



René Voss – Attorney

Natural Resources Law
15 Alderney Road
San Anselmo, CA 94960

renepvoss@gmail.com
Tel: 415-446-9027

**PROTECTING
NATURAL
RESOURCES**

November 15, 2021

Submitted via: <https://cara.ecosystemmanagement.org/Public/CommentInput?Project=60950>.

U.S. Forest Service
Pacific Southwest Regional Office, Ecosystem Planning
1323 Club Drive
Vallejo, California, 94592

cc: Ara Marderosian
Stephen Montgomery
Alison Sheehy
Laura Cunningham
Teresa Benson

**Subject: Region 5 Post Disturbance Hazardous Tree Management
Comments for SFK, WWP, and SC**

Sequoia ForestKeeper (SFK), Western Watersheds Project (WWP), and the Kern-Kaweah Chapter of the Sierra Club (SC) thank you for the opportunity to comment on the subject proposal. SFK, WWP, and SC have been involved in the protection of the Sequoia National Forest, the Giant Sequoia National Monument (Monument), and other forest areas in the Southern Sierra Nevada (SSN) Mountains for many decades and consider the subject proposal a significant action that could have many adverse effects on the global climate, the forest's ecosystems, the Monument objects and values, and the wildlife that depend on the forest habitats of the Sequoia and Sierra National Forests, especially the endangered Southern Sierra Nevada (SSN) Pacific fisher. Due to the size, scope, and potential adverse effects from the proposal, the Forest Service must prepare an Environmental Impact Statement under the National Environmental Policy Act (NEPA).

The Project Scope Must be Further Refined and the Forest Service Must Offer Additional Opportunities for Comment

Additional opportunities for input should follow after the Forest Service further refines the project's scope, which is overly broad. Since the Forest Service issued its letter on October 24, 2021, detailed maps have been changed or have been added for several of the forests, and it is unclear whether all of the roads and trails on those maps will actually be in the final proposal.

For example, it appears that the Sequoia NF has included every road on its entire forest road system, regardless of whether those roads fit the criterion for post-disturbance hazards. Initially, the overview maps for the forest appeared to suggest that roadside hazard logging would only be proposed in recent burned areas, but the detailed maps include all roads outside the burned areas, even where recent projects have already or recently been implemented, such as in the Cedar Fire Area, the Rancheria Road Area in the Greenhorn Mountains, and more recently, the Sherman Pass Road area on the Kern Plateau. With such a broad brush, it is difficult for us to focus on areas where hazards actually exist and provide site-specific comments.

We have also observed changes to the maps to remove most trails in Wilderness areas, which we applaud, but the Forest Service should also remove roads and trails in areas that qualify as Wilderness, such as Inventoried Roadless Areas (more on this below).

Background and Description of Proposal

Based on our initial review, Region 5 is proposing to use three environmental analyses to implement a massive logging program on 10 national forests in California, along thousands of miles of roads and trails. Together, we would argue, the acreage likely would make this the largest logging project ever proposed in the history of national forests in California. The total acreage is likely to be in the hundreds of thousands of acres, based on the normal 400-to-600-ft wide treatment areas along roads for these types of hazard tree logging projects.

The proposal would include hazard tree felling and removal, as well as removal of downed woody fuels resulting from hazard trees (slash), to reduce public safety hazards along portions of roads, trails, and near facilities (campgrounds, trail heads, Forest Service offices). Moreover, the Region wants to expedite the analysis and decision making related to this project, asserting, without support, that the activities are not novel and the effects are generally well-known. The Region intends to do a limited NEPA analysis for these activities with three separate environmental assessments (EAs) for each of three zones: the Northern Zone, the Central Sierra Zone, and the Southern Sierra Zone. However, while the Forest Service plans to do three separate EAs, there is no indication that it will even consider a full NEPA analysis in an Environmental Impact Statement to consider the significant and cumulative effects the proposal may cause.

The Forest Service asserts that due to critical and time-sensitive nature of the proposed action, the Regional Office may elect to seek an Emergency Situation Determination (ESD) from the Chief of the Forest Service or may seek alternative arrangements with the Chief of the Forest Service (36 CFR 220.4(b)(2)).

The public has been asked to provide input, which the Region asserts will be used as a part of the scoping process to help identify issues and frame the analysis, asking specifically for comments that identify specific issues (cause-effect statements) related to the proposed activities.

COMMENTS

Summary of Comments

Because the proposed actions would result in significant adverse and cumulative effects on soils, wildlife, recreation, aesthetic resources, and proposes to remove many thousands of trees from the national forests of California, which would result in the release of millions of tons of CO₂ into the atmosphere, and would even remove trees from the Giant Sequoia National Monument, the Forest Service must prepare an Environmental Impact Statement (EIS). The size and scope of the proposal, which is likely the largest logging project the Forest Service has ever proposed in California's history, requires no less than a full and thorough analysis in an EIS.

To avert hazards on such a scale and to minimize environmental impacts, the Forest Service should scale back its proposal and focus only on imminent hazard tree abatement, that is, only trees that are likely to fail in the next 1-2 years, which are those trees with “high” hazard ratings, and the proposal should exclude trees with a “low” or “moderate” hazard rating as described in the Region 5 Hazard Tree Guidelines.

Generally, an agency must complete an EA within 1 year and an EIS within 2 years. 40 C.F.R. § 1501.10(b), which would give the Forest Service sufficient time to analyze the larger effects of removing trees that are not likely to until 3-5 years or longer from now. These “low” and “moderate” hazard trees should be excluded from the current NEPA and ESD process.

Moreover, to address these imminent hazard, the Forest Service should leave most of these imminent hazards in the forest where felled to contribute to wildlife habitat, soils, and carbon sequestration rather than remove the trees from the forests.

