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On July 15, 2022 the Biden Administration published a [Request For Information](#) (RFI) in the Federal Register, seeking input on the development of a definition for old-growth and mature forests on Federal lands and requesting public input on a series of questions. This letter is response to the RFI from [Friends of the Clearwater](#) (FOC), whose mission includes protecting the ecosystems of the Wild Clearwater Country in which many old growth and mature forests are still found, and also from Alliance for the Wild Rockies (AWR).

Introduction

The stated purpose of the RFI is to take a step toward implementing President Biden’s April 22, 2022 [Executive Order](#) (E.O.) 14072: “Strengthening the Nation’s Forests, Communities, and Local Economies.” Along with other policy statements E.O. 14072 “calls on the Secretaries of Agriculture and the Interior, within one year, to define, identify, and complete an inventory of old-growth and mature forests on Federal lands, accounting for regional and ecological variations, as appropriate, and making the inventory publicly available.”

We appreciate the Biden Administration’s pursuit of conservation goals in E.O. 14072, however in calling for old-growth definitions and inventories the RFI is largely reinventing the wheel. It quotes a generic old-growth definition from the Forest Service Chief’s 1989 letter to Regional Foresters entitled “[Position Statement on National Forest Old Growth Values](#)” while omitting highly relevant details of that letter, in which the Forest Service Chief directed Regional Foresters:

Regions with support from Research shall continue to **develop forest type old growth definitions, conduct old growth inventories**, develop and implement silvicultural practices to maintain or establish desired old growth values, and explore the concept of ecosystem management on a landscape basis.

(Emphasis added.) So one would expect regional definitions of old growth to have been developed long ago, and to our knowledge they have (*see e.g.* Green et al., 1992; Hamilton, 1993

for the Northern and Intermountain Regions, respectively). The inventories' scientific veracity might be debated, which to its credit the RFI invites, however the purpose of the definitions was for use in completing inventories. But this is where agency obstructionism and failure really kicked in. In short, E.O. 14072 would not be needed to tell the Forest Service to conduct old-growth inventories if the agency had done what it was mandated to do 33 years ago.

The Forest Service Northern Region provides an example of noncompliance and inconsistency. Fourteen years after the Chief's directive, the inventory status differed from Forest to Forest, with varying levels of completion ([Juel, 2003](#)).

A prime example of the Forest Service dragging its feet on old-growth inventories is the Nez Perce National Forest (NPNF). The NPNF's 1987 Forest Plan required the agency to "Inventory, Survey and Delineate Old-Growth Habitat" by 1990. Thirty-three years later FOC requested the NPNF's complete old-growth inventory, intending to calculate forestwide old-growth acreage, map its location for public display, and check for overlap of old growth with proposed logging locations. We received a database, but because of ambiguities in the data and since our calculations using the data showed less than one percent old growth on the entire NPNF, we assumed our calculations were incorrect. So we had a conference call with agency officials to shore up our data interpretation. Unfortunately the appropriate Forest Service specialists were not present, so we requested a follow-up meeting with agency staff who could explain in detail the data and the status of the NPNF old-growth inventory. At that point, Forest Supervisor Cheryl Probert refused, saying she had higher priorities than meeting with FOC.

Subsequently, FOC brought a lawsuit against the Forest Service in regards to two huge timber sales on the NPNF, claiming their incomplete old-growth inventory was preventing the agency from complying with old-growth standards in the Forest Plan. In June of this year, a federal court ruled in our favor, issuing an [injunction](#) on the two timber sales.

In another display of agency intransigence, in July Forest Supervisor Matt Anderson of the Bitterroot National Forest (BNF) publicly stated his refusal to conduct the inventory required by the Executive Order. In the context of a [Forest Plan Amendment](#) specific to old growth, he states: "Due to the dynamic nature of stand progression, a **forest-wide stand delineation of old growth will not be provided**. Old growth is not a static state; natural disturbances such as windstorms, wildfire, insects and diseases can move a stand from one successional stage to another" (emphasis added). Since Supervisor Anderson also claims that Forest Plan amendment "will also comport with Executive Order 14072, which provides agency-wide direction for an inventory of old growth and mature forest" we are left wondering if the Forest Service genuinely welcomes input on the questions posed in the RFI.

