

Data Submitted (UTC 11): 1/21/2022 8:00:00 AM

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Comments: Please consider the comments that we are submitting as an Attachment. Thanks to the Forest Staff for good dialogue and helpful sharing.

January 21, 2022

Comments from CSERC/TRT in response to the SERAL DEIS

INTRODUCTION AND CONTEXT FOR THESE COMMENTS

As the Stanislaus Forest staff is fully aware, Alternative 1 of the SERAL project reflects the project concept that was recommended by the YSS forest stakeholder group for treating the green forest area of the Stanislaus River watershed within the SERAL project boundary. TRT and CSERC both support Alternative 1, with the recommended adjustments described below. It was developed in collaboration with Stanislaus Forest staff, and perhaps even more important, it represents the objective of developing a large landscape forest treatment plan that intentionally aims to minimize controversy.

We recognize that no project Alternative can completely please all the different forest interests - including within YSS -- that desire projects to be consistent with their unique priorities, perspectives, and goals. However, TRT and CSERC assert that Alternative 1 best meets the Purpose and Need of the project while incorporating treatment prescriptions that aim for balance and middle ground for the wide range of issues associated with the overall SERAL project. These comments provide reasons for our organizations' support of Alternative 1 as well as the recommended adjustments or requests for points to be clarified or corrected.

Selection of a Final Project Alternative

As noted above, our organizations support Alternative 1 as our recommendation for approval. In addition to its conceptual design coming from the YSS stakeholder group, we support Alternative 1 because extensive modeling analysis shows that it does the most to reduce the risk of stand-replacing, high-severity wildfires. It does the most to reduce overly dense stand stocking and competition by trees for water during droughts or dry year conditions. Based on the modeling analysis of the four alternatives, Alternative 1 provides the greatest resilience overall for the forest ecosystem and wildlife habitat values.

Our organizations strongly promote the objective of ramping up the pace and scale of forest treatments across the SERAL project area to reduce the potential for yet more high-severity wildfires such as the Rim Fire, King Fire, Caldor Fire, Tamarack Fire, Dixie Fire, Creek Fire, and many other recent giant wildfires that have significantly diminished forest values and assets.

Mega-fires in California have significantly reduced the number and extent of old-growth trees in burned areas, wiped out iconic forest recreation destinations, degraded California spotted owl (CSO)} habitat, and have negatively affected many other forest values that cannot be speedily restored even with the most expeditious plans for reforestation or recovery.

With recent years of unacceptable mega-fire impacts in mind, our organizations support the selection of Alternative 1 as the best option that gives the Forest Service the opportunity to show that implementing a large landscape pilot project, with tens of thousands of acres of coordinated

forest treatments, can broadly restore forest resiliency across a vast project area that is currently highly vulnerable to disturbance events.

As described in more detail further below, we also believe that Alternative 1 applies the best available scientific information related to the California spotted owl, the strategic science of pyrosilviculture concepts, and the value of applying broadcast burn treatments at a scale never previously proposed within the Stanislaus National Forest.

As noted in the DEIS, Alternative 1 was designed to apply the specific measures and intended outcomes described in the 2019 Conservation Strategy for the CSO. It is the only alternative that includes limited mechanical fuel reduction treatments in PACs outside of the WUI, that allows for the retirement of non-productive PACs after five years of protocol surveys and monitoring, and that allows removal of up to 34" DBH shade-tolerant white firs or incense cedars in forest areas outside of CSO Territories as one strategy to reduce the takeover of pine forests by shade-tolerant conifers. White firs and incense cedars currently dominate the understory of a large percentage of the project area and produce thickets of small shade- tolerant trees that create ladder fuels and increase the risk of crown fires.

We express our strong support for Alternative 1's wide application of prescribed fire - both as a stand-alone treatment and as a follow up to mechanical treatment. In total, Alternative 1 would result in the most acres treated with prescribed fire. It is of critical importance to widely apply prescribed fire as one of the most economical treatments available to help move the forests towards a more resilient condition that more closely resembles that Natural Range of Variation. We urge the Forest Service to move as expeditiously as possible to apply prescribed fire under whatever Alternative is ultimately approved.

For the reasons highlighted above and for additional reasons spelled out later in these comments, our organizations strongly support the selection of Alternative 1. We also recommend the following adjustments below.

Specific Comments and Recommendations Tied to the SERAL DEIS

1. HERBICIDES

It is not made clear in the DEIS whether Alternative 1 and Alternative 3 propose the use of herbicides only for known/already identified sites (where herbicide use is judged to be the most effective treatment method for dealing with up to 231 acres of invasive weeds in the project area)); or whether those two Alternatives would also allow for criteria-based conditional use of herbicides for additional invasive weed treatments when future invasive weed sites are discovered.

We note on page 83 that, under Affected Environment, the DEIS explains that for 30 species of non-native and invasive plants within the project area, ".the use of herbicides to control or eradicate their occurrences is proposed to occur within these known populations. As such the proposed use of herbicides is limited to approximately 250 acres - which includes an additional 20% over the currently mapped acreage to account for population spread prior to treatment."

That DEIS text appears to restrict SERAL project herbicide use (approved by the selection of either Alternative 1 or Alternative 3)) to only be applied to currently known population sites. But page 33 of the DEIS under Treatment Strategy reads: "For each known invasive plant infestation, and for future infestations that may be discovered, one of four treatment strategies is proposed." That section, continuing on pages 34 and 35, describes how invasive weed infestations would be prioritized for treatments and that treatment methods to control infestations would be selected

based on the order of preference of: (1)} manual and mechanical methods; (2)} cultural methods, and (3)} herbicide application (chemical methods)}.

The wording on page 33 appears to allow for condition-based use of herbicides within the SERAL project area above and beyond the use of herbicides on portions of the known 231 acres where 30 invasive weed species have currently been mapped and documented.

