

Margaret Boland
Forest Supervisor
Klamath National Forest
1312 Fairlane Road
Yreka, CA 96097

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Re: Elk Thin Timber Sale EA

“Eleven historic and recent NSO activity centers lie within the analysis area...All but one NSO activity centers in the analysis area are currently below threshold for suitable habitat acres in the nest core and all but two are below threshold in the homerange.”
Elk Thin EA, Page 29.

“In the 1970’s and 1980’s, road building and commercial timber harvest caused a noticeable increase in suspended sediment transport during period of intense precipitation (a few episodes per year).”
Elk Thin EA, Page 21.

Dear Peg,

We appreciate the opportunity to provide comments for this project. We are encouraged that the Forest Service has elected to develop an action alternative (Alternative C) that attempts to meet the purpose and need for the project while avoiding ground-based yarding systems and retaining 60% canopy closure in logging units. We sincerely hope that this alternative is not mere NEPA “window-dressing” and that it will actually be reflected in the layout and implementation of the project.

Proposed Project

The Elk Thin timber sale proposes to log 25 units covering 358 acres, construct 700 feet of new “temporary” logging road, underburn 552 acres outside of timber sale units, and log “hazard” trees along 115 miles of road.

The Elk Creek Watershed serves as the municipal drinking water source for the town of Happy Camp, and is also designated as a Key Watershed for salmon recovery under the Northwest Forest Plan.

Two action alternatives and a no action alternative are analyzed in the EA. Alternative B would log some stands down to 40% canopy closure, would utilize tractor, cable and helicopter yarding, and would produce an estimated 4.1 mmbf of timber volume. Alternative C would retain at least 60% canopy closure on all logging units, would avoid ground-based yarding systems, and would result in an estimated 3.9 mmbf of timber volume.

We Endorse Alternative C With Modifications

As disclosed in the EA, Alternative C will achieve the stated purpose and need for the project while avoiding some of the adverse impacts to soils and wildlife contemplated in Alternative B. Given the content and findings of the EA, it is unclear to us why Alternative C was not identified as the proposed alternative. The EA clearly establishes that Alternative C results in fewer impacts to the two significant issues (water quality and NSO habitat) identified during the scoping period for this timber sale. See EA page 4.

As stated on page 27 of the EA, given certain weather conditions, Alternative B is projected to result in 93 cubic yards of landslide sediment production whereas Alternative C is projected to result in 8 cubic yards of such sediment production. The EA goes on to state “Alternative C has slightly less risk of water quality effects due to fewer constructed log landings and less ground-based yarding disturbance.” Ibid.

For the significant issue of NSO suitable habitat, Alternative B would convert 42 acres of foraging habitat into dispersal habitat. EA page 31. Whereas Alternative C would retain all foraging habitat in the planning area. EA page 33. **Please note that the 42 acres to be downgraded in Alternative B (units 9 and 15) are within 3 NSO homes ranges, 2 of which would be adversely affected, including KL 381, which is a reproducing pair.**

We will return to both the water quality and NSO significant issues later in these comments, but we draw your attention to them here to help illustrate why Alternative C is significantly less controversial than Alternative B. We respectfully urge you to implement Alternative C with the following modifications/mitigation measures.

Proposed Modification and Mitigation Measures to Alternative C.

(1) Units 9 and 16 should be deferred from logging. While many of the proposed logging units target trees for that have become established due to fire suppression for thinning from below, units 9 and 16 contain old-growth forests providing suitable owl habitat in which large-diameter overstory trees that pre-date fire suppression are marked for logging. **Please see the attached**

photos. We strongly urge the Forest Service to implement an action alternative that addresses the project's purpose and need without logging old-growth trees. An additional reason to drop unit 9 is that the proposed helicopter landing pad is located within a Riparian Reserve (RR). EA page 52. Both the NFP and the KNF LRMP indicate that landings should not be located within RRs.

(2) Roadside "hazard" trees in Riparian and Late-Successional Reserves (RRs and LSRs) should be felled and left on site to provide down woody debris and contribute to nutrient cycling and soil building. It is inappropriate to remove large woody material that will serve as important coarse woody debris from land-use allocations intended to protect riparian and old-growth habitat conditions. The FEMAT definition of "old-growth" specifically includes the presence of such down woody material.

