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Santa Fe National Forest
Coyote Ranger District
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Submitted to the Public Comment Form at:
https://cara.fs2c.usda.gov/Public//CommentInput?Project=54965

Re: Preliminary Environmental Assessment for the Encino Vista Landscape Restoration Project, (project #54965).

District Ranger Mark Sando

These comments are submitted on behalf of the Center for Biological Diversity, regarding the Preliminary Environmental Assessment ("PEA") for the Encino Vista Landscape Restoration Project ("Encino Vista Project" or "Project") on the Santa Fe National Forest.

The Center for Biological Diversity is a non-profit environmental organization with more than 1.7 million members and online activists who value wilderness, biodiversity, old growth forests, and the threatened and endangered species which occur on America's spectacular public lands and waters. Our members and supporters use and enjoy the Santa Fe National Forest, and the lands of the Encino Vista Project area. The Center for Biological Diversity believes that the welfare of human beings is deeply linked to nature—to the existence in our world of a vast diversity of wild animals and plants. Because diversity has intrinsic value, and because its loss impoverishes society, we work to secure a future for all species, great and small, hovering on the brink of extinction; we do so through science, law and creative media, with a focus on protecting the lands, forests, waters and climate that species need to survive. We advocate for increased protections for species and their habitats in the forests of the American Southwest.

The Center supports the restoration of functional fire regimes at landscape scales, and we support the Encino Vista Project's objectives of restoring fire, enhancing wildlife habitat, and improving watershed resiliency. However, the Preliminary EA proposes a project that contains actions contradictory to those objectives, including logging some of the largest remaining trees in the area, reducing forest stands to extremely low tree densities, continuing livestock grazing that undermines the ability to restore fire regimes, and constructing eight miles of new road in an area with an extremely high existing road density; the Preliminary EA fails to adequately disclose and analyze the impacts of those actions.

These comments seek to identify those components of the project that we see as contradictory to the goals of enhancing the ecological function, integrity, and resiliency, and to provide recommendations for achieving the Project's objectives of restoring fire, enhancing wildlife

habitat, and improving watershed resiliency. We also seek to identify specific information and analyses that are necessary to adequately disclose and analyze the impacts of the proposed project. Overall, we urge the Forest Service to revise the proposed action to prioritize the actions necessary to safely and effectively restore fire at the landscape scale.

Issues raised in these comments:

1. Make the specialist reports available on the project web page.
2. Restore fire as a key ecological function.
3. Prioritize forest thinning where it is needed to safely restore the fire regime.
4. Basal area targets must be appropriate to the site.
5. Determine the site-specific need for regeneration openings.
6. Retain trees larger than 16 inches diameter.
7. Retain old growth and large, mature trees.
8. The construction and expansion of roads in inconsistent with the project objectives and the Preliminary EA fails to adequately disclose and analyze the impacts.
9. Specify treatment of the wildland-urban interface.
10. Livestock grazing is inconsistent with the project objectives.
11. The Preliminary EA fails to adequately disclose and analyze the impacts to sensitive plants and wildlife.
12. The Environmental Analysis must comply with NEPA.

I. MAKE THE SPECIALIST REPORTS AVAILABLE ON THE PROJECT WEB PAGE.

The PEA indicates that there is additional information in the project record that is not made available on the project document portal. In particular, the PEA indicates that the specialist reports are available.

> Additional information is provided in the Fuels, Wildfire Behavior, Air Quality and Climate Change specialist reports, located in the Project Record. Modeling results recommend that the entire project area could be treated with either prescribed burned only, light thinned/piles burned, or heavy thinned/piles burned followed by prescribed burning.[1]

We recommend that the Forest Service post the specialist reports to the project web page at https://www.fs.usda.gov/project/santafe/?project=54965, where the Scoping Documents and PEA are currently posted. Other National Forests commonly post all specialists reports online to facilitate public review and understanding. We also recommend posting any other information from the Project Record that the environmental review relies on in its analyses or proposed actions.

[1] Preliminary EA at 51-52.

II. RESTORE FIRE AS A KEY ECOLOGICAL FUNCTION.

The Project identifies the reintroduction of fire on the landscape as a key action of the Project, necessary for the purpose of forest restoration.[2] Furthermore, the PEA includes clear acknowledgement of the value of fire as a management tool moving forward.

> Prescribed fire may be used as a stand-alone treatment if existing site-specific conditions are appropriate. Prescribed burning would typically be used to reintroduce fire, as a maintenance treatment to maintain desired conditions at respective fire regime condition class (USDA, 2022), or as required for the removal of residual fuels from thinning activities.[3]
>
> Prescribed burning in these stands post treatment would reintroduce fire that is characteristic of a frequent fire forest and would maintain much of the desired conditions into the future.[4]

Despite this clear acknowledgment of the capacity of a restored fire regime to function as a management tool, the PEA fails to analyze the capacity of fire over time to reduce stand densities, create openings, and maintain fire risk in perpetuity. Instead, it analyzes forest structural change solely as a result of thinning, and it defines a desired condition for fire and fuels and solely as a matter of reducing fuels loads and minimizing the risk of crown fire. This extremely limited view of fire is inconsistent with the desired conditions for fuels and fires listed in the Santa Fe National Forest Land Management Plan (LMP).

> *Desired Conditions for Fire and Fuels (FW-FIRE-DC)*
>
> 1 Wildland fires do not result in the loss of life, property, or cultural resources, or create irreparable harm to ecological resources.
>
> 2 Wildland fire protects, maintains, and enhances resources. It is allowed to function in its natural ecological role on a landscape scale and across administrative boundaries, under conditions where safety and values at risk can be protected.
>
> 3 Wildland fires burn within the range of severity and frequency of historic fire regimes for the affected vegetation communities. High-severity fires rarely occur where they were not historically part of the fire regime.
>
> 4 Naturally caused fires predominate; accidental human-caused fires (e.g., abandoned campfire, downed powerlines) are rare.
>
> 5 Fires function in their natural ecological role in designated areas (e.g., wilderness and research natural areas).
>
> 6 Restoration and fuel treatments result in ecological resources that are adaptable to changing climate conditions.[5]

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[2] Preliminary EA at 12.

[3] Preliminary EA at 37.

[4] Preliminary EA at 43.

[5] Santa Fe National Forest Land Management Plan at 65.

The LMP includes additional direction on the use of wildland fire…

> When conditions facilitate safe progress toward desired conditions, consider managing naturally ignited fires to meet multiple resource objectives concurrently (i.e., protection and resource enhancement), which can change as the fire spreads across the landscape.[6]
>
> Wildland fire is understood, both internally and by the public, as a necessary disturbance process integral to the function and sustainability of ecosystems.[7]

The Encino Vista PEA largely ignores these directives in the Forest Plan, and fails to analyze the effects of a restored fire regime on the future forest structure. The NEPA analysis for the Encino Vista Project must consider the effects of ongoing future fire and should incorporate those effects into the project design.

USFS research scientists have long worked to develop decision support, risk management, and prioritization tools for use in applications like the Encino Vista Project. Their work has been fundamental in establishing the science of optimization that is increasingly being explored and implemented in the western United States. Important considerations for utilizing wildland fire use have been identified by fire management professionals[8,9] and agency-developed risk management and decision support systems, such as Fire Effects Planning Framework,[10] provide systematic geospatial techniques for managing fire for resource benefit.

Strategically-placed treatments on portions of the landscape are used to safely facilitate the use of prescribed and managed wildfire to achieve restoration of frequent fire adapted ecosystem processes, composition, and structure. In a sweeping review of federal fire policy, Stephens and others recommended that the number one improvement that could be made in planning and implementing forest and fire management is to "mandate evaluation of opportunities for ecologically beneficial fire in land management planning."[11] Forest Service researchers have established that any science-based planning should ask "Which locations provide the greatest strategic opportunity for fuel treatments that would facilitate attainment of desired conditions?"[12]

One forest restoration researcher has stated that "restoration of surface fire in most sites and thinning in strategic sites will increase resistance to severe wildfire at the stand and landscape scales, insect pathogens, and invasive non-native species."[13] The Center agrees with that assertion and believes that the Forest Service should approach the Encino Vista Project analysis

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[6] Santa Fe National Forest Land Management Plan at 67.