Further, the proposal tiers to the *Hazard Tree Guidelines for Forest Service Facilities and Roads in the Pacific Southwest Region* (USDA 2012 or “R5 Hazard Tree Guidelines”) as well as the *Marking Guidelines for Fire Injured Trees* (Smith and Cluck 2011). Neither of these guidelines have ever been subjected to NEPA analysis, and the Forest Service must take a hard look at the consequences of using these guidelines under NEPA.

From a practical standpoint, it is unlikely that a project of the proposed scale, larger than just addressing imminent hazards, can realistically be implemented. If the Forest Service were to continue with a proposal at such a larger scale, it is likely that the proposal will fail and never be implemented due to logistical, funding, and legal constraints. If such a larger proposal, even in 3 zones, were to only be analyzed with EAs and not one or more EISs, the Forest Service would violate NEPA due to the significant and cumulative effects on natural resources, especially those in the Southern Sierra Nevada (SSN) mountains, which is home to fewer than 300 endangered SSN Pacific fishers and declining populations of other sensitive species due to past mismanagement and recent fire events. The sheer scale of fisher habitat that would be removed or critical habitat that would be adversely modified is likely to drive the fisher even closer to extinction, and thus the proposal would also violate ESA.

1. The Forest Service Must Prepare and EIS for All Forests or In Each Zone

The Forest Service must prepare an EIS because it implicates several of NEPA’s intensity factors, including effects on endangered SSN fishers, sensitive California spotted owls and northern goshawks, public safety, the highly controversial nature of the proposal, and it would set a precedent for this type of action in the region. Together, these factors suggest that the proposed actions will cause significant effects on the environment, requiring preparation of an EIS.

The size of the proposal and the large number of trees proposed to be removed from the project area are on a scale that is much larger than the largest timber sale operations implemented in national forests in California. Hence, the project likely constitutes a major federal action that would require analysis in an Environmental Impact Statement (EIS).

While in the past, for example, the Forest Service prepared an EIS for the Tobias Ecosystem Restoration Project in the Sequoia National Forest, which would have only thinned and reduced fuels on 4,900 acres, the current proposal would likely log hundreds of thousands of acres.

An EIS is also required to consider the cumulative effects from the proposal, from the tree removal projects being implemented throughout these forests by the power transmission companies (PG&E and SCE), other planned logging and/or vegetation management projects, and from the recent fires on the endangered SSN fisher and other species and natural resources. The fires, power company clearing, other logging activities, and the proposed actions (and any action alternatives) are likely to have significant direct, indirect, and cumulative effects on the SSN fisher population on the Sierra and Sequoia NFs, as well as the fisher's ability to disperse or move through a fragmented fire and project area.

2. The Scope of the Proposal Should Only Fell and Not Remove Imminent Hazards

The logic in a recent decision from the U.S. District Court in Oregon should apply to this project in order to avert imminent hazards while the Forest Service prepares a full NEPA analysis for a larger scale project to deal with trees that are unlikely to fail over 3 years from now.

In that case, *Cascadia Wildlands v. Warnack*, No. 6:21-cv-01227-MC (D. Or., Nov. 5, 2021) (Attachment A), the Forest Service used a CE to authorize the removal of hazard trees from hundreds of miles of road on the Willamette NF, which included a decision to remove trees with all hazard ratings. While the Willamette NF is in Region 6, the Forest Service used the Region's *Field Guide for Danger-Tree Identification and Response* ("Filip" guide, similar to the R5 Hazard Tree Guidelines), and the Court used the guide to explain its reasoning to only allow imminent hazard treatments:

For most recently killed trees, exposure duration along roads mainly is intermittent (drive-by traffic) *and therefore the trees are not a danger*. However, due to the large number of recently killed trees in these situations, there is a higher risk of tree failures occurring, because stands are often more open following large disturbances, and trees may be more prone to windthrow or windshatter. *After five years, most of these trees (except cedar, juniper, larch, or large Douglas-fir) will have imminent-failure potential and therefore will become danger trees. The challenge is deciding when to treat such trees that are not now a danger but will become danger trees in five years.* Waiting five years for thousands of trees to become dangers presents at least three problems for forestland managers: 1) some trees may fail before they have been dead for five years, 2) older, dead trees have less commercial value because of delay and defect than recently killed trees, and 3) older, dead trees are more dangerous to fell because of increased decay and defect.

Guide at 46-47 (emphasis added). It should be noted that the Region 5 Hazard Tree Guidelines also identify hazard trees through their tree rating criterion, and imminent hazards are trees with a "high" hazard rating of 6-7. *See* R5 HT Guidelines, p. 20. For trees with lower ratings, such as 1-3 the Guide suggests "no action" whereas a rating of 4-5 only suggests "monitor." *Id.* For a

tree to get a “high” rating of 6-7, the tree must have both a “high failure impact” rating of 3 plus a “high potential for failure: serious defect” of 3 (or 4). This “second value, the failure potential, requires the inspector to estimate the likelihood that, prior to the next inspection, the defective tree or tree part will fail during the season when the target is present.” *Id.* at 19. This season is same as the 1-2 year timeframe discussed in by the Court in *Cascadia Wildlands*.

In that case, the Court recognized the significant problems facing the Forest Service, and the decision allowed the felling of trees that were not in any imminent danger of failing on the rationale that felling them now will avoid problems down the road. In this sense, the court observed, the Project was akin to that in *EPIC v. U.S. Forest Service*, because, “[w]hile all of the trees within the scope of the Project may be hazardous in some sense, many of them pose no imminent hazard.” *EPIC*, 968 F.3d 985, 990 (9th Cir. 2020). As was the case in *EPIC*, “[t]he Project does not target only trees that pose an immediate danger to travelers.” *Id.* at 991.

In a footnote, the Court explained further:

The Project authorizes felling of trees on 326 miles of Level 2 roads. Level 2 roads are only open to high clearance vehicles. . . . The Forest Service notes that on these roads, “[t]raffic is normally minor[.]” *Id.* “Motorists should have no expectations of being alerted to potential hazards while driving these roads.” *Id.* Additionally, the possibility that fallen trees—many of which have a low likelihood of failing within 5 years—will impede first responders as they respond to fires is not an imminent danger or hazard, but rather a speculative hazard that may occur at some future date. While the Court understands it would be more convenient and cost-effective for the Forest Service to prevent future road hazards via a preemptive commercial logging operation not subject to NEPA review, the scope of this Project exceeds that open to a CE.

