

Dear Federal Forest Managers,

I've lived in western Oregon for almost 20 years and I've spent countless days and nights in the forests of the PNW as a hiker, biology student, wildlife surveyor, wildland firefighter, old-growth forest research technician, timber stand examiner, and activist. Over the past 4 years alone I've walked through thousands of acres of federal forest while conducting timber stand exams and stocking surveys in areas burned in the labor day fires. One thing that sticks out to me in virtually all of these places is the profound ubiquity of large rotting old growth stumps protruding from the hillsides. We've all heard about how much old growth has been logged over the last hundred years, but to see with my own eyes, day after day, valley after valley, the immense number of great majestic trees that fell to the chainsaw is quite demoralizing and sad. I'd like to think that we can do better as a society than to replace amazingly robust and magical ecosystems with the mundanity of tree farms. That is what we are tasked with: to do better than previous generations in managing and restoring the immense natural systems that we're in care of.

Summary of my priorities: I believe federal forests in the PNW should be managed in such a way to maximize biodiversity, preserve various forest habitats (especially old growth and mature forests), sequester carbon in order to reduce climate change, protect drinking water, and provide fire-resilience.

Old growth legacy: As stated in the introduction, we know that Old growth forests used to make up a much higher proportion of forests than they do now. We should protect all intact old growth stands, including protecting individual old growth trees from nearby logging. We should also increase the amount of old growth by protecting mature forest stands and allowing them to reach an old growth state.

Timber harvest in the PNW: While I am disheartened by the scale and methods of industrial logging in the PNW over the last hundred years, I have done many building projects and I love wood as a renewable resource and as a medium to work with. However, I do not believe there is room for purely commercial harvest projects on federal forests in the PNW anymore. This is simply because we have a vast amount of private forest land which is very much available for industrial timber production with its short-rotation homogenized clear cuts spread all across the PNW. In the hypothetical situation where these areas were managed with any amount of ecological care (they aren't now), then it might make sense to do a very limited amount of commercial timber extraction on federal forests. However, since private forests have only the most superficial ecological regulations, and since our federal forests were the same up until the first NWFP, I strongly believe the appropriate action on federal forest now is to heal and rehabilitate them as the sole refuges of our natural legacy, and they should be immune to the entitlement-attitude of corporate timber interests.

Process: The original Northwest Forest Plan was very inspiring because, to my knowledge, it is one of the few pieces of government policy that was shaped largely by scientific experts rather than by politicians, lawyers, and special interests. Of course there was considerable influence

by the timber industry as well. This time around, let's again rely heavily on experts and scientists and let them decide together which policies will help achieve the multiple goals of habitat restoration, biodiversity restoration, climate resilience, fire resilience, and carbon sequestration. We should limit the contribution of timber industry professionals to practical consultations of how to conduct harvests with ecological, climate, and fire-resilience benefits. Additionally, I believe that tribes should be a part of decision making processes for both setting goals and the methods used in achieving them. Also, since these are native lands that were stolen, I would be open-minded to establishing sacred sites chosen by tribes which have restrictions that they see fit in terms of management and access.

Carbon storage: Our PNW forests store as much if not more than any other terrestrial system on earth. Global public health of current and future generations demands that we not squander this resource through extractive logging. The coast range in particular has a phenomenally high carbon sequestration rate and, since it is less prone to fires than forests in the Cascades, is a no-brainer top choice for increasing terrestrial carbon stores nationwide. This is a national security issue considering the amount of damage to natural and societal systems predicted due to climate change.

Citizen science opportunities: Shortly after moving to Oregon I got involved climbing trees as a volunteer to conduct red tree voles surveys. This experience was so much fun and really helped me to connect to the forest in an intimate way. Unfortunately, our citizen science data was often accepted begrudgingly by the federal agencies and sometimes had its legitimacy questioned in court. Fortunately, it was always determined that our data and nest samples were ultimately legitimate. In the future it would be nice to see the Forest Service actually encourage and engage the public and foster interest in sensitive, endangered, or even invasive species. One way to implement such a program would be through the development of a phone app that provides some education and allows data entry. Perhaps a collaboration could occur with citizen science organizations such as inaturalist, ebird, etc.

The Survey and Manage program is what allowed us to submit citizen science data. This program has steadily been de-emphasized over the years. The new plan should re-visit and re-strengthen Survey and Manage as part of a science-first approach to forest management.

