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Comments: The NOI is once again asking for more comments on USFS direction to preserve and protect old growth as EO 14072 mandates. But the EO also mandates protection and preservation of mature forests. What happened to mature forests in the NOI? They are the old growth of the near future. I suppose the timber lobbyists had that part removed. To summarize my comments (once again), all old growth and mature forests on federal land should be preserved. There should not be any loopholes that allow logging to improve "forest health" or to improve "resilience to wildfires, insects, and disease." Logging has never improved any of these, as the science clearly shows.

The NOI states that tree cutting is now a relatively minor threat compared to climate amplified disturbances such as wildfire, insects and disease. But, first, insects and disease are not a threat to old growth forests, but rather an important component of old growth, and science shows that USFS efforts at reducing insects and disease have all failed. Second, climate largely determines wildfire, and there is not a lot the USFS can do about that either, except waste oodles of taxpayer money on it. Third, tree cutting is a threat that the USFS could address, if it had the will.

The NOI states that an inventory has been done, but FIA data do not constitute an inventory of old growth forests. The FIA "inventory" is based on only one plot of less than an acre for every 6,000 acres (9 square miles) of forest. A real inventory needs to be done. On Bitterroot National Forest's 2017 Westside project, stand exams, FIA data, and walk-through surveys failed to identify 25 acres of ponderosa pine-Doug fir old growth, the largest old growth stand in the project area. Twenty acres of it were subsequently logged and taken out of old growth status in violation of HFRA. BNF Supervisor Matt Anderson recently 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 stated: "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". In the same document, he then contradicts himself, saying the Forest Plan amendment "will also comport with Executive Order 14072, which provides agency-wide direction for an inventory of old growth and mature forest". This all calls into question the validity of any inventory that might result from the Executive Order.

The NOI states potential areas of agreement from comments on preserving mature and old growth forests include:

6. "Management must be science-based, including Indigenous knowledge". But Indigenous Knowledge is not science. And I have yet to see any examples, at least here on Bitterroot National Forest, where vegetation management (logging) was science-based, except maybe to use science to maximize timber company profits.

8. "Consistent and effective monitoring of current and future old-growth forest conditions over time would better inform adaptive management." Currently almost no monitoring or adaptive management occur, although those buzzwords are used extensively in logging project documents. "Adaptive management" is a term often used by the USFS, but is rarely, if ever, practiced. It requires post-project monitoring that is almost never done, followed by analysis of that data, which, of course, has not been collected. If the government was truly implementing "adaptive management", 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.

9. "Good examples of proactive stewardship and management direction and monitoring can be drawn from

recent tribal co-stewardship agreements, Collaborative Forest Landscape Restoration Partnership projects, land management plans, and implementation of other programs." What are these good examples? I'm unaware of any.

10. "Nationally consistent direction for conserving, stewarding and recruiting old-growth forest conditions is connected to and should complement related Forest Service policy and direction, including the Wildfire Crisis Strategy and Climate Adaptation Plan." The Wildfire Crisis Strategy is in direct conflict with protecting mature and old growth forests because it calls for logging these forests to protect them. The Wildlife Crisis Strategy also conflicts with any real Climate Adaptation Plan because logging is a much greater carbon emitter, even per acre, than wildfires (see references below).

In the area of western Montana where I live, the low-mid elevation old growth forests were mostly clearcut a century ago. Many have been recovering well after being left alone for 100 years. But Bitterroot National Forest is now logging off these areas again, using the false reasons of improving resilience to wildfire, insects, and disease. Bitterroot National Forest also now claims it is necessary to move into roadless areas. As the logging continues, ecological values are degraded, wildlife habitat is fragmented, our opportunities to enjoy intact forest are diminished, and carbon is emitted into the atmosphere. Therefore, any new rule you develop should not include these logging loopholes for wildfire, insects, and disease, or the new rule will be meaningless. It's time to preserve all old growth and mature forests, period. This could easily be done by implementing a diameter limit appropriate for each species and ecosystem (see more details below). In addition, a real inventory has still not been done, and is badly needed (see more details below).

The most important characteristic of an old growth or mature forest is its structural and functional complexity. Simply containing a few large, old trees does not mean a forest functions as old growth. Instead, old growth forests contain trees of mixed ages and decaying wood that are respectively dispersed vertically and horizontally through the canopy and stand along with uncountable numbers of other organisms.

In USFS Region 1, old growth definitions are being used to log old growth trees, not protect them. Green et al. (1992) defined minimum screening criteria of different tree species for old growth. The principal quantitative, measurable criteria are age, size (dbh), and the number of qualifying trees per acre. Green et al. identify other important old growth characteristics, such as snags, down woody material, dead tops, decay, and multistoried and uneven aged structure, but give no measurable minimum criteria. Although the purpose of the definitions was for use in completing inventories, here in USFS Region 1, they are being used to cut more large old trees, contrary to the intent of the Executive Order and also to the management recommendations of many old growth researchers (Yanishevsky; 1994; Hessburg et al., 2015; Fielder et al., 2007a,b; Wales et al., 2007; Rapp, 2003).

Mature forests also need to be protected according to EO 14072. The simplest way to preserve both mature and old growth trees would be to immediately impose an upper diameter (dbh) limit for each species in each ecosystem in each region. For example, in Bitterroot National Forest (BNF), an upper limit of 16 inches dbh for ponderosa pines might be reasonable. BNF considers the timber rotation period to be 75 years for ponderosa pine, and a 75-year-old ponderosa here probably averages 16 inches dbh.

However, in some areas that already have diameter limits (eastern Oregon), just the opposite is happening. There, USFS proposes to lift those limits in fuel reduction projects in order to save the forests from fire. However, Bartowitz et al. (2022) found "that increasing harvest of mature trees to save them from fire increases carbon emissions rather than preventing them", a conclusion also reached by Campbell et al, 2011; Harris et al, 2016; Law and Warring, 2015; Law et al, 2017; Reinhardt and Holsinger, 2010; and Stenzel et al, 2019.

Now that climate scientists have confirmed global warming is occurring at such an accelerating rate that humanity's very existence is at risk, every possible effort should be made to mitigate and/or forestall the effects of rising worldwide temperatures. In short, everything which can be done should be. Conservation of not just old-

growth and mature forests, but of all forests, must be pursued. Focusing only on old-growth forests as a solution, as is being suggested by this NOI, appears to be a smokescreen to cover up business-as usual plans for the USFS and timber companies. Please focus instead on the intent of EO 14072.

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