingenuous: the Objectors specifically asked the LTBMU to review OSV

⁴⁰ ROD at R-9.

⁴¹ FEIS 3.4.19.2 at 3-384.

⁴² FEIS 2.5.3 at 2-21.

⁴³ FEIS 2.5.3 at 2-21.

restrictions throughout the basin and the LTBMU consistently refused to consider specific management changes as part of its plan revision process.

- The FEIS fails to acknowledge that NVUM data likely understates backcountry skier and snowshoer activity participation. Such sports have emerged as mainstream sports only in recent years, have very dispersed use patterns and are not specifically tracked in NVUM surveys⁴⁴.
- In the FEIS and the revised Forest Plan, the LTBMU repeats and clings to its argument that OSVs are restricted to “designated areas”⁴⁵. This is disingenuous. In fact, the 1988 Plan and subsequent forest orders have not “designated” OSV areas as that term is commonly used. It suggests some narrow restriction on use, determining where use should be allowed, when in fact over 50% of the most environmentally-sensitive and the most popular recreational lands in the Forest Service system are open to OSVs.⁴⁶

IV. Recommendations for Improvements

Despite the LTBMU’s attempt to deny this fact, the objectors have proposed a range and variety of actions to ameliorate motorized-nonmotorized conflicts in the basin. Consistently, we have focused on the need for the LTBMU to protect the greater Tahoe Meadows area, which has one of the highest concentrations of use in the basin in winter. We have also repeatedly asked for greater protection of the west side drainages.

In resolution of this objection, we ask that the LTBMU take the following four actions:

1. Revise the Plan⁴⁷ to acknowledge the need to review and revisit OSV restrictions in the basin, with particular attention to:
 - Assessing the demand for dispersed winter recreation and methods to accommodate growth in demand sustainably, considering the LTBMU as part of a broader Sierra recreation area
 - Assessing the impacts of OSV emissions and noise on other users, including at trailheads and heavy use areas, and also the propagation of such impacts to adjoining non-motorized areas

⁴⁴ FEIS 3.4.19.2 at 3-381.

⁴⁵ FEIS 2.5.3 at 2-22; Revised LMRP 2.3 at 81.

⁴⁶ See discussion in FEIS 3.4.1.1 at 3-17.

⁴⁷ This provision could be included under either “Recreation Program Strategy” or “Access and Travel Management Program Strategy”.

- Taking a hard look at whether OSV emission may be adversely impacting aquatic systems or the clarity of Lake Tahoe, and how to minimize such impact

2. Revise the Plan to include a commitment to implement any basin-wide resolution of OSV restrictions agreed to by the existing winter collaboration group (or its reconstituted successor), and, if such resolution has not been so agreed to by all parties by July 1, 2015 – or is not acceptable to the LTBMU – then instituting full travel management review of OSVs in the basin, with such review to begin by November 1, 2015, and to be completed by June 1, 2017.

3. Through Forest Order, immediately revise the OSV use map to close the Chickadee Ridge area as indicated on Exhibit 1. This closure is extremely important to non-motorized users because existing use will be severely adversely impacted by growth in OSV activity in this area. This closure will have very slight impact on OSV users because there currently is little OSV use in the area.

4. Through Forest Order, immediately revise the OSV use map to close the meadows and riparian areas in Blackwood canyon as indicated on Exhibit 2. This closure will have slight impact on OSV users because most OSV use in this area is along the road which would remain open to OSVs travelling the road or accessing higher country. This closure is important to non-motorized users because it creates some separation of use originating at a multiple use Sno-Park, allowing novice skiers and snowshoers to recreate on the meadows with some separation from OSVs. OSV noise and some exhaust emissions will thus continue to adversely impact the nonmotorized area, but the proposal balances the desires of both users groups in this popular joint-use area. The proposal is important to protection of the aquatic environment and Lake Tahoe clarity, keeping OSVs off the riparian environment where OSV emissions deposited on the snowpack go most directly into the lake.

