

17 March 2025

Forest Supervisor

Tahoe National Forest

Responsible Official

Dear Responsible Official,

We, Sierra Forest Action! are writing to express our profound dismay and opposition to the proposed amendments to the historic conservation achievement that is the Northwest Forest Plan. The proposed actions are likely to increase logging levels threefold across 24 million acres, bringing a huge train of disastrous climate and biodiversity impacts! This DEIS is simply a massive rubber stamp for millions of acres of mass landscape scale logging plans that threaten to devastate irreplaceable ecosystems and endanger vulnerable wildlife species under the guise of "resilience" and a whole host of other inappropriate euphemisms.

The US Forest Service has failed to consider the independent peer-reviewed science on most all aspects of this plan.

We strongly demand that the U.S. Forest Service (USFS) put a complete moratorium on its plans until the independent peer-reviewed science is considered, which we believe constitutes the majority of the scientific record. This independent peer-reviewed science is being systemically ignored.

Ramming through these ill-conceived changes without proper scrutiny of the independent peer-reviewed scientific evidence sidesteps the peer-reviewed science, muffles public input, and sets a dangerous precedent. It puts our forests at the mercy of hasty, poorly considered decisions that are not in accordance with the best available science and evidence. This action undermines public participation and environmental review, both fundamental to our democratic system.

Our public forests are currently at the mercy of a government that is quite frankly overstepping its authority and trampling on public trust!

Our primary question: how does failing to consider the independent peer-reviewed scientific evidence adhere to the Forest Service's mandate to serve people? How does systemically sidelining the best available science and the valid concerns raised by We The People serve the public interest?

The DEIS is woefully inadequate and fails to comply with the best available science on forest and fire ecology, failing to address crucial ecological concerns. We call on the Forest Service to update and reconsider their analysis to truly grapple with the complex realities of forest ecosystems and climate change. We also call on you to fully protect mature and Old-Growth (MOG) habitats from logging and to respect the unique microclimates and ecosystems that allow for the flourishing of vibrant biodiverse communities of plants and animals. We are concerned that the DEIS fails to address significant concerns and do not provide a reasonable range of alternatives. Additionally, we are concerned that the alternatives provided were not given fair and impartial consideration according to the majority of the evidence. We are concerned that the public's wishes as sovereigns of our public lands were not adequately considered or given the proper weight or respect. The proposed changes also fails to protect human communities from wildfire and by ignoring the countervailing factors shown to occur by peer-reviewed science thereby puts communities at greater risk, risking the loss of homes and lives. Given the scale and potential impacts of this proposed changes, we strongly urge the Forest Service to consider the following:

Climate Change Considerations:

The DEIS must carefully consider the climate implications of proposed “fuels reduction” logging and salvage logging activities, etc. Recent scientific studies have revealed that logging-related emissions far outweigh those from wildfires. Hudiburg et al. (2019) revealed that logging-related emissions in California, Oregon, and Washington were approximately five times greater than emissions from wildfires. Harris et al. (2016) found that a staggering 85% of carbon emissions from U.S. forests were attributed to logging, while only 12% resulted from the combined effects of wildfire, insect outbreaks, wind damage, and drought.

The climate implications of these proposed changes are alarming, and the USFS’s claim of mitigating wildfire risk is wholly unsupported and may exacerbate the very issues it claims to address. The proposed logging activities will largely occur in remote areas far from communities, instead of focusing on “vegetation management” directly in and around communities where it would be most effective in reducing wildfire risk. The emissions increase from logging will far outweigh the emissions impacts of a future wildfire, while the emissions from that future wildfire are also not avoided. This is what the majority of the peer-reviewed scientific record says.

A letter to CARB (CBD et al., 2019) highlighted that current models assume unrealistically high percentages of incineration during wildfires, leading to overestimated emission figures. Stenzel et al. (2019) demonstrated that model-based calculations often significantly overstate actual wildfire emissions.

Given these scientific insights, the DEIS should prioritize natural regeneration processes over extensive salvage logging operations. By allowing the forest to recover naturally, we can maximize carbon sequestration storage potential and promote the development of truly climate resilient, diverse ecosystems better equipped to face future climate challenges.

Use of Harvested Material:

We express deep concern and strong opposition to biomass facilities. We are concerned that the contract work for this proposed changes is slated to be funneled into dirty biomass. We are concerned that such partnerships in particular may create a conflict of interest and an incentive for exploitative extraction and overharvesting. Biomass poses significant threats to our climate, communities, and forests. Your consideration of these impacts and conflicts of interest is woefully inadequate, and the proposed changes must be rejected!

Furthermore, the proposed changes's claims of carbon neutrality for biomass energy are deeply flawed. Numerous peer-reviewed studies demonstrate that in the vast majority of cases, burning forest biomass for energy creates a "carbon debt," resulting in a net increase in atmospheric emissions. This holds true even when considering only forest residuals from thinning proposed changess. The time required for cut forests to re-sequester the carbon emitted from logging and burning woody biomass for energy can span decades to a century or more, a timeframe incompatible with our urgent need to address climate change. Biomass is worse than coal per unit of energy produced. It is not “renewable”, “green, or “sustainable”. (Roder, Mirjam et al., How certain are greenhouse gas reductions from bioenergy? Life cycle assessment and uncertainty analysis of wood pellet-to-electricity supply chains from forest residues, 79 Biomass and Bioenergy 50 (2015), <https://doi.org/10.1016/j.biombioe.2015.03.030>)

Additionally, we are concerned that the facility promoters claims of using only small diameter materials and brush as feedstock to supply the plant are incorrect. This has been a systemic falsehood perpetuated by the biomass industry. Their purported ideal has never practically come to fruition. We challenge you and your partners to provide proof of this claim. Otherwise the public is being misled!

Fire Risk and Community Safety Concerns:

Many of us are concerned about wildfire risks and what can be done to keep our communities safe. With a proposed changes of this scale impacting our public lands and using our tax dollars, it's critical that we base decisions on facts and science, not just assumptions or outdated practices.

The U.S. Forest Service is pushing "thinning" and "clearing" as solutions to reduce fire risks, but peer-reviewed scientific studies show these methods often make fires worse. The proposed actions are not supported by peer reviewed science:

"Lesmeister, D.B., et al. (co-authored by U.S. Forest Service). 2019. Mixed-severity wildfire and habitat of an old-forest obligate. Published in the journal Ecosphere

This study found that: Denser, older forests with high canopy cover had lower fire severity and "buffer the negative effects of climate change" regarding wildfires. "Thinned forests have more open conditions, which are associated with higher temperatures, lower relative humidity, higher wind speeds, and increasing fire intensity. Furthermore, live and dead fuels in young forest or thinned stands with dense saplings or shrub understory will be drier, making ignition and high heat more likely, and the rate of spread higher because of the relative lack of wind breaks provided by closed canopies with large trees."