BNF Supervisor Anderson's statement also asserts the National Forest Inventory and Analysis (FIA) is "what is being used for the national inventory effort." He is referring to the inventory that is to follow from E.O.14072. Regarding FIA data for inventorying old growth, there are significant methodological flaws, one of those being that the FIA data do not determine the size of any particular stand of old growth or mature forest. Concerning the FIA, Bollenbacher et al., 2009 (a Forest Service Northern Region report) state: "All northern Idaho plots utilized a primary sample unit composed of four fixed radius plots with trees ...21.0 inches DBH and

larger tallied on a ¼ acre plot” (emphasis added). Also, Czaplewski, 2004 (another Northern Region report) states, “Each FIA sample location is currently a cluster of field sub-plots that collectively cover an area that is nominally **one acre in size**, and FIA measures a probability sub-sample of trees at each sub-plot within this cluster” (emphasis added). Clearly, with FIA sampling only small plots, the data would not inform an inventory conforming to an ecological definition of old growth. Some Northern Region national forests suggest or require a 300-acre stand be managed as old-growth habitat for the pileated woodpecker, a species needing very large snags or trees with defect for excavation of nest cavities. FIA data do not reliably measure ecologically functioning old growth, so its use for conducting inventories to meet the E.O. conservation and biological diversity goals would be inappropriate.

So our experiences with Northern Region national forests make us skeptical that federal land management agencies will genuinely be “making the inventory publicly available” as required by the E.O. For decades the Forest Service and Bureau of Land Management (BLM) have been pumping out propaganda to instill fear of forests (“risk of catastrophic fire”) and characterize them as unhealthy (“overly dense”, “infested with insects” etc.) or otherwise aesthetically distasteful so citizens don’t challenge the agencies’ industrial logging agenda. These bureaucrats don’t want citizens to visit their forests and learn for themselves how “old growth is valuable for a whole host of resource reasons such as habitat for certain animal and plants, for aesthetics, for spiritual reasons, for environmental protection, for research purposes, for production of unique resources such as very large trees” (quoting from the 1989 Forest Service Chief’s Position Statement on National Forest Old Growth Values).

The RFI and E.O.14072 also fail to identify and acknowledge the biggest threat to mature and old-growth forests on federal public lands—logging. Therefore in particular to the RFI, the purpose of inventorying these forests is unclear.

We want to make another point before responding to the five questions. Whereas the E.O. emphasizes the positive attributes of forests in general, the RFI too narrowly focuses on old-growth and mature forests, failing to acknowledge the one issue that affects pretty much all others we face in contemplating going forward—that being the climate emergency. It’s not that old-growth and mature forests are unimportant considerations for the climate and conservation—indeed we acknowledge forests’ vital functions in our responses to the five questions. However the system of federal public lands also includes a vast extent of lands that are not forested, would likely never feature forests, yet still play extremely important conservation and climate roles. [Kauffman et al., 2022](#) explain how livestock use on federal public lands in western states exacerbates climate change. In sum, livestock grazing is a huge source of greenhouse gas emissions and severely harms the capability of the grazed lands to sequester carbon.

The five questions

The RFI requests input on five questions, restated below. As our responses indicate, we believe the questions fail to place mature and old-growth forests in the proper ecosystem and climate stabilizing contexts, suggesting this RFI exercise may be part of a veiled attempt to validate failing status quo government policies.

1. *What criteria are needed for a universal definition framework that motivates mature and old-growth forest conservation and can be used for planning and adaptive management?*

First, we reject the phrase in this question “used for planning and adaptive management” because those terms are used almost exclusively by the Forest Service and BLM to prioritize logging and other resource extraction. If the government was implementing “adaptive management” with any scientific veracity it would have ended logging, mining, grazing, and other resource extraction on public lands long ago because, as the science shows, those activities heavily contribute to worsening the climate and biodiversity crises we now face.

The criteria must capture the wide range of traditional publicly shared values, to restore a balance from the current situation where the value of timber from mature and old forests dominates. In other words, the criteria must emphasize much higher priorities for “...habitat for certain animal and plants, for aesthetics, for spiritual reasons, for environmental protection, for research purposes, for production of unique resources such as very large trees” (again, quoting from the 1989 Forest Service Chief’s Position Statement on National Forest Old Growth Values).

It takes most old growth a minimum of 150 years to develop, depending on geographic location. However this doesn’t mean stands of burned trees or seedlings have no bearing on old-growth values for the purposes of E.O. 14072. As we discuss below, forest stands are components of old-growth ecosystems, and recognition of the complexity of ecosystems must be a part of the framework. To meet the conservation goals of E.O. 14072 the framework must value habitat diversity and landscape connectivity from a conservation biology perspective, as discussed more fully in response to question #3.

2. *What are the overarching old-growth and mature forest characteristics that belong in a definition framework?*

Note that our response to question #1 necessarily reframes and also responds to this question. Furthermore, a value the 1989 Chief’s Position Statement on National Forest Old Growth Values did *not* anticipate is forests’ contributions toward a stable climate. Given the dire climate crisis in which we find ourselves, and in order to serve all other values, the overarching criteria must examine the carbon sequestration potential of the landscapes and ecosystems within which old growth and mature forests are found.

