

December 9, 2002

Margaret J. Boland  
Klamath National Forest  
1312 Fairlane Road  
Yreka, CA 96097-9549  
Attn: Linda West



**RE: FIVE POINTS TIMBER SALE ENVIRONMENTAL ASSESSMENT**

Dear Mrs. Boland,

The Environmental Protection Information Center (EPIC) has reviewed the November 12, 2002 Environmental Assessment (EA) for the Five Points Timber Sale, located in the Blue Canyon, Trapper Creek, and Pollic Flat 7<sup>th</sup>-field watersheds on the Goosenest Ranger District. The proposed action, outlined as Alternative 2 of the EA, would log a total of approximately 1,699 acres using a combination of commercial thinning, selective "improvement," sanitation, green tree retention clearcut, and pre-commercial thinning silvicultural prescriptions. Other proposed actions include hazard tree felling and removal, post-logging activity fuels treatment/site preparation activities, application of borax fungicide to cut stumps, construction of 1.00 mile of temporary roads, adding approximately 2.95 miles of existing unclassified roads to the National Forest road system, reducing approximately 4.57 miles of Level 2 classified roads to Level 1 maintenance status, and decommissioning approximately 0.56 miles of road. We would like to provide the following comments on the EA for your consideration.

**1. Purpose and Need**

We do not believe the proposed timber sale will meet the identified purpose and need, because it will likely decrease the health of many of the stands being entered and increase the risk of potential catastrophic fire. The EA relies on outdated and inappropriate concepts of forest health and fire hazards. The EA fails to provide any data or evidence to support the claim that that insects and disease are at epidemic levels, or that fire hazards or forest health will be improved by the proposed actions. The EA also fails to address the significant body of scientific literature that concludes that logging as proposed in the EA is actually more likely to increase fire hazards and degrade forest health. While we support the decommissioning of roads in this heavily roaded area, it is inappropriate to join this activity to the continued degradation of the watershed through further road construction and logging. We request that the true restoration activities proposed in this sale be separated out and proposed as another independent proposal. These activities are

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non-controversial and will not get tied up in appeals and litigation if it is proposed separately from damaging logging activities.

We are strongly opposed to the green tree retention (GTR) clearcutting prescription, and believe that the EA fails to provide sufficient analysis or evidence to support the claim that clearcutting will achieve the stated purpose and need for the sale “to move toward the historic condition for the area, which is a healthy mature ponderosa pine forest in the lower elevations and mature ponderosa pine/white fir forest in the transition zone.” (EA, p. 5). The EA also does not explain how removing large, old trees and creating plantations through GTR clearcutting and sanitation logging will increase development of historical mature forest conditions which contain these large, old trees.

The EA makes several references to insects and disease to justify the proposed logging. The EA fails to provide any information on what levels these insects or diseases are present at, and fails demonstrate that the proposed logging is necessary to control them. The EA also fails to address other concepts of forest health that are not based solely on traditional silvicultural objectives. The best available science indicates that logging and road construction as proposed in the sale will not help alleviate risk to adverse impacts from forest pathogens, but will in fact degrade forest health and exacerbate insect and disease problems (e.g., Perry 1994, Schowalter 1995, Franklin et al. 2000).<sup>1</sup> In many cases, insects and diseases, including mistletoe, are maintained at endemic levels and are a natural and important component of healthy forest ecosystems. The EA fails to provide sufficient documentation to demonstrate that this issue is a legitimate need for the sale, or provide scientific evidence that demonstrates that the proposed actions will improve forest health rather than degrade it.

## **2. Fire and Fuels**

The EA fails to demonstrate that the proposed actions will reduce the risk of high fire severity in the project area, and fails to adequately analyze and disclose the effects of logging on potential fire behavior. The EA relies on coarse-scale and outdated fuel models (e.g., BEHAVE) that only address gross amounts of fuel loads and do not reflect or account for the numerous interrelated factors influencing fire behavior and potential severity in forest stands. The EA fails to disclose that the proposed actions that open 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 the stands. The EA emphasizes that opening up the canopy is the primary objective to address fire risk, and ground fuels are not as important. The EA states that “to open a closed stand with regards to fire behavior is a positive action...The issue of the raising of temperature and drying the forest floor is not necessarily a negative factor toward fire behavior, but opening the canopy allows more moisture to reach the ground and the litter fuels will react with the increased penetration of relative humidity (fuel moistures should be higher).” (EA, p.