This is just one example, there are many more studies! You can read more the scientific fact sheets that our spokesperson handed out at the public meetings with numerous scientific studies referenced. These factsheets are also incorporated by reference into our comments.

With something this important, it's critical to hear all sides of the story, even if you may disagree.

Our primary question is: How does the U.S. Forest Service reconcile the proposed actions with the peer-reviewed scientific evidence?

Why are taxpayer dollars being spent on thinning remote forests instead of proven community protection strategies like:

Hardening homes with ember-resistant vents and fire-safe materials

Creating defensible space within 100 feet of structures!

Developing robust evacuation plans to actually save lives

If the proposed actions have been debunked by peer-reviewed science, shouldn't we question whether they truly serve the best interests of our communities? Aren't we being sold ineffective solutions that give us dangerous false assurances and divert resources away from protecting our homes and families?

Does the US Forest Service really have the best interests of our communities at heart? And if so, are their methods effective according to the objective factual evidence? If not, We The People intend to hold your agency to account. Please reverse course and do what is right!

We are urging patience here so all of scientific evidence can be examined, and the best possible decision can be made by the community and for the community, not by those in power alone!

We really need to make sure this is the best route to take before we go cutting down half our forests. We are losing our forests up here right and left. If this is not the solution we are hoping for, can we stand the consequences of losing our majestic forests? We should not cut them down or degrade them unless there is absolutely no other way - and that has not been shown through the science!

Has your agency even looked at the research on the other side of the argument? Since you work for the public, this is really the community's decision and you must be held accountable to rely on all the evidence to them, so that the community can make an informed decision.

Here's more info on forest "thinning", (please just call it logging as it actually is):

Science says that so called "fuels reduction" beyond 100' from homes is NOT a solution to prevent wildfires period!: <https://linktr.ee/foresteducation>

This is not about "fire prevention". This is about money! Timber industry and dirty biomass money to be exact! The regulated are influencing the regulators!

We ask any proponent of "thinning" to go stand outside and ask yourself: what if the destruction of this beautiful scenery, of this living ecosystem, was *not* needed to prevent wildfires? What if it did not work? What if logging and "clearing" actually made fires spread faster and hotter due to countervailing factors like oxygen and heat? What if we are being sold a false solution that actually diverts resources away from protecting communities, that actually diverts resources away from saving homes and saving lives! How then does this destruction actually benefit anyone?

Again, that is actually what the majority of the peer reviewed scientific evidence says: <https://linktr.ee/foresteducation>

Now this sounds counterintuitive to many, how does this work? Well, let's try explaining it with the fire triangle as an illustration:

First let's identify our major players:

- Oxygen
- Heat
- Fuel

Consider that there are three of them, not just one! What would happen if removing one actually increases the other two?

Aridification: clearing canopy cover dries out the understory and increases temperatures (heat).

Windbreaks: vegetation acts as a buffer against severe wind. When trees and understory habitats are removed wind speeds and airflow are increased (oxygen).

Logging slash and regrowth of combustible vegetation: The actually flammable vegetation (ie: invasive grasses, scotchbroom, sun-crisped pine needles, sun-crisped other invasive plants, etc) will come back in force! And do you trust them to not leave the actually flammable materials behind? I'll tell you what we see – we see piles upon piles upon piles, piles, piles, piles and more piles of logging slash left behind everywhere whenever we have to look at one of these messes of a "fire safety" proposed changes! Those involved just get their money and they never clean up after themselves (fuel).

Spolier: attempting "fuels reduction" doesn't just increase oxygen and heat but also can increase the actually combustible fuels!

Don't we just love a good ol' game of wordplay from “big borthor”? We are not blind to what is happening here.

There is a Smokescreen going on! A serious

Smokescreen: https://store.forestwatch.org/products/smokescreen-debunking-wildfire-myths-to-save-our-forests-and-our-climate?fbclid=PAY2xjawlNUjVleHRuA2FlbQlXMAABpmv3ebayHf3puQeSGWx4PeHRHDFUTy3zbShou0zqJNqwdMBiDF0r7av2hA_aem_t_DfM3aWY8M4MdNa0ysuig

Please look into the evidence. We should all honestly evaluate this issue for ourselves.

The majority of the scientific evidence points to the fact that logging/clearing the back forty is not an effective solution for saving our forests or saving our homes and communities. Wildfires are mostly driven by weather and climate (oxygen and heat).

And to protect homes and lives we must focus on community protection from the home outward, not the back-forty inward!

Here's how:

Home Hardening:

Fire-resistant roofing, siding, and windows

Metal gutters (keep leaf free!) and 1/8-inch vent screens

Non-combustible eaves and deck materials

Do not build new homes out of **plywood!**

Defensible Space:

5-foot non-combustible zone around house is most important

Remove flammables within 30 feet

Maintain vegetation spacing and keep grass short

Beyond 100 feet from homes vegetation removal has no additional benefit according to science. Focus within this zone.

Evacuation Planning:

Identify multiple evacuation routes

Develop family plan and emergency kit

Stay informed and follow official orders promptly

Community-wide planning and infrastructure

Public education and special needs considerations

We must follow science-based measures that actually save homes and save lives!

What did "fuels reduction" do to stop the LA Fires? Answer = absolutely nothing!

But you know what would have helped? Home hardening and defensible space upgrades to stop flying embers that cause the vast majority of home ignitions and can travel up to several miles ahead of a fire! What also would have helped is if communities had not been

given false assurances of backcountry clearance proposed changes that divert their focus and resources away from taking responsibility for their **plywood** homes and putting the most thought into evacuation planning to save lives!

We The People demand that this fire pretense forest destruction cease!

The scientific evidence paints a stark picture: "fuel reduction" logging, including thinning and post-fire salvage operations, often exacerbates wildfire effects and puts communities at greater risk. This contradicts conventional wisdom and challenges current forest management practices but this is the plain truth even if inconvenient to acknowledge:

The majority of scientists are sounding the alarm about our misguided approach to wildfire management. Calkin et al. (2023), in a groundbreaking study published in the Proceedings of the National Academy of Sciences, argue that our current obsession with thinning vast swathes of forest is fundamentally misplaced. They emphasize that the "best way" to protect homes and lives is to focus on the "home ignition zone" - the area within 100 feet of structures. This aligns with earlier findings by Cohen (2000), Gibbons et al. (2012), and Syphard et al. (2014), all of which demonstrated that vegetation management beyond this 100-foot buffer provides little to no additional benefit in safeguarding homes from wildfires.

The counterintuitive nature of thinning's effects on fire behavior is striking. Hakkenberg et al. (2024) found that in 42 recent California wildfires, dense, mature forests with higher canopy cover and biomass experienced significantly lower fire severity. This echoes findings by Lesmeister et al. (2019, 2021), Meigs et al. (2020), and Thompson and Spies (2009, 2010), all of which observed that denser, older forests with higher canopy cover tended to have lower fire severity.