It is appropriate for the Forest Service to implement both of the above, very limited closures without further notice to the public or public comment because of the minimal impact to OSV users, the unlikelihood that such actions would displace any material amount of OSV use, the substantial benefits to the non-motorized users, and the benefit to Lake Tahoe's clarity and the environment. These immediate closures do not eliminate the need for the LTBMU to take a broad look at OSV restrictions throughout the basin on full public notice and opportunity to comment.

* * *

Without limiting the objections above, we do want to acknowledge and appreciate the LTBMU's recognition in the revised plan of the need for increased parking opportunities for dispersed winter recreation. Improved trailhead and parking access to existing non-

motorized areas is an important issue, necessary to accommodate growth in dispersed winter recreation demand. Furthermore, one way of ameliorating the conflict between motorized and non-motorized users is the creation of separate trailheads. Winter travel management should use a variety of management tools to promote multiple use and sustainability.

Indeed, it seems fairly obvious that one of the most immediate impacts of global warming is going to be an increased and prolonged demand for parking areas to be open for hikers during the winter. Over the recent holiday season, it was obvious that with a low snow year there is a high demand for winter hiking and that such hiking is going to occur whether or not parking lots are open. The LTBMU needs to start addressing this impact now. Closing dates for parking areas need to be reconsidered, as well as the viability of plowing parking areas, particularly after early-season snowfalls which may sit on the ground – without further accumulation – for two months or more (as was the case this year.) Thus, a small expenditure in early season plowing may reap large rewards when, as in 2013-2014, it is the only snowfall before a long stretch of dry weather including the high-traffic holiday season. In order to recognize the importance of this adaptation, section 2.2 of the Revised Plan should be modified by adding to “Recreation Program Strategies – Public Access Strategies” the following additional bullet point:

- Increase opportunities for winter trailhead parking, as funds permit, by keeping parking areas open longer and/or creating new plowed parking areas

We also appreciate the addition of the Stanford Rock area to backcountry designation, although the distinctions between backcountry and general conservation also should be changed to deal with the issue of motorized use.

We look forward to working with the LTBMU to resolve this objection and to help direct responsible and proactive management of this treasured area for the enjoyment of all, including future generations.

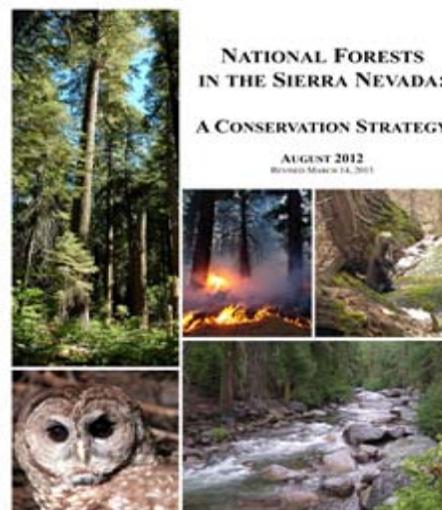
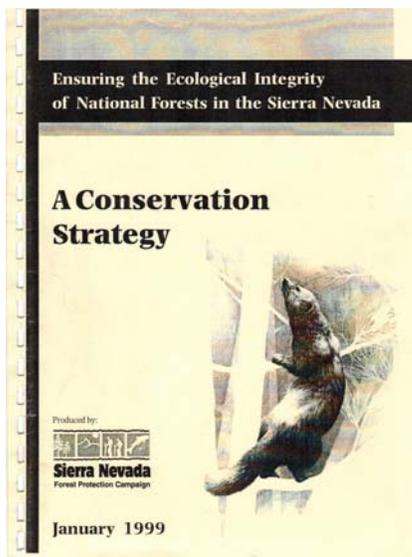
Objection 9--Failure to consider an adequate Range of Alternatives and respond to the Sierra Forest Legacy Conservation Coalition’s science-based Conservation Strategy (NEPA 40 CFR § 1502.14; 40 CFR § 1503.4).