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<sup>1</sup> Perry, D.A. 1994. Forest ecosystems. Johns Hopkins University Press, Baltimore, MD; Schowalter, T.D. 1995. Canopy arthropod communities in relation to forest age and alternative harvest practices in western Oregon. *Forest Ecology and Management* 78: 115-125; Franklin, J., D. Perry, R. Noss, D. Montgomery, and C. Frissell. 2000. Simplified forest management to achieve watershed and forest health: a critique. National Wildlife Federation. Available online at [www.nwf.org](http://www.nwf.org).

53). These and similar statements in the EA are incorrect and are not supported by the scientific literature.

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.<sup>2</sup> This conclusion is supported by a joint U. S. Department of Commerce and U. S. Department of Agriculture document entitled “Fire Weather” which describes the closed canopy forest as one which provides 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:

“The forest canopy of dense timber stands shades the ground and the forest fuels from elevated temperatures from solar radiation. The forest canopy radiates out the heat accumulated from solar radiation. The forest canopy provides moisture by transpiration through the leaves to the air and forest fuels, which decreases the possibility of forest fires. Transpiration from an area of dense vegetation can contribute up to eight times as much moisture to the atmosphere as can an equal area of bare ground. The forest canopy slows down wind movement and fire progress, due to its large friction area. A forest with a dense understory is an effective barrier to downslope winds. The two most important weather, or weather-related, elements affecting wildland fire behavior are wind and fuel moisture. Wind affects wildfire in many ways. It carries away moisture-laden air and hastens the drying of forest fuels. Logs under a forest canopy remain more moist (approximately 25% more moist) through the season than those exposed to the sun and wind. The flow beneath a dense canopy is affected only slightly by thermal turbulence, except where holes let the sun strike bare ground or litter on the forest floor, causing local heating. Convective winds have their origin in local temperature differences. The nature and strength of convective winds vary with many other factors. Since they are temperature-dependent, all features of the environment that affect heating and cooling are significant. Even small openings in a moderate to dense timber stand may become warm air pockets during the day. These openings often act as natural chimneys and may accelerate the rate of burning of surface fires. Temperature of forest fuels, and of the air around and above them, is one of the key factors in determining how wildland fires start and spread. Logging and logging roads open the forest canopy and increase the temperature of the air, the ground and the forest fuels, which accelerate the rate of burning of surface fires. Logging and logging roads open the forest canopy and lower humidity of forest fuels, which increases the flammability of forest fuels and critically influences the behavior of wildland fires. Logging and logging roads open the forest canopy and may cause rapid and intense fire spread.”<sup>3</sup>

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<sup>2</sup> Agee, J.K. 1997. Severe fire weather: Too hot to handle? Northwest Science 71: 153-156.

<sup>3</sup> Fire Weather: A Guide For Application Of Meteorological Information To Forest Fire Control Operations, by Mark J. Schroeder, Weather Bureau, Environmental Sciences Administration, U.S. Commerce Department and Charles C. Buck, Forest Service, U.S. Department of U.S. Government Printing Office: first published in May 1970; reviewed and approved for reprinting August 1977.

