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Re: Request for Information on Federal Mature and Old-Growth Forests (Executive Order 14072) #NP-3239

Please accept the following comments on mature and old-growth forests from Cascadia Wildlands in response to the Request for Information on Federal Mature and Old-Growth Forests, available at <https://www.federalregister.gov/documents/2022/07/15/2022-15185/request-for-information-rfi-on-federal-old-growth-and-mature-forests>.

Cascadia Wildlands represents approximately 12,000 members and supporters throughout the United States. Cascadia Wildlands is a nonprofit conservation organization with a mission to defend and restore Cascadia's wild ecosystems in the forests, in the courts, and in the streets. We envision vast old-growth forests, rivers full of salmon, wolves howling in the backcountry, and vibrant communities sustained by the unique landscapes of the Cascadia Bioregion.

Protecting our remaining mature and old-growth forests on federally-managed public lands is one of the simplest and most cost-effective climate policies the United States can implement. As the climate and biodiversity crises grow exponentially worse, it is critical that the Forest Service and Bureau of Land Management act urgently to fulfill the President's directive to provide lasting protections for these ecosystems. We look forward to contributing to the agencies' definition framework for mature and old-growth forest and support processes to establish comprehensive, lasting protections for these ecosystems. However, current logging of mature and old-growth forests must stop while these processes unfold.

Take, for example, the egregious Flat Country Timber Project, which proposes to clearcut over 1,000 acres of mature and old-growth trees up to 170 years old in western Oregon's Willamette National Forest. With units directly adjacent to the Mt. Washington Wilderness, this cherished area provides habitat for imperiled species like the Northern spotted owl, crucial carbon storage, and the source of drinking water for tens of thousands of people downstream. Neither we nor the generations that will follow can afford to lose these forests and the many values they represent; mature and old-growth forests are worth far more standing.

Definition Framework and Inventory Process

For the purpose of protecting these climate-critical forests from logging, definitions of mature and old-growth forests must be conservative, science-based, and regionally-focused. We support using a benchmark of 80 years or older to define nature forests, which would set a protective floor to effectively safeguard our most climate- and carbon-critical forests.¹ These forests collectively contain the bulk of the carbon already stored in federally-managed public forests and they continue to sequester carbon at high rates.² They also provide vital habitat and biodiversity benefits across forest types,³ help maintain greater stream flows,⁴ and support important sources of drinking water for communities.⁵ Protecting mature forests and trees today will provide the foundation to recover old-growth ecosystems that have largely been decimated by logging across the landscape. It is far better to overestimate than underestimate remaining mature and old growth forest and establish protections accordingly.

The definition framework for mature and old-growth must capture the unique and dynamic nature of forest ecosystems, adequately account for disturbances, and allow room for adaptation.⁶

¹ Stephenson, N., Das, A., Condit, R. et al. *Rate of tree carbon accumulation increases continuously with tree size*. *Nature* 507, 90–93 (2014). <https://doi.org/10.1038/nature12914> (older forests continue to sequester store large amounts of carbon in the largest trees and soils as they age).

² Olga N. Krankina, Mark E. Harmon, Frank Schneckenger & Carlos A. Sierra, *Carbon balance on federal forest lands of Western Oregon and Washington: The impact of the Northwest Forest Plan*, 286 *FOREST ECOLOGY AND MGMT.* 171 (2012), <https://www.sciencedirect.com/science/article/abs/pii/S0378112712005129>; James R. Stritholt, Dominick A. DellaSala & Hong Jiang, *Status of Mature and Old-Growth Forests in the Pacific Northwest*, 20 *CONS. BIO.* 2, 363 (2006) <https://pubmed.ncbi.nlm.nih.gov/16903097/>; Olga N. Krankina, Dominick A. DellaSala, Jessica Leonard & Mikhail Yatskov, *High-Biomass Forests of the Pacific Northwest: Who Manages Them and How Much is Protected?* *ENVT'L MGMT.* (June 2014), <https://pubmed.ncbi.nlm.nih.gov/24894007/>.

