US Forest Service,

Thank you for reading my comment. I deeply care about the outcome of this nation-wide amendment, and hope you will act in accordance to the dire ecological crises we are living through.

I support a re-worded version of Alternative 3, that ends all commercial and non-commercial harvest in mature and old-growth forests on public forests and grasslands.

My personal view, after having read and connected with scientists and public land advocates, is to create a much stronger, enforceable standard that dares to protect mature and old-growth forests from exploitation and manipulation by humans AND encourage proforestation in degraded forests.

A stronger alternative may read something like this:

- 1. Recognizing the irreplaceable ecological, cultural, and climatic benefits of old-growth forests, no trees, stands, or forested areas averaging 100-years of age or older shall be cut, logged, treated, burned, thinned, or sold on USFS managed public forests, for commercial or noncommercial purposes, by the USFS or public.
- 2. Each forest shall, within five years of this amendment, inventory and publicize remaining mature and old-growth forests, using the best available science to fully account for diverse forest types. These reports will include on-the-ground samples of tree size and age, wildlife assemblages, road densities, and carbon biomass, to be used as a benchmark for future inventories.
- 3. Old-growth forest areas will, at the completion of inventory, become administrative "forest refuges" that shall be set aside from commercial harvest or invasive management in future forest plans. Forest refuges shall not be considered for reaching timber-production or harvest goals.
- 4. In forests with less than 20% mature and old-growth forest type (by acreage), "forest refuges" shall be established equal to or greater than that amount forest-wide, intended for recruitement of mature and old-growth habitat into the future. These refuges shall be managed in the same fashion as those with currently-existing old-growth. To encourage landscape-scale MOG conservation, individual districts shall have targets of 25% MOG.

Personal Background

My name is Paul Busch. I was born in Idaho Falls, Idaho, and grew up camping, working, scouting, and exploring the national forests and parks near there. At Little Lemhi Scout Camp, adjacent to the Caribou-Targhee National Forest, I taught nature merit badges and tried to learn everything I could about wild forests. I explored the old-growth Douglas fir and ponderosa groves, watched ruffed grouse and grosbeaks, and fell in love with forests.

During college, I was backpacking in Glacier National Park and met an older retired gentleman who had worked for the Forest Service. He wasn't the first former agent I had met, but the interaction was different than most. When my friends and I thanked him for his contributions to public lands, he sighed and said, "Well, I watched a lot of trees get cut down."

Since then, I have met many more Forest Service employees, both active and retired, and have found many share the feelings that gentleman did on the trail up to Firebrand Pass. I have also met many

young students of forestry or biology who have re-routed their education and careers to avoid working for the US Forest Service.

I did not understand their reasoning. Forests, by everything I had been taught, were public resources that must be protected. How we protect them, as far as USFS employees, news reports, and most science said, was to manage them to reduce threats to the trees themselves. Those threats consistently named were wildfire, insect infestations, disease outbreaks, and drought.

Upon moving to North-Central Idaho, I had several experiences that changed my view. In particular, it was seeing enormous old-growth cedars and firs cut down in the Selway River corridor (some were 150 years old), completed as part of a categorical exclusion that allowed the agency to protect campers from trees that could damage campgrounds.

However, my exploration of the area, as well as investigation into the project itself, revealed a very different project than what was on paper.

For one, trees living and dead were cut. For two, trees hundreds of feet from campsites were cut. Feller-bunchers had driven over the moist soils, compressing them into muddy ruts. Piles of slash were bulldozed into heaps. And all of those trees became logs, which were then shipped by truck to mills, and then sold.

Surrounded by the Selway-Bitterroot Wilderness, on the Selway Wild River Corridor, in some of the most treasured campsites in Idaho, the Forest Service was just selling logs. I was incensed.

No doubt there *were* some dead trees in campsites that posed threats. But that isn't the point. It was the first project on public lands I loved that far overstepped it's proposed mission simply to sell timber. It would not be the last. In the decade since moving to North Idaho, I have seen the Nez Perce-Clearwater National Forests (among others) use nebulous concepts of forest health as a crowbar to increase timber production in ways that are unambiguously destructive to trees, stands, forests, wildlife habitat, carbon stores, waterways, and our public land. In the current effort to update the 1987 Land Management Plans that govern these two combined forests, no alternative provides greater protections for old-growth forests.