Unlike the non-chemical treatments that may be conditionally approved, herbicide use has a far higher potential to need site-specific environmental analysis and site-specific mitigation measures to avoid a potential significant negative impact to the environment. The DEIS cannot accurately speculate on the amount of future herbicide use that could be applied in areas outside of the 231 acres already identified. Our organizations' position recommending against condition-based herbicide approval is also based upon the recognition that chemical treatment of vegetation is a highly controversial issue for some interest groups and for some individuals who oppose any application of chemicals on lands that serve as wildlife habitat, watersheds, and recreational areas.

We recommend that the proposed use of herbicides as a condition-based treatment should be dropped from the SERAL project plan, but that approval for the other identified non-chemical invasive weed treatments should be approved as condition-based treatments. Those non-chemical methods pose minimal environmental risk, need less site-specific analysis, and will not raise broad public concern. The need for treating invasive weed sites as soon as possible after being discovered is a strong rationale for having authorization in place for non- chemical invasive weed treatments.

By limiting the use of herbicides to only the identified, known 231 acres of invasive weeds, herbicide use would only potentially affect a fraction of one percent of the national forest lands within the SERAL project area. Limiting herbicides to that small scale of use and considering the effectiveness of herbicides for controlling or eradicating the spread of invasive weeds, we support herbicide use for those 231 acres of known weed population sites.

RECOMMENDATIONS IF HERBICIDES ARE APPROVED

We restate the position described above that acknowledges that the use of herbicides within the project area can result in ecological benefits by effectively controlling or eradicating difficult-to-treat invasive weed populations - but that alternatively, the use of herbicides also raises public concern over potential risks of contamination, the killing of non-target plant species, and ill effects for wildlife that may be exposed to freshly sprayed vegetation.

Accordingly, our two organizations strongly urge that IF herbicides are eventually approved by the Deciding Officer with the selection of either Alternative 1 or Alternative 3, we ask that the following recommendations be incorporated into the final selected Alternative:

Out of the herbicides listed for potential treatments within the SERAL project area, we urge that the final selected Alternative restrict the list of herbicides allowed for use to only those with the lowest risk for human health and wildlife effects.

While assessments in the DEIS show that all the proposed herbicides exceed at least one calculated threshold of risk, many of those evaluations honestly are not likely to apply to the project. Spills of 20 to 200 gallons of chemicals into a pond are unrealistic given the low amounts of herbicides in spray tanks. The risk of members of the public consuming freshly sprayed vegetation repeatedly, resulting in chronic exposure, is another highly unrealistic scenario. But what

matters to our organizations is the realistic exposure of workers who will be applying herbicides daily over weeks of hand applications.

Clethodim and Indaziflam are the two herbicides that show a Hazard Quotient greater than 1 for workers with general occupational exposure - which: ". modestly exceeds the level of concern." (pg. 87)}. While management requirements for wearing proper personal protective equipment and the desired availability of soap and clean water may be assumed to be helpful mitigations, the risk remains that herbicide spray workers with chronic exposure will face higher health risks from those two herbicides if the DEIS analysis is accepted as valid.

Our organizations recommend that the final SERAL project decision restrict the use of herbicides for invasive weed treatments to the other five herbicides (glyphosate, triclopyr, aminopyralid, clopyralid, and chlorsulfuron). We recommend that clethodim and indaziflam be removed from the list of herbicides allowed for invasive weed removal within the project area.

Our second recommendation is also important to our organizations. Out of the surfactants and colorants listed for potential use with herbicides within the SERAL project area, we urge that the final selected Alternative drop Colorfast TM Purple.

Colorfast TM Purple is acknowledged on page 88 of the DEIS to be "severely irritating to the eyes and can cause permanent damage." The text notes that while acetic acid is the ingredient in household vinegar, the Colorfast TM Purple formulation contains up to 5 times stronger acetic acid by weight.

Our organizations are opposed to the Forest Service approving the application onto vegetation of any chemical that poses even a low risk of causing permanent damage to the eyes of any wildlife and workers. An alternative colorant is available that does not pose that high level of eye damage risk. For both the safety of wildlife and workers, and in order to minimize unnecessary public opposition to the SERAL project, we urge the Forest Service to drop the use of Colorfast TM Purple and only allow Hi-Light Blue.

ADDITIONAL COMMENTS RELATED TO HERBICIDES

If the Forest staff strongly believes that herbicide use will be essential for future invasive weed treatments in areas above and beyond the already identified 231 acres of known populations, our organizations recommend that the Forest Service develop a separate CE for future chemical treatments of noxious weed populations in the SERAL Project area. That CE would be independent of the SERAL project decision so that there could be a separate public comment opportunity for herbicide use for treating not yet known populations of invasive weeds on sites where the FS thinks herbicides are the answer.

Overlapping with the recommendations above, our organizations emphasize our support for the current order of preference in the DEIS for proposed noxious weed treatments:

1. First, try manual and mechanical methods such as hand pulling and cutting
2. Then consider Cultural methods, including tarping and flaming
3. Only choose herbicide application (chemical methods)} as a final resort

2. TEMPORARY ROADS

In initial discussions with Forest staff to clarify the intent of YSS for the SERAL project design, YSS accepted the Forest Service's desire to allow temporary roads based on certain criteria. As now described for Alternative 1, there would be up to 26 miles of temporary roads allowed. After recent informal discussions with various Forest staff about the challenges of the project providing realistic access to all areas that are modeled as in need of treatment, it appears

questionable whether building new temporary roads to get to many isolated areas in between the current existing road system may be ecologically or economically justified to the extent now shown in Alternative 1.

Although the DEIS defines the project as constructing 26 miles of new roads, in reality not all 26 miles of proposed temporary roads would likely be newly constructed. Many are described as either only requiring maintenance or reconstruction of past roads. The DEIS estimates that "approximately 6 miles would require totally new construction where no route or trail previously existed, that approximately half (13 miles)} of the temporary roads would be located over previously used logging roads or old skid trails, less than a mile would occur over existing foot trails, and the remainder would be located along the same route as existing motorized OHV routes." (pg. 32}}.