The answer lies in forest microclimates. As Countryman (1956) explained, opening up the forest canopy through thinning allows more sunlight and wind to reach the forest floor, creating hotter, drier conditions that are more conducive to severe fire. Chen et al. (1999) quantified this microclimate effect, finding a 5°C difference in ambient air temperature between closed-canopy mature forests and partially cut areas.

The historical record further undermines the case for thinning. Thompson et al. (2007) found that areas salvage-logged and replanted after an initial fire burned more severely than comparable unmanaged areas when a subsequent fire occurred. Graham et al. (2012) reported that in the Fourmile Canyon Fire, thinned forests "were burned more severely than neighboring areas where the fuels were not treated." Baker and Hanson (2022) and Hanson (2021) showed that when accounting for tree mortality from both thinning and subsequent fire, thinned areas experienced higher cumulative tree mortality than unthinned forests.

This crucial point has often been overlooked in previous studies, leading to a significant underestimation of thinning's true impacts. The implications for carbon emissions are equally troubling. Bartowitz et al. (2022) found that commercial thinning substantially increases carbon emissions relative to wildfire alone and "causes a higher rate of tree mortality than wildfire."

This aligns with the warnings of over 200 top climate and forest scientists (Moomaw et al., 2020, 2021) who emphasized that thinning results in a substantial net loss of forest carbon storage and can increase carbon emissions beyond those of wildfires. Multiple studies support these observations:

Fuel treatments have been shown to have only modest effects on fire behavior and can sometimes worsen fire outcomes (Zald and Dunn, 2018).

Removing mature trees is particularly likely to have negative effects on fire suppression efforts (DellaSala et al., 2022).

Thinning and salvage logging can increase fire severity by leaving behind combustible slash, opening the forest canopy to create more ground-level biomass, and increasing solar radiation that dries out the understory (Bradley et al., 2016).

The scientific evidence strongly suggests that tree removal is unnecessary prior to prescribed fire or managed wildfire, even in dense, long-unburned forests. Numerous studies demonstrate this:

Keifer (1998) showed effective prescribed fire in a forest with 498 trees per acre and 64 tons per acre of surface fuel.

Stephens and Finney (2002) successfully applied lower-intensity prescribed fire in a forest with 93 tons per acre of surface fuel and 286 trees per acre.

Knapp and Keeley (2006) demonstrated successful prescribed fire in a dense forest with 301 square feet per acre of basal area that had not burned for 123 years.

Knapp et al. (2005) effectively used prescribed fire in a dense forest with over 80 tons per acre of surface fuel, unburned for over 120 years.

Van Mantgem et al. (2011) successfully applied prescribed fire in a dense forest unburned since 1870, with 81 tons per acre of surface fuel and 170 trees per acre.

Zachmann et al. (2018) reported successful prescribed fire in dense mixed-conifer forests with 204 trees per acre and 257 square feet of basal area per acre.

Stephens et al. (2021) documented successful mostly lower-intensity managed wildfire over several decades in unmanaged Yosemite mixed-conifer forests.

These studies cover various Western U.S. conifer forest types, including ponderosa pine and mixed-conifer forests. Land managers can achieve desired outcomes by conducting or allowing burning during mild to moderate fire weather conditions. North et al. (2015) noted that "fire is usually more efficient, cost-effective, and ecologically beneficial than mechanical treatments."

The tragic cases of Greenville (Dixie Fire, 2021), Grizzly Flats (Caldor Fire, 2021), Paradise (Camp Fire, 2018) and others serve as stark examples of the ineffectiveness of extensive logging and thinning in protecting communities. Despite being surrounded by areas that had undergone significant fuel reduction treatments, including mechanical thinning and salvage logging from previous fires, these communities suffered catastrophic damage.

Dense canopy fuels can actually help suppress fire by keeping the forest cool and moist and inhibiting the growth of surface and ladder fuels (Zald and Dunn, 2018).

The effectiveness of fuel treatments is limited by their relatively short duration, often becoming ineffective within 10-20 years as vegetation regrows (Kalies and Yocom Kent, 2016). Given these findings, the proposed extensive thinning and salvage logging in the proposed changes area may paradoxically increase, rather than decrease the fire risk to nearby communities. The USFS and proposed changes partners must thoroughly address this scientific controversy and reassess their approach to truly prioritize community safety.

The science points clearly towards a focus on community preparedness and targeted interventions in the immediate vicinity of structures. As Calkin et al. (2023) argue, we need "direct funding and technical assistance to communities" for home hardening, defensible space creation, and evacuation planning. This approach not only aligns with the best available science but also recognizes the ecological necessity and benefits of wildfire in forest ecosystems.

Again, the proposed DEIS raises significant concerns about increased fire risks to local communities. Contrary to the Forest Service's assertions, extensive scientific evidence suggests that salvage logging and mechanical thinning can exacerbate wildfire behavior and threaten public safety.

A recent study by Baker and Hanson (2023) examined the regionally significant Caldor Fire on El Dorado National Forest and found that areas with recent thinning and plantation creation burned at higher severity than areas of mature, never-logged forest. This regional evidence directly contradicts the proposed changes's assumptions about fire behavior and forest management.

Further scientific studies support these observations:

Removing mature trees, as proposed in this proposed changes, is particularly likely to have negative effects on fire suppression efforts (DellaSala et al., 2022).

Thinning and salvage logging can increase fire severity by leaving behind combustible slash, opening the forest canopy to create more ground-level biomass, and increasing solar radiation that dries out the understory (Bradley et al., 2016).

The science disputes the effectiveness of fuel treatments. But even if they effective in some cases, their effectiveness is limited by their relatively short duration. They often become ineffective within 10-20 years as vegetation regrows (Kalies and Yocom Kent, 2016).

Given these findings, the proposed actions may paradoxically increase, rather than decrease, the fire risk to nearby communities. The Forest Service must thoroughly address this scientific controversy and reassess its approach to truly prioritize community safety.

In conclusion, the evidence is clear: the current approach to wildfire management through extensive forest thinning is not only ineffective but potentially harmful. It's time for a paradigm shift that prioritizes community safety through targeted interventions while allowing our forests to maintain their natural, fire-resilient structures. The stakes are too high, and the science too clear, to continue down this misguided path!

We urge the Forest Service to focus on proven, science-based methods for protecting communities, such as creating defensible space immediately around homes and structures, rather than pursuing extensive logging in backcountry areas that may ultimately increase fire hazards.

Wildlife Impacts:

The proposed changes's treatment of wildlife, particularly the California Spotted Owl and Northern Goshawk, is nothing short of criminal! The EIS pays lip service to Protected Activity Centers (PACs) and HCRAS (territories) but fails to grasp the devastating consequences of its proposed actions. The sheer amount of PACs contained within this 15,000 acre sized proposed changes area is a testament to the ecological richness of these forests, yet the EA treats them as expendable. 13 Spotted Owl PACS will be impacted by the proposed actions.