The EA also lacks information on long-term fuels conditions within the project area in terms of fire and fuels. The EA fails to provide site-specific information on current fuels conditions within the project area, disclose the size of woody material to be removed in the timber sale, and the resulting fuels conditions, in terms of size classes, continuity and distribution, etc.. The proposed project will remove large-diameter woody material at the expense of ecosystem health, while leaving the highly-flammable small-diameter materials on site. In addition, the proposed commercial timber sale contradicts Forest Service direction and guidance outlined in the National Fire Plan, which states:

"Notably, the Administration's wildland fire policy does not rely on commercial logging or new road building to reduce fire risks and can be implemented under its current forest and land management polices. The removal of large, merchantable trees from forests does not reduce fire risk and may, in fact, increase such risk. Fire ecologists note that large trees are 'insurance for the future – they are critical to ecosystem resilience.' Targeting smaller trees and leaving both large trees and snags standing addresses the core of the fuels problem."<sup>4</sup>

Reinforcing this position, the Forest Service Cohesive Strategy states,

"In most cases, any receipts associated with treatments will not be significant due to the need to reduce the disproportionately large number of small, non-merchantable trees, brush, and shrubs that dominate short interval fire-adapted ecosystems and leave standing the larger, fire-tolerant trees."<sup>5</sup>

The EA states that "Recent findings by Pollett and Omi (1999) and Omi and Martinson (2002) indicates stands that incurred fuels treatments sustained lower fire severity than untreated stands in similar weather and topographic conditions." (EA, p. 53). However, these cited studies investigated the effects of non-commercial fuels treatments on fire behavior, not commercial logging as proposed in the EA, and thus they do not support the proposed action. For example, Omi and Martinson (2002) state:

"We ...narrowed our definition of a fuel treatment for the purposes of this study to include only non-commercial or pre-commercial activities that involve mechanical thinning (i.e., "low thinning"), debris removal, and/or broadcast burning and that include moderation of wildfire potential as a stated objective."

Further, Omi and Martinson (2002) provide evidence that contradicts the EA's emphasis on reducing crown density and removing large trees to reduce the risk of severe fire behavior.

"...crown bulk density was not the fuel hazard variable most strongly correlated to fire severity at our study sites; in fact it was significantly correlated only to crown volume scorch. Instead, height to live crown, the variable that determines crown fire initiation rather than

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<sup>4</sup> Managing the Impact of Wildfires on Communities and the Environment - A Report to the President in Response to the Wildfires of 2000.

<sup>5</sup> Protecting People and Sustaining Resources in Fire-Adapted Ecosystems – A Cohesive Strategy, 2000.

propagation (Van Wagner 1977), had the strongest correlation to fire severity in the areas we sampled. Like Pollet and Omi (2002), we also found the more common stand descriptors of stand density and basal area to be important factors. But especially crucial are variables that determine tree resistance to fire damage, such as diameter and height. Thus, “fuel treatments” that reduce basal area or density from above (i.e., removal of the largest stems) will be ineffective within the context of wildfire management.

In summary, the EA fails to address all significant factors affecting fire risk, behavior, and severity, fails to address scientific evidence and agency direction that contradict the EA’s analyses, and fails to provide adequate data or analyses to support the assertion that the proposed logging and road construction will reduce the risk of catastrophic fire rather than increase it. Because the EA did not analyze a non-commercial alternative to achieve the purpose and need, the EA fails to ensure that the project is consistent with the National Fire Plan and Cohesive Strategy, and fails to meet NEPA’s requirement to analyze a reasonable range of alternatives in an EA or EIS.

### **3. Cumulative Effects**

NEPA requires the analysis and consideration of cumulative effects when evaluating proposed actions (40 C.F.R. § 1508.25(a)). A cumulative impact on the environment "results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions...." (40 C.F.R. § 1508.7). Cumulative impacts may result from "individually minor but collectively significant actions taking place over a period of time." (Id). In determining whether a project will have a "significant " impact on the environment, an agency must consider "[w]hether the action is related to other actions with individually insignificant but cumulatively significant impacts." (40 C.F.R. § 1508.27(b)(7)). If several actions have a cumulative environmental effect, "this consequence must be considered in an EIS." <sup>6</sup>

The EA concludes that “The cumulative effects of the project in conjunction with past, present, and reasonably foreseeable future actions in the area (e.g., salvage on private land, thinning, group selection, cattle grazing, etc.) have been considered and found to be relatively minor for all resources.” (EA, p. 36). This conclusion is not supported by evidence or analysis, and is contradicted by other statements in the EA.