One concern of our organizations is that in some past Stanislaus Forest projects, the Forest has at times approved temporary roads and then has failed to follow through to close or decommission those roads post-project. In this situation, the SERAL DEIS states that all temporary roads will be decommissioned after the designated use period is over. Accepting that as a valid promise that the Forest will intend to fully implement, our organizations recommend that for clarity, and as a further legal commitment, that the SERAL FEIS contain a firm 10-year maximum time limit from the time of construction for when temporary roads shall be decommissioned/closed.

In a separate matter tied to temporary roads, the DEIS explicitly states that there will be no construction of temporary roads within $\frac{1}{4}$ mile of an eligible Wild and Scenic River. Our organizations fully support that constraint as a clear requirement, as a protective measure, and as a positive strategy that may reduce potential opposition to the SERAL Project.

It is not as apparent in the DEIS whether temporary road construction would occur in PACs. While temporary road construction allows more access for implementing treatments and making the project more economically viable, our organizations do not support any construction of temporary roads in PACs and request that restrictions be clearly outlined in the FEIS.

3. HAZARD TREE REMOVAL AND SALVAGE LOGGING

It is difficult to glean from a review of the DEIS exactly where salvage logging is intended to be allowed based upon the 37,243 acres number that is provided in the description for Alternative 1. That acreage number appears to be the maximum acreage that would be approved for salvage logging of trees killed by insects/disease/drought. What is not clear is if those acres include areas where thinning logging treatments are already authorized by Alternative 1, which thereby double counts already planned logging. The exact constraints for where those 37,243 acres of salvage treatments will or will not be authorized in Alternative 1 needs to be clearly explained in the Final EIS.

The DEIS explains that Alternative 1 would conditionally allow salvage logging for insect, diseased, or drought-killed trees based on criteria defined by "NRV deviation."

The DEIS has this text for where insect/disease/drought salvage logging could be allowed: ".insect and disease outbreaks that mimic NRV would have produced patches of beetle- or disease-killed trees between 0.25 and 10-acres over up to 15 percent of the landscape (Fettig 2012 in USDA 2019}}." Based on that assessment, the DEIS applies the trigger that salvage logging would be allowable if the Forest staff finds a patch of tree mortality caused by drought or beetle infestation that is either larger than 10 acres or if tree mortality affects more than 15% of the landscape.

Similarly, the following is how the DEIS defines the NRV strategy for where salvage logging can be done following a wildfire:

"Generally, NRV can inform the salvage needs in response to both fire- and insect-related mortality. Historically, fire effects that mimic NRV would have produced a mosaic of patches burned at low (30 to 60 percent)} and moderate (15 to 35 percent)} severities interspersed with large, unburned patches (10 to 30 percent)} and small, high-severity patches (1 to 10 percent)} (USDA 2019)}. High severity burns are most likely to result in tree mortality. Where that occurs in excess of 10 percent of the landscape, there would be an NRV-based restoration need to salvage." (Emphasis Added)}

The FEIS should provide more clarification as to what will happen when a high-severity burn does exceed 10% (of 15%) of the landscape. Will salvage logging only be allowed for the forest area above and beyond the 10% of the landscape that has suffered tree mortality, or does reaching that threshold suddenly mean that all of the burn area can be salvage logged?

Even more important, the FS needs to define what is meant in the EIS by "10% of the landscape". What definition of the "landscape" is the FS specifically discussing? Is it the entire national forest acreage within the SERAL project? Is the landscape the sub-watershed? Defining what is meant by "landscape" becomes pivotal to the understanding of what the Forest staff intends for allowing condition-based salvage of fire-killed or trees killed by drought/disease/insects.

As noted above, the Forest Service also needs to provide more clarification as to what will happen when insect/drought tree mortality "exceeds 15% of the landscape." Does SERAL intend that once scattered dead trees are assumed to cover more than 15% of the landscape, the FS can then cut any and all dead trees within the landscape? Or does the EIS intend that the FS can only log the "excess" amount of dead trees that is above the 15% of the landscape that the FS is using as the trigger?

As part of our comments for this issue, we note that a high severity fire area is defined as >75% tree mortality. That's a clear measurable threshold. The EIS should consider making that threshold the same requirement as the threshold for conditionally defining tree mortality as a trigger to do salvage logging of insect, disease, and drought-killed trees in the SERAL area. Otherwise, a Forest staff in the future may perceive that whenever there are scattered dead trees within a broad portion of the overall landscape, the EIS then conditionally allows all dead trees to be targeted for salvage logging.

A key CSERC/TRT comment for this issue is that when it comes to condition-based salvage logging, we urge that only fully dead trees, not green "damaged" trees, should be allowed to be salvaged. This is a very important point of concern. Our organizations oppose any approval of "condition-based" salvage logging that would allow the salvage logging of green trees that are simply judged to be at risk of dying.

And finally, for the issue of hazard tree removal, the FS needs to more clearly define where and under what criteria hazard tree removal will be allowed to be conditionally approved along the 274 miles of roads now proposed in Alternative 1. What will be the width of roadside areas where the cutting of hazard trees will be allowed (for instance, 200' on either side of the road)}? Again, will criteria allow salvage logging to remove dead trees and green trees only if they have obvious defects that pose safety risks to roads and the public? Or is the intent to allow the judgment of Forest staff to conditionally approve removal of all supposed "hazard" trees by marking green trees that do not lean toward the road nor show obvious defects, yet are either damaged by wildfire or

stressed by drought or beetles? Without clarity in the EIS as to exactly what condition-based salvage prescriptions are proposed for approval, the public cannot understand whether to support or oppose that aspect of the overall SERAL project.

A minor comment for this topic is that in Summary Table S-1, it appears that salvage treatments (37,243 acres) and the Hazard tree removal along 274 miles of road look to be a double count. The final EIS needs to better define and clarify to what extent the two treatments overlap.

