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Comments: Please see comments in the attachment.

Pacific Northwest Region Forest Service

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Comment on Northwest Forest Plan and Amendment DEIR1
We live in Humboldt County so are proximate to a number of the forests in the NWFP and live within the area covered by the plan.

We support the goals of the plan:

* Improving wildfire resistance and resilience across the NWFP area
* Strengthening the capacity of NWFP ecosystems to adapt to the ongoing effects of climate change.
* Improving conservation and recruitment of mature and old-growth forest conditions,
* ensuring adequate habitat for species dependent upon mature and old-growth ecosystems and supporting regional biodiversity.
* Incorporating Indigenous Knowledge into planning, project design, and implementation to achieve forest management goals and meet the Forest Service's general trust responsibilities.
* Providing a predictable supply of timber and non-timber products and other economic opportunities to support the long-term sustainability of communities located proximate to National Forest System lands and economically connected to forest resources.

However, the mechanisms chosen to implement these goals with respect to the first two goals (wildfires and climate change) are inadequate, primarily due to opening up more land to timber harvesting and the ways in which different strategies of fire prevention/resilience are distributed among different Alternatives. It is unfortunate that your Alternatives (B, C and D) preclude some much better combinations of choices.

Below, we reference the strategic elements of the Alternatives A - D that we find preferable. Then we provide documentation for why they should be preferred in the Plan.

The Alternatives
ACTIVE MANAGEMENT AND TIMBER HARVESTING

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1 https://usfs-public.app.box.com/v/PinyonPublic/file/1700454836831

It seems that you are including timber harvest under the term "economic sustainability through forest restoration." If so, Alternative C is clearly preferable as it opens up the least land to logging and salvage logging: "Alternative C would reduce the number of acres in active management, particularly in northern spotted owl habitat, and would prohibit salvage harvest in moist LSR stands and timber harvest in moist LSR stands older than 80 years." Fewer jobs also seems to be a practical indicator of reduced timber harvesting: "Alternative C would, in contrast, result in a reduction in jobs relative to the No Project Alternative" and Alternative B and D.

WILDFIRE PREVENTION AND RESILIENCE

Alternative B seems a better approach to the use of fire and thinning, focusing on protecting communities. "Proposed updates to the NWFP under Alternative B related to Fire Resilience address these basic facts by prioritizing wildfire fire risk reduction in areas that affect communities and infrastructure."

Other than protecting communities, our view follows that of professional foresters that active management should be restricted to "hot spots," that is, areas that are of strategic importance in preventing potentially extreme or severe fires on a landscape level. Overall this requires much less treatment. It would also focus on more prescribed and cultural fire since mechanical thinning alone is of limited value.

Ideally Alternative C would include both protecting communities and forest treatments limited to strategic areas for preventing extreme or severe fires (except in those areas which are ecologically adapted to severe fire.).

Documentation of Preferred Strategies (without additional reference to the Alternatives)
Thinning vs. prescribed fire.

Mechanical thinning is associated with logging and other economically questionable practices (pellet plants, biomass power). There is little evidence that thinning alone will achieve the goal of reducing fire severity. In multiple studies and recommendations,2prescribed burns appear to be most effective (alone

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2 Cansler, C. Alina, Van R. Kane, Paul F. Hessburg, Jonathan T. Kane, Sean MA Jeronimo, James A. Lutz, Nicholas A. Povak, Derek J. Churchill, and Andrew J. Larson. "Previous wildfires and management treatments moderate subsequent fire severity." Forest Ecology and Management 504 (2022): 119764. Banerjee, Tirtha. "Impacts of forest thinning on wildland fire behavior." Forests 11, no. 9 (2020): 918. Urza, Alexandra K., Brice B. Hanberry, and Theresa B. Jain. "Landscape-Scale Fuel Treatment Effectiveness: Lessons Learned from Wildland Fire Case Studies in Forests of the Western United States and Great Lakes Region." Fire Ecology 19, no. 1 (2023). https://doi.org/10.1186/s42408-022-00159-y. Stephens, Scott L., Daniel E. Foster, John J. Battles, Alexis A. Bernal, Brandon M. Collins, Rachelle Hedges, Jason J. Moghaddas, Ariel T. Roughton, and Robert A. York. "Forest restoration and fuels reduction work: Different pathways for achieving success in the S ierra N evada." Ecological Applications 34, no. 2 (2024): e2932. Davis, Kimberley T., Jamie Peeler, Joseph Fargione, Ryan D. Haugo, Kerry L. Metlen, Marcos D. Robles, and Travis Woolley. "Tamm review: A meta-analysis of thinning, prescribed fire, and wildfire effects on subsequent wildfire severity in conifer dominated forests of the Western US." Forest Ecology and Management 561 (2024): 121885. Prichard, Susan J., Paul F. Hessburg, R. Keala Hagmann, Nicholas A. Povak,

