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Sent to:
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**cc: Ara Marderosian
Georgette Theotig**

**Subject: Sirretta Road Blowdown Salvage Project Scoping Comments for Sequoia
ForestKeeper & Kern-Kaweah Chapter of the Sierra Club**

Sequoia ForestKeeper (SFK) and the Kern-Kaweah Chapter of the Sierra Club (the Club) thank you for the opportunity to comment.

Introduction and Summary

From observations in the field, SFK has identified few trees that appear salvageable (see reference to photographs and those submitted with these comments). Many of the damaged trees are still alive and will survive. Unless leaning severely, any tree with any green limbs or needles should be retained and not felled. The remaining trees should be left standing to serve needs of wildlife because there is a deficit of large snags on the landscape. Moreover, downed wood should also be retained for wildlife. Regional directives require that wildlife needs must be served first before trees are salvaged.

SFK and the Club support averting hazards from trees in popular recreation sites. Roads and trails, however, are not considered targets of hazard trees and should not be treated the same as popular recreation sites. Limiting access to only primary roads and closing off secondary roads (including the one in this proposal) will eliminate hazards from trees falling on passing vehicles.

If any trees must be felled to avert a hazard, the Forest Service should consider an alternative that cuts and leaves roadside hazard trees, but only if they are in imminent danger of falling. Any fuel loading or fire risk from these felled trees can be averted by removing limbs, tops, and slash and/or by burning this debris in slash piles. Burning debris/slash piles has been the practice in the past in similar projects. Tree boles are inherently less flammable than slash and pose little, if any, increase in fire risk, while providing important habitat for wildlife and for recycling nutrients to the forest's soils. Leaving felled trees would resolve the safety concerns underlying the project (a downed tree is not going to fall on a passing vehicle or a person walking), and may also avoid much of the safety hazards from the logging activity itself, which is an inherently dangerous profession.

Closing the road and cutting and leaving hazard trees are viable alternatives that should be considered in an Environmental Assessment (EA) along with the proposed action.

While it may be Forest Service policy to abate hazardous conditions, the Forest Service is not obligated to protect people from falling trees along roads and trails. *See, e.g., Moyer v. Washington State*, 106 F.3d 408 (9th Cir. 1997). The *Moyer* court specifically held that the Forest Service does not have a duty to avert hazard trees alongside the road, but has discretion to balance safety and wildlife habitat considerations. Similar to safety issues addressed by the National Park Service in nearby Kings Canyon National Park, the Forest Service has a “choice between the competing policy considerations of maximizing access to and preservation of natural resources versus the need to minimize potential safety hazards.” *Valdez v. U.S.*, 56 F. 3d 1177, 1180 (9th Cir. 1995).

1. Impression of Sirretta Salvage Project Area, Photographs and the Locations

The following observations are based on Ara Marderosian’s August 16, 2011 survey of the units of the Sirretta Road Blowdown Salvage Sale Project:

My overall impressions of the Sirretta Salvage Project area are that the area has had the overstory removed with past logging: large stumps (5 to 8 feet in diameter) in the area attest to this assertion. The remaining trees are providing the shade that protects the soil from drying out and the many seedlings, which are evident throughout the area, from drying up, so these seedlings can survive to replace the overstory trees harvested from the forest.

1) Trees have fallen due to storm blowdown, many on or near the road

Few trees have been blown down. Many trees have already been cut from their fallen position on trails and roads.

2) Snapped boles: These are trees that have snapped off due to wind and snow loading

A small percent of trees have been snapped and lost their tops and many of those trees still have green foliage beneath the broken top. Broken branches and tops are scattered throughout the area.

3) “Leaners” are trees that may be root sprung and are preparing to fall

Few trees are leaning over a road or trail.

4) “Faders” have brown needles, many due to high rates of mistletoe and Cytospora and Annosum fungal infestation in the area, resulting in dead and dying trees

Many of the trees in the area have been stressed and show evidence of fading at random vertical spots in their foliage. Smaller trees display the greatest percentage of fading. Most of the dead trees (trees with all brown needles) are the

smaller diameter trees. The larger diameter trees generally display less than 20 percent fade.

Activity fuels generated during the project will be treated by piling and burning

Logging as well as gathering the fallen biomass and piling and burning will destroy the existing tree seedlings that are currently protected in the shade of these remaining trees.

These observations have been recorded with photographs, which will be sent separately (see below).

2. We request that the Forest Service document the exact locations of trees to be felled so we can find them and verify compliance with Salvage Directives and Hazard Tree Guidelines.

We request that when the Forest Service marks a tree for felling for salvage or as a hazard, that it records its exact location, preferably by GPS, so that we can verify that it has been correctly marked under salvage directives or the hazard tree guidelines. Documentation of hazard trees and the need for their felling and removal is required (see below).