4. POTENTIAL PROJECT EFFECTS ON WILD AND SCENIC RIVERS

Mechanical treatments within any eligible Wild and Scenic corridors are controversial. As now proposed in Alternative 1, a total of only 175 acres (144 acres of helicopter thinning logging, 3 acres of skyline logging, 6 acres of tractor logging, and 22 acres of understory fuel reduction treatments) are proposed within $\frac{1}{4}$ mile of Wild & Scenic River corridors. This makes up only 0.2% of the total 71,121 acres of Alternative 1's planned vegetation treatments within the project area.

The currently proposed tiny percentage of overall mechanical treatments that would be done within $\frac{1}{4}$ mile of the eligible Wild and Scenic River corridors will not meaningfully change the forest health treatment benefits of the project one way or the other.

Our organizations recommend that the final selected alternative drop entirely the small amount of mechanical treatment that is currently proposed to be done within $\frac{1}{4}$ mile of eligible Wild and Scenic River corridor areas in order to eliminate a point of potential public concern and to further show the intention to minimize controversy with this large landscape project.

The DEIS makes it very clear that no project activity would have any negative effect on either the Scenic outstandingly remarkable value (ORV) or the Recreation ORV that apply to the two eligible Wild and Scenic River segments. But due to the tiny percentage of the overall project that is affected by this issue, there is no need for any debate over whether the proposed vegetation treatments have the potential to impact the essential characteristics of eligible wild river segments.

We strongly encourage the Forest to eliminate this issue by dropping those very limited areas of proposed treatments planned in close proximity to eligible Wild and Scenic segment areas.

5. EFFECTS OF THE SERAL PROJECT ON THE CALIFORNIA SPOTTED OWL

This section of our comments supports the intent by the Forest staff to adopt the region's 2019 Conservation Strategy for the California Spotted Owl. However, these comments also identify a number of flaws in the DEIS related to CSO management or issues that are not appropriately clarified by the current DEIS explanations and data.

Out of all the issues of potential controversy within the SERAL project, the topic of highest concern for some conservation organizations is likely to be how the project could negatively affect the CSO. The SERAL DEIS contains extensive information related to the CSO, Protected Activity Centers (PACs), and the differences between Territories and Home Range Core Areas (HRCAs). The DEIS basically states well-founded assertions that the project will not significantly harm CSO habitat - and that instead, it will actually benefit the CSO overall.

While any application of widespread mechanical treatments or even the widespread use of broadcast burning will likely cause some degree of short-term negative effects for the affected CSO habitat,

we agree with the DEIS conclusion that the application of proposed treatments prescribed by Alternative 1 will produce more benefits than ill effects for the CSO in the long term. However, we raise a number of issues that we believe need to be corrected in the final EIS and project design.

EFFECTS ON CSO PACS AND TERRITORIES

Different priorities can lead organizations with similar objectives to view proposed policies or project treatments with different conclusions based upon which priorities are deemed most important. One such example can be whether to aggressively manage some portion of owl habitat to reduce vulnerability to wildfire risk or to instead avoid any forest management disturbance in suitable owl habitat. A primary criticism of the proposed action (Alternative 1) for the SERAL project is the concern that shifting from the current Framework policies for the CA Spotted Owl (CSO) to apply the policies outlined in the 2019 Conservation Strategy might result in less protection for a substantial amount of PAC habitat and could result in the potential for reduced habitat value for the owl. Based on this understandable concern, there is opposition to the project allowing mechanical treatment in up to 1/3 of PACs as well as concerns over policy changes that allow the retirement of PACs. And finally, we recognize that there are thoughtful reasons that have been communicated to us for opposition to the change from the HRCA polygon habitat protection approach to circular Territories.

Our organizations generally agree with the DEIS conclusion that mechanically treating up to 1/3 of a PAC will likely only have short-term effects on canopy cover and on some other PAC values. In the following section of our comments, we point to analysis and information within the DEIS that asserts that Alternative 1's treatment of PACs will end up measurably reducing the degree of potential risk of PACs suffering stand mortality, high severity wildfire damage, and the likely loss of large trees due to periods of drought stress, bark beetles, disease, and inter-tree competition. We believe that Alternative 1 provides measurably higher benefits than harm for the CSO, not only in PACs and in Territories, but also over the forest areas outside of Territories that potentially will carry high-severity fire into Territories.

The DEIS (pg. 55) explains that there are 51,268 acres of CSO Territories within the SERAL project area. Completely staying out of Territories or even just staying out of PACs would be a major constraint to restoring resilience across the SERAL landscape and reducing fire risk if PACs are not treated.

Table 24 of the DEIS shows the following pieces of important information:

Alt. 1 increases Highest Quality Habitat (6, 5D, 5M) in PACs (produces an outcome of 3,373 acres compared to 3,157 acres currently in Alt. 2).

Alt. 1 reduces Highest Quality Habitat in CSO Territories (2,395 acres compared to 3,422 acres in Alt. 2).

Alt. 1 decreases Best Available Habitat (4D, 4M) in PACs (10,177 vs 10,696 acres in Alt. 2 (which as explained by the DEIS is primarily small trees in dense concentrations that have extremely high risk from wildfire, drought, and insects)).

Alt. 1 decreases Best Available Habitat in Territories (11,814 vs 19,080 acres in Alt. 2). Again, as noted above, Best Available Habitat as will be explained further below is mostly small trees in densely stocked stands. It is also habitat that without some significant restoration treatment has potential for widespread tree mortality due to fires, drought, or insects.

Pg 51: "The slight increase in high-quality habitat acres in PACs in Alternative 1. occurs because our proposed forest thinning treatments in PACs target smaller trees akin to a thin- from-below silviculture prescription and intentionally retain larger old-growth trees."

"The effectiveness of Alternative 1 in maintaining and creating new high-quality habitat within CSO PACs is attributed to three factors: a 20-inch diameter limit, a 100-acre treatment limit per PAC, and the deliberate PAC treatment area selection process. PAC treatment area selection was informed by a metric developed by Stine et. al 2020 ("CSO Departure Index"}} which essentially rates CSO habitat conditions on a scale of highest to lowest quality and thus identifies locations which would benefit from treatment while ensuring critical habitat needs of the owl were considered and preserved."

