Data Submitted (UTC 11): 4/29/2026 7:00:00 AM
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Comments: Comment:

Please consider the attached comments on the Dead Mountain project, submitted on behalf of Cascadia Wildlands and Oregon Wild. Thank you.

Section from attachment WITHOUT photos:

April 29, 2026 Middle Fork District

Gabriel Wishart, Middle Fork District Ranger Mariah Wallace, NEPA Planner

46375 Highway 58,

Westfir, Oregon 97492

Submitted online via https://cara.fs2c.usda.gov/Public/CommentInput?Project=67448

Re: Dead Mountain Project [ndash] Environmental Assessment

Please consider the following comments on the Dead Mountain project, submitted on behalf of Cascadia Wildlands and Oregon Wild. Founded in 1998, Eugene-based Cascadia Wildlands represents approximately 18,000 members and supporters with a mission to defend and restore Cascadia[rsquo]s wild ecosystems in the forests, in the courts, and in the streets. Cascadia Wildlands envisions vast old-growth forests, rivers full of wild salmon, wolves howling in the backcountry, a stable climate, and vibrant communities sustained by the unique landscapes of the Cascadia bioregion. Oregon Wild represents 20,000 members and supporters who share our mission to protect and restore Oregon[rsquo]s wildlands, wildlife, and water as an enduring legacy. Our goal is to protect areas that remain intact while striving to restore areas that have been degraded. This can be accomplished by moving over-represented ecosystem elements (such as logged and roaded areas) toward characteristics that are currently under-represented (such as roadless areas and complex old forest).

Project Description

This project includes a mix of commercial and non-commercial thinning, roadwork, and controlled burning. Thinning consists of:

* Commercial Thinning (1,735 acres of 45- to 60-year- old managed stands): Thinning to 60[ndash]80 trees per acre, prioritizing largest trees and fire-resistant species, and minimum 40% canopy cover. Skips and [frac12]- to 3-acre large gaps.
* Small Diameter Thinning (200 acres of 34- to 41-year-old managed stands): Thinning to 135[ndash]170 tpa, minimum of 40 percent canopy cover would be

maintained. Trees larger than 10 inches diameter breast height (DBH) would be retained. EA at 15.

* Shaded Fuel Breaks (154 acres/along 4.25 miles of potential control lines): Thinning to 50[ndash]170 tpa, maintaining minimum 40% canopy cover, up to 150 feet of roadside.

* Red Tree Vole habitat (18 acres): Thinning limited to understory trees up to 10[rdquo] DBH.
* Late Successional Reserve (LSR) (11 acres): Prescribed fire and prescribed fire preparation activities.

* Burn Blocks (970 acres): Non-commercial thinning up to 7[rdquo] DBH; includes some in LSR.
* Fuel break (7 acres) around the communication tower.

The EA describes the project area as about 25 percent early seral forest, 41 percent mid seral forest, and 29 percent late seral forest. About half of the landscape is closed canopy forest, while 19 percent is open. Proposed shaded fuel breaks and burn blocks bisect a range of previously managed and naturally regenerated stands ranging in age from 36 to over 120 years old. EA at 27[ndash]28.

Additional project actions include road maintenance and reconstruction on 42 miles of FS roads and 3.26 total miles of temporary road construction and reconstruction; rock sourcing from three quarries and one-acre expansion of Eagle Butte quarry; and trail construction and maintenance on the Salmon to Town trail and Rigdon Bike Path.

Stated needs for the project include:

* Reducing fire risk to the surrounding community, infrastructure, and values at risk;
* Improving stand and landscape resilience to fire;
* Increasing health and vigor of forest stands;
* Providing trail connectivity;
* And providing a sustainable supply of forest products. EA at 3.

Public Engagement

Thank you for preparing an EA for the project. Cascadia Wildlands staff joined the Forest Service and the Southern Willamette Forest Collaborative on tours of the project area and gain an understanding of the proposal. We appreciate the district[rsquo]s efforts to engage the public in this project and incorporate public input through

the NEPA process to reach an informed decision. We continue to support the district[rsquo]s efforts to prioritize community safety and utilize collaboration to identify priority areas for fire risk mitigation efforts.

Field Checking Photos and Observations

Oregon Wild staff visited the project area during the comment period and offer the following observations.

Overall, the units proposed for commercial thinning appear to be mostly dense, even-aged plantations. However, previous fires and thinning on the landscape have created some different conditions within some of the proposed commercial thinning

units, as demonstrated in the following images. We also note the presence of numerous legacy trees and down wood throughout the commercial thinning units. The images correspond to the unit numbers assigned by Oregon Wild for reference purposes on the attached Proposed Action Map.