³ Jones, Gavin M.; Keane, John J.; Gutiérrez, R. J. and Peery, M. Zachariah, *Declining old-forest species as a legacy of large trees lost*, *Diversity and Distributions*, March & April 2018, Vol. 24, No. 3/4 (March & April 2018), pp. 345-355, https://www.researchgate.net/publication/320677692_Declining_old-forest_species_as_a_legacy_of_large_trees_lost (“Strengthening protections for remaining large old trees and promoting their recruitment in the future will be critical for biodiversity conservation in the world's forests.”); Betts, Matthew G., et al., *Old-Growth Forests Buffer Climate-Sensitive Bird Populations from Warming*, *Diversity and Distributions*, vol. 24, no. 4 (2017) pp. 439–447, <https://doi.org/10.1111/ddi.12688> (Old-growth forests helped reduce and reverse the impacts of warming and population decline on two species of birds. Thermal conditions beneath forest canopies are typically less extreme (cooler in hot climates and warmer in cold climates) than those in open habitats and may have higher food and nest site availability.); Wolf, Christopher, et al., *Temporal Consistency of Undercanopy Thermal Refugia in Old-Growth Forest*, *Agricultural and Forest Meteorology*, Elsevier (July 2021) <https://www.sciencedirect.com/science/article/abs/pii/S0168192321002045> (study finding microrefugia to be more prominent in old-growth, showing that biodiversity requires old growth).

⁴ Perry, T.D., Jones, J.A, *Summer streamflow deficits from regenerating Douglas-fir forest in the Pacific Northwest, USA*, *Ecology* 10:1-13 (2017), <https://andrewsforest.oregonstate.edu/publications/4981>.

⁵ Patric Brandt, David J. Abson, Dominick A. DellaSala, Robert Feller & Henrik von Wehrden, *Multifunctionality and biodiversity: Ecosystem services in temperate rainforests of the Pacific Northwest, USA*, 169 *BIODIVERSITY CONS.* 362 (2014), <https://www.oregon.gov/odf/ForestBenefits/Documents/Forest%20Carbon%20Study/Reference-biological-conservation.pdf>.

⁶ Kneeshaw, Daniel, and Sylvie Gauthier, *Old Growth in the Boreal Forest: A Dynamic Perspective at the Stand and Landscape Level*, *Environmental Reviews*, vol. 11, no. S1 (2003) <https://doi.org/10.1139/a03-010> (“If we are serious

Structural complexity shown by an abundance of old-growth attributes (e.g. large trees, snags, and accumulated woody debris) can be used as a proxy for old-growth forest mapping. Ecological complexity should be used to identify older forests to complement age thresholds, especially in forests that experience more frequent natural disturbances.⁷

When developing a mature and old-growth forests inventory, utilize forest inventory and mapping data that has already been gathered. Mapping is necessary to determine how much mature and old-growth forest remains, where it is located, who manages it, how much is currently protected and/or in need of greater protections, and what values those forests possess. Identification processes should consider the edge influence of historical harvesting near mature and old-growth boundaries, as past clearcuts are shown to alter the ecosystem function and structure of neighboring intact older forests.⁸ Collaboration with state and tribal land-managers, academic researchers, private landowners, and impacted communities is central to the inventory development process.

Logging Threatens Remaining Mature and Old-Growth

Threats to remaining mature and old-growth forests should not be misrepresented. A recent USDA Secretarial Memorandum inaccurately claimed that “[a] primary threat to old-growth stands on national forests is no longer timber harvesting, but rather catastrophic wildfire and other disturbances resulting from the combination of climate change and past fire exclusion.”⁹ Indeed, logging projects that target fire-resistant mature and older growth forests are proposed under the guise of “restoration,” “hazardous fuels reduction,” and “wildfire mitigation.” This represents an alarming and inaccurate assessment of threats to mature and old-growth forests. Uncharacteristically severe wildfire is very largely driven by small trees and brush, not big, fire-resistant trees that have survived for generations. Further, scientific research indicates that logging of federal forests is a major source of carbon dioxide emissions to the atmosphere that is

about conserving biodiversity, we must develop a management strategy that contains both even-aged and uneven-aged management systems that are defined in a regional context, and combined with a conservation strategy that ensures maintenance of all developmental stages.”); Johnston, James D, et al., *Conservation of Dry Forest Old Growth in Eastern Oregon*, OUP Academic, Oxford University Press (May 2021) <https://academic.oup.com/jof/article-abstract/119/6/647/6287588?redirectedFrom=fulltext#no-access-message> (outlining an adaptive management strategy to conserve dry forest old growth that seeks to restore the ecological processes that perpetuate old tree populations over time).