SFK has visited the proposed Sirretta Salvage project area and has documented much of the storm damage to trees along Forest Road 22S05A (or 22S21, as the map attached to the scoping notice shows). These photographs are contained on a CD and are being sent by mail separately to the district for the project file. They are also posted at the following web site location for direct access: <https://picasaweb.google.com/renepvoss/SirettaRdSalvageAra>. Each photograph is labeled with the number in the attached map and index. See Exhibit A (Map of Sirretta PhotoWaypoints) and Exhibit B (Index of Photographs for each Waypoint).

But it is unclear from on the ground observation and those photographs which trees are being considered for salvage and which trees could present a hazard. No trees are marked in the project area. In order to determine whether the Forest Service is complying with its salvage directives and its hazard tree guidelines, we need additional information on the exact nature of the proposed tree felling and removal. Moreover, the map that was provided with the scoping notice did not label the salvage units on the map.

We request a corrected map with unit numbers and data on the exact location of roadside hazard trees. Moreover, we request that you provide us with the list of hazard trees, as well as dead and dying trees, as soon as the list has been generated.

3. Salvage Directives

Because the Forest Service intends to salvage storm-damaged trees, it must comply with directives specific to salvage logging. Please indicate how the project will comply with these directives.

2004 Sierra Nevada Framework Directives include special requirements for Salvage:

Design projects to protect and maintain critical wildlife habitat. Examples are activities that would: (1) avoid areas where forest vegetation is still largely intact; (2) provide for sufficient quantities of large snags; (3) maintain existing large woody material as needed; (4) provide for additional large woody material and ground cover as needed; (5) accelerate development of mature forest habitat through reforestation and other cultural means; and (6) provide for a mix of seral stages over time.

...

Use the best available information for identifying dead and dying trees for salvage purposes as developed by the Pacific Southwest Region Forest Health Protection Staff.

Outside of WUI defense zones, salvage harvests are prohibited in PACs and known den sites unless a biological evaluation determines that the areas proposed for harvest are rendered unsuitable for the purpose they were intended by a catastrophic stand-replacing event.

Consider ecological benefits of retaining small patches of mortality in old forest emphasis areas.

Appx. A of SNFPA ROD at 52-53.

This raises several questions about the project area not discussed in the scoping documentation, such as:

- How does the Forest Service intend to design this project to protect and maintain critical wildlife habitat, such as habitat for Pacific fishers, Cal. spotted owls, and goshawks?
- What is the best available information for identifying dead and dying trees for salvage purposes and how is it being applied?
- Since this area is not in a WUI, does the project area include PACs or any known den sites, and will salvage be prohibited in these areas?
- Is the project area considered an old forest emphasis area, and if so, will the project design include retaining small patches of mortality?

Please address each of these issues in the environmental analysis.

4. Hazard Tree Guidelines for Forest Plan Compliance

a. Roads Should Not be Considered Targets under the Hazard Tree Guidelines

Appendix D of the Hazard Tree Guidelines (R5 Guide) states that “Failures [of trees] result in accidents only if they strike a target. Targets can be stationary such as buildings, or mobile, such as vehicles and people.” But roads are not considered targets under these guidelines.” So, the mere fact that a tree may strike a road is not a reason to cut it down. These guidelines, for example, should not be applied to closed roads, such as Maintenance Level 1 roads because they are not open to the public. Moreover, the risk that a tree might strike a mobile target, such as a

vehicle or person on a backwoods road that is less heavily traveled than a main arterial road or highway is different. Therefore, we request that the Forest Service assess the level of use of each road to determine the need for treatments, rather than treat all roads the same.

b. Record of Tree Failures, Defects, and Losses

The R5 Guide also states that a hazard tree program includes “recording tree failures, associated defects, and losses.” We request the Sequoia’s data records on tree failures, associated, defects, and any losses. Moreover, the R5 Guides states: “Every tree that is defective and inspected must have documentation of the inspection.” We request that this information be made available at the earliest possible time, and that it be complete and legible. The record requires the “Tree Location” to identify it “for action, monitoring, tracking.” This can only be complied with if it is accurate, and the best way to do that is with a GPS device.

c. Removing the Target, Topping, Pruning, or Monitoring

The R5 Guide contemplates that the hazard tree program will consider other actions besides just removing the entire tree. In fact, the Guide requires consideration of target removal, which includes “Redirecting the use pattern with barriers and access relocation may also be done,” which “may require permanent closure and relocation of the facilities.” This should include consideration of individual road closures to avert the hazard and eliminate use by targets, such as vehicles or persons. In the past, it did not appear that the Forest Service seriously considered these other options. We request that the Forest Service consider other methods of averting hazards. And we request that the Forest Service also consider monitoring some trees with low hazard ratings, rather than removing, topping, or pruning them.

d. Hazard Rating Low (3 or below)

In some cases, a tree’s overall hazard rating may be low (3 or below). These trees should not be marked for removal when the R5 Guide only calls for “Monitor Tag Tree.”