^ Unit 1, Figure 1

<photo>

^ Unit 1, Figure 2

<photo>

^ Unit 1, Figure 3

The southwest portion of the commercial thinning units just east of the junction of Forest Service Road 209 with Forest Service Road 24 was previously affected by the Salmon Fire. As shown in Unit 1, Figure 1, the stand contains a high number of fire-killed trees. It also appears that thinning previously occurred in this portion of the project area. Compare to the other images of Unit 1 that show areas unaffected by the Salmon fire and which exhibit denser stands. Will treatment in the thinning units affected by the Salmon Fire be different from treatment in those portions not previously affected by the Salmon Fire? Our groups ask that the agency consider dropping the fire-impacted portions of units from the project, as the risks of logging in sensitive post-fire landscapes do not outweigh the benefits.

Burned areas are best left to natural recovery processes.

<photo>

^ Unit 2, Figure 1

<photo>

^ Unit 2, Figure 2

These photos of Unit 2, taken near the photos of Unit 1 above, again demonstrate both fire-impacted and non-fire-impacted areas. These stands are dense and contain generally small-diameter trees.

<photo>

^Unit 4, Figure 1

<photo>

^Unit 4, Figure 2

<photo>

^Unit 4, Figure 3

Unit 4 demonstrates even-aged stands with trees of similar sizes. The larger cohort of trees observed in Unit 4 measured approximately 22[rdquo] dbh. Additionally, a handful of large hardwood trees are present as shown in Unit 4, Figure 3. The agency should impose a diameter limit of 20[rdquo] dbh for all units in line with the agency[rsquo]s prioritization of retention of the largest trees as stated in the EA. Additionally, the agency should add a PDF to preserve hardwoods for increased species diversity and fire resilience, prioritizing but not limited to riparian areas.

<photo>

^Unit 6, Figure 1

Unit 6 exhibited similar dense stands, but there seemed to be slightly more species diversity. Unit 6, Figure 1 above shows a pine tree found within the mostly Douglas-fir plantation. There were also several pacific madrones, not pictured, and some incense cedars in this more central portion of the commercial thinning units.

The agency should retain all pines and cedars to promote species diversity and fire-resilient landscapes.

<photo>

^Unit 7, Figure 1

Unit 7 contained some large, down wood including the downed log pictured above. The agency should prioritize retention of down wood throughout all of the commercial thinning units. PDF Wildlife 16 calls for retention of the 3 largest pieces of down wood per acre, in decay classes 1-2 where available. It[rsquo]s unclear that this PDF would protect down wood like that pictured above. Retention of this down log, and similar ones throughout the project area, provides benefits for wildlife habitat, carbon storage, and nutrient cycling.

<photo>

^Unit 8, Figure 1

Unit 8 contained a patch of large legacy trees, pictured above.

<photo>

^Unit 10, Figure 1

<photo>

^Unit 10, Figure 2

Unit 10 is a proposed burn block in the northeast portion of the project area. The stand contains a cohort of large overstory trees, with some individual trees measuring about 33[rdquo] dbh. The stand also contains understory and midstory growth.

<photo>

^ Unit 12, Figure 1

<photo>

^Unit 12, Figure 2

<photo>

^Unit 12, Figure 3

Unit 12, a small diameter thinning unit in the northeast portion of the project boundary, displays considerable variability. Some portions of the unit are composed of very dense, small-diameter trees as demonstrated in Unit 12, Figure 1. There are also numerous openings in the forest, as demonstrated in Figure 2, and a handful of large legacy trees, as demonstrated in Figure 3. How does the agency account for the openings in the proposed treatment that calls for thinning to approximately 135 to 170 trees per acre?

<photo>

^Unit 13, Figure 1

<photo>

^Unit 13, Figure 2

<photo>

^Unit 13, Figure 3

Unit 13, also a small diameter thinning unit, exhibits similar variability as described above for Unit 12.

Comments on Proposed Actions

Our groups are generally supportive light, small-diameter, variable thinning from below on young, previously managed stands. We remain concerned that young stand thinning proposed as part of a project expanding the network of shaded fuel breaks (SFB) could create more problems than it solves and want the agency to fully evaluate the associated tradeoffs.

1. Thinning Intensity and Fire Risk and Hazard

Regarding potential benefits of thinning to mitigate fire risk, the EA asserts:

[ldquo]Thinning, fuels reduction treatments, and prescribed fire would reduce the likelihood of crown fire, an extreme fire behavior occurrence that fire suppression resources do not have the ability to stop.