[7] Santa Fe National Forest Land Management Plan at 68.

[8] Black *et al.* 2008. Wildland Fire Use Barriers and Facilitators. *Fire Management Today* 68(1): 10-14.

[9] Doane, D., J. O'Laughlin, P. Morgan, and C. Miller. 2006. Barriers to wildland fire use: A preliminary problem analysis. *International Journal of Wilderness* 12(1): 36-38.

[10] Black and Opperman 2005. Fire Effects Planning Framework: a user's guide. RMRS-GTR-163.

[11] p. 4 in Stephens, S.L., B.M. Collins, E. Biber, and P.Z. Fule. 2016. U.S. federal fire and forest policy: emphasizing resilience in dry forests. *Ecosphere* 7(11): 1-19.

[12] Peterson and Johnson 2007. Science-based strategic planning for hazardous fuel treatments. *Fire Management Today* 67(3): 13-18.

[13] p. 529 in Fule, P.Z. 2008. Does it make sense to restore wildland fire in changing climate? *Restoration Ecology* 16(4):526-531.

within such a framework, wherein project objectives relax the focus on strict structural parameters and instead utilize cost-effective means that emphasize fire-based ecological process to establish landscape mosaics and maintain ecological integrity.

Ager and colleagues stated in a 2013 article that "Meeting the long-term goals of dry forest restoration will require dramatic increases in prescribed and managed fire that burn under conditions that pose minimal ecological and social risk. Optimization models can facilitate the attainment of these goals by prioritizing management activities and identifying investment tradeoffs."[14]

One common fundamental similarity between all optimization models is that they seek to reduce fire-severity or minimize wildfire risk, balancing tradeoffs between the size of treatment units, the placement of treatments, and the proportion of the landscape treated.[15,16,17] Collins and colleagues[18] reviewed fuel treatment strategies, including much of Finney and Ager's work, and arrived at some basic parameters for optimizing fuel reduction treatments at the landscape scale that provide some guidance for those evaluating tradeoffs and can be evaluated in a an alternative focused on the reintroduction of fire regimes as a key restoration function:

- Treating 10% of the landscape provides notable reductions in modeled fire size, flame length, and spread rate across the landscape relative to untreated scenarios, but treating 20% provides the most consistent reductions in modeled fire size and behavior across multiple landscapes and scenarios.
- Increasing the proportion of area treated generally resulted in further reduction in fire size and behavior, however, the rate of reduction diminishes more rapidly beyond 20% of the landscape treated.
- Random placement of treatments requires substantially greater proportions of the landscape treated compared with optimized or regular treatment placement.
- The improvements offered by optimized treatments are reduced when 40%-50% of the landscape is unavailable for treatment due to land management constraints.
- Treatment rates beyond 2% of the landscape per year yield little added benefit.

The Encino Vista Project analysis should identify strategic treatment priorities incorporating scientific information relevant to landscape-scale restoration within the project landscape. These include:

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[14] p. 11 in Ager, A.A., N.M. Vaillant, and A. McMahan. 2013. Restoration of fire in managed forests: a model to prioritize landscapes and analyze tradeoffs. *Ecosphere* 4(2): 1-19.

[15] Collins *et al.* 2010. Challenges and approaches in planning fuel treatments across fire-excluded forested landscapes. *Journal of Forestry* Jan/Feb 2010: 24-31.

[16] Chung 2015. Optimizing fuel treatments to reduce wildland fire risk. *Current Forestry Reports* 1: 44-51.

[17] Krofcheck, D.J., M.D. Hurteau, R.M. Scheller, and E.L. Loudermilk. 2017a. Prioritizing forest fuels treatments based on the probability of high-severity fire restores adaptive capacity in Sierran forests. *Global Change Biology DOI: 10.1111/gcb.13913.*

[18] Collins *et al.* 2010.

- Strategically placed treatments to support fire use in the long-term, utilizing anchor points such as natural fuel breaks, previously treated or burned areas, roads, and waterways
- Reasons why the location, timing and intensity of proposed mechanical actions will support a coherent restoration strategy
- Landscape scale assessment of opportunities to manage unplanned natural ignitions for resource benefits
- An analysis of fire-risk at multiple spatial scales using broader criteria[19]
- surface fuel density and arrangement

The NEPA analysis should provide meaningful analysis of how and where unplanned ignitions could be used to accomplish resource management objectives, and what the range of effects of fire use could be. Adverse effects of fire control practices to the environment should be analyzed and disclosed where proposed treatments are designed to increase the effectiveness of fire suppression.[20] While the PEA discusses the effects of prescribed and managed fire, it fails to disclose and analyze the effects of fire suppression activities.

Considering the fire modeling that we assume is already underway by the Forest Service for the Encino Vista Project, we believe that a modified version of the methodology developed by the Hurteau lab and used by Krofcheck and colleagues[21,22] is completely appropriate for the Encino Vista Project and would assist the agency in taking the required "hard look" at the proposal's impacts. Their research[23] has developed "prioritization strategies for implementing fuel treatments…with the goal to maximize treatment efficacy using optimal placement and prescription options under typical and extreme fire weather conditions."[24] Their optimization model, which analyzes mechanically treatments only of the operable areas with a high probability of mixed- and high-severity fire, was shown in multiple fire simulations to be as effective as thinning all operable acres at reducing wildfire burn severity and facilitating landscape scale low-severity fire restoration. This approach could inform landscape-scale restoration planning nationwide, as "Testing of strategic placement of treatments by resource

[19] These criteria have long-been identified as fundamental factors in effective fire and fuels-management planning, for example, *see*: Agee, J.K., and C.N. Skinner. 2005. Basic principles of forest fuel reduction treatments. *Forest Ecology and Management* 211(1): 83-96. *See also* Reinhardt, E. D., R.E. Keane, D. E. Calkin, and J. D. Cohen. 2008. Objectives and considerations for wildland fuel treatment in forested ecosystems of the interior western United States. *Forest Ecology and Management* 256:1997-2006.

[20] Backer, D.M, S.A. Jensen, and G.R. McPherson. 2004. Impacts of fire suppression activities on natural communities. *Conservation Biology* 18: 937-46.

[21] Krofcheck *et al*. 2017a.

[22] Krofcheck, D.J., M.D. Hurteau, R.M. Scheller, and E.L. Loudermilk. 2017. Restoring surface fire stabilizes forest carbon under extreme fire weather in the Sierra Nevada. *Ecosphere* 8(1): 1-18.

[23] Krofcheck *et al*. 2017a; Krofcheck *et al*. 2017b.

[24] http://www.hurteaulab.org/

managers will add data in the years ahead and provide information that can be shared and applied in other locations."[25] The authors summarize their methods here:

> "We developed three scenarios: no-management, naive placement, and optimized placement. Both management scenarios employed combinations of mechanical thinning and prescribed burning. The naive placement scenario aimed to simulate mechanical thinning from below and prescribed fire to all forest types that have experienced a fuels load departure from their historic condition due to fire exclusion. Within each forest type that received mechanical thinning, thinning was constrained based on operational limits (slope>30%, which totaled 22,436 ha available for mechanical thinning). The optimized placement scenario further constrained the area that received mechanical thinning by limiting thinning to areas that also had a high probability of mixed- and high-severity wildfire…In both treatment scenarios, stands identified for mechanical treatment were thinned from below, removing roughly one-third of the live tree biomass over the first decade of the simulation. Stands selected for mechanical thinning were only thinned once in the simulations, and all thinning was completed within the first decade."[26]

Their results suggested that thinning the most optimum 33% of the operable acres with slopes less than 30% could achieve the same effect as thinning all operable acres. The study was simulated in the Sierra Nevada of California, but the authors asserted that their approach was "broadly applicable to historically frequent-fire ecosystems, or systems which have transitioned away from a low severity and fuel limited fire regime to one characterized by high-severity fires."[27]

Current Forest Service policy and guidance calls for strategic treatment implementation. The dramatic deficit of annual acreage burned in frequent-fire adapted forests has led senior Forest Service scientists to call for increasing the scale and rate of fuels treatments following three key strategies:[28] 1) Increasing the extent of fuel treatments if resources permit; 2) Designing treatments to create conditions conducive to naturally ignited fires burning under desired conditions while fulfilling an ecological role; and 3) Placing treatments to reduce hazard while providing options for firefighting when highly valued resources and assets are present.