Our organizations note that the focus for treatment in Alternative 1 is to treat areas with "departed-conditions" that are "primarily made up of only small trees, with no or very few larger trees larger than 30" DBH and/or an excess proportion of dense tree clumps with too few openings." We support that focus.

Pg. 53 - "The intended use of this metric was to allow managers to target limited treatments in PACs to areas of a lower quality habitat."

ADDITIONAL POINT TIED TO PACS AND POTENTIAL EFFECTS

In our review of the framework amendments, there appears to be an exception that allows for the 100 acres of treatment within a PAC to not maintain the highest quality habitat when constructing a fuel break where avoiding overlap with a PAC is not feasible. We recommend that no more than 100 acres are ever treated in any PAC and that any exception to protecting the highest quality habitat is only allowed in inner core WUI fuel break sections.

Here are the related sections from the DEIS:

[bull] SPEC-CSO-GDL-03: "To limit fragmentation and maintain connectivity of nesting, roosting, and foraging habitat, construction of fuel breaks should avoid intersecting with California spotted owl protected activity centers. Where avoiding overlap with a protected activity center is not feasible, the PAC should be remapped to maintain acreage equivalent to the quantity of the treated PAC acres using adjacent acres of comparable quality wherever possible"

Exceptions: "In WUI Defense zones this standard may be modified as necessary to meet safety objectives. This standard may be modified as specified in SPEC-CSO-GDL 03 when constructing a fuel break where avoiding overlap with a protected activity center is not feasible." (pg. 133}}.

EFFECTS ON TERRITORIES

Our organizations have heard strong concerns that Alternative 1 would result in potentially inadequate protections for CSO Territories. While we agree that there are adjustments needed to how Territories are delineated and the need to correct some flaws in the current DEIS, we believe that Alternative 1 is actually better for the CSO and CSO Territories than the "no action" alternative or Alternative 3, or Alternative 4.

The focus for vegetation treatment in Alternative 1 is to treat areas with "departed-conditions" that are "primarily made up of only small trees, with no or very few larger trees larger than 30"

DBH and/or an excess proportion of dense tree clumps with too few openings." We support that focus.

On page 53 of the DEIS, the authors acknowledge. "Treatment area selection within territories (Alt. 1}}. was not informed by the CSO departure index described above. Treatment area selection within these areas was predominantly selected to best meet the overall objectives of the project: (1}} to correct the landscape's departure from NRV in order to support a more resilient landscape, and (2}} reduce the landscape's susceptibility to resource and asset losses due to large scale and high severity wildfire."

"Alternatives 1 and 4 both would reduce the acres of high-quality habitat in territories (Alternative 1}} and HRCA (Alternative 4}} respectively. However, the reduced presence of high-quality habitat is expected to be short-lived. The applied treatments in both of these Alternatives will reduce resource competition and promote tree vigor and growth. An increase in high-quality habitat will occur as trees grow and thrive." An important new paper was just released on 1/19/22 - (Operational resilience in western US frequent fire forests, North et al. - Forest Ecology and Management}}. This scientific paper provides the most recent, best available science advocating for forest management that increases spacing between mature trees in order to reduce competition for water and nutrients during drought stress conditions as well as to minimize wildfire spread.

We note that Alternative 1 prescriptions in Territories admittedly do not adhere to a strict "thin from below" prescription and do not apply a canopy cover restriction, so a shift in post- treatment cover values is expected and explains the reduction in acres of high-quality habitat.

"A similar summary explains why the acres of best-available habitat are reduced among each action alternative in comparison to the existing condition (Alt. 2}}. Best-available habitat represents areas containing lower quality habitat (e.g. WHR 4D, 4M}} which contain smaller and often overly dense stands with few openings. Forested areas composed of smaller trees in high densities are the most vulnerable to high severity fire and inter-tree competition and are the areas the proposed treatments were intentionally targeted."

Pg. 54 - "Allowing a reduction in the quantity of high-quality habitat across the landscape outside of PACS is critical to reducing the landscapes susceptibility to large scale disturbances and loss of habitat. It is a tradeoff made acceptable by the preservation and promotion of high- quality habitat within PACs."

The DEIS excerpts listed above make it clear that a priority focus of the SERAL project is to treat small- diameter trees in the lowest quality habitat within PACs and to treat overly dense, small tree concentrations in Territories. Those treatments will inarguably reduce wildfire risk and reduce dense tree competition that increases the potential for widespread mortality during drought or insect irruptions.

The design of the SERAL project is aimed first and foremost at reducing the potential for high-severity destructive wildfires that pose the potential for destroying critical wildlife habitat, destroying forest communities, causing the loss of lives, destroying prime recreational destinations, degrading highly valuable watersheds, and destroying forest resources that produce wood products, tourist dollars for the local economy, and jobs for regional residents.

Yet the SERAL project design goes to great lengths to minimize harm to the CSO (and associated old forest dependent species such as the Northern Goshawk, Northern flying squirrel, Pileated

Woodpecker, and other sensitive wildlife species. The SERAL project design also attempts to balance the desire for protection patches and blocks of closed canopy habitat while simultaneously attempting to follow pyrosilviculture principles - creating anchor treatments and creating economically viable thinning logging and biomass treatments that can prepare the overall forest landscape for broadcast burns and managed wildfire.

Our organizations point to the extensive amount of modeling data in the DEIS that shows the predicted effectiveness of applying Alternative 1 to reduce the potential loss of PACs and Territories as well as to protect the many other diverse objectives that both the YSS stakeholder group and the Stanislaus Forest staff embrace as desired multiple use benefits.

Additional Excerpts from the DEIS Further Support Alternative 1 as the Best Choice:

Pg. 55 - "Currently there are 53 CSO PACs totaling 15,702 acres and 57 CSO territories totaling 51,268 acres that overlap with the project area."

"In the SERAL project area, most CSO PACs are lacking high- quality nesting and roosting habitat and greater than half of the PACs consist of dense, disturbance-prone stands."