[hellip]

By opening up the canopy with thinning, more resources of light, soil, and water would be available to the competing vegetation to create a more diverse fuels structure of openings, grass and forbs in treatment areas. We could expect a

short-term increase in surface fuel loading from commercial logging activity. Change in the surface fuel dynamics could include increased grass and shrub components.[rdquo]

EA at 24, 25.

The agency declined to analyze an alternative that focused on small-diameter shaded fuel breaks because they would be less effective. [ldquo]It would only deter fire from climbing into the canopy and leave the canopy overstocked and susceptible to crown fire.[rdquo] EA at 19.

We are concerned that heavy thinning (e.g., to as low as 40% canopy cover as is proposed here) would open the stand too much likely create problems such as:

* Warm/dry/windy microclimate that dries fuels more rapidly and increases flame lengths.
* Heavy thinning moves more fine fuels for the canopy to the ground where they are more vulnerable to fire. Treating these activity fuels is expensive and rarely entirely effective. Plus, there is a time period after the fuels are put on the ground and before they are treated.
* Opening the canopy will make resources available to stimulate excessive growth of future hazardous surface and ladder fuels.
* Greater growth of surface fuels requires more frequent and more expensive retreatment that the agency lacks funding for. The agency may be tempted to keep removing mature trees to pay for removal of small trees and brush, but this causes a vicious cycle of unwanted fuel growth and funding shortfalls.

If area thinning is too heavy, it would open the stand and stimulate growth of fuels that the agency does not have adequate resources to retreat. So, when the fire does come, the agency would be left with a brushy condition that it cannot safely put defensive fire into.

See Lesmeister, D.B., Davis, R.J., Sovern, S.G. et al. Northern spotted owl nesting forests as fire refugia: a 30-year synthesis of large wildfires. fire ecol 17, 32 (2021), https://doi.org/10.1186/s42408-021-00118-z (an analysis of hundreds of wildfires spanning three decades in the Pacific Northwest, finding that open forests with lower tree

densities had hotter, drier, and windier microclimates than older forests and that those conditions decreased dramatically over relatively short distances into the interior of unthinned older forests with multi-layer canopies

and high tree density).

See Karla M. Jarecke, Linnia R. Hawkins, Kevin D. Bladon, Steven M. Wondzell 2023. Carbon uptake by Douglas-fir is more sensitive to increased temperature and vapor pressure deficit than reduced rainfall in the western Cascade Mountains, Oregon, USA. Agricultural and Forest Meteorology, Volume 329, 15 February 2023 (finding that elevated vapor pressure deficit expected with climate change will likely reduce forest productivity regardless of soil moisture availability).

For a discussion of tradeoffs, see David Lindenmayer, Dominick A. DellaSala, Elle Bowd, Beverly E. Law, Philip J. Burton, Chad T. Hanson, Philip Zylstra, William J. Ripple, Ecological trade-offs of mechanical thinning in temperate forests, Biological Conservation, Volume 316, 2026, 111748, ISSN 0006-3207, https://doi.org/10.1016/j.biocon.2026.111748

(tradeoffs associated with widespread thinning not paired with prescribed burning to reduce wildfire risk).

[ldquo]Mechanical thinning, the partial removal of stand basal area using tracked or wheeled machines, is a standard silvicultural treatment for whole tree extraction in many temperate forest ecosystems worldwide. It is also increasingly recommended to reduce fire risks in, and increase water yields from, temperate forests. In

fire-suppressed forest types, reduced fire risk has been documented in thinned forests under certain conditions. Thinning also may enhance drought resilience in some forest types and assist in habitat restoration for some species. However, we argue there are substantial costs to ecosystems associated with large-scale forest removals from mechanical thinning. Depending on environmental context, scale, frequency, and type of removals, impacts include: (1) loss of ecological integrity in a key successional stage and degradation of habitat suitability for associated taxa; (2) increased susceptibility of thinned stands to fire spread from higher sub-canopy wind speeds and increased fine fuels (slash); (3) soil compaction from heavy machinery; (4) reduced resilience where thinning from above removes naturally competitive dominant trees that may contain adaptive gene complexes; (5) release of carbon stored in forest biomass and soils; and (6) an increase in flammable understory species, including the spread of invasive plants. Thinning requires an extensive road network that alters hydrology, especially where roads intersect streams and on steep erosive slopes. In addition, the relatively high financial costs of thinning may divert resources from other activities that are more cost-effective and restorative. Forest managers need to carefully consider the multi-facetted costs and

environmental trade-offs of thinning operations and not just the benefits in silviculture and restoration projects.[rdquo]

The agency should retain, not reduce, canopy fuels because canopy fuels actually help maintain a favorable microclimate and reduce surface and ladder fuels which are the greater hazard. If there is a perceived need to reduce the continuity of canopy fuels, the road itself serves that purpose. Hakkenberg et al. (2024) showed that ladder fuels were the main driver of wildfire severity, whereas dense, high canopy fuels tend to reduce fire severity, even during extreme fire conditions.