5. Reasons Why a CE is Not Appropriate for this Project

There may be a potential to adversely affect proposed and sensitive (R5) species, which are extraordinary circumstances.

If the project area includes habitat and the presence of candidates for Federal listing (Pacific fisher) or Forest Service sensitive species (northern goshawk, California spotted owl, American marten, and Pacific fisher), the project may not be appropriate for CE. The project area is in the Southern Sierra Nevada Fisher Conservation Area. Because both the project’s implementation (noise, potential collisions with fishers) and the removal of potential habitat (trees, snags, and tree boles or resting structures) could have a significant adverse effect on these species, the Forest Service cannot analyze this project without the detailed environmental analysis require by an EIS or at least and EA.

6. An Environmental Assessment or Environmental Impact Statement should be prepared to consider several additional alternatives

We request that the Forest Service fully analyze the following alternatives in an EA or EIS:

- a. Cut and Leave Alternative – Fell and leave tree boles as large down woody material, and remove only the tops, limbs, and slash to avert fuel loading and fire risk. This alternative is feasible and was analyzed fully in the Piute Roadside Hazard EA (See Exhibit C), and therefore it should be feasible here.
- b. Alternative that closes the road to the public to avert hazards and to provide snags for wildlife – Not all roads receive the same amount of use or are at the same maintenance level. To avert the hazard from this lesser-used road, we suggest that the Forest Service fully analyze an alternative that permanently closes Forest Road 22S21 (or 22S05A – as appears on the sign at the start of the road, whichever applies).
- c. Alternative that considers a combination of the above and the proposed action – We would also suggest that the Forest Service study some sort of alternative that combines aspects of each of the alternatives we have proposed and some aspects of the proposed action.

7. Any Project Decision Should be Subject to an Administrative Appeal

The Appeals Reform Act gives interested persons who have commented on a proposed action a right to appeal any decision that implements a forest plan, whether or not that decision was categorically-excluded from an environmental analysis under NEPA. This project is no exception, and the Forest Service should allow an administrative appeal under 36 C.F.R. § 215 *et seq.*

8. Downed Woody Material & Snags

We request that the Forest Service provide data on the number and size of large snags (>15 inches dbh) and the number, size, and amount of downed logs in the vicinity of the project area. Without this data, the Forest Service will not be able to determine whether it is meeting the standards in the 2004 SNFPA for snags and downed logs.

The 2004 SNFPA Record of Decision provides details on these standards:

Determine down woody material retention levels on an individual project basis, based on desired conditions. Emphasize retention of wood in the largest size classes and in decay classes 1, 2, and 3. Consider the effects of follow-up prescribed fire in achieving desired down woody material retention levels.

Determine snag retention levels on an individual project basis for vegetation treatments. Design projects to implement and sustain a generally continuous supply of snags and live

decadent trees suitable for cavity nesting wildlife across a landscape. Retain some mid- and large diameter live trees that are currently in decline, have substantial wood defect, or that have desirable characteristics (teakettle branches, large diameter broken top, large cavities in the bole) to serve as future replacement snags and to provide nesting structure. When determining snag retention levels and locations, consider land allocation, desired condition, landscape position, potential prescribed burning and fire suppression line locations, and site conditions (such as riparian areas and ridge tops), avoiding uniformity across large areas.

. . .

Use snags larger than 15 inches dbh to meet this guideline. Snags should be clumped and distributed irregularly across the treatment units. . . . When some snags are expected to be lost due to hazard removal or the effects of prescribed fire, consider these potential losses during project planning to achieve desired snag retention levels.

Appx. A of SNFPA ROD at 51-52.

Please provide an analysis and statement about how the Forest Service plans to meet these standards for the project area.

An indication of how much downed wood is located in the area is available from the Forest Inventory Analysis (FIA) database. That data describes large downed logs of 10 inches in diameter and larger. It should give some indication of whether more downed woody material is needed in the units near where roadside felling and salvage is proposed.

But any determinations of snag and down woody material retention must be based on a site-specific inventory of the project area; otherwise a statement that the Forest Service is meeting the Salvage standards, along with the marking and removal of storm-damaged timber, would be arbitrary and capricious. Please provide us with this site-specific inventory information.