The National Strategy for Vegetation and Fuels Management recommends implementing strategically placed fuel treatments to interrupt fire spread across landscapes, and managing wildfire for resource objectives and ecological purposes to restore and maintain fire-adapted ecosystems and achieve fire-resilient landscapes.[29] Both of these strategies are highly applicable to the Encino Vista project area, and we urge the Forest Service to analyze and apply them here.

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[25] p. 15 in Peterson, D. L. and M.C. Johnson. 2007. Science-based strategic planning for hazardous fuel treatment. *Fire Management Today* 67(3):13-18.

[26] p. 2 in Krofcheck *et al*. 2017a.

[27] p. 6 in Krofcheck *et al*. 2017a.

[28] p. 301 in Vaillant and Reinhardt 2017. An evaluation of the Forest Service hazardous fuels treatment program—are we treating enough to promote resiliency or reduce hazard? *Journal of Forestry* 115(4): 300-308.

[29] pp. 1 and 58 in National Strategy 2014: https://www.forestsandrangelands.gov/strategy/thestrategy.shtml.

By focusing limited resources on specific key locations, expanded wildland fire use for resource benefit can be utilized to achieve fuels reduction and ecological restoration objectives. The National Strategy clearly asserts that "Prescribed fire and managing wildfire for resource objectives have the greatest potential for treating large areas at lower cost than mechanical treatments."[30] Researchers have long asserted that "Prioritizing restoration efforts is essential because resources are limited. An initial focus on areas most likely to provide benefits and that present a low risk of degradation of ecological values will build experience and credibility."[31]

Prominent fire scientists have affirmed that "Strategically placing fuel treatments to create conditions where wildland fire can occur without negative consequences and leveraging low-risk opportunities to manage wildland fire will remain critical factors to successful implementation of the [National] Strategy."[32] This approach is further called for in the 2012 Mexican Spotted Owl Recovery Plan, which suggests that restoration projects: "Conduct a landscape-level risk assessment to strategically locate and prioritize mechanical treatment units to mitigate the risk of large wildland fires while minimizing impact to PACs."[33]

We urge the Forest Service to consider a strategic treatment alternative, or to explain why it cannot. Such an approach is under development as part of the Four Forests Restoration Initiative in northern Arizona. We also urge the Forest Service to look to the Environmental Assessment for the Kaibab Plateau Environmental Restoration Project, which identified specific treatment blocks both by location and sequencing, based on fire hazard rating and natural features across the project area.[34] This allowed for a more meaningful analysis of the project's impacts on the forest structure and fire risk, as well as on wildlife and habitat composition over time.

III. PRIORITIZE FOREST THINNING WHERE IT IS NEEDED TO SAFELY RESTORE THE FIRE REGIME.

The Project proposes to use mechanical thinning on 33% of the total acres of ponderosa pine forest type across the project area, 33% of the total acres of dry mixed conifer, and 69% of the total acres of spruce fir, but the PEA offers essentially no analysis of what thinning is necessary in order to safely and effectively restore fire.[35]

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[30] p. 58 in National Strategy 2014

[31] Brown *et al*. 2004. Forest restoration and fire: principles in the context of place. *Conservation Biology* 18(4): 903-912.

[32] p. 8 in Barnett *et al.* 2016. Beyond fuel treatment effectiveness: characterizing interactions between fire and treatments in the US. *Forests* 7(237): 1-12.

[33] p. 262 in USFWS 2012 Mexican Spotted Owl Recovery Plan, First Revision (*Strix occidentalis lucida*). Southwest Region U.S. Fish and Wildlife Service Albuquerque, New Mexico.

[34] Kaibab Plateau Ecological Restoration Project, Environmental Assessment, U.S. Forest Service, Kaibab National Forest, 2020, at 11. https://www.fs.usda.gov/project/?project=54226

[35] Preliminary EA at 46. Of the 31,305 total acres of ponderosa pine forest type, the project proposes 2274 acres of commercial thinning and 8166 acres of pre commercial thinning, for a total of 10,440 acres of mechanical thinning, 33% of all ponderosa pine acres. Of the 38,130 total acres of dry mixed conifer forest type, the project proposes 2109 acres of commercial thinning and 10,656 acres of pre-commercial thinning, for a total of the 12,765 acres of mechanical thinning, 33% of all dry mixed conifer acres. Of the 3440 total acres of spruce-fir forest type, the project

Furthermore, the PEA offers no analysis on the purpose and effectiveness of mechanical thinning of 995 acres of spruce-fir forest type. As the PEA acknowledges, spruce-fir forest is naturally subject to infrequent, high-severity, stand-replacing fire.[36] In addition, the PEA states that spruce-fir forest within the project area is at only moderate departure from reference conditions.[37]

The Preliminary EA provides data and results regarding fuels and fire risk, but only at the scale of an entire forest type (ERU) within the project. Such data and analyses can generalize conditions in a way that greatly obscure the actual conditions overall and the conditions at individual locations. Such generalized data also cannot provide a basis for determining the need for treatment at any particular site, nor the location and specific goals and prescription of such treatments.

For example, Table 12 presents the fire regime group descriptions for each forest type in the project area.[38] These fire regimes are evidently generalized over the entirety of each forest type—the entire 38,130 acres of dry mixed conifer forest in the project area is listed as fire regime group I (0-35 year fire frequency); the entire 38,130 acres of dry mixed conifer forest is also listed as fire regime group III (35-200 year fire frequency). A similar situation applies to ponderosa pine and practically every other forest type. It seems obvious that a forest type has historically experienced more than one type of fire severity at more than one fire frequency. However, it is not clear from the PEA how these overlapping data are being used to inform the proposed vegetative treatments. In addition, it is not clear from the Preliminary EA that the departure from natural fire regimes takes into account the multiple fire regimes for each forest type. We urge the Forest Service to address these data gaps in any subsequently prepared NEPA analysis.

As another example, Table 13 in the PEA provides the seral state departure from reference conditions for each forest type.[39] However, it is not clear from the PEA what these data mean in any practical sense. For example, how does a departure index of 97 for ponderosa pine forest relate to forest structure and the risk of active crown fire? At what scale are the departure indices calculated, and what does that mean with respect to individual stands? How does this analysis take into account the many wildfires that have burned within the project area since 2000? Are the areas within the burn perimeters of recent fires at the same departure from reference conditions as are the areas that are outside of those burn perimeters? If the seral state departures are not the same across all acres of a forest type, then what does the departure index mean with respect to the proposed actions at any particular site?

We recommend that the fire and fuels section of the EA be further developed to explain how the data and modeling results apply to individual stands and how these data and results are used to

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proposes 1380 acres of commercial thinning and 95 acres of pre-commercial thinning for a total of 1475 acres of mechanical thinning, 69% of all spruce-fir acres.

[36] Preliminary EA at 48. Table 12. Fire Regime Group Descriptions and Ecological Response Unit acreages.

[37] Preliminary EA at 49. Table 13. Degree of Seral State Departure from Reference Conditions for selected ERUs within the project area.

[38] Preliminary EA at 48. Table 12. Fire Regime Group Descriptions and Ecological Response Unit acreages.

[39] Preliminary EA at 49. Table 13. Degree of Seral State Departure from Reference Conditions for selected ERUs within the project area.

develop proposed treatments. In the absence of more clarity on the Forest Service's interpretation of these data and more specificity with regard to individual stands, the highly generalized data could be used as a justification for the most intensive possible actions, with significant negative impacts to the forest ecosystem and wildlife.

The PEA includes a discussion of surface fuels loading before and after prescribed burning. However, the PEA is very confusing with respect to the implications of the modeling results presented. (Note, the PEA incorrectly refers here to Table 1; this should be corrected to refer to Table 14.)