Here we employed GEDI space-borne lidar to consistently assess how pre-fire forest fuel structure affected wildfire severity across 42 California wildfires between 2019[ndash]2021. Using a spatial-hierarchical modeling framework, we found a positive concave-down relationship between GEDI-derived fuel structure and wildfire severity, marked by increasing severity with greater fuel loads until a decline in severity in the tallest and most voluminous forest canopies. Critically, indicators of canopy fuel volumes (like biomass and height) became decoupled from severity patterns in extreme topographic and weather conditions (slopes >20[deg]; winds > 9.3 m/s). On the other hand, vertical continuity metrics like layering and ladder fuels more consistently predicted severity in extreme conditions [ndash] especially ladder fuels, where sparse understories were uniformly associated with lower severity levels.

[hellip]

Vertical fuel continuity is especially important for lower stratum ladder fuels, where greater continuity may enable flames to transition from ground and surface fires to higher canopy strata, thereby increasing contagion [hellip] [W]e observed that steep slopes, dry conditions and high winds overwhelmed most fuel structural conditions to constrain landscape severity patterns. Importantly, the sole exception to this pattern occurred with ladder fuels [hellip]

[hellip] This finding suggests that high-intensity fuel treatments (which target entire forest canopies rather than focusing on lower stratum ladder fuels only) may have a limited effect on wildfire severity in extreme conditions. Conversely, sparse understories (<10 m) [ndash] even those that concurrently possess robust mid- strata (>10 m) [ndash] were associated with reduced wildfire severity. This result has important management implications, especially for treatment interventions that focus on vertical fuel continuity such as understory thinning or cultural burns, which have been found to be effective in reducing high-severity burns2. Understory treatments have also been found to lessen externalities associated with more intensive thinning operations71 and simultaneously promote culturally- and ecologically-beneficial

wildfire outcomes across a wide variety of topographic, weather and climate contexts1,72.

Hakkenberg, C. R., Clark, M. L., Bailey, T., Burns, P., & Goetz, S. J. (2024). Ladder fuels rather than canopy volumes consistently predict wildfire severity even in extreme

topographic-weather conditions. Communications Earth & Environment, 5(1), 1-11. https://doi.org/10.1038/s43247-024-01893-8; pdf.

We flagged this study for the agency during scoping, but it is not cited in the EA. Did the agency consider its findings when determining post-treatment canopy cover and assessing project tradeoffs?

1. Legacy Trees

There is a PDF to protect legacy trees included in the EA:

[ldquo]Legacy trees should be retained through marking guidelines and strategic use of skips in treatment areas. Legacy trees are older trees than the primary overstory cohort and were primarily grown in open conditions before canopy closure occurred.[rdquo]

PDF Silviculture 1, EA at 91. This is vague, potentially leaving it open to interpretation during implementation. Is there a diameter limit or range the agency will apply? Please explain how this will be implemented. The agency, as opposed to commercial operators who may be financially incentivized to cut larger diameter trees, should either mark or review tree marking to ensure crews adhere to this PDF.

1. Climate Change & Drought

The EA assessed crown fire behavior based on [ldquo]normal summer[rdquo] conditions. EA at 24. What is considered a [ldquo]normal summer[rdquo] for the purposes of this analysis? The changing climate is creating drier fuels and longer fire seasons. This increases the potential for extreme fire behavior where embers can travel long distances during high fire growth periods and render shaded fuel breaks ineffective at stopping or slowing fire spread.

Oregon is experiencing record-breaking drought and low snowpack, which will widen the window of opportunity for fires to start. See the drought maps below, comparing drought conditions in the Western US last spring (left) to this spring (right), followed by current drought classifications in Oregon. Much of the state is already in severe drought and historically low snowpack levels. These conditions are projected to be more common in years to come and should factor into the agency[rsquo]s analysis of tradeoffs.

<photo>

U.S. Drought Monitor, National Drought Mitigation Center, 2026: https://droughtmonitor.unl.edu/Maps/ComparisonSlider.aspx (comparing last year to this year).

U.S. Drought Monitor, National Drought Mitigation Center, 2026: https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?OR.

1. Shaded Fuel Breaks

If implemented correctly, shaded-fuel breaks can be a useful tool for fire management and a way to reintroduce fire to a fire-adapted landscape. Done incorrectly, fuel breaks can have significant trade-offs, including: spreading weeds through soil and canopy disturbance, habitat fragmentation and edge effects, exacerbating barriers to wildlife movement, impaired wildlife connectivity, loss of wildlife cover, loss of snag and dead wood habitat, facilitating unauthorized OHVs, increased carbon emissions, etc.