First, the EA provides a brief list of other actions that were supposedly considered in the cumulative effects analysis on page 20. However, there is no data or analysis presented in the EA to indicate or show how these activities were actually considered.

Second, the EA provides evidence that significant cumulative effects are currently occurring within the project area, and that the proposed logging will contribute to and exacerbate these cumulative effects. For example, the EA states that “For marten, reducing canopy closure in the regeneration with green tree retention areas may cause stand avoidance, and according the (sic) recent literature, possibly landscape avoidance. However, past overstory removal and clearcuts may have already caused marten to avoid the landscape.” (EA, p. 31). Thus, the EA provides evidence that past logging activity has caused such a cumulative impact that they have possibly

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<sup>6</sup> *Neighbors of Cuddy Mountain v. United States Forest Service*, 137 F.3d at 1378 (9th Cir. 1998).

eliminated the presence or marten in the area, and that the proposed logging will further increase this possibility. This contradicts the conclusion that cumulative effects are insignificant in the project area. The EA cannot discount adverse impacts from the proposed action simply because past cumulative impacts have already significantly degraded the area, while simultaneously claiming that cumulative impacts are “relatively minor.” Because of these deficiencies, the EA fails to take a requisite “hard look” at the potential cumulative effects of the timber sale and fails to adequately analyze and disclose significant cumulative effects, in violation of NEPA.<sup>7</sup>

#### **4. Survey and Manage Species**

The EA relies on the 2001 Record of Decision for Amendments to the Survey and Manage Species program of the Northwest Forest Plan, as well as the implementation of 2001 Survey and Manage Annual Species Review letter and accompanying attachments for its validity. However, the 2001 ROD and Annual Species Review letter fail to ensure the viability of survey and manage species, in violation of NEPA and NFMA. In addition, the 2001 Annual Species Review letter makes significant changes to the standards and guidelines of the Northwest Forest Plan without the benefit of environmental analysis and public comment, in violation of NEPA. In addition, the EA fails to provide sufficient evidence that all survey and manage plant and mollusk species have been properly surveyed and protected, in violation of the NWFP.

#### **5. Wildlife**

The EA fails to provide information or adequately analyze and disclose potential impacts to Sensitive and Management Indicator (MIS) species, and fails to ensure their viability, in violation of NEPA and NFMA. The cursory discussion of cumulative effects in the Wildlife BA/BE hardly constitutes the “hard look” and substantive analysis of cumulative effects that is required by NEPA, and hardly forms the basis for a viability determination for wildlife species of concern. No mention is made of the acreage or habitat affected by the proposed action as well as other past, present, and foreseeable future actions, and does not provide any information on population trends or viability.

While admitting that impacts will occur to Sensitive and MIS species such as the northern goshawk, marten, fisher, pallid bat, and black-backed woodpecker (EA, pp. 30-31), the EA fails to provide any analysis or data on populations of these species to support the conclusion that viability of these species will be maintained and that the project is not likely to result in a trend toward federal listing or loss in viability, as required by the NFMA and the KNF LRMP. No surveys were conducted for any of these species to support the conclusions reached in the EA. Instead, the EA states that some future assessment will provide this required information, stating that “population trend analysis at a larger scale will occur at the Forest level.” (EA, p. 33). The 1982 regulations implementing NFMA require that ‘Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area.’ (36 C.F.R. § 219.19). The Klamath National Forest Land and Resource Management Plan specifically requires monitoring of MIS and sensitive species populations, not simply habitat, to determine effects on population trends and viability. For example, the LRMP and FEIS include the following standards and guidelines:

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<sup>7</sup> City of Carmel-By-The-Sea v. U.S. Department of Transportation, 123 F.3d at 1151 (9<sup>th</sup> Cir. 1997).