9. Climate Change and Carbon Sequestration Analysis

The analysis must disclose the project's effects on and contribution to climate change by disclosing and analyzing the carbon emitted from salvage/logged tree trunks, the remaining dead root systems, the loss of interaction between the roots systems, the soil, and the microbial ecosystem in the soil, slash treatments, and biomass or prescribed burning as well as the energy used to transport biomass materials from the forest. An environmental analysis must also discuss what efforts will be taken to mitigate these emissions.

The scoping notice states that “[t]he purposes of the Sirretta Road Blowdown Salvage project are to protect forest stands from high severity, stand-replacing burns in the future and support the reintroduction of fire” In other words, one of the purposes of the project is fuels reduction.

Mitchell et al. (2009) (see Exhibit D) describes tradeoffs for managing for carbon storage (a valid goal in any forest management action) versus fuels reduction. That study suggests that, with the exception of some xeric ecosystems (not present in the current project area), “fuel reduction treatments should be forgone if forest ecosystems are to provide maximal amelioration

of atmospheric CO₂ over the next 100 years.” *Id.* at 653. For that reason, the alternatives analysis should discuss and analyze carbon emissions from implementation, but the no-action alternative should also provide information about the potential for carbon (C) storage from foregoing project implementation.¹

Moreover, Mitchell et al. (2009) found the amount of net carbon released into the atmosphere, on an acreage basis with small diameter thinning for fuel reduction (if used for biomass) puts more carbon into the atmosphere than an average fire, on an acreage basis. “Our simulations indicate that fuel reduction treatments in these ecosystems consistently reduced fire severity. However, reducing the fraction by which C is lost in a wildfire requires the removal of a much greater amount of C, since most of the C stored in forest biomass (stem wood, branches, coarse woody debris) remains unconsumed even by high-severity wildfires. For this reason, all of the simulated fuel reduction treatments resulted in a reduced mean stand C storage. One suggested method of compensating for such losses in C storage is to utilize C harvested in fuel reduction treatments as biofuels. Our analysis indicates that this will not be an effective strategy in the west Cascades and Coast Range over the next 100 years.” (Mitchell et al., 2009 abstract).

In any case, the analysis must disclose the emissions from fuel reduction treatments, associated slash treatments, and biomass burning or prescribed burning for each action alternative. For this, the Chief’s 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) (attached as Exhibit E). That document specifically mentions fuel reduction projects in the types of projects that 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.

¹ Depro et al., 2007, found that eliminating logging would result in massive increases in Carbon sequestration. “Our analysis found that a “no timber harvest” scenario eliminating harvests on public lands would result in an annual increase of 17–29 million metric tonnes of carbon (MMTC) per year between 2010 and 2050—as much as a 43% increase over current sequestration levels on public timberlands and would offset up to 1.5% of total U.S. GHG emissions.” (Depro et al., 2007 abstract)

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

1. Modify alternatives including the proposed action.
2. Develop and evaluate alternatives not previously given serious consideration by the Agency.
3. Supplement, improve, or modify the analysis.
4. Make factual corrections.
5. 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 project includes fuel reduction treatments and burning that will contribute GHG emission, 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 emission from prescribed burning on-site and the emissions from any biomass that is removed from the project area and later burned off-site, but also the contribution of emissions from transporting this material for off-site burning, the loss of carbon sequestration capacity when living trees are removed and the remaining dead tree roots are no longer capable of feeding carbon to the soil and the microbial ecosystem in the soil (See Exhibit F – Scientist Article: “The Root of the Problem”, also available at <http://the-scientist.com:80/2011/08/01/the-root-of-the-problem/>), and the contribution of emissions from planning and implementing the project by a contractor and by the Forest Service.

This holistic approach to account for GHG emission is necessary to provide managers and the public with the kind of information under NEPA to make informed choices between alternatives and to mitigate for climate change, and to consider and assess the larger picture of GHG contributions from all projects on the national forests that may contribute GHG emissions.

10. The Forest Service must use the “best available science” standard

Current Forest Service regulations require that projects that implement forest plans consider the best available science in their analysis. 36 C.F.R. § 219.35(a), (d) (2000); 69 Fed. Reg. 58055 (Sept. 29, 2004). To correctly apply this standard, the Forest Service “should seek out and consider all existing scientific evidence relevant to the decision and it cannot ignore existing data. . . . The Forest Service must determine which data are the most accurate, reliable, and relevant, and that will be reviewed deferentially, but it still must be good science—that is reliable, peer reviewed, or otherwise complying with valid scientific methods.” *Ecology Center v. U.S. Forest Service*, 451 F.3d 1183, 1194, n. 4 (10th Cir. 2006).

This also means that, in the final analysis, the Forest Service must disclose and discuss the science it accepts and applies and any science that it rejected as less accurate, reliable, or relevant than the science it actually applied to the project.

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



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