NEPA requires a rigorous exploration and an objective evaluation of all reasonable alternatives in the environmental impact statement for a plan or project (40 CFR 1502.14 (a)). This requirement is the very heart of NEPA and it is critical that the “exploration and evaluation” be done well and with scientific credibility during a forest plan revision process like the LTBMU Forest Plan Revision. This Forest Plan decision may last 15 years or more and must contain rigorous analysis of alternative approaches that

are reasonable and have the ability to address key concerns raised in the 7 year planning process.

1) Failure to adequately consider and respond to the (8-27-12) Sierra Forest Legacy Conservation Coalition’s science-based Conservation Strategy.

Below are two significant submissions from the Sierra Forest Legacy Coalition (formerly, the Sierra Nevada Forest Protection Campaign) to the record during the Sierra Nevada Forest Plan Amendment process in 1999 (left) and the Sierra Nevada Forest Plan Revision process (2012) for the LTBMU and the early adopter forests (Inyo, Sierra, Sequoia) on the right.



The Conservation Strategy developed in 1999 and submitted to the SNFPA process was welcomed by the Regional office, utilized during the plan amendment process, and was given a Environmentally Preferred Alternative designation by the Forest Service in 2001. The 2001 Framework SNFPA planning effort received two national planning awards and was strongly support by all relevant agencies, the Forest Service Washington office and USDA.

Conversely, the 2012 Sierra Forest Legacy Coalition’s conservation strategy was submitted as a reasonable and feasible suite of conservation proposals to the LTBMU for consideration in the plan revision process during scoping and DEIS development and was rejected in a 1 1/3 page arbitrary summary statement in the LTBMU FEIS Vol.1, Section 2.5.8, p. 2-27. Although the LTBMU states they, “appreciate the extensive work and research that went into the document (the Conservation Strategy 2012) and support many of the concepts and strategies proposed” the failure to fully consider the conservation measures contained therein is arbitrary, capricious and not consistent with

the law. We are not suggesting, nor should anyone suggest, that the Forest Service adopt any and all ideas submitted during the plan revision process. The law requires that an effort of this nature take a “hard look” at environmental impacts of the proposed plan and apply NEPA’s requirements for a rigorous exploration and an objective evaluation of all reasonable alternatives in the environmental impact statement for a plan or project (40 CFR 1502.14 (a)).

Below we will deconstruct the flawed analysis offered on FEIS pp. 2-27 & 28 regarding the appropriateness of the SFL Strategy and point out several areas where the 2012 Conservation Strategy does a better job of addressing key concerns in the LTBMU Plan and FEIS. For the record, we did not expect or request that the LTBMU accept every aspect of the Conservation Strategy on every issue we described. However, the law requires that the Forest Service rigorously explore and objectively evaluate the material presented in the Conservation Strategy.

A. Issues raised in the Alternatives Consideration section of the FIES p. 2-27

(i) Recreation resources—from Vol. I, P. 2-27 The Forest Service states, the SFL “Conservation Strategy does not meet the requirements for multiple use management because consideration of recreation is almost exclusively limited to management of the negative impacts of recreation on natural resources.”

This is a very confused and arbitrary response to the Conservation Strategy’s Travel Management recommendations at IV.H Travel Management. There are over 47,000 miles of roads on National Forest lands in California. Over 10,000 miles of these roads are unclassified or non-system roads. Does the LTBMU really believe that its Multiple Use Act mandate (MUSYA) (PL 86-517) exempts it from managing resources to prevent resource damage while hosting a recreation program on the Unit? With “5.7 million visitors per year” in the Lake Tahoe Basin, where over a billion dollars of taxpayer dollars have been spent trying to maintain the pristine water quality in Lake Tahoe, one would think the Forest Service would support a travel management program that allows ample recreation activities while setting an example of sustainable recreation management with protection measures that limit roads that are unauthorized or can not be managed to standards and limit impacts to soil, water quality, wildlife, rare plants, and limits invasive species.

The Secretary of Agriculture stated in August 14, 2009 that, “restoration, for me, means managing forest lands first and foremost to protect our water resources while making our forest far more resilient to climate change. . . In many of our forests, restoration will also include efforts to improve or decommission roads, to replace and improve culverts, and to rehabilitate streams and wetlands.” (Emphasis added). It seems Secretary Vilsack has a similar view as ours when it comes to resource protection under existing law and policy.