Cascadia Wildlands, Slip Op. at 11, n. 3 (citing *EPIC*, 968 F.3d at 990). Given that the Forest Service wanted to log many more trees than just imminent hazards, the Court issued an injunction limiting the actions the Forest Service would be allowed to take without a sufficient NEPA analysis:

As to the scope of the injunction, the Forest Service is enjoined from felling any tree with a low likelihood of failure within 5 years as determined in Filip [the R6 HT Guide]. . . . The Forest Service is enjoined from felling any tree with a likely failure potential in Filip. . . . Filip indicates these trees “are defective or decayed, but it would take moderate effort to make them fail.” *Id.* As these trees have a high probability of failure within 3 to 5 years, they fall outside of the CE for the reasons discussed above. The Forest Service may, however, fell any tree at risk of imminent failure (as defined in Filip) within striking distance of a road. “Imminent failure” in this sense means: “Trees or their parts are so defective or decayed that it would take little effort to make them fail. These trees or parts have a high probability of failure within one year.” . . . The Forest Service must leave any felled tree where it falls, with the exception that it may remove any tree that falls on a road to a safe location beside the road. To clarify, the Forest Service is enjoined from removing any felled tree pending the completion of an EA or EIS.

Id. at 14.

And while here the Forest Service is not proposing to use a CE for the current Region 5 proposal, it is proposing to only analyze its massive proposal for hazard tree abatement along thousands of miles of road using only EAs to include trees with low and moderate failure potential, even though the cumulative and adverse effects are likely to be significant, which definitely requires a full analysis in one or more EISs.

If, on the other hand, the Forest Service were to prepare EAs to only fell and leave imminent hazard with a high likelihood of failure potential in the next year or two, it might pass legal muster. For the remaining trees, the Forest Service has time to prepare an EIS without using an ESD or alternative NEPA arrangements and allow the public to file objections.

3. The Proposal Must Eliminate All Proposed Tree Felling in Wilderness and Inventoried Roadless Area

We urge the Forest Service to drop any roads, trails, or segments of roads and trails in any Wilderness or Inventoried Roadless Areas (IRAs) from the R5 proposal in all national forests.

It is beyond our ability, given the limited time we have, to analyze the total acreages of incursions from the proposal into Wilderness and IRAs on the various forests. The Forest Service must include such an analysis if it continues to pursue hazard tree removal in these areas. The following numbered road- and trail-segments delineated in the maps for the Sequoia and Sierra NFs indicate that they are included and would allow felling and/or removal of trees in IRAs and Wilderness based on versions of those maps posted on the website on Nov. 8, 2021 (and dated Nov. 5, 2021):

Sequoia NF Road Treatments in Sequoia IRAs

19S29 – Moses Mtn IRA
21S58 – Black Mtn IRA
23S73 – Lion Ridge IRA
23S65B – Lion Ridge IRA
12S01 – Kings River IRA
13S03 – Kings River IRA
13S66 – Kings River IRA
13S03A – Kings River IRA
13S46 – Kings River IRA (last short section)
13S06 – Agnew IRA
13S41 – Agnew IRA
13S05 – Agnew IRA
13S87A – Agnew IRA
13S87 – Agnew IRA

Sierra NF Roads and Trail Treatments in Sierra NF Wilderness and IRAs

27E223 (trail) – Ansel Adams Wilderness
24E03 (trail) – San Joaquin IRA
6S44X – San Joaquin IRA
6S84 – San Joaquin IRA
6S84A – San Joaquin IRA
6S80 – San Joaquin IRA
6S89YF – San Joaquin IRA
6S78YH – San Joaquin IRA
5S84 – San Joaquin IRA
4S61 – San Joaquin IRA
5S67 – San Joaquin IRA
5S30 – San Joaquin IRA
4S25 – San Joaquin IRA
4S09 – San Joaquin IRA
4S09B – San Joaquin IRA
5S30D – San Joaquin IRA
25E206 (trail) – San Joaquin IRA & Ansel Adams Wilderness
25E207 (trail) – San Joaquin IRA & Ansel Adams Wilderness
26E24 (trail) – San Joaquin IRA
24E01 (Isberg Trail) – San Joaquin IRA
24E20 (Walton Trail) – San Joaquin IRA
24E25 (trail) – San Joaquin IRA
24E41 (trail) – San Joaquin IRA
24E12 (trail) – San Joaquin IRA
24E06 (Jackass Trail) – San Joaquin IRA
5S57 – San Joaquin IRA

If the Forest Service includes these roads and trail areas, it must conduct an analysis of how the actions would promote or protect Wilderness or Roadless characteristics and values under the Wilderness Act or the Roadless Conservation Rule, as they apply to the road or trail in question.

The Wilderness Act

Congress stated that Wilderness areas “shall be administered for the use and enjoyment of the American people in such a manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness” 16 U.S.C. §1131(a). Accordingly, “each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area and shall so administer such areas for such other purposes for which it may have been established as also to preserve its wilderness character.” *Id.* § 1133(b).

Congress defined “Wilderness” as follows:

A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are

untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

16 U.S.C. § 1131(c).

Therefore the primary directive of the Wilderness Act requires the Forest Service to preserve the wilderness character of any wilderness where trails are included for proposed treatments. If the Forest Service were to include any trails in the proposal, an analysis must show how these proposed treatments preserve the wilderness character of, for example, the Ansel Adams Wilderness in the Sierra National Forest.

We believe the analysis would show that felling trees within the Wilderness significantly degrades wilderness conditions, and the proposal for these hazard tree treatments along trails in Wilderness is not consistent with Wilderness values. Any such trails in Wilderness should be dropped from the proposal.