We recommend that the agency use a lighter thinning prescription and retain a more densely shaded condition along all the roads that are part of the SFB network. While there is a diameter limit for LSR and red tree vole habitat, the agency should consider setting a diameter limit for the shaded fuel break. Larger diameter trees have thick bark and retain higher moisture content, making them naturally more resilient to wildfire.

1. Maintenance

Shaded fuel breaks implemented non-commercially with significant canopy retention may be an effective fuel treatment if they are maintained over time. Several attendees during project field visits expressed the need for maintenance of fuel treatments for them to be effective at reducing fire risk to the community.

Regarding maintenance, the EA states:

[ldquo]Shaded fuel breaks would be maintained to limit ingrowth of woody vegetation and provide continued benefits to fire suppression.[rdquo] EA at 16.

and

[ldquo]Maintenance activities are planned. This means a fuels specialist would determine in 5 to 10 years.[rdquo] EA at 17.

It also acknowledges that repeated entries will contribute to the spread of weeds and invasives, which contributes to increased fire risk in the project area. We are concerned the project will exacerbate existing conditions. Does the district have the capacity and resources needed to address current infestations?

In recent years, the current administration has significantly reduced the Forest Service[rsquo]s workforce and budget, initiated an agency-wide restructuring plan including the closure of the Region 6 office, and shuttered research stations including the PNW Research Station in Portland. While we are mindful of the stress this instability and uncertainty places on the district, we must note our ongoing concerns about the agency[rsquo]s limited resources and capacity and how this likely translates into limits to long-term maintenance of thinned stands and fuel breaks.

Northern Spotted Owls

We are concerned about this project[rsquo]s impacts to spotted owls and their prey, including removing and downgrading habitat. The EA summarizes impacts as follows:

[ldquo]Reduction in canopy cover from shaded fuel breaks would remove about 6 acres of northern spotted owl (NSO) foraging habitat, downgrading it to unsuitable (i.e., capable) habitat status, and downgrade an additional 43 acres of foraging habitat to dispersal habitat. Habitat downgrades from proposed project actions would occur within three spotted owl home ranges. Proposed commercial thinning in shaded fuel breaks would cause continued impairment in one core area and proposed fuel break gaps would cause continued impairment in one home range.

[hellip]

Nine known NSO home ranges overlap the project area, and two activity centers are within the project area boundary. Some of the home ranges are currently impaired due to habitat losses from the Salmon and Cedar Creek Fires and past timber management activities. Surveys conducted from 2024 to present have not detected NSO occupancy within the project area. About 90 percent of the project area currently supports dispersal.[rdquo]

EA at 40, 42.

1. Survey Methods

The EA states that, [ldquo]Thinning treatments that would downgrade habitat would only occur if surveys determine the sites are not occupied by spotted owls during the year of treatment. If sites are found to be occupied, the thinning treatments would not proceed.[rdquo] EA at 40.

There are recent studies from the authors of the spotted owl protocol that have highlighted the negative effects barred owls have had on spotted owl survey results. Appel et al. studied the merits of using passive acoustic monitoring to detect spotted owls, noting reduced vocalization of spotted owls around the barred owl. Appel et al. at 3, 15-16. In contrast to the USFWS 2012 Spotted Owl Survey Protocol, which elicits owl calls through mimicking, passive acoustic monitoring passively records spotted owl habitat to document calls. Appel et al. at 2-3. Appel estimated that [ldquo]when any owl was detected[rdquo] through passive acoustic monitoring, it was seventy-two percent likely [ldquo]that the owl belonged to a pair.[rdquo] Appel et al. at 13. Is the agency utilizing passive monitoring to survey for spotted owls?

Appel, Cara L., Damon B.Lesmeister, AdamDuarte, Raymond J.Davis, Matthew J.Weldy, and TaalLevi. 2023. [ldquo]Using Passive Acoustic Monitoring to Estimate Northern Spotted Owl Landscape Use and Pair Occupancy.[rdquo] Ecosphere14(2): e4421. https://doi.org/10.1002/ecs2.4421

1. Barred Owls

The EA does not mention or analyze impacts of barred owls, including in the context of fragmenting, modifying, and reducing northern spotted owl habitat. Did the agency consider the impact of barred owl competition on the likelihood of detections? Barred owl competition, impact on spotted owl detections, and ways in which thinning treatments and habitat modification and removal will contribute to negative impacts on northern spotted owls need to be considered.