Pg. 56 and 57 - Modeling of the area shows that thinning and tree removal will contribute to reducing the modeled estimates of annual burn probability within CSO PACs "which is critical to the project's effectiveness at reducing the threat of habitat loss due to wildfire within the CSO PACs.

"We expect the proposed forest thinning, removal of trees, and prescribed burn actions will contribute to reducing the modeled predictions of vegetation burn severity, and that the proposed forest thinning in PACs is critical to the project's effectiveness at lowering subsequent wildfire severity effects."

Pg. 58 - Stand Density Index (SDI) - Existing SDI values in the SERAL project area indicate that the majority of the conifer forest stands (61% or more than 48,000 acres)} are currently at high-risk to density-related mortality. Proposed actions would result in reduced tree densities and competition throughout treated stands."

"Alternative 1 - which treats the largest proportion of CSO PACs among the alternatives - is clearly the most effective at reducing both the total acreage (Figure 6)} and the proportion of conifer forest in the "High Risk" category (from 61% to 26%)). (Figure 5)}"

Pg. 59 - "Despite this, Alternative 1 would still maintain nearly a quarter of conifer forest acreage (>20,000 acres)} at densities classified as "High Risk" immediately post-treatment. This is partly due to access issues (lack of roads, steep slopes)}, but also to leaving the vast majority of PACs at very high stand densities, including the acres of PACs that would be treated, as proposed treatments within PACS are intentionally designed to have a very light touch."

This point noted above from the DEIS is a pivotal reason why it is beneficial for the CSO to apply Alternative 1 treatments.

Pg. 59 -- "Not treating any acreage within PACs - as in the cases of Alternatives 2 and 4 - would leave thousands of additional acres at extremely high densities, which would not be consistent with the SERAL purpose and the need of increasing landscape resilience to natural disturbance."

Pg. 60 - "The Northern California Fire Severity model (Drury et. al 2021)} predicts nearly 90% of

CSO PACs in the SERAL project area would experience more than 75% vegetation mortality over more than 50% of the PAC."

"This risk of high severity fire effects and forest mortality is mirrored at the landscape scale as well. The NCFS predicts nearly 55% of the project area would experience high vegetation mortality under the existing condition (Alt. 2)} at moderate dry, hot summer weather conditions (i.e. 90th percentile weather)}, but that reduces to 28% (Alt. 1)}, 31% (Alt. 3)}, and 32% (Alt. 4)} respectively."

"The most positive outcome for both the project area and PACs for reducing overstory tree death and increasing resilience for forest ecosystems including wildlife habitat is having the highest acreage prediction in the low severity category and lowest proportion in the high severity category as listed for Alternative 1."

And when it comes to the priority focus of protecting the SERAL project landscape area from the threat of high severity wildfire, page 66 of the DEIS states: "Alternative 1 would reduce the proportion of conifer forest acres in the high-risk SDI category from 61% to 26% and would increase the proportion of low-risk acreage from 7% to 20%."

One additional point is raised in the DEIS. "Between 2014 and 2017, 55% of the California spotted owl (CSO)} Protected Activity Centers (PACs)} on the southern Sierra national forests (Sierra, Sequoia, and Stanislaus)} experienced tree mortality of more than 20 trees per acre with greater loss in larger-diameter trees (USDA 2019, Koontz 2021)}."

To reduce the risk of large tree mortality in owl territories as a result of wildfires, drought, or insects, our organizations take the position that based on this clearly negative trend of losing so many larger-diameter trees, that it is both logical and essential to apply aggressive thinning logging treatments and well-anchored broadcast burn treatments to reduce tree competition for water and to reduce the risk of large tree mortality from wildfires.

THE ISSUE OF A CIRCULAR CSO TERRITORY VS HOME RANGE CORE AREAS

Our organizations are aware that there are inarguably various trade-offs from either staying with the HCRA strategy or adopting the circular CSO Territory strategy recommended by the 2019 Owl Strategy. To the extent that the Forest can ensure that adoption of a circular Territory strategy will not result in less overall Highest Quality habitat protection for the CSO or lose any significant areas of Highest Quality CSO habitat from a Territory, then our organizations can support adopting circular Territories to be consistent with the latest available Region 5 science information. We do raise a number of concerns in this section of our comments that we believe need to be addressed.

However, first we point to information in the DEIS that supports the adoption of circular Territories:

TABLE 32 shows that when comparing total acres protected either by Territories or HRCAs, there are 14,410 more acres protected in Territories than in HRCAs.

TABLE 32 also shows that for acres of High-Quality Habitat, the Territories in Alt. 1 would have 186 fewer acres protected than the HCRA strategy, but the outcome of Alt. 1 would have 4,911 more acres of Best Available Habitat protected than applying the current HCRA approach.

The DEIS also asserts: "Circular territories also better recognize how owls are central place foragers (i.e., tend to focus activities in a circular pattern)}. In contrast, HRCA delineation in practice often results in more "amoeba" like or long linear features that may not actually be defended by owls (an owl territory is the area defended by a resident pair)}. Instead of the best available habitat it is just whatever is in the circle. But having the mosaic of areas will reduce the risk of fire and have a variety of foraging habitats available to the owls."

The position of our organizations is that a circular-shaped Territory may provide more value to CSOs as central-place foragers, and that Territories can facilitate the management of Landscape Management Units to create High-Quality (5D, 5M, 6 WHR Classification)} ecosystems. We also point to the 2019 CSO Strategy as the Region's best available science for ecosystem management and strategic management for the CSO.

However, as now depicted and described in the DEIS, the circular-shaped Territory strategy appears to have some flaws that need correction in the final project design and FEIS. Any flaws will undoubtedly lead to some comments of high concern from organizations that oppose the application of the circular Territory approach.

One apparent problem of Circular Territories (as planned by the SERAL project) is that numerous 1,000-acre territories include measurable amounts of private or industrial timberlands within the supposed "protected" 1,000-acre Territory.