The Roadless Area Conservation Rule

The Forest Service developed the 2001 Roadless Rule in order “to protect and conserve inventoried roadless areas on National Forest System lands.” Special Areas, Roadless Area Conservation, 66 Fed. Reg. 3244, 3272-73 (Jan. 12, 2001). Conservation of inventoried roadless areas serves to “provide large, relatively undisturbed landscapes that are important to biological diversity and the long-term survival of many at risk species . . . including hundreds of threatened, endangered, and sensitive species.” The Roadless Rule identifies nine specific “features that are often present in and characterize inventoried roadless areas”: (1) High quality or undisturbed soil, water, and air; (2) Sources of public drinking water; (3) Diversity of plant and animal communities; (4) Habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land; (5) Primitive, semiprimitive nonmotorized and semi-primitive motorized classes of dispersed recreation; (6) Reference landscapes; (7) Natural appearing landscapes with high scenic quality; (8) Traditional cultural properties and sacred sites; and (9) Other locally identified unique characteristics. 36 C.F.R. § 294.11

In order to protect roadless area characteristics, the Roadless Rule generally “prohibits . . . timber harvest in inventoried roadless areas because [these activities] have the greatest likelihood of altering and fragmenting landscapes, resulting in immediate, long-term loss of roadless area values and characteristics.” 66 Fed. Reg. at 3,244. The Forest Service may, however, “infrequent[ly]” authorize the “cutting, sale, or removal of *generally small diameter timber*” in

inventoried roadless areas. *Id.* at 3,244, 3,273 (emphasis added); *see also id.* at 3,257 (“Such [logging] activities are expected to be rare and to focus on small diameter trees.”). The overall intent of this narrow and “infrequent” exception to the prohibition on logging within roadless areas is to restrict cutting “to those areas that have become overgrown with smaller diameter trees.” *Id.*; *see also* 36 C.F.R. § 294.13 (“Prohibition on timber cutting, sale, or removal in inventoried roadless areas.”). The rules only provides exceptions for timber cutting if “needed for one of [several listed] purposes and will maintain or improve one or more of the roadless area characteristics as defined in § 294.11.” *Id.*

Accordingly, the roadless area logging exception is limited to two narrow and specifically defined circumstances, where the Forest Service has determined that logging of generally small-diameter trees is necessary:

- (1) To improve threatened, endangered, proposed, or sensitive species habitat; or
- (2) To maintain or restore characteristics of ecosystem composition and structure, such as to reduce the risk of uncharacteristic wildfire effects, within the range of variability that would be expected to occur under natural disturbance regimes of the current climatic period[.]

Id. § 294.13(b)(1)(i)-(ii). In addition, even if one of these two circumstances applies, the Forest Service must also specifically demonstrate that the proposed cutting “will maintain or improve one or more of the [nine] roadless area characteristics as defined in § 294.11.” *Id.* § 294.13(b)(1); *see also Sierra Club v. Eubanks*, 335 F. Supp. 2d 1070, 1079 (E.D. Cal. 2004) (“The Roadless Rule permits timber cutting only if the logging is limited to ‘generally small diameter timber’ and allows logging only for narrowly defined purposes such as enhancing roadless area characteristics.”).

Hazard tree felling and removal generally does not involve “generally small diameter” trees because a hazard tree, by definition, must be large in diameter to be considered a hazard. Even if hazard abatement may be necessary, hazards in roadless areas can be averted by just felling and leaving, rather than removing, the trees. Any analysis that would fell or remove trees must include specific details on how the tree felling (or removal) of hazard trees (1) falls under one of the exceptions in § 294.13, and (2) will maintain or improve one of more of the roadless characteristics in § 294.11. This is particularly important in habitat for the endangered SSN fisher where the removal of large trees would also adversely affect this species on the brink of extinction with likely fewer than 300 individuals still in existence.

Finally, under NEPA the Forest Service must include alternatives that exclude trails and roads in Wilderness or IRAs proposed for treatment.

4. The Forest Service Should Not Seek and ESD or Alternative NEPA Arrangements to Short-Cut the Public Objection Process

The R5 Proposal argues that the administrative process should be truncated by seeking an ESD:

Due to the critical and time-sensitive nature of the proposed action, the Regional Office may elect to seek an Emergency Situation Determination (ESD) from the Chief of the Forest Service. If the ESD is sought and granted, it would expedite the actions proposed in this project (36 CFR 218.21).

Scoping letter, p. 1. The letter states that this would expedite and streamline the environmental review on this huge geographic area of 10 National Forests across a majority of California by waiving the objection process. The letter also asserts that an expedited review process is needed because, “[w]e have identified a need to expedite analysis and decision making related to this project, which includes activities that are not novel, and for which the effects are generally well-known.” *Id.*

But the environmental conditions have greatly changed on National Forests in California due to climate change, increased recreational use, sensitive species declines, newly listed species, and other concerns. While the management activities may not be “novel,” because of these major changes, the Forest Service can no longer hide behind their worn-out claim that the effects are “generally well-known.” The unpredictability of the effects on the endangered SSN fisher population, the cumulative removal of massive quantities of carbon from tree removal from the combined proposed actions across 10 national forests, by themselves and in combination with other projects, the need to restrict management in sensitive species habitats, and the need to reduce or restrict overuse from recreational activities enabled by enhanced access from the proposed activities all provide evidence that the effects from these activities are no longer well-known.

Therefore, a full Environmental Impact Statement needs to analyze these effects with full public input and a robust policy of public participation, so we get this right. Seeking an ESD or alternative NEPA arrangements will only lead to poor decision-making and associated poor project design and implementation that will make matters worse with unknown or unpredictable effects from such a massive proposal.

Furthermore, an ESD combined with a truncated public involvement process will make it very likely that this proposal will be immediately challenged in court and result in an injunction of most or all of the activities proposed. Hasty analysis and decision-making is vulnerable to mistakes and legal violations.