(3) The proposed new roading along the top of unit 27 should be dropped. New road construction in a municipal and key watershed violates the spirit and intent of the Northwest Forest Plan. It is particularly inappropriate in a municipal watershed. While the new road construction is described as "temporary," the vast majority of impacts to hydrological and soils from new road construction occur during construction and use, regardless of subsequent decommissioning, ripping or other post-project mitigation. Also, please note that the vast majority of 7th field watersheds in the planning area have been identified in the LRMP as "Areas with Watershed Concerns" where cumulative watershed effects "are a special concern due to a combination of high disturbance levels, potential for landsliding and surface erosion, or poor aquatic habitat conditions." EA page 21.

(4) Landing locations for tractor, cable, and helicopter yarding should be identified and disclosed prior to a decision being made to implement the project. Page 12 of the EA indicates that the purchaser will propose landing locations. This cuts the public out of the planning process and does not allow for informed decision-making. As we've recently seen in the Happy Camp LSR thinning project, the location of yarding corridors and landings are a significant factor in determining if and where old-growth trees will be felled. It is not uncommon for large-diameter trees to be logged (and inevitably yarded) at the whim of a purchaser due to landing and yarding location.

(5) Every effort should be made to treat logging created fuels as quickly as possible after the project. The potential 5-year gap in-between logging and fuels treatments (see EA page 66, and 39) is very dangerous and will increase the potential for stand replacing fires. While we recognize that prescribed fire treatments are constrained by weather and moisture, we are extremely concerned about the lag time between logging and fuels treatments. We remind the KNF that both the Yellow fire (47,500 acres) and the Specimen fire (7,000 acres) originated in logging slash.

Fire and Forest Canopy

Page 37 of the EA makes the unsupported contention that "...research indicates that canopy closure below 70% is less likely to carry active, running crown fire..." While we are generally supportive of the proposed logging of small-diameter true-firs that are acting as ladder fuels in portions of the planning area, we do not believe that the Forest Service's characterization of "research" regarding canopy closure is accurate.

Attached to these comments you will find a recent peer-reviewed paper by Dennis Odion indicating that closed canopy forests in the Klamath Mountains typically experience less severe fire behavior than do previously logged sites. Odion, D.C., E.J. Frost, J.R. Strittholt, H. Jiang, D.A. DellaSala and M.A. Moritz. 2004. Patterns of fire severity and forest conditions in the Western Klamath Mountains, California. *Conservation Biology* 18(4): 927-936.

The central conclusion of the paper is that the absence of fire predicts low-severity fire effects in Klamath mixed evergreen forests. This conclusion has four management implications:

1. The fuel build-up model formulated for southwestern ponderosa pine forests does not apply to Klamath mixed evergreen forests, and fuel treatments intended to prevent crown fires based on this model are misdirected.
2. Fuel treatments designed to impose a low-severity fire regime may be ecologically detrimental because highly severe fire effects, to some degree, support diverse vegetation community structures and habitats for which the Klamath region is globally unique. Some fuel treatments also may adversely affect soils, water quality, wildlife habitat, and spread noxious weeds.
3. Fuel treatments may be ecologically beneficial in tree plantations where past logging left behind unnatural fuel profiles.
4. Naturally ignited wildland fires may be beneficial to a variety of conservation objectives in Klamath forests. Home ignitability mitigation in the wildland-urban interface may increase options for backcountry wildland fire use.

Indeed, a number of studies suggest that opening up the canopy will make the understory more open and exposed, with increased sunlight, temperatures, and wind, decreased air humidities and fuel moisture levels, decreased conifer regeneration, and increased shrub and herb growth, leading to increased fire risk in these stands. For example, Agee (1996) concluded that reducing groundfuels is the most effective treatment to prevent crown fires, while thinning tree canopies results in hotter, drier, windier conditions on the ground surface. See Agee, J.K. 1997. Severe fire weather: Too hot too handle? *Northwest Science* 71:153-156. This conclusions is supported by a joint US Department of Commerce and US Department of Agriculture document entitled

‘Fire Weather’ which describes the closed canopy forest as providing a variety of benefits that decrease the risk of forest fires, states that all features of the environment that affect heating and cooling are significant in affecting fire behavior, and concludes that logging and logging roads change the fire prevention characteristics of the closed canopy forest and increase the chance of wildland fire.

