

June 13th, 2022

Sent by electronic and regular mail

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Cc: Linda Heath, Deborah McGlothlin, Roy Barbour

RE: Best practices for protecting mature and old-growth forests on federal lands

Dear Secretary Vilsack, Secretary Haaland, Mr. French, and Ms. Sanchez:

President Biden signed Executive Order 14072 to advance a science-based strategy for conserving US forests for their climate, biodiversity, and community benefits. As part of that strategy, the USDA and USDI have been tasked with completing an inventory of mature and old-growth forests on federal lands and developing policies to reduce threats. The EO also calls for a robust public input process as those policies are developed. With that in mind, the undersigned organizations and individuals are writing to express their interest in engaging with USDA and USDI staff to help define what forests should be included in the inventory, what added value this new inventory process can create, key threats to these forests, and what policies should be implemented to reduce these threats. Below are a few initial recommendations we hope will be addressed during both the inventory and policy development phases of your work:

Defining mature and old-growth forests

One of the most acceptable and trackable definitions of mature forests are those that have reached their maximum growth potential, or culmination of mean annual increment (CMAI). This is also the age at which carbon sequestration is maximized. The age at which this

happens varies considerably and can range from 40 to 130 years depending on the species and site-specific factors (1). Defining mature forests in this way will help protect the communities of wildlife, fish and plants that have evolved to depend on mature stands of different types in different places with different maturity ages. Old-growth forests are those that have aged enough to acquire telltale characteristics, such as large, old trees, snags, downed logs in multiple stages of decay, multi-storied canopies and a large diversity of ecological niches and species that depend on these niches (2).

Building on existing inventories and concentrate on gaps

While we applaud efforts to inventory mature and old-growth forests we also want to be sure that the USDA and USDI are not reinventing the wheel and ignoring the many rigorous ground based, aerial, and satellite inventories that already exist. For example, Wild Heritage, collaborating with Griffith University in Australia and the Woodwell Climate Research Center, has completed an inventory already. In addition, the extent of these forests, their integrity, and their management status has been well documented in a number of regional, national and global studies. We hope that the USDA and USDI will use this opportunity to add value to rather than replace those inventories, such as by improving their spatial resolution or addressing forest types that have not been well-studied. Most of the publications associated with these inventories specify next steps for improving their accuracy and expanding their scope (3,4). The USDA and USDI should partner with these independent researchers to implement those recommendations.

Moratorium on federal projects that destroy or degrade mature and old-growth forests

Mature and old-growth forests represent just a fraction of the nation's forested landscape and their historical extent- we already know this. According to your 2017 Forest Resources of the United States mature forests of 100 years in age and up represent just 66.5 million out of 514.4 million acres across all ownerships in the US (5). This share (13%) is far below the historical extent of mature and old-growth, which typically represented the spatial majority of most forest types (6).

Given this, we ask that you mirror what the Administration did for oil and gas drilling on public lands (EO 140008) and place a moratorium on federal projects that would log mature and old growth forests until long term management plans can be put in place to ensure recovery of these endangered ecosystems. We ask that this moratorium also halt post-fire logging proposals in mature and old-growth forests that recently experienced wildland fire, given the well-documented high biodiversity and carbon storage in such post-fire habitat. Many of the signatories to this letter are now compiling information on such federal projects on national forest and BLM managed lands and we look forward to meeting with you soon to review urgent priorities.

Late successional reserves on all federal forestlands

The federal strategy for protecting mature and old growth forests should not stop at what now exists but rather should seek to restore the extent of these forests back to their natural abundance and distribution on the landscape. Forest plans should designate and manage late successional reserves (LSRs) – much like they do in the Pacific Northwest – for development and maintenance of late successional forest conditions in perpetuity. These reserves can be strategically located to maximize their contribution to carbon storage and biodiversity goals (7). The Chief of the Forest Service and Director of the Bureau of Land Management can issue interim national directives to accomplish this now, followed by amendments to planning regulations to ensure that LSRs are a required component of forest plans as they are revised over the next decade (8).

Logging will not protect mature and old-growth forests from wildfires

We are concerned that the USDA and USDI are continuing to embrace false narratives and allocate billions of taxpayer dollars to commercial logging projects that increase, rather than decrease wildfire risk. Protecting mature and old growth forests from wildfires means no commercial logging in and around these stands because such logging puts more flammable slash on the ground, opens up canopies to the hot sun, increases wind speeds that fan the flames, and increases human access, which is by far the number one cause for most ignitions. The most comprehensive study of western wildfires ever conducted consistently found that fire severity and rate of spread is far greater in logged areas and timber plantations than the unmanaged areas where most mature and old growth stands exist (9).

In Oregon's recent megafires, it was the timber plantations, mostly found on private lands, and not mature and old growth forests on federal lands that burned most intensely and presented the biggest risks to nearby communities (10). Moreover, "thinning" kills far more trees than it prevents from being killed in mature and old-growth forests, and thinning results in far higher carbon emissions per acre than wildfire alone (11). As such, the policies you select for protecting mature and old growth forests should not include commercial logging in these stands but rather a range of activities – like decommissioning roads and removing invasive species – to minimize risks from large-scale fires.

Comprehensive evaluation of threats

Lastly, we want to make sure that the full range of threats to mature and old growth forests are addressed in this process. Logging, grazing, mining, oil and gas development, roads, infrastructure, invasive species, off road vehicle use, fire suppression and timber poaching are some of the human activities of most concern. In addition, edge effects caused by logging and development on adjacent parcels of state and privately held lands should be considered in the evaluation of threats, which can be mitigated through financial incentives, changes to right of way agreements, or land acquisition to help establish buffer zones around mature and old growth stands you identify and propose for protection (12).

Thank you for the opportunity to share our concerns and recommendations with you. We look forward to engaging with you over the next year as this critically important process unfolds.

Sincerely,

Agh Tim

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4. Grantham, H.S., Duncan, A., Evans, T.D., et al. (2021). Anthropogenic modification of forests means only 40% of remaining forests have high ecosystem integrity. Nature Communications, <u>doi.org/10.1038/s41467-020-19493-3</u>.

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6. See, e.g. Wimberly, M.C., Spies, T.A., Long, C.J., Whilock, C.W., 2000. Simulating historical variability in the amount of old forests in the Oregon Coast Range. Conservation Biology 14(1): 167-180; D'Amato, A., Catanzaro, P., 2007. Restoring Old-Growth Characteristics. Amherst, MA: University of Massachusetts and the Nature Conservancy.

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8. For example, CFR 219(a)ii can be succinctly modified to read "....the plan must include plan components to maintain or restore: (i) Key characteristics associated with terrestrial and aquatic ecosystem types; (ii) Rare aquatic and terrestrial plant and animal communities; (iii) The diversity of native tree species similar to that existing in the plan area, and [new language] (*iv*) Late successional forests back to their historical distribution and extent."

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11. Bartowitz, K.J., Walsh, E.S., et al., 2022. Forest Carbon Emission Sources Are Not Equal: Putting Fire, Harvest, and Fossil Fuel Emissions in Context. Front. For. Glob. Change, doi.org/10.3389/ffgc.2022.867112.

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