5. The Purpose and Need Should Be Better Defined

The Scoping proposal, describing the proposed project, defines two items for analysis, at 1-2: to provide for public health and safety, and to reduce fuel loading. But the Scoping letter at 1 suggests using an Emergency Situation Determination (ESD) to benefit commercial logging interests and recover value through salvage logging, which is necessarily inconsistent with the proposals for public safety and fuel reduction: “An ESD would enable the capture of the commercial value of the salvaged timber...” Commercial logging of beneficial snags and potentially live but fire-scarred trees should not be an element of this proposal because the removal of these trees is not necessary to provide public safety or reduce fuels.

6. Fuel Reduction Should Be Analyzed In a Separate Environmental Impact Statement

In addition, the need for felling a few, select hazardous dead trees along roads or trails can perhaps be justified in the Purpose and Need statement. But large fuel reduction in a vague radius outwards from roads, routes, and trails in forests seems to be a completely different Purpose and Need should be analyzed in a separate environmental review, as already suggested above as it relates to a larger proposal. This type of fuel removal project resembles a fuel break project, which has nothing to do with public safety. Fuel breaks are a different issue that involves wildfire fighting issues. But these fuel breaks have failed and are now proven to not be useful in halting the advance of the now all too frequent megafires driven by winds in California's Sierra Nevada.

The Scoping document at 3 says: "The area assessed for hazard tree removal will be within 300 feet of the roads." This indicates the creation of 600-plus foot-wide fuel breaks across wild lands, intact forest habitats, and recovering forests. This type of massive proposal should be analyzed in a separate fuel reduction-fuel breaks Environmental Impact Statement, since such large-scale habitat removal across millions of acres of public lands would have highly significant impacts. Artificial fuel breaks fragment wildlife habitat, impacts rare plants and sensitive species, impact soils, and impact cultural resources, among other potentially significant impacts. These impacts should be analyzed in a separate EIS.

7. The NEPA Analysis Must Consider the Potential Adverse Effects the Proposal Could Have in Increasing Fire Severity and Fire Spread.

Tree removal and fuels reduction methods used to manage forests that open the forest canopy can cause more problems than they claim to solve. When trees and fuels are removed on the scale of 400-600 ft wide hazard tree corridors throughout the forests, the trees that normally block the wind are no longer there to slow windspeeds, thereby exacerbating the speed a wildfire can spread. And opening the forest canopy also creates a chimney effect, which increases the flow of oxygen into the fire area and increases wildfire severity.

Current and recent Forest Service funded research demonstrates that atmospheric coupling at the process scale (e.g., Banerjee et al 2020, *Effects of canopy midstory management and fuel moisture on wildfire behavior* and Atchley et al. 2021, *Effects of fuel spatial distribution on wildland fire behaviour*), and at the larger landscape scale (e.g., Coen et al., 2018, *Deconstructing the King megafire*) is critically important, and demonstrates how atmospheric coupling influences the rate of oxygen replenishment during a fire, which show that for historic megafires, coupling to the atmosphere is more significant than both fuel load and climate trends. See Attachments B, C, and D (Banerjee, Atchley, and Coen, respectively).

Research using detailed high-resolution numerical simulations reports that removing ladder fuels can easily increase the likelihood of crown-fire occurrence, despite being designed to reduce it (Banerjee et al. 2020). The reason for this seemingly counterintuitive result involves the important role atmospheric motions play, and it demonstrates how focusing solely on forest fuels can make matters worse, if one neglects to also consider how vegetation treatments can increase the oxygen supply to a fire.

When ladder fuels are removed, the ground-level windspeed and turbulent mixing both increase, leading to faster fire spread and greater oxygen-transport efficiency; this, in turn, results in increased fire intensity. As recent high-resolution numerical fire simulations show (e.g., Banerjee et al. 2020, Atchley et al. 2021), in many cases this aerodynamic effect is more important than the fire-dampening effects of the fuels reduction being evaluated. While current models used by the Forest Service only use constant 20 mph windspeeds for varying degrees of ladder fuel removal (Jones et al. 2010), increasing levels of fuels reduction will be accompanied by higher windspeeds as the sub-canopy wind drag drops, but this is not considered by Jones et al., and this is typical of operational fire-model use.

The Banerjee and Atchley studies used high-resolution numerical fire simulations to demonstrate just how consequential neglecting canopy wind-drag effects can be, leading to potentially disastrous results. In both studies, separate simulations were performed to compare different fuels configurations, and both papers demonstrate that the removal of ladder fuels reduces the sub-canopy wind drag, ultimately leading to increased fire spread. In other words, they both show how fuels-reduction treatments can increase fire spread, which is the opposite of what the operational model studies predict. Furthermore, the Banerjee et al. 2020 paper goes further and also shows that aggressive ladderfuel removal increases the likelihood of overstory crown fires compared to more modest ladderfuel reductions, which is again opposite to operational model-run predictions.

From these results, it is clear that evaluating wildland fire resilience using current Forest Service operational fire-modeling theory is suspect, especially since operational models fail to properly include all of the important effects associated with specified fuels treatments, especially canopy wind resistance, which both Atchley et al. (2021) and Banerjee et al. (2020) show are extremely important.

In addition to the focused process studies like those of Atchley et al. 2021 and Banerjee et al. 2020, realistic high-resolution numerical fire simulations are also used to study the details of real-world fires. For example, Coen et al. 2018 used high-resolution simulations to deconstruct the 2014 King Fire, and its authors showed that fire-induced winds were primarily responsible for the fire's rapid growth and size. In their study, Coen et al. demonstrate that drought and fuel load were secondary effects compared to fire-induced atmospheric motions, which operational fire-behavior models neglect. Two important conclusions from the study are: (1) "... extreme fires need not arise from extreme fire environment conditions," and (2) "... models used in operations do not capture fire-induced winds and dynamic feedbacks so [they] can underestimate megafire events." In other words, the inability of operational models to simulate plume-driven megafires like the 2014 King Fire is not due to climate change or extreme weather events, but instead because of known missing physics in the operational models.