In the Meteor FEIS, the KNF acknowledges that another 1997 Agee peer-reviewed study found that “To reduce fire damage from wildfires, future thinning operations must concentrate on small trees with operations called low thinning, removing the trees that have invaded these sites since fire exclusion began, and cleaning up the debris...By leaving the largest trees and treating fuels, fire tolerant forest conditions are created, so that fire severity can be significantly reduced. (Agee 1997, Meteor FEIS page 155)

We wish to be clear that while we support some understory thinning of ladder fuels and fir encroachment in Elk Thin, we do not believe that the Forest Service is accurately describing the current state of fire science when it contends that “...research indicates that canopy closure below 70% is less likely to carry active, running crown fire...” Hence we support Alternative C with modifications, while opposing the logging of late-successional forest canopy in units 9 and 16.

Old-Growth and Spotted Owls

Page 6 of the EA contends that “the proposed units do not contain late-successional or old-growth forest.” We strongly disagree with this statement. Units 9 and 16 most certainly do contain late-successional forests. Unfortunately the KNF elected to release this EA for comment at a time when virtually all units are under snow and behind locked gates. Hence we have been unable to visit some of the higher elevation units in the proposed timber sale. We hope that they do not contain LS/OG characteristics (like units 9 and 16) that are not disclosed in the EA.

Further, we believe that many of the “haz” trees to be removed from LSR and RR land use allocations will be old-growth trees from old-growth stands. We again urge the Forest Service to implement an action alternative that fells and leaves old-growth trees on site in these “reserve” land use allocations. The USFS stated desired condition for this issue consists of “Roadside areas free of hazard trees that pose a threat to public safety...” Clearly this desired condition may be met by felling and leaving large-diameter “haz” trees in Riparian and Late-Successional Reserves.

Alternative B would increase habitat deficit in the home-range of a number of spotted owls that are in serious trouble. Please note that of 11 NSO activity centers in the analysis area, 10 are currently below threshold for suitable nest core habitat, 9 are below threshold for suitable habitat

in their home range, and 4 have not received a 100 acre LSR protective designation. See EA pages 29-30. Further, please note that Alternative B would change 42 acres of suitable NSO forage habitat to dispersal habitat in several home ranges resulting in individual owls being adversely affected. EA page 34.

We strongly urge the Forest Service to drop units 9 and 16 and implement Alternative C in order to avoid further harming NSOs.

We are very concerned about the Forest Service's characterization of the effectiveness of surrounding LSR forests to provide for the survival *and recovery* of the NSO. Page 33 of the EA contends that "large tracts of suitable NSO habitat in the adjacent Ten Bear and Seied Late-Successional Reserves, Critical Habitat Units and Wilderness surround the analysis area. Modeling indicates...that Matrix lands in the project area are at low risk and the large Late-Successional Reserves within and adjacent to the project area are providing adequately for many pairs of NSOs." These statements only tell half the story, and so mis-characterize the actual condition and use of NSO habitat as to be misleading in the extreme.