This obviously would not result in 1,000-acres of actual protection for the CSO, since the Forest Service has no authority over what management is applied on private lands. Worse, the Forest staff is fully aware that SPI applies clearcut-type "Alternative Prescription" logging methods and other even-age forest management treatments on their private forest lands.

Whether or not private timberlands may have a "take" permit authorized by the USFWS for clearing suitable CSO habitat on certain private lands, the Forest Service still cannot assure that 1,000 acres of habitat within a Territory will be protected when that area of 1,000 acres includes private timberland or includes other private lands where all suitable CSO habitat could potentially be severely altered or removed.

The graphic taken from the SERAL Terrestrial Wildlife BE is one example of information showing how Territories overlap with private lands. As noted above, the Forest Service cannot in any way influence or assure a desired outcome of how private lands are managed. Thus, to provide for the minimum 1,000-acre Territory, private lands should not be counted towards the objective of 1,000 acres of protected habitat within a Territory.

Accordingly, we urge that - for all Territories in the SERAL project area where nest stands are located on national forest lands - the Forest Service should ensure in the FEIS that 1,000 acres of the Territory (be it a circular territory or HRCA) is composed of national forest lands without counting any acres of private lands. Where a circular Territory includes measurable amounts of private lands, we ask that the circle for that Territory be widened sufficiently so that it includes no less than 1,000 acres of national forest land.

Finally, in addition to the issue of private lands being counted as protected habitat within a Territory, our organizations also point to separate issues with PAC modeling and associated data. Those technical comments are presented at the end of our overall SERAL comments.

THE ISSUE OF PAC RETIREMENT BASED ON THE 2019 CSO STRATEGY

For those who identify forest health by the degree of protection for the CSO, any potential retirement of a previously identified PAC is problematic. Yet there are numerous reasons why in the SERAL project area, application of the 2019 Conservation Strategy and consideration of retiring a very limited number of PACs is scientifically supported.

Page 78 of the DEIS explains that out of 53 owl PACs, up to 4 (and more likely, only 2 or 3) of the PACs could be retired eventually based on only single owls being detected and due to poor quality habitat. Pg. 80 - TABLE 33 shows that up to 1,167 acres of PACs could be potentially retired based on lack of occupancy, but only 53 of those acres are High-Quality Habitat.

In contrast with PAC retirement, the best estimate from Forest wildlife biologists is that 1 or 2 new additional PACs will likely be designated based on updated survey information. This reveals that even if the new policy allowing PACs to be retired is implemented, the overall number of PACs within the SERAL project area is expected to stay generally the same.

Page 13 of the 2019 CSO states that when a PAC becomes abandoned, research suggests the probability of recolonization of a vacant PAC is relatively low (0.34 one-year post vacancy) and continues to decline through time. The recolonization probability is 0.20 the fourth year and 0.06 the tenth year after abandonment (Wood et al. 2018). Accordingly, PAC retirement after a number of years of vacancy (based upon a minimum of five different years of monitoring) is not likely to pose any harm or threat to CSO within the project area.

Pg. 79 - This section of the DEIS describes why the PACs that are identified as having potential for retirement are PACs that have high annual burn probability, high conditional flame length, and high estimated vegetation burn severity. "If these PACs are at an elevated risk of wildfire effects, retiring the PAC and treating a larger portion of the area may promote longer term protections for the CSO and be more beneficial to CSO conservation than maintaining the existing PAC delineations."

Similar to points raised previously in these comments, the more that non-productive CSO habitat can be treated to be less susceptible to high severity wildfire, drought, and insects, then the potential is increased for the medium and large trees to persevere and provide suitable habitat for the owls as the treated areas recover.

CUTTING SHADE-TOLERANT TREES GREATER THAN 30" DBH

The 2019 Conservation Strategy spells out the desired goal to shift forest composition away from shade-tolerant white fir and incense cedar in order to return forests to a more natural composition and resiliency. Our organizations and the YSS forest stakeholder group strongly agree with this objective - not just to benefit the CSO, but to reduce wildfire risk and overly dense stand density caused by shade-tolerant trees.

The 2019 Conservation Strategy for the CSO explicitly allows trees to be logged "up to 40" DBH in limited situations. Alternative 1 would allow white fir and incense cedars up to 34" to be removed outside of the 51,268 acres of CSO Territories, and even then -- only if a residual tree of at least 30" DBH will still be left within one tree length of the white fir or cedar to be cut. Our organizations support this strategy.

This application of the strategies within the 2019 Conservation Strategy for the CSO is also tied to a diameter limit for logging that is lower than the current policy within CSO Territories outside of PACS. In Alternative 1, shade-intolerant pines and Douglas firs could only be cut up to

24" DBH, not 30" DBH, which is what the current CSO policies allow. This lower diameter limit further protects shade-intolerant medium-large trees that will grow over time into the large and very large trees that provide extra value for the CSO and various other wildlife species. Thus, our organizations point out that Alternative 1 proactively aims to reduce shade-tolerant white firs and incense cedars to inch their composition back toward more natural levels, and Alternative 1 also applies a lower diameter limit for cutting shade-intolerant pines and Douglas firs in CSO Territories outside of PACs to boost growth of shade-intolerant conifers.

FUEL BREAKS AND DOWN LOGS

There is some information in the DEIS concerning fuel breaks, but the full details of fuel break prescriptions are not readily apparent. Based on the information now provided, one issue is a lack of any large down logs over broad areas. As now proposed in the DEIS, the inner core strip of fuel breaks (the inner core is 300' wide and would extend over countless miles)} will have no down logs left, which would affect ~9,000 acres, and the outer core will have, at most, only 2 logs/acre. This is a wildlife concern due to the project creating such long linear strips of depleted habitat where there will be no remaining down logs for amphibians or for small mammals that rely on these types of habitat features.

We ask for a modification of the fuel break prescription so that the core strips of fuel breaks are still effective due to limited woody fuel, but that scattered down logs are intentionally authorized to be retained - at least periodically - where fire management staff judge them not to pose a significant risk.