Furthermore, the cumulative impacts of this 15,000 acre subproposed changes proposed changes, combined with the total DEIS, the CPP Proposed changes on Plumas National Forest, the North Fork Forest Recovery Proposed changes and Tributaries Proposed changes in Plumas National Forest nearby, and others, could lead to critical fragmentation of essential wildlife habitats. This fragmentation can disrupt wildlife movement corridors, reduce genetic connectivity between populations, and ultimately decrease the overall resilience of the forest ecosystem for a wide range of species. Given these potential impacts, it is imperative that the Forest Service conduct more updated comprehensive impartial review (EIS) that thoroughly assesses the effects of the proposed actions on the full spectrum of wildlife species dependent on forest habitats, not only those discussed in the EIS.

Northern Spotted Owl (*Strix occidentalis caurina*)

- **Status:** Federally threatened (ESA).
- **Impacts:** Logging has affected 87% of severely burned owl territories, with 60% experiencing logging both before and after fires. Only 12% of severely burned sites had no logging or Barred Owl detections, showing the rarity of undisturbed sites (Bond et al. 2022). Barred Owls, an invasive competitor, further exacerbate declines by displacing Spotted Owls from nesting sites (Dugger et al. 2016). Despite being well-adapted to wildfires, Spotted Owls require sufficient canopy cover to persist in burned areas (Eyes et al. 2017). Their population continues to decline at a rate of 2.9% annually due to habitat loss and competition (Lesmeister et al. 2019).

Marbled Murrelet (*Brachyramphus marmoratus*)

- **Status:** Federally threatened (ESA).
- **Impacts:** Forest thinning increases predation risk by attracting corvid nest predators such as Steller's Jays and Canada Jays. These predators respond positively to forest

canopy openings created by thinning, increasing nest predation rates in adjacent old-growth stands (Malt and Lank 2007; Marzluff et al. 2004). Habitat fragmentation from logging reduces suitable nesting platforms, leading to nest abandonment and delayed breeding (Hébert and Golightly 2006). Conservation efforts under the Northwest Forest Plan aim to restore late-successional habitat, but short-term risks from thinning remain significant (Raphael et al. 2018).

Northern Goshawk (*Accipiter gentilis*)

- **Status:** State-listed species of concern (CA/OR/WA).
- **Impacts:** Goshawks require mature forests with large-diameter trees for nesting and hunting. Thinning removes up to 70% of perch trees and fragments hunting grounds, reducing prey availability. Federal agencies have failed to update habitat guidelines since 1997, leaving gaps in protection for this apex predator. Research shows that Goshawks are highly sensitive to habitat disturbance, making them an essential indicator species for forest health (Squires and Kennedy 2006).

Pacific Fisher (*Pekania pennanti*)

- **Status:** Federally threatened (ESA).
- **Impacts:** Thinning removes large cavity trees essential for denning, while forest fragmentation increases predation risk by opening up habitats to generalist predators like coyotes and bobcats. Connectivity in Klamath forests has decreased by 55%, further isolating populations (Spencer et al. 2011).

Wolverine (*Gulo gulo*)

- **Status:** Federally threatened (proposed ESA listing).
- **Impacts:** Logging roads fragment alpine habitats critical for denning snowpack persistence. Habitat connectivity in recovery areas has been reduced by 50%, delaying population recovery efforts (Aubry et al. 2007).

Sierra Nevada Red Fox (*Vulpes vulpes necator*)

- **Status:** Federally endangered (CA populations).
- **Impacts:** High-elevation habitat fragmentation from logging roads isolates genetically distinct subpopulations, reducing genetic diversity critical for survival (Quinn and Sacks 2014).

Humboldt Marten (*Martes caurina humboldtensis*)

- **Status:** Federally threatened (ESA).
- **Impacts:** Post-fire salvage logging eliminates old-growth structural complexity required for foraging and denning. Coastal populations have declined by over 75% due to habitat loss (Slauson et al. 2007).

Oregon Spotted Frog (*Rana pretiosa*)

- **Status:** Federally threatened (ESA).
- **Impacts:** Wetland destruction from logging operations increases sedimentation, smothering up to 90% of egg masses. Streamside thinning raises water temperatures beyond thermal tolerances, leading to population declines of up to 75% in some areas (Pearl et al. 2009).

Cascades Frog (*Rana cascadae*)

- **Status:** WA/OR species of concern.
- **Impacts:** Logging drains ephemeral wetlands critical for breeding, while pesticide runoff from plantations poisons tadpoles and juveniles (Pilliod et al. 2013).

Foothill Yellow-Legged Frog (*Rana boylei*)

- **Status:** Federally threatened (ESA).
- **Impacts:** Streamside logging removes boulder microhabitats necessary for breeding and shelter. Sedimentation from timber operations buries up to 90% of egg masses, severely reducing reproductive success (Lind et al. 1996).

Bull Trout (*Salvelinus confluentus*)

- **Status:** Federally threatened (ESA).
- **Impacts:** Riparian thinning increases stream temperatures beyond the thermal tolerance threshold of 16°C, while sedimentation clogs spawning redds, reducing reproductive success (Rieman et al. 1997).

Port-Orford-Cedar (*Chamaecyparis lawsoniana*)

- **Status:** Federally threatened (ESA).
- **Impacts:** Logging equipment spreads *Phytophthora lateralis* root rot into uninfected stands, killing disease-resistant genotypes critical for recovery efforts (Hansen et al. 2000).

Whitebark Pine (*Pinus albicaulis*)

- **Status:** Federally threatened (ESA).
- **Impacts:** Fire suppression logging removes blister rust-resistant trees, while thinning increases windthrow mortality by up to 70% in high-elevation stands (Keane et al. 2012).

Systemic Impacts Across Species:

1. Habitat fragmentation reduces connectivity for species dependent on old-growth forests.
2. Increased edge effects from thinning attract predators like corvids that prey on vulnerable species such as Marbled Murrelets.
3. Logging-induced sedimentation degrades aquatic habitats critical for amphibians and fish.
4. Over-thinning reduces carbon sequestration capacity by up to 60%, exacerbating climate change impacts on forest ecosystems.

Further Species Impacts:

Impacts to California Spotted Owl:

The DEIS poses significant threats to the California Spotted Owl, a species recently proposed for listing as threatened under the Endangered Species Act. The proposed changes proposes extensive commercial thinning operations across this 15,000-acre subproposed changes area and 275,000 acre total proposed changes, which could severely impact this species' habitat.

Recent research challenges long-held assumptions about post-fire habitat suitability for spotted owls: Hanson et al. (2018) found neutral or positive effects on Spotted Owls from large wildfires without post-fire logging, while post-fire logging had adverse impacts.

Lee (2018) observed that Spotted Owls continue to occupy and reproduce in territories affected by high-severity fire.

Jones et al. (2016) described the "bed and breakfast effect," where owls nest in low/moderate-severity burned areas but forage in high-severity burned areas.