⁷ Barros, Luizmar de Assis, and Ché Elkin, *An Index for Tracking Old-Growth Value in Disturbance-Prone Forest Landscapes*, Ecological Indicators, Elsevier (2020) <https://www.sciencedirect.com/science/article/pii/S1470160X20311146>.

⁸ Bell, David M.; Spies, Thomas A.; and Pabst, Robert, *Historical harvests reduce neighboring old-growth basal area across a forest landscape*, Ecological Applications, Vol. 27, No. 5 (2017), pp. 1666-1676, <https://www.jstor.org/stable/26294516> (Western Oregon-based study showing that clearcutting can alter the understory microenvironment in a neighboring old-growth forest at distances of ten to hundreds of meters into intact old-growth forest).

⁹ Secretary’s Memorandum 1077-004, “Climate Resilience and Carbon Stewardship of America’s National Forests and Grasslands,” June 23, 2022, available at <https://www.usda.gov/directives/sm-1077-004>.

at least comparable to, and probably greater than, levels associated with wildfires.¹⁰ Long-lasting protections for carbon-storing old-growth forests are the answer, and federal agencies have the ability to include ecologically-appropriate fire risk reduction and investments in community preparedness in those protections.

Moreover, heightened risk from wildfires that are intensifying due to climate change does not remove logging as a threat. That fact that federal agencies continue to propose new mature and old-growth logging and aggressively conduct post-fire logging—exacerbating the damage caused by fire by releasing remaining stored carbon, disturbing sensitive soils, and introducing non-native invasive plant species—is inconsistent with President Biden’s Executive Order on Strengthening the Nation’s Forests, Communities, and Local Economies (EO 14072) as well as the Executive Order on Tackling the Climate Crisis at Home and Abroad (EO 14008, otherwise known as 30x30). Our forest management frameworks must accurately address the threats of continued logging amidst evolving climate impacts and heightened wildfire risk.¹¹

Conclusion

If the Biden Administration is to do all it can—and must—to limit atmospheric carbon levels and demonstrate international leadership, protections for mature and old-growth forests must be established through binding regulations that will endure in future administrations, much like the Clinton-era Roadless Rule. To ensure a rule can be adopted on the necessary urgent time frame and with opportunity for robust public engagement and environmental review, it is critical for federal agencies to initiate a rule-making process as soon as possible.

In summary, we urge the Forest Service and Bureau of Land Management to work together to initiate a rulemaking based on a conservative, science-based definition of mature forests that are 80 years or older to permanently end the avoidable loss of their critically important carbon, water, and wildlife values to logging. In the interim, both agencies must cease proposing new logging in mature and old-growth forests and rescind decisions authorizing logging in these forests.

¹⁰ Harris, N.L., Hagen, S.C., Saatchi, S.S. et al., *Attribution of net carbon change by disturbance type across forest lands of the conterminous United States*, Carbon Balance Manage 11, 24 (2016), <https://doi.org/10.1186/s13021-016-0066-5> (Nationwide emissions from logging were five times greater than wildfires, insects, and storms combined.)

¹¹ See Blumm, Michael C., et al., *The World's Largest Ecosystem Management Plan: The Northwest Forest Plan after a Quarter-Century*, SSRN Electronic Journal (2021), <https://doi.org/10.2139/ssrn.3911432> (Discussing the Northwest Forest Plan and offering recommendations to end salvage fire logging, logging of old-growth, and logging of mature forests. “As wildfire continues to affect old-growth forests within the range of the northern spotted owl, if the government continues to convince courts not to enjoin salvage sales on the unproven ground salvage logging helps prevent future wildfires, the integrity and viability of the NFP’s LSR network will be undermined.” (at 47)); Gaines, William L., et al., *Climate Change and Forest Management on Federal Lands in the Pacific Northwest, USA: Managing for Dynamic Landscapes*, Forest Ecology and Management, vol. 504, 2022, p. 119794, <https://doi.org/10.1016/j.foreco.2021.119794>; Moomaw WR, Masino SA and Faison EK, *Intact Forests in the United States: Proforestation Mitigates Climate Change and Serves the Greatest Good*, Front. For. Glob. Change 2:27 (2017), doi: 10.3389/ffgc.2019.00027 (growing existing forests intact to their ecological potential (“proforestation”) is an effective, immediate, and low-cost approach that could be mobilized across suitable forests of all types).

Sincerely,

A handwritten signature in cursive script that reads "Grace Brahler".

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