> Post treatment fuel loading should be reduced to amounts that should produce average flame lengths no greater than 4 feet under the 90th percentile wildfire burning conditions. Table 1 shows the estimated pre and post prescribed burning fuel loading. Post treatment PPF surface fuel loads would be one ton less per acre than the desired condition range, and MCD would be two tons higher than the desired condition range… Post treatment wildfire behavior modeling shows that the project area would generally meet 2022 SFNF LMP wildfire behavior desired conditions, standards, and guidelines.[40]

The PEA does not explain the import of reducing flame lengths to four feet or less, other than to meet the desired conditions stated in the LMP. Nor does the PEA explain the import of surface fuel loads being one ton less per acre than the desired condition range for ponderosa pine forests or two tons more per acre than the desired condition range for dry mixed conifer forests. Furthermore, the PEA treats these estimates as identical across each forest type, and provides no explanation of what these mean with respect to individual stands, sites, or areas.

The implications of a four-foot flame length can be understood only in the context of the structural and functional components of the forest, as with fire modeling for active crown fire, passive crown fire, and soil impacts. Such an analysis should include a comparison of the expected flame lengths for surface fires implemented under prescribed fire conditions. That is, what would be the expected flame length of a prescribed fire under appropriate conditions without thinning treatment, and what would be the expected flame length of a wildfire burning within a few years after such a prescribed fire?

We recommend that the fire and fuels section of the EA provide an analysis of the fuel loading and flame lengths under current conditions by stand or treatment area, and the expected results of prescribed fire under appropriate fire conditions, in comparison to the same areas before and after thinning treatments.

The purpose of the fire and fuels section of the EA is to help the decisionmaker and the public understand the fuel structure and fire risk at the operational scale, and the effects of the proposed treatments. Analysis of these elements would optimally provide stand-level findings, but should have a resolution at least of the scale of the proposed thinning treatments and prescribed fire burn blocks, presumably between 100 acres and 1000 acres. To understand the need and effects of vegetation treatments, it is critical to know the fuel composition and fire risk in the current condition, the expected effects of prescribed fire under the current forest structure, and a comparison to the expected effects of managed fire following the proposed thinning treatments.

[40] Preliminary EA at 51.

Ultimately, the EA should disclose specifically where forest thinning is necessary to safely and effectively restore fire regimes, and what specific thinning and fire treatments are necessary in which specific locations. Only with this foundation of what is essentially the minimum necessary treatment could the decisionmaker and the public then understand where additional forest thinning would be necessary to develop desired future conditions.

We strongly recommend that the EA identify specific wildland fire targets and analyze an alternative that identifies the amount and location of thinning treatments needed to achieve those targets. We recommend a sequence of analyses to identify specific treatments needed in specific locations:

1) Map the fire hazard at the stand scale, by ERU.

2) Map the boundaries of likely burn units for prescribed fire and the existing features that can serve as fuel breaks or be developed into fuel breaks.

3) Identify the minimum thinning treatments needed to establish containment lines, building on existing and natural features, in order to safely and effectively implement prescribed fire in each of these areas.

4) Model the results of prescribed fire across these burn units; model the results of repeated prescribed fire over subsequent years and the resulting fire hazard.

5) Identify those areas at risk of large runs of high-severity crown fire even after minimal treatment of containment lines and multiple rounds of prescribed fire.

6) Within the areas that would remain at risk of large runs of high-severity crown fire, identify those locations where forest conditions remain outside the range of desired conditions. Identify the specific treatments necessary to achieve desired conditions in those locations.

IV. BASAL AREA TARGETS MUST BE APPROPRIATE TO THE SITE.

The Project proposes basal area targets of 20-80 square foot per acre for mechanical thinning in ponderosa pine stands and 30-100 BA for mechanical thinning in dry mixed conifer.[41] These are loosely based on the desired conditions for various forest types as stated in the Santa Fe National Forest Land Management Plan. For ponderosa pine forest, the LMP states that "[Stand density] within forested areas ranges from 22 to 89 square foot basal area per acre."[42] For dry mixed conifer, the LMP states that "Tree density within forested areas ranges from 30 to 125 square feet per acre."[43]

These are very large ranges in basal areas, which make it impossible for the public to understand that the forest will look like when the project is implemented, given that treatments may result in only 20 square feet basal area per acre or four times that much. This in turn makes it impossible to understand the impacts on fuels, fire, and wildlife habitat. Does the environmental analysis assume the highest impact scenario and analyze the impacts of reducing all treated acres of

[41] Preliminary EA at 35. Table 6: Prescriptive summary for each ERU utilizing group selection silvicultural method.

[42] Santa Fe National Forest Land Management Plan at 46.

[43] Santa Fe National Forest Land Management Plan at 46.

ponderosa pine and mixed conifer forest to 20 and 30 square foot basal areas, respectively? Furthermore, does the environmental analysis present fire effects based on the assumption that treatment will result in the lowest basal area at each site?

20 and 30 square feet per acre are extremely low basal areas that would be associated with sites with extremely low productivity. The PEA does not indicate where such low productivity sites exist in the project area. In my cursory survey of the project area, the sites proposed for commercial and pre-commercial thinning were not such very low productivity sites. Instead, they tended to be medium to high productivity sites. It would be a misapplication of the LMP—and would result in significant negative impacts to the forest—if the Project were to apply the low-end basal area target to a site that is not of the lowest productivity.

The PEA provides no information on the productivity of any sites in the project area, nor does it indicate the basal area target that would be applied in any particular site. Instead, it proposes to use the entire range of basal areas (truncated forms of the basal area targets stated in the LMP) for all sites targeted for mechanical thinning. Given that the sites proposed for commercial and pre-commercial thinning are the sites most likely to experience the most intensive thinning, and given that these sites are not extreme low-productivity sites, there is a strong indication that the Project is incorrectly applying the basal area targets identified in the LMP.

Furthermore, the PEA includes direction to preferentially retain trees specifically for their carbon storage and sequestration capacity.

> Retain large diameter trees and healthy smaller diameter trees in densities that meet site prescriptions to aid in carbon sequestration and storage in above-ground biomass.[44]

This design feature essentially states that trees should be retained at the highest densities consistent with site prescriptions, as in the basal areas at the high end of the range for each forest type.

To comply with the Forest Plan, basal area targets must be based on site-specific conditions, and the Project should identify specific basal area ranges to be applied in specific locations, especially the sites proposed for commercial and pre-commercial thinning.

V. DETERMINE THE SITE-SPECIFIC NEED FOR REGENERATION OPENINGS.

The Project proposes to create regeneration openings of 0.5 to 4 acres in size in ponderosa pine forest, and 0.5 to 2 acres in mixed conifer and spruce-fir forest.[45] The PEA provides no rationale for these particular targets, nor does the Project identify the total amount of regeneration openings to be created, or at what scale. To take the hard look NEPA requires, any subsequently prepared analysis must fill in these gaps.

The LMP includes no reference standard for the size or density of regeneration openings. Instead, the LMP describes the distribution of seral states that might be found in each forest type. For example, in the ponderosa pine forest type, the LMP expects 2% of the ERU to be early seral

[44] Preliminary EA, Appendix C at 11. Climate-2.

[45] Preliminary EA at 35. Table 6: Prescriptive summary for each ERU utilizing group selection silvicultural method.

and 4% in small trees. The PEA does not indicate whether or how these targets apply to the creation of regeneration openings 0.5 to 4 acres.

Furthermore, the LMP is very clear that the distribution of seral stages is to be evaluated specifically at the landscape scale:

> Seral state proportions are applied at the landscape scale, where contributions from all seral stages and low overall departure from reference proportions are positive indicators of ecosystem condition.[46]

To determine the need for the creation of regeneration openings in the Project, and to comply with the Land and Management Plan, the PEA must provide an analysis of the current distribution of seral states in each forest type across the project area, to identify the specific deficits in early seral state and how the creation of regeneration openings at any site—and across that forest type—would address that deficit. Without such an analysis, there is no guidance for the number, size, and juxtaposition on the landscape of regeneration openings. In the absence of such guidance and clear limitations, the creation of regeneration openings could be used to remove trees based solely on the commercial value of those trees, with significant negative impacts to the forest ecosystem.