The proposed changes's reliance on the outdated 2004 Framework is inadequate for protecting this species, especially considering its proposed ESA listing. The U.S. Fish and

Wildlife Service has concluded that logging negatively impacts Spotted Owls. The scale of the proposed logging operations could lead to habitat fragmentation and isolation of Spotted Owl populations.

Furthermore, Bond et al. (2009) found that California Spotted Owls preferentially selected high-severity burn areas for foraging. The proposed salvage logging would significantly degrade this important habitat, potentially leading to population declines and disrupting the complex post-fire ecosystem that these owls depend on.

Given these findings and the species' proposed threatened status, it is imperative that the Forest Service conduct more updated and more comprehensive review and survey truly remote inaccessible areas that Spotted owls may inhabit in order to fully assess these impacts

and explore alternatives that better protect California Spotted Owl habitat in accordance with the majority of the scientific evidence within the DEIS area.

The proposed mechanical thinning in the DEIS raises significant concerns about impacts on California Spotted Owls, a species recently proposed for listing as threatened under the Endangered Species Act.

California Spotted Owls preferentially select areas with high canopy cover and complex structure characteristic of mature and Old-Growth Forests for nesting and roosting (Bond et al., 2009). The proposed thinning would degrade these important habitat elements that owls rely on. Importantly, Lee (2018) observed that Spotted Owls continue to occupy and reproduce in territories with complex forest structure, even in areas affected by high-severity fire.

This adaptability to post-fire landscapes is further supported by Jones et al. (2016), who described the "bed and breakfast effect," where owls nest in areas with high canopy cover but forage in more open areas, including high-severity burn patches. Bond et al. (2009) found that California Spotted Owls preferentially selected high-severity burn areas for foraging. This suggests that even if high-severity fire breaks out in unthinned areas, it may actually create valuable habitat for Spotted Owls rather than destroying it as often assumed.

Thinning in owl habitat can have long-lasting negative impacts. Stephens et al. (2014) found that while treatments initially reduced owl habitat quality, they did not improve forest resilience to wildfire in the long term as often claimed. Tempel et al. (2014) observed that medium-intensity timber harvests, which can include thinning, were negatively associated with owl territory colonization rates and positively associated with territory extinction rates.

Given these findings and the species' proposed threatened status, it is imperative that the Forest Service reupdate their EIS to fully assess these impacts. We urge the exclusion of all PACS, and all mature and Old-Growth stands from “thinning” treatments in this proposed changes to protect all suitable and potentially suitable California Spotted Owl habitat, recognizing that even areas that may experience high-severity fire in the future can provide important habitat for this species.

Concerns about large scale habitat elimination and resulting impacts:

We would like to emphasize the critical importance of safeguarding mature and Old-Growth forests as California Spotted Owl (CSO) habitats. We recognize the intricate relationship between these ecosystems and their inhabitants, which is essential for maintaining biodiversity and ecological health. The legal protections afforded to California Spotted Owls inherently extend to their habitats, particularly old-growth forests, which serve as critical environments for these threatened birds. It is essential to understand that old-growth forests are not merely a collection of trees; they represent a complex ecosystem that supports a rich biodiversity, including the California Spotted Owl. CSOs are indicators of ecosystem health and vital components of the intricate web of life that thrives within these ancient ecosystems. The decline of old-growth habitats directly threatens the survival of CSOs and other species that depend on these unique environments.

We would like to highlight that by virtue of their designation as Spotted Owl habitat, impacts to Old-Growth Forests cannot be dismissed as non-legal issues. The framework surrounding the protection of CSOs necessitates the preservation of their habitats. Thus, our advocacy for Old-Growth protections aligns with the broader goal of safeguarding California Spotted Owl populations. This relationship is reciprocal: protecting Old-Growth Forests is essential for maintaining healthy CSO populations, and advocating for CSO protections inherently supports the preservation of old-growth ecosystems.

Concerns Regarding Fire Management Assumptions.

What if the Forest Service's assumptions about fire impacts and California Spotted Owl habitat are incorrect? “Thinning” and other forest management practices being proposed claim to mitigate wildfire risks, but substantial evidence suggests these practices do not effectively achieve their intended goals. Scientific research indicates that thinning does not necessarily lead to less severe wildfires. In fact, studies by Hanson (2021) found that mechanical thinning increased wildfire severity in the 2020 Creek fire, while Bradley et al. (2016), in the largest scientific analysis on forest management and wildfire behavior, found that more tree removal leads to more intense wildfires. We further elaborated on this previously in this comment letter.

By eliminating certain portions of Old-Growth Habitat to supposedly safeguard others, we do not solve the issue of wildfire potentially burning critical habitats. Instead, we risk reducing these ecosystems even further.

The proposal under Alternative 4 includes mechanical thinning in so-called "low and moderate productivity" PACs, resulting in a significant reduction in suitable habitat for California Spotted Owls within the proposed changes area! Less suitable habitat would remain post-treatment. If thinning does not have the intended impact on wildfire severity, this approach could leave much less habitat available for California Spotted Owls if fires occur. Given this significant reduction in old-growth habitat that Spotted Owls depend on for their survival, how can the Forest Service justify potentially accelerating this species' decline based on fire prevention strategies that may not align with current ecological understanding?

Retaining all old-growth habitat increases the likelihood that if some stands are lost to fire, larger contiguous areas will remain intact, providing refuge for CSOs and all the other species that depend on old-growth habitat. Moreover, maintaining intact Old-Growth Forests helps preserve essential microclimates that enhance ecosystem resilience. Old-Growth areas have a higher probability of surviving mixed-severity fires due to their structural complexity and moisture retention capabilities. After logging, these microclimates lose their protective qualities and become more vulnerable to fire damage. Studies by Countryman (1956) found that reducing canopy cover increases temperatures and windflow, creating a more fire-prone microclimate that leads to more intense and faster-moving wildfires. Hardage et al. (2022) discovered windspeeds were 15 to 20 times higher in thinned forests relative to unthinned forests.

Even when burned areas do occur, scientific literature shows that such environments can benefit California Spotted Owls by promoting increased prey availability and habitat diversity (Bond et al., 2009). This indicates that while fire poses risks, it can also create conditions favorable for CSOs if sufficient habitat remains intact. Lee and Bond (2015) demonstrated high occupancy of spotted owls in a large, intense fire prior to post-fire logging. Hanson et al. (2018) further indicated that mature/old forest that experienced high-intensity fire is suitable spotted owl foraging habitat.

Furthermore, considering that this reduction impacts not only PACs but also other suitable habitat areas including HRCAs/territories, we must ask: are we really expected to believe that further degrading their habitat constitutes a protective measure? Or is this merely a façade for increased logging at the expense of an imperiled sensitive species soon to be listed as threatened? The U.S. Forest Service must provide clear justification based on the

best available science for how these actions will benefit CSOs rather than contribute to their decline.