1. Canopy Cover Retention

Proposed thinning treatments would reduce canopy cover to 40 percent. The proposed shaded fuel breaks are expected to maintain canopy cover greater than 40 percent but below 60 percent. EA at 44.

Studies indicate that spotted owl dispersal habitat should be managed for higher canopy cover, at least 80%. See Stan G. Sovern, Eric D. Forsman, Katie M. Dugger, Margaret Taylor. 2015. Roosting Habitat Use and Selection By Northern Spotted Owls During Natal Dispersal. The Journal of Wildlife Management 79(2):254[ndash]262; 2015; DOI: 10.1002/jwmg.834. https://osu-wams-blogs-uploads.s3.amazonaws.com/blogs.dir/2742/files/2016/09/Sovern-et-al.-2015.pdf ([ldquo]Roost Site Selection. In contrast to the assumption that stands with relatively open canopies provide suitable dispersal habitat for spotted owls, our results suggest that dispersing juveniles selected stands for roosting that had relatively high canopy closure (x = 66 + 2%). [hellip] Two hypotheses could explain why dispersing owls selected closed-canopy stands. First, several researchers (Barrows 1981, Forsman et al.

1984, Weathers et al. 2001) have shown that temperature and precipitation appear to influence selection for roost trees and attributes within a roost tree, such as perch height and percent overhead cover. [hellip] Second, juvenile northern spotted owls may have selected for closed-canopy forest because their preferred prey were most abundant [hellip] Landscape Scale Selection. [hellip] [O]ur mean estimate of canopy closure from plots at roosts (66%), which was likely an underestimate of canopy cover, was considerably higher than the minimum values recommended by Thomas et al. (1990) [i.e. 50-11-40]. [hellip] Management Implications. [hellip] Based on our study, we recommend that managers should pursue a strategy that exceeds the canopy cover guidelines recommended by Thomas et al. (1990) when managing dispersal habitat for spotted owls. Based on our estimate of mean canopy closure (66%), and our estimate of mean canopy cover from overlaying a dot grid on the same areas (approx. 14% larger), we recommend that the target for canopy cover in stands managed for dispersing spotted owls should be at least 80%.[rdquo])

1. Spotted Owl Prey

The EA lacks analysis of proposed treatments on spotted owl prey. Flying squirrels are an important prey item for northern spotted owls in all parts of the owl[rsquo]s range. See Forsman, Anthony, Meslow, Zabel. 2004. Diets And Foraging Behavior Of Northern Spotted Owls In Oregon. Journal of Raptor Research 38(3):214-230.

http://elibrary.unm.edu/sora/jrr/v038n03/p00214-p00230.pdf. Given the importance of flying squirrels to the diet of the spotted owl, managers must ensure that thinning does not significantly reduce the flying squirrel population, but recent evidence shows that thinning does in fact lead to a multi-decade decline in the number of flying squirrels. The agencies must leave significant untreated skips in order to mitigate for this significant adverse effect.

Manning et al (2012) found that the thinning is adverse to both flying squirrels and snags, and these effects may be related.

*
* Flying squirrel density positively associated with snag density
* Snags rare in thinned stands
* Thinning causes decrease in density-dependent mortality

[hellip]

*
* Canopy gaps = exposure to predators
* Tree trunks = safety

Tom Manning, Joan Hagar, Brenda McComb 2012 spotted owl prey workshop. Flying Squirrel Response to Thinning in the Oregon Cascades.

http://ecoshare.info/wp-content/uploads/2012/08/Commercial-thinning_flying-squirrels.ppt;

http://ecoshare.info/projects/central-cascade-adaptive-management-partnership/workshops/spotted-owl/. See also, Tom Manning, Joan C. Hagar, and Brenda C. McComb. 2011.

Thinning of Young Douglas-fir Forests Decreases Density of Northern Flying Squirrels in the Oregon Cascades, [FORECO9370, revised Aug 2011]
https://andrewsforest.oregonstate.edu/sites/default/files/lter/pubs/pdf/pub4783.pdf

Wilson & Forsman 2013 state ([ldquo]thinning reduces the abundance of some tree-dwelling rodents, especially Northern Flying Squirrels (Glaucomys sabrinus) and Red Tree Voles (Arborimus longicaudus), that are important prey species for Northern Spotted Owls (Strix occidentalis caurina).[rdquo] Wilson, Todd M.; Forsman, Eric D. 2013. Thinning effects on spotted owl prey and other forest-dwelling small mammals. In: Anderson, Paul D.; Ronnenberg, Kathryn L., eds. Density management for the 21st Century: west side story. Gen. Tech. Rep. PNW-GTR-880. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station: 79[ndash]90. https://www.fs.usda.gov/pnw/pubs/pnw_gtr880/pnw_gtr880_009.pdf.