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or in conjunction with mechanical thinning). The conclusion is supported by analysis of individual fires, by on-the-ground managers in a consensus statement, and by academic researchers providing guidance for the field. In addition only fire is restorative: "Fire-less fuel reduction treatments rarely mimic the broad role of fire, which performs many cultural and ecological functions, e.g., nutrient cycling, facilitating tree regeneration by exposing mineral soils, promoting valued cultural and aesthetic resources. As a result, any area treated using mechanical fuel treatments alone rarely restores fire- adapted ecosystems."3

Logging as a fire prevention or resilience measure.

A study in Washington that encompassed 150 fires over a 20-year period found that some areas "are fire refugia, and that, as in other studies, treatment that include prescribed fires were most effective, that prior logging could increase intensity of wildfires "4 And: "Tree

plantations have long been a debated aspect of forest management, and more recently, climate change mitigation. Planting after harvest to increase forest productivity were the central justifications for past clearcut logging, even as a growing body of science demonstrated that plantations (1) did not provide the needed ecological structures or functional diversity of old- growth forests, (2) were not necessarily more productive than mature forests, and (3) without surface fuel treatment, could be conducive to high-severity wildfires. Similarly, planting seedlings after post-fire salvage logging is sometimes used to expedite tree regeneration following high-severity fire. Without strategic management, post-fire plantations may be overstocked, dominated by a single species, lack tree clumping and canopy gaps, and pose significant wildfire hazard particularly without post-harvest slash reduction."5

In addition, clear-cutting precludes the effective practice of leaving a substantial number of large trees in each treated area.6

Strategic fire treatments.

"A comparison of random vs. strategically placed treatments showed that a significant reduction in area could be achieved with strategic placement, where that opportunity exists..... Quantifying the probability of high-severity wild-fire across a given landscape and focusing thinning treatments on high-probability areas can decrease the required treatment area by >50%. However, the success of these strategies

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Solomon Z. Dobrowski, Matthew D. Hurteau, Van R. Kane et al. "Adapting western North American forests to climate change and wildfires: 10 common questions." Ecological applications 31, no. 8 (2021): e02433. We have removed the citations from the quotations. To see the evidence for the conclusions, please refer to the original paper.

3 Prichard, Susan J., Paul F. Hessburg, R. Keala Hagmann, Nicholas A. Povak, Solomon Z. Dobrowski, Matthew D. Hurteau, Van R. Kane et al. "Adapting western North American forests to climate change and wildfires: 10 common questions." Ecological applications 31, no. 8 (2021): e02433. We have removed the citations from the quotations.

4 Cansler, C. Alina, Van R. Kane, Paul F. Hessburg, Jonathan T. Kane, Sean MA Jeronimo, James A. Lutz, Nicholas A. Povak, Derek J. Churchill, and Andrew J. Larson. "Previous wildfires and management treatments moderate subsequent fire severity." Forest Ecology and Management 504 (2022): 119764.

5 Prichard, Susan J.,op sit.

6 Gaines, William L., Paul F. Hessburg, Gregory H. Aplet, Paul Henson, Susan J. Prichard, Derek J. Churchill, Gavin M. Jones, Daniel J. Isaak, and Carly Vynne. "Climate change and forest management on federal lands in the Pacific Northwest, USA: Managing for dynamic landscapes." Forest Ecology and Management 504 (2022): 119794.