Purported expendability of Low and Moderate Productivity PACs

A significant issue is the classification of numerous PACs as low and moderate productivity, which appears to be a strategy to deem them expendable for mechanical treatments. A significant portion PACs are slated for mechanical thinning and other activities posing significant disturbance, raising alarms about long-term impacts on CSO populations. This designation undermines the integrity of these habitats and fails to recognize their potential ecological value. Research indicates that even lower productivity habitats can provide essential resources for wildlife, including nesting sites and prey availability. The assumption that these PACs can be sacrificed without consequence directly contradicts findings suggesting habitat loss contributes significantly to declines in sensitive species. Tempel et al. (2014) revealed that mechanical thinning decreases California spotted owl occupancy and negatively affects reproduction rates.

New Conservation Framework

The introduction of a new conservation framework is another area of concern. This framework in part emphasizes territories instead of Home Range Core Areas (HRCAs). The Plumas National Forest updated their environmental analysis of the CPP proposed changes to reflect changes being currently undertaken as a part of the process of listing the CSO as threatened. The Tahoe National Forest must evaluate it's analysis' consistency with other precedent and thoroughly evaluate the best steps for protecting this species into the future in accordance with the species proposed listing.

We do have some concerns about this new approach, however. So further evaluation is necessary. Our preliminary analysis of GIS data for the Plumas CPP Proposed changes suggests that this shift may result in a less effective strategy for protecting CSOs. By designating at least half or more of the PACs as expendable for mechanical thinning, this framework could further jeopardize already vulnerable CSO populations. The reliance on territories without adequately considering the ecological dynamics of HRCAs may lead to insufficient habitat protection.

Long-Term Habitat Viability

The decision to mechanically thin large areas within PACs could have long-lasting consequences on habitat viability for California Spotted Owls. If thinning does not achieve its intended goals of reducing wildfire risk, we may face a scenario where critical habitats are lost without any corresponding benefit to fire management. This approach

compromises the resilience of old-growth forests, which are vital for maintaining healthy ecosystems and supporting diverse wildlife populations.

Need for Comprehensive Habitat Protection

It is imperative to recognize that simply designating certain areas as expendable does not equate to effective wildfire management or species protection! Instead, a comprehensive strategy prioritizing the preservation of all mature and Old-Growth habitats is necessary. By retaining these forests in their entirety, we enhance their ability to withstand fire events and maintain biodiversity while benefiting California Spotted Owls as their populations continue to fluctuate for better or worse. Hopefully for better if habitat loss due to logging does not plunge this imperiled species further into decline.

The US Forest Service's thorough consideration of both forest protection and California Spotted Owl conservation is not only justified but essential for ensuring the health of these vital ecosystems. By recognizing the interconnectedness between mature and Old-Growth Forests and California Spotted Owls that live in them, we emphasize that protecting one directly supports the other. The time for accountability is now—will you commit to a strategy that genuinely protects California Spotted Owls and their old-growth forest habitats in accordance with the best available science? Or will you continue down a path that jeopardizes their future?

Impacts to Northern Goshawk:

Your analysis' treatment of the Northern Goshawk is woefully inadequate and potentially devastating for this magnificent species. Your agency shamefully fails to provide sufficient protection measures for this critical habitat. This is not just an oversight—it's a blatant disregard for the ecological importance of this apex predator. The proposed logging and thinning activities could destroy nesting sites, disrupt hunting territories, and fragment the mature forest habitat that goshawks depend on. Research has shown that goshawks are highly sensitive to forest disturbance, making them an essential indicator species for overall forest health. A more thorough and updated analysis of impacts to this state listed species of special concern is needed!

Misdesignation of PACS for both CSO and NOGO:

We strongly oppose the impromptu designation of many Spotted Owl and Northern Goshawk PACS as inactive. We are concerned that this is a thinly veiled attempt to strip away crucial habitat protections. This loophole would weaken existing safeguards for these imperiled raptors. It is unconscionable that the Forest Service would consider reducing canopy cover requirements and altering habitat designations at a time when these imperiled species face increasing threats from climate change and habitat loss. This

premature redesignating is not based on sound science and directly contradicts the Forest Service's mandate to protect and preserve our natural resources. Birds go through cycles; they have good years and bad years. Some years they breed, and some years the conditions are not quite right or they may have to change nesting or roosting sites. Sometimes they may move to more remote parts of their territories to escape disturbance by humans, ect. If the birds are temporarily absent, there could be a myriad of reasons. As long as suitable habitat remains, and the site has been previously inhabited there is no justification for sacrificing these PACS and territories to logging! As long as suitable or potentially suitable habitat remains for these species it should not be sacrificed!

Foothill Yellow-Legged Frog:

The EA's reliance on outdated studies from 1936-1996 for foothill yellow-legged frog habitat preferences is nothing short of scientific malpractice. This species has faced significant declines and habitat changes in recent decades, yet the USFS seems content to base its decisions on research that predates our modern understanding of amphibian ecology and climate change impacts. More recent studies, such as Kupferberg et al. (2012), have shown that this species is highly sensitive to changes in stream flow regimes and water temperature—factors that could be significantly altered by the proposed forest management actions. The EA's failure to incorporate current scientific knowledge is a dereliction of duty that could push this vulnerable species closer to extinction.

And this is just a handful of the many many wildlife species that call the MOG forests within the proposed changes area home. Is it unconscionable to destroy their habitats!

Impacts to other wildlife species:

Even more appalling is the complete disregard for other wildlife species known to inhabit the proposed changes area but apparently deemed unworthy of consideration. Just because a species isn't listed yet doesn't mean it's population isn't declining and that it's existence may soon be called into question. We are living in the midst of a mass extinction event and a climate crisis! Now is not the time to be putting even non-listed migratory birds at risk! It is morally undefensible that these species are deemed unworthy of consideration. Consideration of all wildlife species whose populations are declining, in cases where it is not already, should be made a legal requirement. Without a doubt it is already, certainly, and undoubtedly a moral and ethical requirement! No matter who you are, you will be answerable to your children, grandchildren, and future generations for the world you leave behind for them. We will list our concerns for these other inhabitants that occur or may occur in the proposed changes area and ask you to consider the complex ecological relationships that sustain them:

Northern Saw-whet Owl:

Northern Saw-whet Owls rely on MOG mixed conifer forest habitats, especially more mesic forests, which are at risk from the proposed proposed changes. These small owls play crucial roles in forest ecosystems, controlling rodent populations and serving as indicators of forest health. The USFS's failure to even acknowledge this species, let alone provide protection measures, could have far-reaching consequences for the forest's biodiversity. The proposed logging and thinning activities could destroy nesting sites, disrupt hunting territories, and fragment the mature forest habitat that Northern Saw-whet Owls depend on for survival.