- “Population trends of the management indicator species will be monitored and relationships to habitat changes determined. This monitoring will be done in cooperation with State fish and wildlife agencies, to the extent practicable (219.19(a)(6).” (LRMP, p. 5-3).
- “MIS are animal species or groups of species, communities or special habitats selected for emphasis in planning. They are monitored during Forest Plan implementation to assess the effects of management activities on their populations and the populations of other species with similar habitat associations that they may represent. .” (FEIS, p. 3-48)
- “Monitoring several species, with similar or overlapping habitat needs, will provide a better reflection of the range of responses by all wildlife species associated with a given habitat or habitat element. Monitoring multiple species is not expected to add significantly to the cost, because most survey techniques (for example, bird censusing) are designed to detect multiple species.” (FEIS, p. 3-55).
- “Project areas should be surveyed for the presence of Sensitive species before project implementation.” (LRMP, p. 4-23).

Despite this clear direction contained in the LRMP, as well as direction provided in the NFMA itself, neither the EA, BA/BE, nor the MIS Assessment provide data on population trends for MIS or sensitive species impacted by this project. Documents provided by the Klamath National Forest in response to a Freedom of Information Act request reveals that no systematic species surveys have been conducted at the Forest level to estimate population numbers or trends for most MIS species on the Forest, including those impacted by the proposed Project. Because the Klamath National Forest has failed to conduct surveys for the project, the EA, BA/BE, and MIS Assessment fail to adequately evaluate impacts to sensitive and MIS species, and fail to demonstrate that the project will not threaten the viability of these species, in violation of the NFMA (36 C.F.R. § 219.19), the Klamath National Forest LRMP (pp. 4-6, 4-23, 5-3), ESA (16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(g)(3)), and NEPA (40 C.F.R. §§ 1508; 1502.16, 1508.25(a)).

Finally, there is no evidence to support that EA’s claim that the proposed logging, particularly GTR clearcuts, will maintain habitat capability for these species, or accelerate the development of large, old trees and mature forest conditions.

In summary, there is no evidence or support in the EA and project record for a Finding of No Significant Impact, or compliance with the species viability requirements of the National Forest Management Act, because the cumulative effects analysis to wildlife species was not adequately discussed or disclosed in the EA or BA/BE, in violation of NFMA and NEPA (36 C.F.R. § 219.27; 40 C.F.R. § 1508.7). This leaves both the decision maker and the public without enough information to conclusively know that the project will have no significant effect to Threatened, Sensitive, and Management Indicator wildlife species, in violation of NEPA. (40 C.F.R. § 1508.27).

## **6. Riparian Reserves**

The EA does not provide sufficient information to determine whether all riparian reserves were identified and adequately protected. Specifically, it does not specifically address all unstable or potentially unstable areas, seeps, springs, and other areas identified in the NWFP (ROD C-30 to C-31). The EA also does not provide any information on site-specific tree heights within the project area and how this was considered in the determination of riparian reserve widths. The EA also does not disclose how RR widths were determined. The ROD requires that RR widths be a specific distance depending on type, or one or two site-potential tree heights, *whichever is greatest* (C-30, C-31) (italics added). Information and documentation on site-potential tree-height and how it was used in the EA is necessary to determine compliance with the ACS.

## **7. Range of Alternatives**

The EA does not develop and analyze an adequate range of alternatives. The only two alternatives considered were the No Action and Proposed Action Alternative. To comply with NEPA, a non-commercial alternative should be considered which thins stands, reduces fuels, and conduct watershed restoration activities (road decommissioning and maintenance) through the use of service contracts. The EA should have also considered an alternative that included an upper-diameter limit such as 12"-16" on the trees to be removed, and included structural guidelines (e.g., retain all dominant and pre-dominant overstory trees).

## **8. Access and Landings**

The EA does not adequately analyze the potential impacts from the proposed temporary road and landing construction. The EA fails to provide site-specific information on the proposed roads and landings, such as specific location, size, soils, slopes, and proximity to streams and riparian reserves.