The agency, locally, at least, seems guided by economic purposes. They seem to have no interest in limiting their "management options", little interest in wilderness, little interest in enforceable standards, and little interest in serving the forest.

I share this story of mine, not to shame or embarrass the US Forest Service, but to explain how everyday people encounter forest management on public lands, and what the stakes actually are in this national old-growth amendment. I was born in 1995. For my entire life, the Earth's average temperature has been above the preindustrial average. Extinctions have accelerated. Wilderness globally has plummeted. Forests, like all of the natural world, are in a state of collapse. It is emotionally intense, as someone who cares so deeply about the natural world, to cope with the weight of loss happening.

In such dire times for forests and wildlife, why is the agency offering such weak policy to protect them?

The Amendment

The amendment, as written, is woefully lacking to protect old-growth and mature forests. Only one alternative (number 3) offers a meaningful restriction on commercial harvest of mature and old-growth forests. However, that alternative would still allow logging in MOG, as long as it is done with the guise of ecosystem restoration. Such efforts are controversial in young forests. I know of no independent science that suggests that old-growth forests have developed from logging, bulldozing, chemical treatments, or prescribed fire. The only examples of old-growth forest that exist are areas that have escaped human management for 150 years or more.

Simply put, old-growth forests cannot exist with human management. Human management, including noncommercial thinning projects, always degrades and simplifies old-growth landscapes, even if the intents of such management would be ecologically positive in younger forests.

Sadly, the entire process of this nation-wide amendment has been severely bent toward commercial harvest as the preferred method of "management". In all the research supplied, there is a notable exclusion of independent research that shows the damage logging, thinning, and burning have done and continue to do to old-growth landscapes. Commercial timber harvest is, and always has been, the number one threat to MOG, whether or not the agency accepts that. Greenwashing "chainsaw medicine" in this amendment to open up more acres of ancient forest to commercial exploitation is morally reprehensible and scientifically baseless. Commercial industrial logging, especially since 1945, has obliterated most of the primeval forests of this continent (and the world). There are no examples of "actively managed" or "restored" old-growth, because old-growth is, by definition, a forest landscape that develops without human management. All other forest types can develop through active management – old-growth habitats are the exception. You cannot log your way into restoring old-growth habitat. "It's like saying you need to fornicate to save virginity," as George Carlin would say. So don't include any of that in the amendment, especially alternative three.

Occasionally, natural disturbances do degrade or eliminate old-growth. However, a wide variety of wildlife has evolved in tandem with unmanaged mature and old-growth forests, living alongside such disturbances for millions of years. The current hysteria about forest health in the agency is especially strange considering these facts. Windstorms, fire, insect infestations, disease outbreaks, and drought have battered forests for millions of years. And yet, under those conditions that today are seen as apocalyptic, rare forest species evolved and thrived. Consider just a few species that require late seral/old-growth forest habitat for part of their lifecycle:

- Mountain Caribou (now extirpated, largely due to old-growth logging)
- Spotted Owl
- Northern Goshawk
- Marbled Murrelets
- Pileated Woodpecker
- Fisher
- Pacific Yew

The narrative that the USFS is promoting in most timber sales, most forest plans, and this amendment simply do not line up with the ecological reality that many species evolved in and rely on un-managed forests to survive. This amendment shouldn't be to save MOG forests from natural disturbance, it should be to exclude MOG forests from the short-sightedness of human management.

Thank you, and Stay Wild,

Paul Busch Moscow, Idaho

Sources to consider:

1. Large Trees Dominate Carbon Storage in Forests East of the Cascade Crest in the United States Pacific Northwest, Mildrexler et al, 2020: https://www.frontiersin.org/journals/forests-and-global-change/articles/10.3389/ffgc.2020.594274/full

The largest trees support the most carbon sequestration.

2. Management of Old-growth in the US Rocky Mountains, Jeff Juel, 2021: https://www.friendsoftheclearwater.org/wp-content/uploads/2021/11/Juel 2021-Old-Growth.pdf

Old-growth management developed as a strategy to conserve late-seral dependent species.

3. Combustion of Aboveground Wood from Live Trees in Megafires, CA, USA; Harmon et al, 2022: https://www.researchgate.net/publication/358902925 Combustion of Aboveground Wood from Live Trees in Megafires CA USA

Wildfires, even landscape-scale megafires, do not lead to large losses in forest carbon.