Biodiversity and habitat protection: While protecting individual species is important, whether they are endangered, threatened, or a Survey-and-Manage listed, we should also implement policy that protects biodiversity in general and seeks to protect habitat types regardless of the number of individual endangered animals present. The current system places a lot of emphasis on whether or not certain species are currently present, but if the answer is "no" then these habitats are often not protected even if they are high quality habitats that could easily host species in the future if kept intact. I value endangered species, but I also deeply value old and mature forests in and of themselves. Furthermore, what happens if the spotted owl or marbled murrelet go regionally extinct, or if there are sensitive species which fail to be listed officially as endangered due to bureaucratic hang-ups? The habitats themselves are what is endangered and rare and they should be treated as such. For me, any forest habitat that is not a

homogenous tree plantation is worthy of protection, including roadless areas, old-growth, mature forests, wet forest areas, hardwood patches, etc.

Finally, we should do our best to connect habitat types to each other with corridors or form large patches of contiguous habitats to facilitate the presence of large interbreeding populations of plants and animals that are specific to these habitats.

Thinning, invasive species, and fire resilience: From my time working, hiking, and volunteering in federal forests it is clear that many of these forests are overly dense, homogenous, and frankly, quite flammable. In many cases I think it is appropriate to thin and remove trees from these stands for the purposes of fire resilience and improving biodiversity. These stands are a good example of places that can provide *some* commercial harvest which provides ecological benefits. HOWEVER, having worked in many post-harvest areas, I believe that these types of thinnings presently almost always go too far. They remove too many trees. The ground in these units is scraped bare by machinery and log removal, while the canopy opens up drastically. This combination often leads to a complete takeover of invasive plants in the understory, including himalayan blackberry, Scotch broom, thistle, etc. Oftentimes the blackberry swells into an uninterrupted sea of pain that grows well over my head, effectively making vast swaths of land inaccessible not only to me and other humans, but also I imagine to the various mammals that once lived in the area. It is very frustrating to see. On the contrary, when there is a certain amount of canopy cover (what is this threshold?), most of these invasives seem to have a hard time taking control and are only marginally present, often near roads. This is the case even in areas that were once clear cut: once there is sufficient overstory, the native plants return to the understory. In conclusion, gap cuts, clear cuts, and heavy thinnings should be avoided, unless they provide a significant ecological function and considerable effort is made to establish native understory.

Planting hardwoods for fire resilience: Furthermore, I'd like to propose a new approach to fire resilience which uses the planting of trees rather than the harvest of them. It has been stated in Forest Service sources that hardwoods such as red alder and big-leaf maple provide natural buffers to wildfire. Why not use the strategic planting of these to provide periodic fire resistant zones and to help reinforce fire breaks? Red alder has the added benefit of fixing nitrogen, which could certainly be of ecological value in areas that have been subject to timber harvests and the corresponding depletion of soil nutrients. Planting of these trees could provide jobs while protecting homes and communities. I recently talked to a forest service contact person for the re-planting project in the areas of the labor day fires in Oregon, and my understanding is that hardwood species are not currently planted in reforestation efforts but are simply allowed to naturally regenerate. I think some effort and research should be devoted to revisiting this approach, and we should be open-minded to planting these species farther uphill than they might normally occur.

Replanting trees: I think the federal agencies have gotten better at this, but we need to start planting all trees native species that historically existed at sites in the interest of ecological restoration, rather than simply planting commercial species.

Restoration jobs: I would like to see an increase in non-logging jobs on federal forests including: wildlife and plant surveyors, invasive species removal, fire treatments, tree planters, carbon scientists, general restoration workers, trail builders, etc.

Salvage logging: I oppose any logging or salvage logging which doesn't provide a benefit for the ecosystem or for fire resilience. However, if the future plan does end up including logging quotas for minimum timber volume produced on federal forests, then salvage logging should absolutely count towards these production volumes. My understanding is that this isn't currently the case. This allows for a double-dipping system where logging is constantly ongoing in green forests while bonus harvests get tacked on from forests which undergo disturbance via fire, wind, or ice, act as large bonuses of timber volume. As a result we're losing green forests at a constant rate even as the stands nearby burn. This is doubly destructive to the goal of healthy and sound forest ecosystems. Furthermore, these salvage-bonuses encourage arson in forests, and we know that there have been instances of arson leading to salvage projects in the PNW. So, I'm proposing that when salvage projects are implemented, any amount of board feet they produce should cause a cancellation of that same amount of harvest from any green tree harvest projects.

Thanks so much for your time and careful consideration.

I appreciate your efforts,

Aaron Nelson