THE EMERGENCY SITUATIONAL DETERMINATION

Last year's exceptionally destructive wildfire season showed that previous fire seasons that had been considered to be the worst ever could be quickly exceeded with even more damaging mega-fires and high severity burn impacts. The green forest area of the SERAL project is one of the remaining large landscape areas in the Stanislaus Forest at low and middle elevation that has not been significantly damaged by wildfires.

Our organizations support whatever choice is made by Forest Supervisor Jason Kuiken to utilize an Emergency Situational Determination as long as that ESD actually will result in a measurable amount of fuel break work being done sooner than if no ESD was utilized.

ECONOMICS AND SOCIAL BENEFITS

There is no way to separate the ecological, economic, and social benefits and risks related to forest management within the SERAL project area. Those who prioritize wood products and jobs for regional residents will desire sustained levels of fuel reduction treatments that create jobs through project outputs of sawlogs for mills and biomass for cogeneration or wood pellet facilities.

Those who narrowly focus on the wildfire risks faced by forest communities that stretch from Columbia to Strawberry and from Cedar Ridge to Pinecrest will certainly desire to see fuel reduction treatments (to protect communities)} that include forest thinning, biomass treatments, broadcast burning, and the strategic creation of fuel breaks. Those who narrowly focus on advocacy for wildlife, watershed values, and recreation should support the same exact SERAL fuel reduction and wood production treatments that provide economic and social benefits, since those treatments will significantly reduce the risk of destructive wildfire impacts to habitat, recreational values, scenic values, water quality, and overall ecosystem health.

ISSUE WITH SERAL DEIS: PAC SHAPE AS PER LAND-SERAL-WILDLIFE-02

This technical comment below is designed to highlight a shortcoming and modeling error within the circular Territories designated in the DEIS. We have identified a potential misapplication of the 2019 CSO Strategy within the SERAL DEIS.

Issue 1a: Data discrepancies

This comment is designed to highlight a data error in the SERAL DEIS geodatabase. There is a misalignment between PACs listed in the SERAL_PACs_DEIS shapefile and the PACs listed in the SERAL_ForSys_Input_v16 shapefile. The SERAL_PACs_DEIS shapefile shows 19,306 acres of PACs, while the SERAL_ForSys_Input_v16 only shows 15,715 acres of PACs. There is no known or justifiable reason for this nearly 20% reduction in PAC areas listed in the DEIS. We recognize that there will be a differentiation in total acreage due to rasterization of datasets, creating a coastline paradox, but many sections of PACs appear to have been errantly dropped, with no viable reason. We respectfully request that all PAC areas be represented in the SERAL FEIS.

Issue 1b: SERAL PAC shape as per LAND-SERAL-WILDLIFE-02

This comment is designed to highlight a shortcoming and modeling error within the circular Territories designated within the SERAL DEIS. We have identified a potential misapplication of the 2019 CSO Strategy within the SERAL DEIS, and wish to bring it to the attention of the USDA Forest Service. This comment is not designed to critique circular Territories instead of amoeba-shaped Home Range Core Areas (HRCAs)}. We recognize the value-add that a circular-shaped Territory provides to CSOs as central-place foragers, and that Territories can facilitate management of Landscape Management Units to create High-Quality (5D, 5M, 6 WHR Classification)} ecosystems, and accept that the 2019 CSO Strategy is the best available science for ecosystem management in the Sierra Nevada.

We have identified that, while the 2019 CSO Strategy states that, "A Territory includes the associated PAC." (USDA Forest Service 2017. Conservation Strategy for the California spotted owl (*Strix occidentalis occidentalis*)} in the Sierra Nevada. Publication R5 TP-043. Page 9)}. This was not applied in the Forsys Modeling process (Map 1)}. This contradicts the 2019 CSO Strategy, as well as the SERAL DEIS as well, including the definition of CSO Territories, which reads, "Territory boundaries may be adjusted to be non-circular, as needed, to include the entire protected activity center and the most sustainable areas of high-quality habitat and exclude areas less likely to support suitable habitat" (USDA Forest Service 2019. Social and Ecological Resilience Across the Landscape. Draft Environmental Impact Statement. Page 126)}.

The Data Dictionary for ForSys Input Data lists the following SQL Logic:

If "CSO_PAC_ID" <> -9999, CSOterr_ID = CSO_PAC_ID

If "CSO_PAC_ID" = -9999 AND "CSO_trrtor" <> -9999, CSOterr_ID = {[CSO_trrtor] + 1000
If "CSO_PAC_ID" = -9999 AND "CSO_trrtor" = -9999, CSOterr_ID = 10000

However, 219 sub-units violate this rule, having a CSO PAC ID that is not -9999, and a Territory ID of -9999. This results in 1,621 acres out of 15,715* acres (10.3%)} of PACs being excluded from Territories, preserving the circular Territories at the expense of spotted owl habitat.

We request that Territories be modified to be non-circular when PACs extend beyond the 1,000-acre Territory Footprint, in compliance with the 2019 CSO Strategy and the language in the SERAL DEIS. We request that the 1,621 acres be added on to the 48,485 acres of CSO Territory identified in the ForSys model, resulting in a cumulative 50,106 acres of CSO Territory, encompassing all sub-units of PACs.

*Note that this comment uses the PACs delineated in SERAL_ForSys_Input_v16, which does not represent the total acreage of PACs listed in the SERAL_PACs_DEIS. We request that this modeling be recomputed using ALL 19,306 PAC acres.

Map 1: CSO PACS outside of Territories

CLOSING COMMENTS

With these comments, our organizations advocate for the selection of Alternative 1 with recommended adjustments and with additional clarification and requested correction of flaws in the EIS. We judge Alternative 1 to be the best choice for achieving economic, social, and environmental objectives within the SERAL landscape area. We also advocate for the Forest Service to make every reasonable effort to minimize unnecessary controversy by being as responsive as possible to well-founded public comments, while still ensuring that the project purpose and needs are met by the adjusted, final project design and treatment prescriptions.

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