Flammulated Owl:

These small owls thrive in mixed conifer forests, particularly in ecotones between drier ponderosa pine-dominated stands and more mesic Douglas-fir and sugar pine-dominated areas. Their presence signifies a delicate balance of Old-Growth elements, open understory for foraging, and abundant insect populations. Studies like Linkhart et al. (2016) have shown that Flammulated Owls strongly prefer mature and old-growth ponderosa pine/Douglas-fir forests with a multi-layered canopy structure. The proposed proposed changes threatens to homogenize these complex forest structures, potentially rendering them uninhabitable for these owls and countless other species dependent on these unique habitats.

Pileated Woodpecker and other indicator species:

Your agency's failure to address crucial indicator species like the Pileated Woodpecker is a glaring oversight that undermines its ecological credibility. These magnificent birds, which have been observed in the proposed changes area, are vital indicators of forest health and biodiversity. Their presence speaks to the ecological value of the mature forest habitats that this misguided proposed changes threatens to destroy. The USFS's willful ignorance of these species and their habitat needs is not just an oversight - it's an ecological travesty that could have far-reaching consequences for the entire forest ecosystem.

The USFS's failure to even mention these species in the EIS, let alone provide specific protection measures for their habitat, is an ecological travesty and it should be seen as a shocking abdication of their responsibility to maintain biodiversity and ecosystem health. This omission is particularly egregious given the known presence of these species in the very habitats targeted for "restoration."

Botanical Impacts:

The proposed changes's potential impacts on rare plants must be thoroughly examined and considered.

Many areas in the plan may harbor several mesic (wet) microclimates, nurtured by high annual precipitation and/or hidden groundwater aquifers/aquaculdes that concentrate water in localized areas. Some likely cradle many undiscovered rare lichens and groundcover plants. As an avid explorer of these fragile ecosystems, I can attest to the high probability of encountering such vulnerable species. Logging would devastate such plant communities, aridifying (drying out) the microclimate conditions they need for survival. Some of these species are also highly sensitive to pollution. Some lichens are a "snitch" on bad air quality, sacrificing their lives as an early warning sign to the health of the ecosystems in which they live.

Be forewarned: should any new at-risk plants or lichens and/or new populations of rare species be confirmed within the proposed changes area (and they probably will be, we are committed to seeking them out), I will not hesitate to report to the California Natural Diversity Database (CNDDDB), U.S. Fish and Wildlife Service (USFWS), and other relevant enforcement agencies. Environmental organizations poised for litigation will also be promptly informed, as will any botanists I do indeed know. I am personally committed to

defending public trust and environmental justice, and "muckraking" and "rabble-rousing" in every way I can to stop any negative impacts that threaten imperiled plant and lichen species. Proponents of this proposed changes must tread carefully, for the eyes of botanists and ecologists are watching, and the consequences of overlooking these botanical rarities could be swift and severe.

Mature & Old-Growth (MOG) Forests and Large Tree Impacts:

These are among the tallest on earth and represent an ecological heritage so valuable that it is unconscionable to lose it. Cutting them or affecting their microclimate would be such a breach of public trust would trigger immediate outrage and news media coverage

These ancient ecosystems are irreplaceable treasures, hundreds of years in the making that support countless species and play a crucial role in carbon sequestration. Studies like Lutz et al. (2018) have shown that old-growth forests continue to accumulate carbon for centuries, making them invaluable in our fight against climate change.

The EA's complete disregard for the unique microclimatic conditions created by Old-Growth Forests is a shocking display of ecological ignorance. Research by Chen et al. (1999) has demonstrated that Old-Growth forest microclimates can buffer against extreme temperature fluctuations and maintain higher humidity levels—crucial factors for many sensitive species. The proposed thinning could disrupt these delicate ecosystems, potentially leading to a cascade of local extinctions that the EA conveniently ignores.

The proposed changes's focus on managing plantations and younger stands overlooks the irreplaceable ecological value of mature and old-growth forests. This is not forest restoration—it's forest destruction masquerading as conservation.

Microclimate and Hydrological Impacts:

The EA's failure to address the unique microclimates and hydrological conditions in the proposed changes area is inexcusable. Old-growth forests create distinct microclimates that support a diverse array of flora and fauna. The proposed thinning could disrupt these delicate ecosystems, potentially impacting numerous species that depend on these specific conditions.

The EA's failure to address the unique groundwater situation in the proposed changes area is not just an oversight—it's a potential ecological catastrophe waiting to happen.

Certain basins collect significantly more water than surrounding areas, suggesting a complex hydrological system that could be irreparably damaged by proposed logging and thinning activities. Studies like Goeking and Tarboton (2020) have shown that forest

management practices can significantly alter local hydrology, affecting everything from stream flow to groundwater recharge.

This is completely overlooked. This egregious oversight could lead to numerous unintended consequences for local hydrology and ecosystems.

Descriptions of Old-Growth Forest and Hydrological conditions locally specific to the proposed changes area:

Approach to Bark Beetle Impacts:

The EA's approach to bark beetle infestations is shockingly shortsighted. It fails to recognize the vital ecological role these insects play in forest regeneration and biodiversity. Instead, it perpetuates the misguided notion that every natural disturbance must be "managed" out of existence, regardless of long-term consequences for forest health.

The bark beetle logging is much like logging for drought. There is no way we can possibly know which trees are likely to be resistant to bark beetles. Pesticides also must be used on trees surrounding those infested in these proposed changes. Chads main point however is that tree mortality is already increasing across the state, and likely to only accelerate, as indicated by numerous USFS studies, whether by drought, climate, beetles whatever. If we do not know which trees are likely to be genetically resistant to those numerous threats, and knowing that our forests are our best carbon-sinks, it is irresponsible to intentionally kill any mature trees.

So called "ladder-fuels" are in most cases more likely to dampen the effects of fire, as they retain incredible amounts of moisture. This is obvious to anyone who has been in an old-growth forest. Low hanging branches act as wind breaks, lessening the spread of embers. The recent Davis Fire in Reno had some videos posted which clearly showed how much more intense the fire burned where the vegetation was most sparse, while it was mostly creeping along among the more dense areas.

<https://www.instagram.com/reel/DAHRIlvMuld/?igsh=MzRIODBiNWFIZA==>

This is nature's way of compensating. after your agency did extensive salvage logging!
Please do not repeat past mistakes. Where does this end?

Fire Risk and Community Safety Concerns:

The proposed proposed changes raises significant concerns about increased fire risks to local communities. Contrary to the Forest Service's assertions, extensive scientific evidence suggests that salvage logging and mechanical thinning can exacerbate wildfire behavior and threaten public safety. Baker and Hanson (2023) found that areas with recent thinning and past high-severity fire followed by salvage logging and plantation creation burned at higher severity than areas of mature, never-logged forest. Multiple scientific studies support these observations, challenging the effectiveness of fuel treatments and highlighting potential negative effects of removing mature trees.