These new findings apply directly to the current proposal because of its massive size and scope and the fact that the wide hazard tree corridors along roads are likely to experience these wind- and oxygen-driven effects during a wildfire. For those reasons, the Forest Service's NEPA analysis must consider and analyze these potential significant effects, which could be caused by the proposal.

In fact, the 9th Circuit Court of appeals has found that when the Forest Service ignored similar concerns in their NEPA analysis, it violated NEPA. In *BARK v. U.S. Forest Serv.*, 958 F.3d 865 (9th Cir. 2020), one of the purposes of the project was fuel reduction to reduce the risk and severity of wildfires. There, the plaintiffs provided substantial expert opinion and scientific reports, which disputed that the treatments would be helpful and showed that they could potentially increase fire risk or make fires more severe. *Id.* at 870. The Court in *BARK* noted:

Importantly, even the Fuels Specialist Report produced by the USFS itself noted that “reducing canopy cover can also have the effect of increasing [a fire’s rate of spread] by allowing solar radiation to dry surface fuels, allowing finer fuels to grow on ... the forest floor, and reducing the impact of sheltering from wind the canopy provides.”

BARK, 958 F.3d at 871. But the analysis “did not engage with the considerable contrary scientific and expert opinion; it instead drew general conclusions such as that ‘[t]here are no negative effects to fuels from the Proposed Action treatments.’ ” *Id.* The Court held that the scientific dispute about the potential negative effects was of substantial consequence because

fire management is a crucial issue that has wide-ranging ecological impacts and affects human life. When one factor alone raises “substantial questions” about whether an agency action will have a significant environmental effect, an EIS is warranted. *See Ocean Advocates v. United States Army Corps of Eng’rs*, 402 F.3d 846, 865 (9th Cir. 2005) (“We have held that one of [the NEPA intensity] factors may be sufficient to require preparation of an EIS in appropriate circumstances.”). Thus, the USFS’s decision not to prepare an EIS was arbitrary and capricious. *See [Blue Mountains Biodiversity Project v.] Blackwood*, 161 F.3d at 1213 (holding that conflicting evidence on the effects of ecological intervention in post-fire landscapes made a proposed project highly uncertain, thus requiring an EIS).

Id. The Court found that “[s]ubstantial expert opinion presented by the Appellants during the administrative process disputes the USFS’s conclusion that thinning is helpful for fire suppression and safety.” *Id.* at 870. And, in concluding that Appellants had shown a substantial dispute about the effect of thinning on fire suppression, the Court held that “[t]he effects of the Project are highly controversial and uncertain, thus mandating the creation of an EIS. *See* 40 C.F.R. § 1508.27(b)(4) & (5) (listing relevant factors for whether an EIS is required, including if the project’s effects are ‘highly controversial’ and ‘highly uncertain’).” *Id.*¹

For these reasons, the analysis must consider these effects from the proposal in an EIS.

¹ An action is “highly controversial” when “a substantial dispute exists as to the size, nature, or effect of the major federal action ...” *Humane Soc’y of the U.S. v. Locke*, 626 F.3d 1040, 1047 (9th Cir. 2010). “A substantial dispute exists when evidence ... casts serious doubt upon the reasonableness of the agency’s conclusions.” *Anderson v. Evans*, 371 F.3d 475, 489 (9th Cir. 2004). “Used in this context, the term ‘controversial’ refers to ‘[the existence of a] substantial dispute ... as to the size, nature, or effect of the major federal action rather than to the existence of opposition to a use.’ ” *Found. for N. Am. Wild Sheep v. U.S. Dep’t of Agric.*, 681 F.2d 1172, 1182 (9th Cir. 1982) (quoting *Rucker v. Willis*, 484 F.2d 158, 162 (4th Cir. 1973)).

8. The Proposal is Likely to Harm the endangered SSN Pacific fisher, California Spotted Owl, and Northern Goshawks, Which is Significant and Must be Analyzed in an EIS.

While the guidelines may restrict noise within 0.25-miles of den sites from March 15 to June 15, scientific studies of the SSN fisher confirm that fishers use post-fire burned forest habitats² and female fishers return to their natal and maternal dens with their kits well after June 15—into late September,³ so the Forest Service should follow the research and not remove post-fire snag habitats or take the chance of harming / taking / killing the endangered SSN Pacific Fisher kits by reinstating tree removal activities after June 15.⁴

We are concerned about the direct, indirect, and cumulative effects from this project and other projects in the SSN Fisher Conservation Area and how the Forest Service would analyze the effects of each alternative. Fishers use large areas of primarily coniferous forests with fairly dense canopies and large trees, snags, and down logs. A vegetated understory and large woody debris are important for their prey species.

The proposed logging would result in removal of multiple millions of board feet of timber as well as substantial volumes of biomass from the project area. The project would also allow pile burning and understory burning of natural stands, plantations, meadows, and goshawk protected activity centers. The acres of logged areas would later most likely be replanted with a closely-spaced mono-culture of pines, potentially causing further long-term degradation of habitat.

The proposal must strictly apply the wildlife restrictions and sufficiently analyze potential adverse effects on these and other species. Because the effects from the proposed tree felling and removal activities, the related hazard tree proposal along roads, combined with the changed baseline environmental effects from the fires, are significant, the Forest Service must prepare an EIS and consider a full range of alternatives that minimize adverse effects, including felling and leaving trees and/or topping trees to prevent them from striking the road, trail, campground, or other improvement.

Finally, the final plan for this proposal must include standards to inspect trees as possible dens for fishers. Prior to marking trees for removal in denning habitat of the SSN fisher, a qualified biologist must first inspect locate / verify / document all large hazard trees, danger trees, or defect trees containing cavities and clearly mark and protect these trees from being felled or removed.

9. The EIS must analyze the greenhouse gas (GHG) emissions generated by the proposal and their effects on climate change.