The SFL's primary consideration is to have the specific Travel Management Issue Statement, Desired Conditions, Objectives and Standards (and cited references and additional recommendations) given rigorous examination and objective evaluation in the NEPA process. Our recommendations are not single-minded in terms of limiting recreation activities. The Conservation Strategy, including the Travel Management section below is science-based, well-cited and is given serious policy consideration at all levels of the Forest Service. See below:

http://www.sierraforestlegacy.org/Resources/Conservation/Biodiversity/ConservationStrategy/IV_H_Travel%20Mgmt.pdf

(ii) Scale of Fuels Reduction Strategy—Vol. I, p. 2-27. The LTBMU makes another arbitrary rejection of all recommendations in the Strategy because the LTBMU does not contain all ecosystem elements in the Sierra Nevada. This is not a “rigorous exploration and objective examination” of alternatives. The LTBMU again over-reacts and over-states the nature and purpose of the Conservation Strategy submission by the Sierra Forest Legacy coalition.

The LTBMU denies the Conservation Strategy recommendations for Restoring Fire as an Ecological Process, Section IV.A. because the recommendations are not consistent with the 2007 Lake Tahoe Basin Multi-Jurisdictional Fuels Reduction and Wildfire Prevention Strategy, adopted by 17 agencies, including the Forest Service absent NEPA review and with a heavy emphasis on fire prevention in an ecosystem in a large fire deficit (Safford and Schmidt 2007).

Here are 2 examples from the Restoring Fire Chapter (Objective F-5) p. IV. A-2: All land allocations in the forest plan specifically address how planned and unplanned ignitions will be used to increase forest resilience and provide ecological benefits for multiple habitat types.

(Standard F-1) All projects proposed in fire adapted plant communities must tier to existing fire plans and include an unplanned ignitions management plan for all allocations that are outside the Community Zone.

The Conservation Strategy “Community Zone” is the same as the ¼-mile Defense Zone recommended in the LTBMU Forest Plan and currently in the 2004 Sierra Nevada Framework. The LTBMU has identified a Guideline (SG26) in the Forest Plan Vol. 2 p. 109, that allows unplanned ignitions on all land allocations outside the WUI-Defense Zone. Unfortunately, in the FEIS Vol. I, p. 3-229 the Forest Service offers a variety of reasons not to expect significant accomplishments using unplanned fire events, in spite of records showing over 350 lightning events annually (FEIS Vol. I, p. 3-219). One way to ensure the failure of being able to take advantage of this major opportunity to increase scale of restoration is to not have planned for it. The SFL Conservation Strategy offers a number of objectives and standards (similar to above) that would provide guidance for

the education and the necessary pre-planning work to take advantage of all opportunities to use unplanned ignitions for resource benefits.

The Conservation Strategy, including the Restoring Fire as an Ecological Process section below is science-based, well-cited and is given serious policy consideration at all levels of the Forest Service. See below:

http://www.sierraforestlegacy.org/Resources/Conservation/Biodiversity/ConservationStrategy/IV_A_Restoring%20Fire%20as%20Ecological%20Process.pdf

Ignoring this section of the SFL Conservation Strategy denies full consideration of reasonable, practical, science-based recommendation that have credibility in the fire community of the Forest Service. The LTBMU also fails to meet the intent of NEPA's requirements to rigorously explore and objectively evaluate a reasonable range of alternatives. Failing to examine and address, in detail, the relevant sections of the SFL Conservation Strategy and the decision to dismiss the range of ideas in the document is contrary to law.

(iii) Human presence and the importance of the recreational economy (FEIS Vol. I., p. 2-28) is the third reason the LTBMU uses to dismiss the SFL Conservation Strategy. We get the sense that the LTBMU does not understand the national direction of its own agency. In the Conservation Strategy Introduction p. I-2 we highlight Figure I-1. Weak versus Strong Sustainability in USDA, Forest Service (2010) Report on Sustainable Forests. It is clear that the Forest Service, at the national level, supports this vision of "strong sustainability" by incorporating the newer vision of ecological sustainability and by acknowledging, " that the human economy depends on people and social interaction. Society, in turn, can not exist outside the environment which provides the basic necessities for people to exist: air, food, water, energy, and raw materials." (USDA Forest Service 2010).