VI. RETAIN TREES LARGER THAN 16 INCHES DIAMETER.

The Project proposes to cut trees up to 24" diameter in commercial thinning, characterized as "group selection thinning with regeneration opening."[47] Commercial thinning is proposed for a total of 7,202 acres across the project.[48]

The PEA states that a primary objective of commercial thinning is to "promote an uneven-aged structure."[49] The PEA also states that stands would be "managed over time to develop a balance of age classes in a mosaic of tightly interspersed structural groups."[50] Appendix D to the PEA adds further color to this objective.

> FW-VEG-G-4 Vegetation treatments should be designed such that structural stages and age classes that are under-represented in desired conditions become proportionally represented, and to assure continuous recruitment of old growth characteristics across the landscape over time.[51]

Nowhere in the PEA is there any indication that there is a surplus of VSS class 5 trees in any forest type anywhere in the project area. In fact, I found just the opposite in my tour of the project area, with a particular focus on the sites proposed for commercial thinning. I found a general deficit in trees 18 to 24 inches diameter across the project area; I found an even more severe deficit of trees larger than 24 inches diameter (VSS 6). Trees in VSS class 5 are crucial

[46] Santa Fe National Forest Land Management Plan at 40.

[47] Preliminary EA at 34.

[48] Preliminary EA at 46.

[49] Preliminary EA at 34.

[50] Preliminary EA at 34.

[51] Preliminary EA, Appendix D at 3.

for developing VSS class 6, as large mature trees (VSS 5) are the only trees capable of developing into old trees (VSS 6) over the next few decades.

Aside from the deficit of large and mature trees, I found no sites in the project area where the creation of openings and the recruitment of younger forest at the mid scale (10 to 1000 acres) would require the removal of large, mature trees. That is, there is a substantial amount of openings and younger trees already in the forest that can be used to establish openings, regeneration, and younger forest, without having to cut larger trees.

Furthermore, the LMP identifies seral stage proportions (VSS class distributions) specifically at the landscape scale (1000 to 10,000 acres).[52] That is, the LMP indicates clearly that efforts to balance the age classes is based on a landscape-scale assessment. Nonetheless, the PEA fails to provide any such landscape-scale assessment, and provides no justification or need for cutting large trees. Nor does the EA specify a deficit of smaller trees at the landscape scale, find that the deficit cannot be addressed through the removal of mid-size trees, and ensure that there is no deficit of mature and old trees at the same landscape-scale. This does not appear to be the case for any of the areas proposed for commercial thinning in the Encino Vista project.

VII. RETAIN OLD GROWTH AND LARGE, MATURE TREES.

The PEA neglects to state how the project will treat old growth trees and old growth stands, instead referring obliquely to the Santa Fe National Forest Land Management Plan.

> The SFNF LMP, provides descriptions for old growth by ERU, minimum criteria for old growth classification, as well as guidance for the management of old growth on the SFNF (USDA 2022).[53]

This effectively tells the reader essentially nothing. It refers to guidance without saying what that guidance is, how it applies to the project area, or how (or whether) the proposed actions will follow it. Specifically, it does not indicate whether the project could include the logging of old growth trees.

The same section of the PEA also contains the following paragraph, which I found to be confusing…

> Midscale GIS data was used to allocate old growth in each of the forest types found in Table 11. Due to the limitation of data the allocations may not meet all the criteria in Table 11. For instance, dead and down woody material data is not available in midscale data sets. Therefore, the old growth allocations will be ground verified as the project is implemented. Some stands maybe dropped from is allocation and other maybe be added. Stands that are close to meeting old growth criteria may receive a treatment to move the stand closer to old growth in a shorter time frame.[54]

This paragraph is unclear whether "allocation" in this context is inclusive or exclusive. That is, does the allocation process identify all potential old growth for protection or does it identify a set

[52] Santa Fe National Forest Land Management Plan at 34, 37, 41, and 44.

[53] Preliminary EA at 46.

[54] Preliminary EA at 46.

amount of old growth beyond which protections do not apply? Also, the second sentence refers to criteria in Table 11, but Table 11 contains no criteria. The fifth sentence is in need of serious editorial attention.

The final sentence in the above excerpt indicates that some stands may be thinned in a way that moves the stand closer to meeting old growth criteria. Does this refer to logging smaller trees to increase the average tree size in the stand, or does it refer to removing mature trees in order to decrease the tree density in the stand? The EA should identify specific criteria for such treatment, and clearly define the treatment. The EA should also provide a map of the locations of the old growth stands and the stands that may be targeted for treatment.

The same section of the PEA also states the following…

> Some areas managed for wildlife habitat, i.e., Mexican Spotted Owl (MSO) nest/roost areas (Cores) and replacement nest/roost areas as well as Northern Goshawk post-fledgling family areas and nest areas, are considered as old growth areas due to the desired structural and density characteristics of these areas.[55]

As with the ambiguity of old growth "allocation," it is not clear whether the MSO nest cores and goshawk PFAs are additive to the overall area to be treated as old growth.

On April 22, 2022, President Biden issued an executive order highlighting the need to "conserve America's mature and old-growth forests on Federal lands" and directing federal agencies to develop policies to that effect[56]. The resulting inventory indicates the Encino Vista project area may have a substantial large tree component but an extremely low component of old growth forest, indicating that large trees and stands with large trees need to be protected to develop into old growth.[57]

We recommend that all trees older than 150 years are retained and that any stand 150 years or older is managed specifically as old growth. We also recommend that mature trees and mature tree stands are retained for old growth recruitment. The EA must explain how the proposed action—and the removal of large trees, in particular—is consistent with the executive order on mature and old growth forest.

VIII. THE CONSTRUCTION AND EXPANSION OF ROADS IS INCONSISTENT WITH THE PROJECT OBJECTIVES AND WILL RESULT IN SUBSTANTIAL NEGATIVE IMPACTS.

The project area is one of the most heavily roaded areas in the Santa Fe National Forest; with 761 miles of roads within the project area, [58] it has a road density of 4 miles of road per square mile. Despite the existing high density of roads within the project area, the Encino Vista project proposes to build 8 miles of temporary road to facilitate mechanical thinning during project

[55] Preliminary EA at 46.

[56] Executive order 14072. https://www.federalregister.gov/documents/2022/04/27/2022-09138/strengthening-the-nations-forests-communities-and-local-economies

[57] Forest Service Climate Risk viewer. https://storymaps.arcgis.com/collections/87744e6b06c74e82916b9b11da218d28?item=8

[58] Preliminary EA at 56.

implementation.[59] In addition, 14 miles of existing roads would be widened for use during project implementation.

> Approximately 14 miles of ML-1 roads would be temporarily upgraded to ML-2 for restoration activities and then placed back into storage (ML-1). For ML 2, maintenance and reconstruction activities may be included as well as curve-widening to allow for larger vehicles to access sites.[60]

The construction of temporary roads and the widening of existing roads is contradictory to the LMP direction to minimize soil disturbance during thinning activities.

> Minimize disturbance to soils during thinning activities to protect soil and below-ground carbon stores.[61]

Furthermore, the PEA fails to disclose the location of these temporary roads and to analyze the site-specific impacts of road construction, increased traffic, and the long-term increase in the potential for unauthorized vehicular use. NEPA's hard look mandate requires more.

IX. SPECIFY TREATMENT OF THE WILDLAND-URBAN INTERFACE.

The PEA clearly identifies five WUI communities in the project area. However, these communities lie outside the project area and are generally separated from the project area by non-forested land. The PEA does not identify, either by description or map, the specific locations that it considers to be WUI within the project area.

> The communities of Cañones, Youngsville, Coyote, and Gallina are the primary population centers that may be affected as all are near the project's northern boundary and can be considered to be within the wildland-urban interface (WUI). Abiquiu may also be considered, as the watershed it relies on is within the project boundary…[62]

In addition, the PEA mentions WUI treatments only with respect to pinon-juniper woodlands.