² See:

https://d2k78bk4kdhbpr.cloudfront.net/media/publications/files/Fisher_use_of_a_postfire_landscape_Thompson_et_al_2021.pdf

³ See: https://www.fs.fed.us/psw/news/2009/090915_fisherkit.pdf

⁴ See: https://consbio.org/products/publications/fisher-use-postfire-landscapes-implications-habitat-connectivity-and-restoration?utm_source=CBI+Master+List&utm_campaign=3341983f2b-EMAIL_CAMPAIGN_2021_10_04_06_19&utm_medium=email&utm_term=0_1548d4a8b9-3341983f2b-327484753

The proposal fails to even mention the global climate crisis or the agency's responsibility to help mitigate it. Considerations of climate change and greenhouse gas (GHG) emissions are required by the Forest Service's Washington Office and NEPA. There is no question that the proposal would result in a significant release of CO₂, and as a result global temperatures would rise and cause associated adverse effect to people, wildlife, and their habitats.

The proposal would likely remove millions of trees as sawtimber, by burning on site, as firewood, and as biomass, which would not only release millions of tons of GHGs into the atmosphere over a very short period of time, but would also irrevocably consume the limited natural resource of petroleum products in order to transport the biomass to burning facilities and would emit additional GHGs at those facilities. Leaving the material in the forest to naturally decay would significantly reduce the pulse of GHGs and store much of the carbon in the soil, compared to the proposal to fell and remove trees. Moreover, the Forest Service, other public agencies, and private entities continue to implement similar large-scale logging, biomass, and other burning activities throughout the mountains of the Sierra Nevada, in other national forests, and in other areas of California. Cumulatively, these activities will release significantly more GHGs into the atmosphere over a very short period to exacerbate the effects of climate change compared to leaving the trees in the forest, even if felled, by reducing for years the ability of the forests to sequester atmospheric carbon to counteract the climate crisis. These cumulative effects and additions of GHG emissions and their effects on climate change must be considered and analyzed in detail.

Consideration of climate change and GHG emissions are required by the Forest Service's Washington Office. See <https://www.fs.usda.gov/ccrc/topics/introduction-incorporating-climate-change-nepa-process>.

Each alternative must discuss and analyze carbon and methane emissions from implementation of the proposed action and the equipment used to implement the proposed action, and the no-action alternative should also provide information about the potential for carbon sequestration in area soils (and the reduced rate of GHG emissions from natural decay) and from foregoing project implementation that would remove or burn trees.

The environmental analysis must disclose the emissions from biomass and on-site burning, as well as the GHG emissions caused by equipment and transportation, for each action alternative. For this, the Washington Office of the Forest Service has generated specific direction on how to discuss climate change effects in a NEPA analysis. See *Climate Change Considerations in Project Level NEPA Analysis* (Jan. 13, 2009) (available at <https://www.fs.fed.us/climatechange/documents/nepa-guidance.pdf>). That document includes how similar projects should disclose direct effects on climate change:

- **The effect of a proposed project on climate change** (GHG emissions and carbon cycling). Examples include: short-term GHG emissions and alteration to the carbon cycle caused by hazardous fuels reduction projects, GHG emissions from oil and gas field development, and avoiding large GHG emissions pulses and effects to the carbon cycle

by thinning overstocked stands to increase forest resilience and decrease the potential for large scale wildfire.

Id. at 2. To assist in disclosing these effects, the Forest Service provides tools that can help managers determine the direct contributions of GHG emissions from project burning or treatments. *Id.* at 5 (*FOFEM 5.5, Consume 3.0, and the Forest Vegetation Simulator*). Because the Forest Service has tools or models to effectively calculate emissions, it must disclose these emissions for each of the action alternatives. In addition, the guidance document suggests that the NEPA document include a qualitative effects analysis. *Id.* Such an analysis should include the cumulative effects, quantified in an “individual, regional, national, global” context. *Id.* at 6.

Finally, the guidance suggests that NEPA provides direction on how managers should respond to comments raised during project analysis regarding climate change:

- Modify alternatives including the proposed action.
- Develop and evaluate alternatives not previously given serious consideration by the Agency.
- Supplement, improve, or modify the analysis.
- Make factual corrections.
- Explain why the comments do not warrant further agency response, citing the sources, authorities, or reasons which support the Agency’s position and, if appropriate, indicate those circumstances that would trigger agency reappraisal or further response.

Id. at 8. At the very least, because this proposal includes tree removal and burning that will contribute GHG emissions, the analysis must include an acknowledgment of carbon emissions and must provide a response to this issue.

Moreover, the analysis should account for and quantify (as part of the cumulative effects analysis) not only the longer-term emission from wood products, but also the short-term emissions from burning on-site and the emissions from any biomass that is removed from the project area and later burned off-site. This must necessarily include the contribution of emissions from transporting this material, and the contribution of emissions from planning and implementing the proposal by the Forest Service and its contractors.

This holistic approach to account for all GHG emission is necessary to provide managers and the public with the kind of information NEPA requires and to make informed choices between alternatives, to mitigate actions that may affect climate change, and to consider and assess the larger picture of GHG contributions from all national forest projects that may contribute GHG emissions. Since this proposal is regional in scope, Region 5 should be able to pull together the necessary information needed to analyze this in the regional or even national context.

Finally, if Region 5 has or is planning to conduct additional analyses on the effects from the cumulative treatments of similar projects in the California, the analyses should reference and disclose that information.

10. NEPA Requires that the Forest Service take a Hard Look at the Environmental Consequences of using the Hazard Tree Guidelines for Forest Service Facilities and Roads in the Pacific Southwest Region (R5 Hazard Tree Guidelines (2012)) as well as the Marking Guidelines for Fire Injured Trees (Smith and Cluck 2011).

The NEPA process is designed to ensure that a federal agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts. It also guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision.