It is alarming that the LTBMU misses the key point that "extremely high visitor use" is exactly why the Unit needs to apply rigorous conservation measures to continue to allow the human presence (5.7 million people/yr) and recreation-based economy to continue to enjoy the beauty and ecological integrity of the Lake Tahoe Basin in a manner consistent with law and policy and which meets the sustainability vision of the Forest Service, nationally. The LTBMU is not a Disneyland environment for any and all recreational uses and intensities. The natural environment in the LTBMU must not be managed any differently than on other national forests in the Sierra Nevada or elsewhere. Ecological integrity and "Strong Sustainability" are also at the forefront of the Region 5 Ecological Restoration Initiative. Suggesting that the LTBMU is governed by difference rules of management due to high use levels is unacceptable and contrary to law and policy.

B. Conservation Measures in the SFL Conservation Strategy that better address key issues in the Forest Plan/FEIS/Draft ROD—a partial list.

(i) Conservation of California Spotted owl and Pacific marten

As discussed in our LTBMU Objection elsewhere, the California spotted owl is undergoing significant population declines and risk to viability. We point out in the Owl Objection section serious mistakes in the analysis and characterization of habitat loss in Late Seral habitat. We also object to risky exemptions for protections of PACs and HRCAs due to the Forest Plan's negative habitat projections and low owl productivity. Marten habitat loss under the Forest Plan's vegetation projections offer increased risk to marten viability. Both species are offered improved protections in the SFL Conservation Strategy. The Conservation Strategy suggests Objectives and Standards that offer better protections for important habitat elements and for landscape connectivity and improve ecological integrity in the short and long term. See link below.

http://www.sierraforestlegacy.org/Resources/Conservation/Biodiversity/ConservationStrategy/IV_E_Conservation%20Species%20at%20Risk.pdf

(ii) Removal of larger trees- In addition to the information presented in Objection section #4 opposing the potential for unlimited removal of trees >30" dbh for "restoration" the Forest Plan offers nothing to support retention of the same subject larger trees for biodiversity enhancement. This biased and arbitrary approach is ecologically risky and threatens ecological integrity. The link below offers approaches that highlight old forest structural integrity. This and other information in the record are intended to support a revision of the exemptions for removal of trees >30 inches. It is mentioned here because of the failure of the LTBMU to place any balance in the review of exemptions for removal of important larger structures with limits or criteria for retention for ecological/habitat value (of the same tree).

http://www.sierraforestlegacy.org/Resources/Conservation/Biodiversity/ConservationStrategy/IV_C_Maintain%20and%20Restore%20OG%20Forest.pdf

(iii) The Fire as an Ecological Process section mentioned above includes multiple Objectives and Standards that, if applied, will enhance restoration opportunities and increase restoration accomplishments to a much greater degree than under the current proposed Forest Plan. In recent fire and restoration research such as (North et al. 2012), it is clear that absent a much more aggressive fire program--added to mechanical treatments--the Forest Service will not meet its restoration goals. The SFL Conservation Strategy offers multiple recommendations that support and improve the LTBMU's restoration efforts. There are reasonable and practical desired conditions, objectives

and strategies that promote managed fire use and will help ensure that Forest Service is actually prepared to use unplanned fire when it occurs. See link below.

http://www.sierraforestlegacy.org/Resources/Conservation/Biodiversity/ConservationStrategy/IV_A_Restoring%20Fire%20as%20Ecological%20Process.pdf