> *Fuels Reduction in Wildland Urban Interface*
>
> For the EVLRP, Piñon-Juniper woodland ERU will not be treated with the objective of meeting or moving toward the desired conditions for the ERU, as described in the SFNF LMP (USDA, 2022b) but rather to meet objectives related to fire, fuels, and WUI objectives.[63]

There are multiple private parcels within the project boundaries. Some of these are dispersed residential developments; others are large open meadows, with a few buildings that tend to be located away from the surrounding forest. There is no statement in the PEA to indicate that any of these parcels are considered WUI for the purposes of this project. A large fraction of the proposed commercial thinning is proposed for areas near private parcels, but these areas are

[59] Preliminary EA at 38.

[60] Preliminary EA at 39.

[61] Preliminary EA, Appendix C at 11. Climate-1

[62] Preliminary EA at 144.

[63] Preliminary EA at 45.

largely not piñon-juniper woodlands and there is no indication in the PEA that the proposed commercial thinning is related to WUI treatment.

We recommend that the EA provide a map of the areas considered WUI and identify the specific values to be protected in each location.

X. LIVESTOCK GRAZING IN THE PROJECT AREA IS INCONSISTENT WITH THE PROJECT OBJECTIVES

The Center supports the reintroduction of fire to the Encino Vista area. These ecosystems evolved with fire, and prior to Euro-American settlement, rare species were not threatened by fire because the natural cycle had not been interrupted by damaging stressors of logging, fire suppression, and livestock grazing. The continuation of livestock grazing in the project area is inconsistent with the objectives of restoring functional fire regimes.

In particular, livestock grazing greatly reduces the grasses that serve as fine fuels that are crucial for carrying low-severity surface fire. With fine fuels diminished by livestock grazing, the use of broadcast burning can be extremely limited, as there is insufficient fine fuels for fire to move across the forest floor.

The PEA discusses the need to allow understory vegetation to recover after project treatments like thinning and prescribed fire.[64] However, the PEA fails to identify any specific criteria regarding plant health, nor does it disclose and analyze the impacts of livestock grazing on the project area or the project's objectives. As such, nowhere in the PEA is there a discussion of the benefits of a permanent reduction in livestock grazing with respect to the project area or the specific objectives of to restoring overall forest health, restoring fire, improving watershed health, and protecting wildlife habitat. Indeed, the PEA does not even consider limiting livestock grazing *in advance of* prescribed fire treatments in order to provide for fine fuels to carry a low-severity fire. We urge that the Forest Service consider, and adopt, such an option.

XI. THE PRELIMINARY EA FAILS TO ADEQUATELY DISCLOSE AND ANALYZE THE IMPACTS TO SENSITIVE PLANTS AND WILDLIFE

Appendix A of the PEA identifies 24 species of conservation concern within the project area. These are American Peregrine Falcon, Boreal Owl, Chaco Milkvetch, Chama Blazing Star, Greene's Milkweed, Gunnison's Prairie Dog, Gunnison's Mariposa Lily, Jemez Woodland Snail, Large Yellow Lady's-Slipper, Lewis's Woodpecker, Masked Shrew, Northern Goshawk, Pacific Marten, Pinyon Jay, Rio Grande Chub, Rio Grande Cuthroat Trout, Rio Grande Sucker, Snowshoe Hare, Spotted Bat, Springer's Blazing Star, Tufted Sand Verbena, Water Shrew, Western Burrowing Owl, and Wood Lily.

[64] Preliminary EA, Appendix C at 3. Range-7. Livestock will be managed to allow for vegetative groundcover response after project implementation. Prior to authorization to graze a treated area monitoring and evaluation will be conducted for 1-3 years post treatment. In order to determine whether plant health has recovered sufficiently to protect soil while also supporting grazing. If plant health has not recovered, grazing will be delayed until those conditions have been met.

Appendix A asserts that the needs of these species were considered in the LMP, that the Encino Vista Project is consistent with the LMP and, therefore, as a function of the transitive property, the Encino Vista Project is consistent with the needs of these species.

> These species were evaluated for forest plan compliance, specifically for Standards (S), Guidelines (G) and Desired Condition (DC). The remaining SCC species were not considered for further analysis based on lack of suitable habitat or occurrence within the project footprint (USDA Santa Fe NF 2022). See Appendix C for a list of Project Design Features, Best Management Practices (BMPs) and Mitigation Measures for biological resources.[65]

Based on this assertion, the PEA neglects to disclose and analyze the impacts to all SCC listed in the LMP.

The PEA does identify significant impacts to the ESA-endangered Jemez Mountain Salamander.

> Commercial thinning (and associated road maintenance work) would impact up to 940 acres of suitable JMS habitat. Direct effects to JMS include harassment, potential injury or mortality. These effects may occur through use of vehicles and ground skidding equipment (GSE) accessing commercial timber units to conduct thinning operations and skidding logs to landings. Indirect effects to suitable habitat include decrease in canopy cover, inadvertent destruction of habitat features (downed wood) by GSE, increases in solar radiation, long term reduction in habitat quality and habitat fragmentation (compaction)…
>
> Up to 1,541 acres of suitable JMS habitat would be impacted by PCT and pile burning (8%). This proposed action component is overlapping much of the prescribed fire broadcast areas discussed in the next component section however, we articulate here that impacts from this action would include hand thinning impacts to treated areas but would not experience GSE compaction impacts. Direct effects to JMS may include harassment from Forest crews while hand thinning small diameter fuels along roads or steep hillsides over 40% slope.[66]

Despite identifying these impacts, the PEA considers and analyzes no alternatives to mechanical thinning in the JMS habitat, despite the fact that hand thinning and broadcast burning would clearly reduce the impacts to JMS.

Instead, the PEA refers to the design features listed in Appendix D, which include no disclosure or analysis of the impacts to the species.

> Burn piles will be constructed away from existing large down logs and rock piles within JMS habitat. Hand piles would be comprised of limbs, boles and branches less than 9-inches dbh and the pile would not exceed 6 feet in diameter or 6 feet in height (conical or paraboloid shape).[67]

[65] Preliminary EA, Appendix A at 1.

[66] Preliminary EA at 88.

[67] Preliminary EA, Appendix C at 9. WILD-9.

Piles will be burned within 1.5 to 2 years of creation to limit the potential for colonization by individual salamanders.[68]

If a proposed activity may disrupt breeding conditions for an at-risk species, timing restrictions or other implementation adjustments may be imposed for said species. Contact SFNF biologists for project specific implementation guidance.[69]

XII. THE ENVIRONMENTAL ANALYSIS MUST COMPLY WITH NEPA.[70]

The National Environmental Policy Act (NEPA) is "our basic national charter for protection of the environment."[71] Congress enacted NEPA to "encourage productive and enjoyable harmony between man and his environment … promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulating the health and welfare of man; and enrich the understanding of the ecological systems and natural resources important to the Nation."[72] "NEPA has twin aims. First, it places upon an agency the obligation to consider every significant aspect of the environmental impact of a proposed action, and to consider reasonable alternatives that could mitigate those impacts. Second, it ensures that the agency will inform the public that it has indeed considered environmental concerns in its decisionmaking process."[73]

A. Any Environmental Analysis Must Provide Baseline Information about the Project Area.

Information contained in a NEPA analysis "must be of high quality. Accurate scientific analysis … [is] essential to implementing NEPA."[74] An agency's "[h]ard look" analysis should utilize "the best available scientific information."[75] As part of developing an accurate analysis, NEPA documents must "succinctly describe the environment of the area(s) to be affected ... by the alternatives under consideration."[76] "Establishing appropriate baseline conditions is critical to any NEPA analysis. 'Without establishing the baseline conditions which exist ... before [a project] begins, there is simply no way to determine what effect the [project] will have on the

[68] Preliminary EA, Appendix C at 10. WILD-15.

[69] Preliminary EA, Appendix C at 10. WILD-20.