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depends on maintaining the treatments and reintroducing fire to a larger portion of the landscape." 7 Fortunately high priority areas in all of the NW Forest Plan areas have been mapped.8 Protection of the Wildlife Urban Interface should lead to prioritizing treatments near population centers.9

Importance of limiting timber harvesting for the climate

Timber harvest has an enormous effect on greenhouse gas sequestration. Tim Searchinger, Princeton climate researcher, recently published an estimate of timber harvesting carbon costs worldwide in Nature using a model that aligns assumptions about forest carbon with climate science.10 The counterfactual is that forests are left to grow without harvesting (See Figure 1 below on carbon sequestration parity). The basic finding is that:

[F]orest harvests between 2010 and 2050 will probably have annualized carbon costs of 3.5-4.2 Gt CO2e yr[minus]1, which approach common estimates of annual emissions from land-use change due to agricultural expansion.

These timber harvesting carbon costs have been studied in detail in two nearby California counties within the Northwest Forest Plan area. Talberth found11 that "Using a life-cycle carbon footprint method... GHG emissions associated with logging and logging roads in Shasta and Siskiyou counties averages over 4 million metric tons CO2 equivalent per year." The EPA12 currently values the Social Cost of Carbon at $190 per metric ton, so one year of logging in these small counties alone cost $788,000,000 in future climate damages, far more than any present economic value of the practice. The counterfactual of forests left to grow should be the acknowledged baseline for the NWFP DEIR analysis, and the future costs of emissions should be provided in your climate analysis.

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7 Prichard, Susan J., Paul F. Hessburg, R. Keala Hagmann, Nicholas A. Povak, Solomon Z. Dobrowski, Matthew D. Hurteau, Van R. Kane et al. "Adapting western North American forests to climate change and wildfires: 10 common questions."

8 Peeler, Jamie L., Lisa McCauley, Kerry L. Metlen, Travis Woolley, Kimberley T. Davis, Marcos D. Robles, Ryan D. Haugo et al. "Identifying opportunity hot spots for reducing the risk of wildfire-caused carbon loss in western US conifer forests." Environmental Research Letters 18, no. 9 (2023): 094040. Also see: Daum, Kristofer L.,

Winslow D. Hansen, Jacob Gellman, Andrew J. Plantinga, Charles Jones, and Anna T. Trugman. "Do vegetation fuel reduction treatments alter forest fire severity and carbon stability in California forests?" Earth's Future 12, no. 3 (2024): e2023EF003763. And CalFIRE has mapped fire hazard zones across most of California

9 This is not a trivial concern. In 2020 in California 10,000 structures were damaged or burned. Bayham, Jude, Jonathan K. Yoder, Patricia A. Champ, and David E. Calkin. "The economics of wildfire in the United States." Annual Review of Resource Economics 14, no. 1 (2022): 379-401.

10 Peng, Liqing, Timothy D. Searchinger, Jessica Zionts, and Richard Waite. "The carbon costs of global wood harvests." Nature 620, no. 7972 (2023): 110-115.

11 Climate Impacts of Logging and Wood Products in Shasta and Siskiyou Counties, California. Prepared for Battle Creek Alliance, August 2024 By John Talberth, Ph.D. Senior Economist, Center for Sustainable Economy

12 https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.epa.gov/environmental-economics/scghg&ved=2ahUKEwjbqP201b6KAxUIOTQIHbKmCkkQFnoECAoQAQ&usg=AOvVaw0Ejdkvnq22PD2rgT NwtS69

Summary

1. The Plan contains laudable goals
2. The Plan is made difficult to comment on by how strategies are distributed among the Alternatives. These do not cohere into consistent packages that commenters can support. A better approach might be to ask for comments on the individual strategies and only put them together into a scenario when the favored strategies have emerged.
3. We have provided at least minimal documentation for the combination of strategies we prefer and hope will be incorporated into the Plan. Namely:

* Focus wildfire prevention and resilience on communities and on hot spots of strategic importance in limiting severe wildfires; recognize that logging is not a wildfire treatment but a wildfire problem.
* Prioritize prescribed and cultural fire for forest treatments, with limited use of mechanical thinning.
* Sequester far more carbon by limiting timber harvesting to current levels or lower.

Thank you for the opportunity to comment.

350 Humboldt Steering Committee

ATTACHMENT-LETTER TEXT: Letter on the Northwest Forest Plan Amendment DEIR.pdf; This is the same content that is coded in text box; it was originally included as an attachment