[ldquo]Management strategies that involve tree removal, even ones designed to have positive long-term ecological effects, almost always result in reduced squirrel populations. A squirrel-predation connection explains this phenomena [hellip][rdquo] Wilson, T. 2010. Forest

structure is a good indicator of flying squirrel habitat. In Mazza, Rhonda 2010. 2010 Science Accomplishments Report of the Pacific Northwest Research Station. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 88 p.

https://web.archive.org/web/20170531140755/https://www.fs.fed.us/pnw/pubs/2010-science-accomplishments.pdf.

Red Tree Voles

Three habitat areas were designated following surveys in 2024, which excluded 18 acres of suitable habitat from shaded fuel break commercial thinning treatments per PDF Wildlife

10. Wildlife Report at 17. The report states that no RTV were detected in the communications tower thinning sites.

Project actions would result in the following impacts:

Commercial thinning for shaded fuel breaks and the Dead Mountain communications tower fuels treatments would remove about 51 acres of suitable habitat for red tree voles, representing a 1 percent decrease in the 4,676 acres of tree vole habitat within the project analysis area. Canopy cover in commercial thinning areas would decrease from 85 percent to 52 percent on average. Canopy cover post- treatment would be expected to increase up to 2 percent per year (Chan et al. 2006), suggesting that effects to tree vole habitat would likely last at least a few decades. No known active nest trees would be removed in the project area.

Wildlife Report at 17.

Habitat connectivity needs to be prioritized for red tree voles. Red tree voles are short-distance dispersers, so habitat patch size and contiguity are important for their viability. See Gaines WL, Lyons AL, Suring LH, Hughes CS. Ecosystem Conditions That

Influence the Viability of an Old-Forest Species with Limited Vagility: The Red Tree Vole. Animals (Basel). 2023 Mar 25;13(7):1166. doi: 10.3390/ani13071166. PMID: 37048422; PMCID: PMC10093472.

Where were suitable habitat areas designated following surveys? Did the agency consider maintaining higher levels of canopy cover between RTV habitat areas to provide refugia or facilitate dispersal between larger patches of habitat?

Riparian Reserves & Water Quality

Removing trees near streams, conducting roadwork, and allowing for wet weather haul risks degrading water quality.

1. Riparian Reserves

The project proposes thinning in Riparian Reserves, including 356 acres of RR thinning, 147 acres of no-harvest skips along streams, and 1,232 acres of upland thinning. EA at 34. The EA describes the RR stands proposed for thinning as [ldquo]previously managed, overstocked monocultures with structural characteristics that are outside the natural range of variability for this area.[rdquo] EA at 33.

The EA states that logging could occur as close as 30 feet from streams depending on its class, which raises concerns about both shade and wood recruitment. EA at 76 (PDF Aquatics 1).

Riparian reserves are naturally a fuel-rich condition, so intensive thinning is not desired. Non-commercial thinning of small trees might be okay in riparian reserves, but commercial removal of trees and or canopy reduction may not be consistent with the Aquatic Conservation Strategy, especially related to microclimate, stream temperature, and

long-term wood recruitment. The NEPA analysis should consider this.

Riparian vegetation is important in several ways: (a) it shades the water surface from direct solar insolation, (b) it shades soils and shallow groundwater before it is discharged to surface streams; (c) it reduces wind penetration and air mass mixing over the water surface, insulating the stream from summer daytime warming or winter night time cooling, and (d) it stabilizes streambanks and floodplain surfaces and provides a supply of downed wood that helps keep channels narrow and establishes and maintains internal hydrologic complexity (vertical and lateral flow exchange between surface water and hyporheic waters) that buffers stream temperature against the effects of solar insolation and airmass mixing.

Thinning in riparian reserves raises ambient air temperatures that the microclimate effects must be accounted for. Anderson, Paul D.; Larson, David J.; Chan, Samuel S. 2007. Riparian Buffer and Density Management Influences on Microclimate of Young Headwater Forests of Western Oregon. Forest Science, Volume 53, Number 2, April 2007 , pp. 254-269(16).
http://www.ingentaconnect.com/content/saf/fs/2007/00000053/00000002/art00012.