[70] This action is governed by the Council on Environmental Quality's 1978 regulations, as amended, and so all references to the CEQ regulations are to those currently in force. Although CEQ issued a final rulemaking in July 2020 fundamentally rewriting those regulations, the new rules apply only "to any NEPA process begun after September 14, 2020," or where the agency has chosen to "apply the regulations in this subchapter to ongoing activities." 40 C.F.R. § 1506.13 (2020). Scoping for this project began in 2019 (before September 14, 2020), and the Forest Service has indicated that it has chosen to apply the pre-2020 regulations. *See* Forest Service, Encino Vista Landscape Restoration Project, Scoping Content Analysis (Oct. 2020) at 36 (relying on pre-2020 regulations to address "significance" criteria). If the Forest Service chooses to apply anything other than the pre-2020 NEPA regulations, we request that the agency explicitly state as much in any subsequently prepared NEPA document.

[71] 40 C.F.R. § 1500.1(a).

[72] 42 U.S.C. § 4321.

[73] *Balt. Gas & Elec. Co. v. Natural Res. Def. Council*, 462 U.S. 87, 97 (1983) (citation omitted).

[74] 40 C.F.R. § 1500.1(b).

[75] *Colo. Envtl. Coal. v. Dombeck*, 185 F.3d 1162, 1171 (10th Cir. 1999).

[76] 40 C.F.R. § 1502.15.

environment and, consequently, no way to comply with NEPA.'"[77] The Ninth Circuit has explained that "[t]he establishment of a 'baseline is not an independent legal requirement, but rather, a practical requirement in environmental analysis often employed to identify the environmental consequences of a proposed agency action.'"[78]

Any NEPA document prepared for the Encino Vista Project must provide the following baseline information concerning the project area:

- Fire regimes of all plant communities and fire history and fire atlas information
- Location and status of all rare species populations
- Location, extent, and severity of invasive plants and animals and factors leading to current conditions
- Current forest and woodland structural conditions including size and density distributions
- Location, extent, and condition of old growth forests and woodlands
- Historic climax plant communities and reasons for their decline
- Location and condition of northern goshawk and Mexican spotted owl habitats
- Ecological Site Description, soils, and associated potential vegetation types or Ecological Response Units
- Occupied and potential habitat for endemic species
- Soils with potential to develop biological soil crust cover
- Current cover of biological soil crust (distinguishing light cyanobacteria, dark cyanobacteria, moss, and lichen)
- Size/density/species of shrubs present in shrub and chaparral communities
- Current authorized system roads and user-created motorized vehicle routes
- Sources of water for wildlife by season of use in the proposed treatment area
- Fences and water transport, storage, and intensity of use within and near the proposed treatment areas, and other range management infrastructure
- Location, status, and condition of livestock exclosures or areas closed to livestock
- Incised channels, areas of severe erosion, soils with severe erosion hazard, and areas subject to increased erosion following treatment

The PEA provides few of these baseline conditions, and fails to incorporate that information into the analyses. For example, it does not identify areas of bare soil and rock, which would greatly inform the EA as to locations that could serve as natural fire lines and fuel breaks. In other cases, the PEA fails to provide substantive information on many of these baseline conditions—for example, occupied and potential habitat for endemics and protected species, or the location and extent of impacts from livestock grazing.

B. Any Environmental Analysis Must Analyze a Range of Reasonable Alternatives.

[77] *Great Basin Res. Watch v. BLM*, 844 F.3d 1095, 1101 (9th Cir. 2016) (quoting *Half Moon Bay Fishermans' Mktg. Ass'n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988)).

[78] *Or. Natural Desert Ass'n v. Jewell*, 840 F.3d 562. 568 (9th Cir. 2016) (quoting *Am. Rivers v. FERC*, 201 F.3d 1186, 1195 n.15 (9th Cir. 1999)).

In taking the "hard look" at impacts that NEPA requires, an EA must "study, develop, and describe" reasonable alternatives to the proposed action.[79] NEPA's requirement that alternatives be studied, developed, and described both guides the substance of the environmental decision-making and provides evidence that the mandated decision-making process has actually taken place."[80]

Federal courts explain that this mandate extends to EAs as well as EISs. "A properly-drafted EA must include a discussion of appropriate alternatives to the proposed project."[81] This alternatives analysis "is at the heart of the NEPA process, and is 'operative even if the agency finds no significant environmental impact.'"[82] Reasonable alternatives must be analyzed for an EA even where a FONSI is issued because "nonsignificant impact does not equal no impact. Thus, if an even less harmful alternative is feasible, it ought to be considered."[83] When an agency considers reasonable alternatives, it "ensures that it has considered all possible approaches to, and potential environmental impacts of, a particular project; as a result, NEPA ensures that the most intelligent, optimally beneficial decision will ultimately be made."[84]

In determining whether an alternative is "reasonable," and thus requires detailed analysis, courts look to two guideposts: "First, when considering agency actions taken pursuant to a statute, an alternative is reasonable only if it falls within the agency's statutory mandate. Second, reasonableness is judged with reference to an agency's objectives for a particular project."[85] Any alternative that is unreasonably excluded will invalidate the NEPA analysis. "The existence of a viable but unexamined alternative renders an alternatives analysis, and the EA which relies upon it, inadequate."[86] The agency's obligation to consider reasonable alternatives applies to citizen-proposed alternatives.[87]

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[79] 42 U.S.C. § 4332(2)(C) & (E); 40 C.F.R. § 1508.9(b) (an EA "[s]hall include brief discussions . . . of alternatives").

[80] *Bob Marshall Alliance v. Hodel*, 852 F.2d 1223, 1228 (9th Cir. 1988) (citation omitted).

[81] *Davis v. Mineta*, 302 F.3d 1104, 1120 (10th Cir. 2002) (granting injunction where EA failed to consider reasonable alternatives).

[82] *Diné Citizens Against Ruining Our Env't v. Klein*, 747 F. Supp. 2d 1234, 1254 (D. Colo. 2010) (quoting *Greater Yellowstone Coal. v. Flowers*, 359 F.3d 1257, 1277 (10th Cir. 2004)). *See also W. Watersheds Project v. Abbey*, 719 F.3d 1035, 1050 (9th Cir. 2013) (in preparing EA, "an agency must still give full and meaningful consideration to *all* reasonable alternatives" (emphasis added) (internal quotation and citation omitted)); 40 C.F.R. § 1502.14 (describing alternatives analysis as the "heart of the environmental impact statement").

[83] *Ayers v. Espy*, 873 F. Supp. 455, 473 (D. Colo. 1994) (internal citation omitted).

[84] *Wilderness Soc'y v. Wisely*, 524 F. Supp. 2d 1285, 1309 (D. Colo. 2007) (quotations & citation omitted).

[85] *Diné Citizens Against Ruining Our Env't*, 747 F. Supp. 2d at 1255 (quoting *New Mexico ex rel. Richardson*, 565 F.3d at 709). *See also Idaho Conservation League v. Mumma*, 956 F.2d 1508, 1520 (9th Cir. 1992) ("nature and scope of proposed action" determines the range of reasonable alternatives agency must consider).

[86] *Diné Citizens Against Ruining Our Env't*, 747 F. Supp. 2d at 1256.

[87] *See Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217-19 (9th Cir. 2008) (finding EA deficient, in part, for failing to evaluate a specific proposal submitted by petitioner); *Colo. Envtl. Coal. v. Dombeck*, 185 F.3d 1162, 1171 (10th Cir. 1999) (agency's "[h]ard look" analysis should utilize "*public comment* and the best available scientific information") (emphasis added).

Courts hold that an alternative may not be disregarded merely because it does not offer a complete solution to the problem.[88] Even if additional alternatives would not fully achieve the project's purpose and need, NEPA "does not permit the agency to eliminate from discussion or consideration a whole range of alternatives, merely because they would achieve only some of the purposes of a multipurpose project."[89] If a different action alternative "would only partly meet the goals of the project, this may allow the decision maker to conclude that meeting part of the goal with less environmental impact may be worth the tradeoff with a preferred alternative that has greater environmental impact."[90]

The courts also require that an agency adequately and explicitly explain in the EA any decision to eliminate an alternative from further study.[91] The PEA analyzes only two alternatives: no action and the proposed action.[92] It is inconceivable that the Forest Service can achieve some or all of its objectives for this project only by the one proposed action alternative. The Forest Service should therefore analyze one or more alternatives that include:

- using strategically-placed fuels treatments that reduce the number of acres requiring mechanical treatment in order to safely facilitate the use of prescribed and managed wildfire to achieve restoration of fire-adapted ecosystems;
- limiting tree removal by mechanical thinning to trees 16 inches dbh and smaller;
- excluding mechanical thinning from Jemez Mountain Salamander habitat;
- limiting livestock grazing to facilitate the introduction of low-severity fire and to restore overall forest health;
- the construction of no new roads, including temporary roads;

C. The Environmental Assessment Must Disclose Site-Specific Impacts and Cannot Utilize "Condition-Based Management."

NEPA's review obligations are more stringent and detailed at the project level, or "implementation stage," given the nature of "individual site specific projects."[93] "[G]eneral

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[88] *Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 836 (D.C. Cir. 1972).