Further, the framework must act on the need to highly prioritize immediate preservation of those forest areas exhibiting high levels of stored carbon, because they are threatened by the usual suite of commercial extractive activities government agencies enable. To that end, we refer you to scientific papers being submitted by Dr. Dominick DellaSala of Wild Heritage in response to this RFI. These papers by Wild Heritage, Griffith University (Australia), Woodwell Climate Research Center (Massachusetts) plus scientists from the International Panel on Climate Change and are currently undergoing review. Our understanding is that their mapping methodology uses the latest processed LiDAR (2019) imagery on tree height, canopy cover, plus published ecosystem biomass datasets spatially derived to rank order the structural development of all conterminous U.S. forests from least developed (“young”) to most developed (“mature/old growth”). The mapping is at 30-m pixels, and uses Forest Inventory and Analysis (FIA) plots for

field validation of the rankings of remotely sensed areas. It is state-of-the art and science for defining mature/old growth spatially along with location, extent, ownership, protected status, amount of carbon sequestered, value for drinking water, and the imperiled species in the protected and unprotected mature forests. Mature/old growth in this context is the sum of their highest scorings for the three proxies relative to their surroundings: tree height + canopy cover + ecosystem biomass = mature/old growth forest which is then validated where researchers' polygons overlap FIA plots.

In other words, these scientists' data will be the best available science for achieving many of the mapping and inventory goals outlined in E.O. 14072, and will assist in the creation of a nationwide network of Strategic Carbon Reserves for responding to the Climate Emergency the Executive branch should have declared long ago. In dealing with this emergency, a first step for the Biden administration would be to issue an order halting all logging in areas these scientists' research has identified as exhibiting high levels of stored carbon.

As would happen with using these scientists research, the Forest Service/BLM definitional framework must lead to publicly accessible maps of mature and old-growth forests so anyone can visit and enjoy these areas, and also so the inventory and mapping methodology can be validated on the ground by interested independent scientists, NGOs, and citizens.

3. *How can a definition reflect changes based on disturbance and variation in forest type/composition, climate, site productivity and geographic region?*

During the July 21, 2022 webinar Linda Heath of the Forest Service responded to a question by stating, "landscapes may make more sense." (She was responding to a participant's concern that the forest stand level is potentially too narrow a focus for the inventory, resulting in definitions that would miss the elements RFI question #3 describes.) We wholeheartedly agree. [Juel, 2021](#) [in citing DeLuca (2009), Foster et al. (1996), Franklin and Spies (1991), Green et al. (1992), Hamilton (1993), Harris (1984), Harrison and Voller (1998), Kaufmann et al. (2007), Marcot et al. (1991), Noon (2009), Spies (2009), USDA Forest Service (1987d), and Warren (1990)] discusses the issue of how natural disturbances and processes lead to the type of diversity recognized by this question (*see especially the two sections—Old-growth ecosystems and old-growth landscapes, and Recovering old-growth landscapes*).

By embracing old-growth ecosystems and old-growth landscapes, the changes mentioned in this question would be fully considered in the definitional framework.

To preserve old-growth ecosystems/landscapes and tackling the climate emergency, the agencies must end resource extraction on federal lands and prioritize removing the human-caused impediments to the recovery of fully functioning ecosystems. This will assist in restoration of forest ecosystems to a condition for best expressing their carbon sequestration potential and natural resilience, featuring abundant, well-distributed old growth along with clean water, clean air, recovered populations of rare and endangered species, and remaining places where people find aesthetic appreciation, spiritual renewal, and a sense of full cultural connection and belonging to a place.

4. *How can a definition be durable but also accommodate and reflect changes in climate and forest composition?*

The inevitable result of climate change will be changes in forest composition to a degree we lack the capability to fully and accurately predict. The lessons from the past heavy-handed management on public lands reveal that emphasizing one set of “outputs” reduces the provision of the full, natural suite of ecosystem services making human civilization possible. In other words, resource extraction cuts strands in the web of life and inevitably reduces natural ecological resilience and threatens survival of humans and a vast number of other species. Please see our responses to the other four questions where we encapsulate these values.

5. *What, if any, forest characteristics should a definition exclude?*

This question precariously flirts with the danger of focusing on the minutiae while missing the wider ecological context, with its subtle bias toward the agencies’ paradigm of manipulating and controlling aspects of nature to maximize or emphasize certain “outputs” that favor short-term economic gains for some sectors of our society at the expense of everyone else on the planet. To exclude burned forests, for example, embraces logging dead trees—an industrial process which harms ecologically sensitive areas while undervaluing the critical ecological benefits of wildland fire.

To be blunt, any forest characteristics whose conceptual bases facilitate or promote resource exploitation must be excluded from the framework.

Finally, for reasons given in our introduction, the FIA must be excluded from the methodology for conducting the inventory process mandated by the E.O. The FIA is most useful for sampling, and does not yield spatially explicit or accurate information that discloses the location and extent of mature and old-growth forests.

In conclusion, we thank you for soliciting and considering our input on this Request For Information.

Sincerely,



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