(iii) Aquatic Conservation—The federal government has spent over a billion dollars to restore lake clarity and protect the ecology of Lake Tahoe yet the LTBMU in 2009 didn't bother to winterize their exposed roads at the Angora Fire logging site nor other projects ahead of an incoming October storm resulting in several major Lahontan Regional Water Quality Control Board notices of violation (Angora Fire NOV-October 19, 2009). Forest Plan SG 4, p. 105 fails to account for past negligence and significant violations of water quality standards. Additions to SG4 should include mandatory planning and preparedness prior to the winter closure period so such unfortunate incident doesn't happen again. The SFL Conservation Strategy section IV. D offers many objective and standards for aquatic resource protection that should be analyzed in detail.

http://www.sierraforestlegacy.org/Resources/Conservation/Biodiversity/ConservationStrategy/IV_D_Restore%20and%20Maintain%20Aquatic%20Ecosystems

<http://www.sierraforestlegacy.org/Resources/Conservation/Biodiversity/Conservation%20of%20Freshwater%20Ecosystems%20on%20Sierra%20Nevada%20Forests%202012%20OPRC.pdf>

(iv) Adaptive Management and Monitoring --The monitoring and adaptive management section (III. B-1) of the SFL Conservation Strategy offers a far more detailed and integrated approach to meaningful forest monitoring and adaptive management. The LTBMU monitoring section (Appendix A-1) lacks established thresholds and trigger points for important indicators that would inform managers regarding changes to resources that require management review and reconsideration. The LTBMU Monitoring Plan lacks any coherent adaptive management strategy to inform the need for change or to affirm achievement of desired conditions.

http://www.sierraforestlegacy.org/Resources/Conservation/Biodiversity/ConservationStrategy/III_B_Adaptive%20Mgmt%20and%20Monitoring.pdf

Recommendations for Improvements

A. Revise the consideration of alternatives in the FEIS to comply with NEPA's requirements for a rigorous exploration and an objective evaluation of all reasonable alternatives in the environmental impact statement for a plan or project (40 CFR 1502.14 (a)).

This analysis of the SFL Conservation Strategy should give full section by section consideration to the chapters in the Strategy and either accept the concepts if they improve or clarify the Forest Plan, or provide a reasoned explain why they are rejected.

There are reasonable, feasible and practical measures (Desired Conditions, Objectives, Strategies, additional recommendations and copious citations) to inform and improve the new LTBMU Forest Plan. It is not and never was our intention that the Forest Service adopt (or reject) the document in total. We seek an alternatives analysis consistent with the rigorous and objective review required under the law. A simplistic, 1-1/3 page dismissal of the comprehensive Conservation Strategy hardly meets that test.

Appendix A--Objection from the Tahoe Area Sierra Club for the failure of the Lake Tahoe Basin Management Unit's Forest Plan to include new designated wilderness areas.

The members of the Wilderness Committee of the Tahoe Area Sierra Club, strongly object to your decision to select a plan (alternative E) which does not include new wilderness designations. The decision was made in spite of your appraisal of Dardanelles and Freel Roadless area as wilderness appropriate. The decision was also made in spite of our recommendations that Meiss Country (Dardanelles), Granite Chief additions, Desolation additions, Trimmer Peak and Hell Hole were wilderness appropriate and deserved wilderness status. We find the decision of your agency to be shortsighted as forces of forest degradation are increasing and time is running out to make these critical decisions.

The Final Lake Tahoe Basin's Management Plan has been released at a time in history (November 2013) when the basins natural communities are encountering growing and unprecedented shocks.

- California's population has surged to 38.2 million an increase of 332,000 in the last year portending increasing numbers of hikers, bikers, snowmobilers, and off-road vehicle users wanting their share of Tahoe's treasure. At this pace an additional five million people would inhabit California in the 15 year life of the plan.

- Climate change predictions for the Basin suggest drought will increase in frequency and severity (Saffold, 2010) threatening the health of forests, wetlands, and their wildlife in the Tahoe Basin.
- Erosion, nutrient release, and air pollution have caused Lake Tahoe's water clarity to decline from 100 feet in 1960 to about 70 feet today. Climate change also drives the problem as water temperature of Lake Tahoe has increased 1 degree Fahrenheit in the last 30 years threatening the lakes clarity (Margaret Moran, 2013).