NEPA regulations allow for “tiering.” Tiering “refers to the coverage of general matters in broader [EISs] or [EAs] (such as national program or policy statements) with subsequent narrower [EISs] or [EAs] (such as regional or basin-wide program [EISs] or ultimately site-specific [EISs]) incorporating by reference the general discussions and concentrating solely on the issues specific to the [EIS] subsequently prepared.” 40 C.F.R. § 1508.1(ff).

Under 40 C.F.R. § 1501.11(a), “agencies should tier their [EISs] and [EAs] when it would eliminate repetitive discussions of the same issues, focus the actual issues ripe for decision, and exclude from consideration issues already decided or not yet ripe at each level of environmental review.” Under 40 C.F.R. § 1501.11(c), “[t]iering is appropriate when the sequence from an [EIS] or [EA] is (1) From a programmatic, plan, or policy [EIS] or [EA] to a program, plan, or policy statement or assessment of lesser or narrower scope or to a site-specific [EIS] or [EA]”[;] (2) From an [EIS] or [EA] on a specific action at an early stage (such as need and site selection) to a supplement (which is preferred) or a subsequent [EIS] or [EA] at a later stage (such as environmental mitigation). Tiering in such cases is appropriate when it helps the lead agency to focus on the issues that are ripe for decision and exclude from consideration issues already decided or not yet ripe.”

Tiering is permitted when an agency has previously prepared an EIS or EA addressing general matters and incorporates by reference such general discussions in a subsequent EIS or EA while focusing in the subsequent EIS or EA on more specific issues. 40 C.F.R. § 1508.1(ff). Tiering to a document that has not itself been subject to NEPA review is not permitted.

For the regional hazard tree proposal, the Forest Service would rely on agency guidance documents to establish its hazard tree criteria, specifically, R5 Hazard Tree Guidelines (2012) and Smith and Cluck (2011). Along with the road segments identified for treatment, the hazard tree criteria are the crux of the proposal. They determine which trees will be cut. The environmental impacts of the proposal therefore turn on the hazard tree criteria, that is, the more trees that will be cut, the greater the environmental impacts.

Neither the R5 Hazard Tree Guidelines (2012) nor Smith and Cluck (2011) have undergone NEPA analysis. Members of the public, Tribes, other agencies, and other interested parties never had the opportunity to review and provide feedback on the proposal’s hazard tree criteria either when the R5 Hazard Tree Guidelines (2012) or Smith and Cluck (2011) were issued. Whether or

not the criteria accurately predict that trees actually pose a hazard risk has never been vetted in accordance with NEPA's procedural safeguards.

The Forest Service has broad authority to weigh and balance the competing values associated with managing hazard trees and habitat, including the authority to close roads and reduce public use of roads where environmental values dictate. Preparing an analysis of the environmental impacts of the R5 Hazard Tree Guidelines (2012) and Smith and Cluck (2011) would allow the Forest Service to weigh competing values and involve the public in that process. Without full consideration of the criteria used to determine whether trees are hazards, the public will have no way of knowing whether or how competing interests were weighed and considered.

The Forest Service must take a hard look at its reliance on non-NEPA guidance found in the R5 Hazard Tree Guidelines (2012) and Smith and Cluck (2011) in order to comply with NEPA.

11. Other Forest Structure and Ecological Modifications of the Project Need to Be Analyzed

(1) How do the proposed actions relate to past timber sales and deforestation in the proposal area, as well as logging roads through the areas increase forest temperatures, increase wind speeds, make the forest more susceptible to pine bark beetle, leading to increased bark beetle activity, and make the forest susceptible to increased wildfire burn severity?

(2) And how did closely-planted trees in the post-logging plantations in the area of the proposal areas increase wildfire burn severity?

(3) And what is the cumulative impact of the proposed project and all of the other projects in the area, including projects on State and private lands as well as tree removal projects by Cal Trans along roads throughout the proposal areas and tree removal projects along power lines through the project area by the PG&E and SCE?

(4) Also, the U.S. Forest Service instruction manual for fire fighter personnel, Agriculture Handbook 360, Fire Weather . . . A Guide for Application of Meteorological Information to Forest Fire Control Operations, Mark J. Schroeder, and Charles C. Buck, 1970 (<https://digitalcommons.usu.edu/barkbeetles/14/>), which continues to be used more than fifty years later, provided relevant information regarding how altering the forest structure can alter the weather behavior in the forest, which can negatively alter fire behavior. For example, "**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 which are close enough to be influenced by these 'chimneys'.**"⁵ How will the Forest Service apply the lessons learned from this important manual to the current proposal?

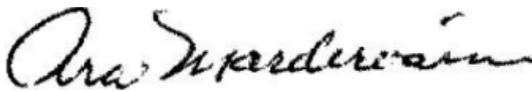
(5) How appropriate is it for the proposal to scatter wood chips 18-inches deep in forested areas?

⁵ FIRE WEATHER, TEMPERATURE, Chapter 2, page 31

“Mastication of woody shrubs is used increasingly as a management option to reduce fire risk at the wildland–urban interface. But the effects from the resulting mulch layer, which can lead to extreme soil heating, if burned, is unknown. The potential for biological damage from soil heating during fire exists following mastication, particularly in dry soil with a **mulch depth of 7.5 cm or greater**. Field projections indicate that up to one-fourth of treated areas with dense pre-mastication vegetation would surpass lethal soil temperatures during a surface wildfire.” <https://www.publish.csiro.au/WF/WF04062>

For Sequoia ForestKeeper, Western Watersheds Project, and the Kern-Kaweah Chapter of the Sierra Club,

Sincerely,



Ara Marderosian
Executive Director – Sequoia ForestKeeper
Conservation Chair – Kern-Kaweah Chapter of the Sierra Club
P.O. Box 2134
Kernville, CA 93238-2134



René Voss – Attorney at Law
15 Alderney Rd.
San Anselmo, CA 94960



Laura Cunningham
California Director
Western Watersheds Project
PO Box 70
Beatty NV 89003