[89] *Town of Matthews v. U.S. Dep't. of Transp.*, 527 F. Supp. 1055 (W.D. N.C. 1981).

[90] *North Buckhead Civic Ass'n v. Skinner*, 903 F.2d 1533, 1542 (11th Cir. 1990).

[91] *See Wilderness Soc'y*, 524 F. Supp. 2d at 1309 (holding EA for agency decision to offer oil and gas leases violated NEPA because it failed to discuss the reasons for eliminating a "no surface occupancy" alternative); *Ayers*, 873 F. Supp. at 468, 473.

[92] Draft EA at 12.

[93] *Ecology Ctr., Inc. v. United States Forest Serv.*, 192 F.3d 922, 923 n.2 (9th Cir. 1999); *see also Friends of Yosemite Valley v. Norton*, 348 F.3d 789, 800-01 (9th Cir. 2003); *New Mexico ex rel. Richardson v. Bureau of Land Management*, 565 F.3d 683, 718-19 (10th Cir. 2009) (requiring site-specific NEPA analysis when no future NEPA process would occur); *Colo. Envtl. Coal. v. Ofc. of Legacy Mgmt.*, 819 F. Supp. 2d 1193, 1209-10 (D. Colo. 2011) (requiring site-specific NEPA analysis even when future NEPA would occur because "environmental impacts were reasonably foreseeable").

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."[94]

NEPA requires site-specificity to fulfill two basic purposes: 1) to ensure agencies are making informed decisions prior to acting and 2) to ensure the public is given a meaningful opportunity to participate in those decision-making processes.[95] Federal courts apply these touchstone criteria when evaluating whether an EIS is adequately site-specific.[96]

Analyzing and disclosing site-specific impacts is critical because where (and when and how) activities occur on a landscape strongly determines the nature of the impact. As the Tenth Circuit Court of Appeals has explained, the actual "location of development greatly influences the likelihood and extent of habitat preservation. Disturbances on the same total surface area may produce wildly different impacts on plants and wildlife depending on the amount of contiguous habitat between them."[97] The Court used the example of "building a dirt road along the edge of an ecosystem" and "building a four-lane highway straight down the middle" to explain how those activities may have similar types of impacts, but the extent of those impacts – in particular on habitat disturbance – is different.[98] Indeed, "location, not merely total surface disturbance, affects habitat fragmentation,"[99] and therefore location data is critical to the site-specific analysis NEPA requires. Merely disclosing the existence of particular geographic or biological features is inadequate; agencies must discuss their importance and substantiate their findings as to the impacts.[100]

Courts in the Ninth Circuit have taken a similar approach. For example, in March 2020, the U.S. District Court held that the Forest Service's condition-based management approach to a large logging proposal on the Tongass National Forest violated NEPA.[101] The court explained that "NEPA requires that environmental analysis be specific enough to ensure informed decision-making and meaningful public participation. The Project EIS's omission of the actual location of proposed timber harvest and road construction within the Project Area falls short of that mandate."[102]

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[94] *Or. Natural Res. Council Fund v. Brong*, 492 F.3d 1120, 1134 (9th Cir. 2007) (citation omitted); *see also Or. Natural Res. Council Fund v. Goodman*, 505 F.3d 884, 892 (9th Cir. 2007) (holding the Forest Service's failure to discuss the importance of maintaining a biological corridor violated NEPA, explaining that "[m]erely disclosing the existence of a biological corridor is inadequate" and that the agency must "meaningfully substantiate [its] finding").

[95] *Stein v. Barton*, 740 F. Supp. 743, 749 (D. Alaska 1990).

[96] *See WildEarth Guardians*, 790 F.3d at 921-25 (holding EIS inadequate for failure to disclose location of moose range); *Or. Nat. Desert Ass'n v. Rose*, 2019 WL 1855419 (9th Cir. 2019) (holding environmental analysis violated NEPA by failing to establish "the physical condition of [roads and trails] and authorizing activity without assessing the actual baseline conditions").

[97] *New Mexico ex rel. Richardson*, 565 F.3d at 706.

[98] *Id*. at 707.

[99] *Id*.

[100] *Or. Natural Res. Council Fund v. Goodman*, 505 F.3d 884, 892 (9th Cir. 2007).

[101] *Southeast Alaska Conservation Council v. United States Forest Serv*., 2020 U.S. Dist. LEXIS 43499 (D. Alaska Mar. 11, 2020), attached as Ex. 7. The Forest Service has appealed this decision.

[102] *Id*. at *19 (citations omitted).

The district court also concluded that the Forest Service's "worst case analysis" was insufficient, explaining: "This approach, coupled with the lack of site-specific information in the Project EIS, detracts from a decisionmaker's or public participant's ability to conduct a meaningful comparison of the probable environmental impacts among the various alternatives."[103] Consequently, the court concluded that

> By authorizing an integrated resource management plan but deferring siting decisions to the future with no additional NEPA review, the Project EIS violates NEPA. The Forest Service has not yet taken the requisite hard look at the environmental impact of site-specific timber sales on Prince of Wales over the next 15 years. The Forest Service's plan for condition-based analysis may very well streamline management of the Tongass ... however, it does not comply with the procedural requirements of NEPA, which are binding on the agency. NEPA favors coherent and comprehensive up-front environmental analysis to ensure ... that the agency will not act on incomplete information, only to regret its decision after it is too late to correct.[104]

The Encino Vista Project is apparently a project-level decision. There is no indication that the Forest Service intends the project to be a programmatic decision, or that the agency intends to undertake additional NEPA analysis. As a result, the agency cannot adopt a "condition-based" management approach in its NEPA analysis, and any analysis must include the detailed information and analysis that NEPA and the CEQ regulations require because there will evidently be no further NEPA analysis. As detailed in the above comments, the PEA fails to contain this site-specific information, which NEPA requires.

CONCLUSION.

The Center supports the restoration of functional fire regimes at landscape scales, and we support the Encino Vista Project's objectives of restoring fire, enhancing wildlife habitat, and improving watershed resiliency. However, the Preliminary EA proposes a project that contains actions contradictory to those objectives, including the construction of eight miles of new road in an area with an extremely high existing road density, reducing ponderosa pine forest stands to extremely low tree densities, and logging some of the largest remaining trees in the area; the Preliminary EA fails to adequately disclose and analyze the impacts of those actions.

We urge the Forest Service to revise the proposed action to focus on the actions necessary to safely and effectively restore fire at the landscape scale, greatly reduce the implementation of mechanical thinning, address the impacts of livestock grazing, and eliminate the construction of new roads. We would welcome the opportunity to discuss these issues with you further, and to work with you on a project that achieves the goals of reducing the risk of large-scale, high-

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[103] *Id*. at *27.

[104] *Id*. at *27-*28 (internal citations and quotations omitted). The Forest Service should not interpret the Alaska District's decision to somehow endorse the use of condition-based analyses for environmental assessments. Where the exercise of site-specific discretion is material to a project's environmental consequences, NEPA requires consideration of site-specific proposals and alternatives, *regardless* of whether the effects are "significant." 42 U.S.C. § 4332(2)(C), (E).

severity fire, restoring fire to the landscape, and protecting and restoring habitat for native species.

Thank you for considering these comments.

Sincerely,

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Center for Biological Diversity comments and cited publications

(Encino Vista – 04/15/2024)

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