Impacts to Old-Growth Trees, record-class trees:

The impacts to large trees are far more insidious than they appear on the surface. Regarding large Old-Growth trees, even trees of record-size status the situation is precarious. While the US Forest Service claims a **30-inch diameter limit**, you have **built in loopholes** that could allow you to **log Old-Growth trees under the guise of "safety" or "operational needs"**. This means that you **could potentially cut any tree near a road as a "hazard tree". Some record size trees are known to be near roads. We have a database of record size trees and know world-class big tree hunters with an even more intensive purview of record size specimens. We collectively know all the locations, we have GPS coordinates. We will not hesitate to immediately alert the press and the public if any off these trees are harmed or suffer future impacts resulting from this proposed changes.**

Many giant trees are at risk of being declared a "hazard", even if they are not truly hazardous. It is important to have independent experts keeping track on the ground. What independent oversight will be exercised - or will your agency and money hungry contractors be given full discretion?

Your analysis allows even the clearing Old-Growth trees that are in their way for staging areas or road construction! FYI, as a case example: When the Plumas National Forest was questioned about this a recent public meeting, their staff seemed completely indifferent to the potential loss of Old-Growth trees. Your agency's systemic apathy about this issue is deeply concerning.

The lack of oversight in this process is also a problem. Your agency will auction the timber to any logging company that wins the bid, likely resulting in a situation where **contractors hire subcontractors with minimal supervision**. And I don't think we can trust mice with cheese - money is their bottom line, not the preservation of our forests.

Even if not cut directly, giants like the world's second tallest Sugar Pine will be put at risk through the intense degradation of their surrounding ecosystem. Even if they don't cut the largest trees, the damage to the forest would be profound. Altering the microclimate of these areas could make it harder for trees to reach the impressive sizes we are documenting and threatens the survival of existing giants by altering their environment. **Logging surrounding trees could weaken these giants by increasing their susceptibility to high wind events (ie: what happened to the Pickering Pine and One Armed Bandit - previous record class sugar pines that perished in the early 2000's).** The loss of surrounding canopy cover is likely to increase drought-stress, potentially leading to

bark beetle attacks (ie: what happened with the Whelan Pine and other record class Sugar Pines lost in the last decade, etc).

Since the science is clear that "thinning" and other forms of "fuels reduction" aka logging are ineffective at stopping wildfires and will likely make them worse due to countervailing microclimate factors such as windbreaks, fuel moistures, aridification, ect; how can the USFS justify these enormous impacts to our priceless natural heritage already dwindling?

Over 200 scientists agree - logging is not the solution to wildfire prevention ([200 Climate Scientists Urge Congress to Protect Forests](#)). We hereby incorporate this letter by reference and also intend it to back the other concerns prseented in our entire letter where applicable.

Removing smaller trees destroys the multi-age character of Old-Growth stands, exposes remaining big trees to harsh conditions, and decimates wildlife habitat. While Old-Growth Forest is typically thought of as large trees above 30" DBH, "smaller" trees actually make up the majority of an Old-Growth stand, as you are probably familiar. These smaller trees contribute to the canopy cover, multi-age character, health, and microclimate of an Old-Growth Forest. Removing them degrades the stand, exposes it to an aridified microclimate, and destroys its habitat value for wildlife. An Old-Growth Forest isn't just a collection of big trees—it's a complex ecological community where trees of all sizes play crucial roles and support diverse wildlife and native plants.

This use of herbicides is yet another additional and potentially very serious threat to big trees like the world's 2nd tallest Sugar Pine. As the famous big tree hunter Michael Taylor said in his correspondence with our director: "YNP sprayed roundup after clearing the vegetation away from the Yosemite Giant up at Hodgdon Meadow. Result: Dead tree one year later. Was it the roundup?" We believe he is correct in his thinking here and we are sure there are other examples of this happening.

Sunlight also dries out surface moisture and the smaller trees provide increased canopy cover which prevents aridification. And since drought stress is what makes these trees susceptible to bark beetles, the smaller trees do provide a buffer against beetles in the sense that they make the drought stress less severe by limiting sunlight exposure and aridification.

The potential loss of these giant trees and ecosystems is truly alarming, and we believe you need to take this threat very seriously!

Use of Herbicides:

"...The scope of herbicide use in this proposed changes is staggering. Most studies on the environmental effects of herbicide use are small in geographic area. Proposing to use it on 200,000 acres surrounding communities is tantamount to an experiment on the people and environment of Plumas County. Especially with toxic substances like Glyphosate and Imazapyr which are known to cause cancer and is banned in Europe, respectively. These compounds are regularly used by logging companies and again it makes this proposed changes stink of commercial/industrial forest management, not community protection from wildfire."

- John P. O'Brien, Ph.D. [Read More – Feather River Action!](#)

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The herbicide Glyphosate likely means roundup.

The herbicide Imazapyr is known for its persistence in the environment.

These herbicides are known Carcinogens and will have impacts on human health, the recreation of visitors, watershed health, water quality, and fish populations.

Cumulative Impacts:

We are concerned that your agency fails to adequately address the cumulative impacts of the proposed actions changes when considered alongside other past, present, and reasonably foreseeable future actions in the region. This analysis is crucial for understanding the full scope of environmental consequences, including impacts on wildlife habitat, watershed health, carbon sequestration, and true overall forest resilience.

1. The proposed changes must consider the cumulative effects of multiple "thinning" aka logging operations across the PNW region, which collectively impact wildlife habitat, watershed health, and carbon sequestration on a meta-landscape scale.
2. The cumulative loss of habitat due to this and other logging proposed changes could have significant long-term impacts on species like the Northern Goshawk and California Spotted Owl, potentially leading to population declines across their range.
3. Your agency should further analyze how this proposed changes, combined with other forest management activities in the area, might alter future fire behavior and impact overall forest resilience in the face of climate change.

4. The cumulative effects on water quality and soil erosion from multiple logging operations could have far-reaching consequences for downstream ecosystems and communities.

5. The Forest Service must consider how this proposed changes, along with other similar proposed changes, contributes to the overall fragmentation of forest ecosystems in the Sierra Nevada, potentially disrupting wildlife corridors and altering species distributions.

Misleading Labeling:

The disconnect between the stated goals of "resilience"/"fuels reduction", etc and the likely outcomes as indicated by numerous peer-reviewed studies is stark. The proposed changes prioritizes timber harvest over true forest health and short-term economic gains over long-term ecological resilience. This mislabeling is not just semantically incorrect but fundamentally misleading to the public and decision-makers:

1. True ecological restoration would prioritize natural regeneration processes, habitat preservation, and ecosystem recovery, not extensive thinning aka logging which is really "timber harvest under false guise.

3. By labeling logging "resilience", the Forest Service is obscuring the potential negative impacts on wildlife, soil health, and true long-term forest resilience.

Thank you for your consideration. Please accept my timely submission and I would appreciate a reply.

Sincerely,

Joshua French

Director, Sierra Forest Action!

Grass Valley CA, 95949