... concern about cumulative effects of thinning, which involves an understanding of the spatial and temporal dimensions of the issue in whole-stream networks. To address these cumulative effects we are studying experimental riparian thinning treatments in adjacent stream networks and forests managed by the Green Diamond Resource Company and the National Park Service (Redwood National Park) in northern California. Thinning was implemented in multiple locations, allowing us to evaluate effects of these local treatments in the context of larger stream networks. To track local treatments, we followed a before-after-control-impact approach to quantify spatial and temporal patterns of riparian shade, light, and stream temperatures as possible responses to riparian thinning. To evaluate how the potential effects of these local treatments resonate at broader extents, we have

quantified shade, light, and stream temperatures across entire networks. Spatial statistical models were applied to these data to determine the spatial extent to which localized thinning propagated through stream networks. Preliminary results fromtracking local treatments indicate an immediate response in stream temperatureassociated with the reductions in shade and increases in light associated with riparianthinning. At the network extent this resulted in variable downstream propagation of the effects of upstream thinning.

David Roon, Jason Dunham. 2018. Spatial Patterns of Riparian Shade, Light, and Stream Temperature in Response to Riparian Thinning in Redwood Headwater Streams. Speed Talks. 2018 Oregon Chapter of the American Fisheries Society 54th Annual Meeting. http://orafs.org/wp-content/uploads/2017/10/2018-Annual-Meeting-Abstracts.pdf

Climate change is expected to increase stream temperatures and reduce fish habitat quality and quantity. [ldquo]Riparian vegetation can potentially off-set future increases in water temperature [related to global climate change].[rdquo] Gordy Reeves, 4-22-2020 Presentation to the Oregon Board of Forestry.

https://www.oregon.gov/odf/board/bof/20200422-bof-handouts.pdf (p 63/132).

1. Road Construction & Maintenance

We urge the agency to avoid temporary road construction and wet weather haul due to concerns about increased sedimentation and negative water quality and aquatic habitat impacts. We encourage the district to utilize existing roads whenever possible and avoid constructing new temporary roads due to their lasting environmental impacts (sedimentation, habitat fragmentation, introduction of invasives).

The Forest Service road network is already massive and there is a significant backlog of road maintenance costs. We are concerned about the district[rsquo]s ability to maintain existing roads given current resources and capacity. Roads fragment landscapes and modify wildlife behaviors, increase likelihood of erosion and risk of landslides, introduce sediment to waterways, spread invasive weeds, increase risk of fire starts, and introduce trash. Even temporary roads carry these environmental harms.

Did the district analyze the need for road closure, storage, and decommissioning for the EA, which was included in the scoping notice? What were the resource specialist recommendations?

1. Wet Weather Haul

The timber industry wants the flexibility of hauling logs during wet weather, but it is NOT in the public interest to allow this practice. The public[rsquo]s water quality and the public[rsquo]s fish will be adversely affected. Sediment and turbidity produced by wet weather haul is an externality [ndash] a real cost created by the timber industry but not included on their balance

sheet or included in the price of wood products. By allowing wet weather haul, the agency is effectively shifting costs from the timber industry to the public. The agencies should be working for the public, not the timber industry. Hauling logs on wet roads is inconsistent with the Aquatic Conservation Strategy, especially where roads cross streams or are in riparian reserves, or where road drainage may be connected to streams.

The ACS prohibits activities that will retard attainment of ACS objectives, such as ACS Objective #5: [ldquo]Maintain and restore the sediment regime under which aquatic ecosystems evolved. Elements of the sediment regime include the timing, volume, rate, and character of sediment input, storage, and transport.[rdquo] The natural sediment regime is more episodic, but the sediment regime produced by modern forest management is chronic.

Mitigation and BMPs are partially effective at best. The district should reconsider allowing this practice.

1. Upper Willamette Spring Chinook

The EA states the project is likely to adversely affect Upper Willamette Spring Chinook present in the project area. EA at 59 (Table 18). Please provide documentation of consultation with National Marine Fisheries Services for Dead Mountain burn block and PCL activities. EA at 100.

Additional Project Actions

Earlier descriptions of this project included addressing resource damage at dispersed campsites, improving safe water access in the Salmon Creek Corridor, and reducing the agency[rsquo]s extensive road network, including the potential of decommissioning approximately four miles of roads and closing up to ten miles of roads. Scoping Notice at 3[ndash]4. We are aware that the current administration instructed districts to [ldquo]streamline[rdquo] project planning and prioritize timber production above the broad array of values for which the agency must manage public forests. These non-timber project actions had community support and dropping them from the project is disappointing. The district should aim to implement these portions of the initial project proposal when possible.

Each substantive issue discussed in these comments should be (i) incorporated into the purpose and need for the project, (ii) used to develop NEPA alternatives that balance tradeoffs in different ways, (iii) carefully analyzed and documented as part of the effects analysis, and (iv) considered for mitigation. Please provide us with timely notice of any forthcoming comment opportunities and any draft and final decisions on this project.

Thank you,

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