## **9. Soils and Site-Productivity**

The EA is completely devoid of any meaningful information or analysis of effects on soils and long-term site productivity in the project area, even though this is fundamental to the long-term health and productivity of the forests affected by the timber sale. The EA does not analyze potential soil compaction, displacement, erosion, or mass wasting from the proposed logging, road construction, or landing construction and use. In addition, the EA fails to provide site-species analysis of potential soils impacts, instead relying on "representative sampling" (e.g., "Six of the proposed Five Points units (a representative sample) were examined for total and organic soil cover, coarse woody debris, and soil compaction." (EA, p. 20)). This is inadequate, as NEPA requires site-specific information and analysis of potential impacts. Without specifically analyzing each and every unit, the EA fails to ensure that each unit will comply with LRMP standards and guidelines and other applicable laws and regulations. The EA also fails to analyze the effects from the proposed logging on long-term organic debris input to soils, in violation of NFMA, NEPA, and the Klamath National Forest LRMP.

Regional Soil Quality Standards (SQS's) provide threshold values that indicate when changes in soil impairment and soil conditions would result in significant chance or impairment of the productivity potential, hydrologic function, or buffering capacity of the soil. Detrimental soil disturbance is the resulting condition when threshold values are exceeded. Regional SQS's included threshold values for soil cover, soil porosity, soil organic matter, soil moisture regime, and soil hydrologic function. The EA and project record fail to contain any information or analysis to ensure that these SQS's will be met, in violation of FSH 2509.18.

As a result of the failure to address the direct, indirect, and cumulative impacts associated with the proposed activities, the EA fails to ensure that timber will be harvested only where soils will not be irreversibly damaged. In addition, the EA fails to identify and disclose technology and mitigation measures necessary to prevent irreversible damage to soils and site productivity from the proposed activities. Because the EA and project record do not adequately analyze impacts on soils and long-term productivity, they fail to ensure compliance with the LRMP for the Klamath National Forest, which requires the Forest to "Maintain soil productivity" (KNF LRMP, p. 4-5). In addition, because of these deficiencies, the EA and project record also violate NFMA, which requires the Forest Service to: "... insure that timber will be harvested from National Forest System lands only where (i) soil, slope, or other watershed conditions will not be irreversibly damaged; ... (iii) protection is provided for streams, streambanks, shorelines, lakes, wetlands, and other bodies of water from detrimental changes in water temperatures, blockages of water courses, and deposits of sediment, where harvests are likely to seriously and adversely affect water conditions or fish habitat ..." (16 USC 1604(g)(3)(E); 36 CFR 219.27).

## **10. Economics**

The EA fails to address all costs associated with the timber sale, including sale preparation, road maintenance, and decommissioning.

## **11. 15% LSOG S&G's**

The EA fails to provide sufficient evidence to demonstrate compliance with the requirement to retain at least 15% of each GTR unit intact, and fails to demonstrate compliance with the requirement to maintain at least 15% LSOG habitat in the fifth-field watershed, as required by the Northwest Forest Plan.

## **12. Borax Fungicide**

The EA proposes to use borax fungicide to prevent the introduction and spread of *Heterobasidion annosum* infections in the proposed logging units (EA, p. 9). This action is presented as a mitigation measure. However, this chemical compound is intended to kill plant and fungal species, and has significant adverse impacts in itself. The EA fails to analyze and disclose these potential impacts on soils, plants, water, and wildlife in the project area, in violation of NEPA's requirements to take a hard look at potential environmental consequences and insure the high quality and scientific and professional integrity of its environmental analyses. (40 CFR §§ 1500.1(b), 1502.24).

### **13. Conclusions**

Because the EA fails to articulate a rational connection between the facts found and the conclusions made, the decision to implement the sale is not based on a consideration of the relevant factors, the EA and project record fail to provide the underlying data used in an environmental analysis, the conclusions do not have a basis in fact, and there has been a clear error of judgment, any decision based on them would be “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law” (5 U.S.C. § 706(2)(A)). We urge you to drop the proposed timber sale and develop a restoration project that focuses on pre-commercial thinning of plantations, road decommissioning, treatment of small-diameter ground fuels, and prescribed burning.

Thank you for considering these comments. Please send us the Decision Notice when it becomes available.

Sincerely,

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/s/Anthony Ambrose