Currently 10/11 NSO activity centers in the planning area are experiencing a habitat deficit. EA page 29. Clearly the ability of individual NSOs to "feed, shelter and reproduce in the landscape" has been severely impacted in the planning area. Furthermore, the LSRs *adjacent* to the planning area are not providing NSO habitat *in* the planning area. And despite the contention in the EA, the LSRs and Wilderness are *not* "providing adequately for many pairs of NSO." Indeed, table 7 of the EA actually reveals that the matrix land allocation provides significantly more Nesting/Roosting, Foraging and Dispersal habitat than do the LSRs. Even more telling (although not revealed in the EA) page 41 of the Elk Creek Ecosystem Analysis indicates that 51% of NSO habitat **inside of NSO activity centers** is located within the matrix land-use allocation. The same page indicates that 20,283 out of 23,618 acres of available NSO habitat in the wilderness allocation are located **outside of NSO activity centers**. Hence, the Forest Service has protected owl habitat that is generally absent of actual owls, while it contends that the habitat in which the owls actually live is disposable. The Elk Thin EA relies on NSO habitat modeling, while down-playing the severe habitat impacts that have occurred where NSO's actually reside. Please honestly disclose and analyze the impact of removing yet-more suitable habitat from NSO activity centers that are currently in habitat deficit. Better yet, please drop units 9 and 16 and implement Alternative C.

Cumulative Impacts to Hydrology and Soils

Please avoid contributing to the degradation of the hydrological and soil resources of the Elk Creek Watershed. The proposed tractor yarding and new road construction should be dropped.

KS Wild has submitted many comments to the Forest Service establishing in detail the negative impacts of tractor yarding and new road construction on soil and watershed values. Please note that most of the 7th field watersheds in the planning area are designated as “Areas With Watershed Concerns” in the Klamath LRMP and hence there should be no further degradation. Further note that Elk Creek is both a municipal watershed and a Key Watershed and that hence watershed degradation must be avoided, rather than merely mitigated. See WR-3 at C-37 of the Northwest Forest Plan. Mitigating (as opposed to avoiding) the impacts of landings and road construction on landslide generated sediment is clearly inappropriate for this watershed. See EA page 24.

The Forest Service may only yard timber if the activity will be "carried out in a manner consistent with the protection of soil." 16 USC §1604(g)(3)(F)(v); 36 CFR §219.27(c)(6). Management plans and projects must "insure that timber will be harvested from National Forest System lands only where—"soil, slope, or other watershed conditions will not be irreversibly damaged." 16 USC § 1604(g)(3)(E)(i). By enacting this section, Congress intended that the Forest Service "provide empirical guarantees that timber harvesting will not damage soils, water conditions, and fish habitats." Charles F. Wilkinson and Michael Anderson, *Land and Resource Planning in the National Forests* 161 (1987).

Further, the NFMA regulations require the "conservation of soil and water." 36 CFR §219.27. Section 219.27(a)(1) provides that "[a]ll management prescriptions shall—[c]onserve soil and water resources and not allow significant or permanent impairment of the productivity of the land." Section 219.27(b)(5) provides that "[m]anagement prescriptions that involve vegetative manipulation of tree cover for any purpose shall—[a]void permanent impairment of site productivity and ensure conservation of soil and water resources." Further, [c]onservation of soil and water resources involves the analysis, protection, enhancement, treatment, and evaluation of soil and water resources and their responses under management and shall be guided by instructions in official technical handbooks." 36 C.F.R. §219.27(f).

Please note that ground-based logging causes higher incidences of root damage and scarring of residual trees (compared to skyline systems). Kellog, L., Han, H.S., Mayo, J., and J. Sissel, “Residual Stand Damage from Thinning— Young Stand Diversity Study,” Cascade Center for Ecosystem Management.

Soil loss with respect to method of harvest is directly related to the amount of soil disturbed and bared by harvest activity, especially the density of skid trails and roads required to access the timber. Megahan (1981) found tractor logging on granitics to result in 28 percent of the soil disturbed, ground cables with 23 percent, suspended cables with five percent and helicopter logging with two percent. Similarly, Swanston and Dyrness (1973) found tractor yarding in granitics to result in 35.1 percent bare soil, hi-lead in 14.8 percent and skyline in 12.8 percent. In

a Trinity County study on mixed soil types, skid trails averaged four to eight percent (6-12 km/sq.km) for clearcut areas (Scott et al., 1980).

http://www.krisweb.com/biblio/klamath_srcd_sommarstrometal_1990.pdf

We are very concerned that Elk Creek already suffers from elevated suspended sediment during storms (EA page 19) and that the cumulative hydrological impacts of grazing, mining and ORVs are not analyzed or disclosed in the EA (see EA page 21). Page 51 of the EA discloses that “The main area of concern [regarding impacts to soil productivity] was tractor logging on 21 acres in Alternative B.”