In the face of these problems, the emphasis of your agency on balancing the competitive interests of forest users ignores the major underlying issues. Balancing biking, snowmobiling, hiking, off-road vehicle use, and other uses to create a balance of winners and losers, is a political decision. Whether the various users are happy is really secondary to the issue of preserving these forests and protecting the watershed of the Lake Tahoe Basin. In the long term, these forests, once designated as wilderness, will provide valuable and necessary natural services for all of the stakeholders of the Tahoe basin. The decision to be made is not a political decision to balance the many disparate uses but a crucial regional ecosystem-management decision designed to serve us all.

These candidate wilderness areas need to remain as intact healthy forests to ensure that they continue to provide the vital ecological services that are necessary to support our long term health as well as the health of the economy of the Basin. They function as healthy watershed, reducing erosion, providing clean water, and helping to protect the clarity of Lake Tahoe. Their trees sequester CO₂ to help ameliorate climate change. As healthy intact forests, they are also vital to the existence of a diverse variety of wildlife species. Only wilderness designation can provide the high level of forest health required.

Your agency found pristine conditions at the Dardanelles and Freel that caused you to propose them for wilderness areas in Alternatives you did not select (C and D). We found those same pristine conditions in Meiss (Dardanelles), Granite Chief Addition, Desolation Addition, Hell Hole and Trimmer Peak. Without the protection of wilderness status, these candidate wilderness areas will degrade from overuse during the fifteen year life of the plan until they are no longer wilderness appropriate. The loss of candidate wilderness area will be irrevocable.

Our wilderness committee members and others have made numerous excursions into the candidate wilderness areas to evaluate and experience them. Putting their vital services aside, we were stunned by their unspoiled majesty and terrified to think of their future without protection as wilderness.

We feel that all of these candidate wilderness areas are necessary for the reasons stated above. If it is not possible to designate them all, however, we feel that the strongest

case can be made for a wilderness designation for the Dardanelles. We recommended 10,500 acres of Meiss Meadows (Dardanelles) and your agency proposed 14,227 acres in the Dardanelles. These are essentially the same recommendation. Meiss Meadows features intact forests, meadows, spectacular scenery, and an established self-sustaining, fluvial population of Lahontan Cutthroat Trout. It serves as the headwaters for Upper Truckee River, the largest tributary to Lake Tahoe. Preserving the integrity of Meiss Country is of utmost importance to maintain the quality of water destined for Lake Tahoe and to protect the established population of Lahontan Cutthroat Trout. The area also creates less conflict with other users since the Pacific Crest Trail runs through Meiss Meadows and biking and OHV access is prohibited on the trail.

Granite Chief Addition is also a strong case. The forests there provide watershed for both Ward and Blackwood Creek. Late seral (old-growth) hemlock and red fir forests near the border of Granite Chief were unsurpassed by any we saw in our evaluations.

Another strong case can be made for Desolation Additions. Much of the addition is steep, creating difficult access, which should reduce management costs. It also plays an important role by providing healthy watershed.

In summary, the Basin's forests and wetlands, and Lake Tahoe itself are facing growing forces of degradation – increasing population, increasing frequency and severity of drought, increasing nutrient release into the lake to name a few. The candidate wilderness areas provide ecosystem services that mitigate these forces. With wilderness status, these forests and watersheds will remain intact into the future, continuing to provide these services. Without wilderness status, they will degrade with overuse. In this case, the services they provide to protect the environmental quality of the basin erodes as does their wilderness appropriateness. The loss of these wilderness treasures will be permanent.

Moran Margaret, 2013. Scientists: Climate change impacting Tahoe clarity.

<http://www.recordcourier.com/news/6900551-113/lake-tahoe-goldman-clarity>

Safford, Hugh, 2010. A summary of current trends and probable future trends in climate and climate driven processes in the Lake Tahoe Basin and the neighboring Sierra Nevada. Version 2, USFS.

Final Note:

Objection References *notes new citation not contained in the LTBMU planning record. Copies of new citations, not in the record, are included in a separate attachment.

The Coalition is Requesting an Objection Resolution Meeting during the 90-day review period to help resolve the Objection issues.

END