We urge the Forest Service to implement Alternative C, with the modifications proposed in these comments, so as to reduce the risk of adverse cumulative impacts to soils and hydrology.

Additional Concerns and Comments

Please note that the Northwest Forest Plan indicates that the Forest Service should “Reduce existing and nonsystem road mileage” in Key Watersheds. The Elk Creek project proposes new landings and new logging road construction but does not propose any significant road decommissioning. While the EA references road decommissioning that occurred over five years ago (EA page 18) the road density in the watershed is still contributing significantly to sediment loading and habitat fragmentation, and is well above the KNF inference point of 2.5 miles of road per square mile of forest for properly functioning watershed conditions. Further, we are concerned that the severe road failure that occurred in the Cougar Creek 7th field watershed, as elsewhere in Elk Creek, during the 1997 floods, is likely to occur again unless road density in this Key Watershed is reduced.

Please note that the March 22, 2004 RODs referenced on page 2 of the EA illegally weaken the basic habitat and biodiversity protections of the Northwest Forest Plan. These RODs are currently the subject of litigation, and when they are declared illegal, it is likely that projects that tier to them will be enjoined. We urge the Forest Service to implement the Northwest Forest Plan as written, rather than relying on illegal RODs designed to circumvent the survey and manage and aquatic conservation strategy of the Northwest Forest Plan.

We urge the Forest Service to implement projects that protect Pacific Fisher, Wolverine and Northern Goshawk habitat. Please note that page 6 of the EA contemplates negative impacts to all three of these sensitive species.

The inference points for surface erosion and landslide erosion identified on page 20 of the EA are arbitrarily high. Site-specific investigation and analysis is necessary even when actions may increase surface erosion by less than 400% and landslide sediment production by less than 200%.

We are concerned that proposed logging could harm constituent elements of NSO critical habitat in CHU CA-21 and CHU CA-17. In particular we are perplexed by the proposal to fell and remove old-growth trees in these CHUs pursuant to the roadside haz treatment. Please note that most of the roads proposed for haz logging are closed to vehicle traffic much of the year, mitigating the risk to motorists, and that the Forest Service is refusing to consider reducing the high road density in this key watershed as an alternative to logging old-growth trees in CHUs along the road system. Further, the Northwest Forest Plan requires that “Topping trees should be considered as an alternative to felling,” for roadside haz treatments in LSRs. We are able to find no evidence that topping was considered in this EA.

We acknowledge and appreciate that the Forest Service dropped units 20 and 21 from the logging proposal so as to protect the riparian and hydrological values of these forests. We very much appreciate the willingness of the Happy Camp Ranger District to incorporate public concerns and comments into project layout.

Conclusion

We support the thinning from below of small-diameter fir and brush that has encroached on pine trees or oak woodlands in this watershed. **See attached photo.** However, Elk Creek is a Key Watershed that serves as a municipal water supply, and its hydrological and wildlife habitat values have been severely impacted by aggressive logging and roading projects over the past few decades. Hence we urge the Forest Service to proceed cautiously by implementing Alternative C so as to protect the values of intact forest canopy and soil health. We further urge the Forest Service to implement the modifications and mitigation measures that we have identified so as to reduce the road density in this Key Watershed while protecting the existing late-successional habitat and hydrological functions that it provides.

Thank you for considering these comments.

Sincerely,

George Sexton
Conservation Director
KS Wild
P.O. Box 102
Ashland, OR 97520
(541) 488-5789

Regina Chichizola
Private Citizen & KS Wild
member
P.O. Box 836
Somes Bar, Ca 95568

Sam Stroich
Program Coordinator
Klamath Forest Alliance
P.O. Box 756
Somes Bar, CA 95568

Kimberly Baker
Forest and Wildlife Coordinator
Klamath Forest Alliance
PO Box 21
Orleans, CA 95556

Scott Greacen
National Forest Program Coordinator
EPIC
P.O. Box 397
Garberville CA 95542