

Data Submitted (UTC 11): 2/2/2024 5:00:00 AM

First name: Frank

Last name: Toriello

Organization: We Advocate Thorough Environmental Review

Title: President

Comments: Comment on the Notice of Intent to prepare an environmental impact statement regarding a new

Land Management Plan Direction for Old-Growth Forest Conditions Across the National Forest

System

We Advocate Thorough Environmental Review, more commonly known as W.A.T.E.R., is a grassroots, nonprofit 501(c)(3) organization dedicated to protecting Mount Shasta's waters and other natural attributes for the benefit of current and future generations. In our ten-plus years as an organization (eight-plus years as a nonprofit) we have focused on protecting our water resources from depletion by extraction and corporate privatization, protecting surface and groundwater from contamination by industrial activity, and protecting the regional environment from other inappropriate and polluting industrial/commercial activities. Our work has clarified for us the following realities:

* The climate crisis is one of the most urgent existential threats to humanity.

* "Environmentalism" in the 21st century cannot exist without addressing economic and social justice issues.

* Achieving social, economic, environmental, and climate justice requires confronting the dysfunctional economic and political systems that are ruining the planet and stonewalling efforts to change.

* Local issues are not strictly local; they are impacted by what happens regionally, statewide, nationally, and globally. And conversely, what we do in our communities can have far-reaching impacts around the globe.

* It is a moral obligation to protect Mount Shasta's water and other natural attributes.

We believe in the inherent value of all Life. This planet is our only home and each generation has the responsibility to steward the Earth so the biosphere can regenerate and thrive now and for countless generations to come.

We live in a harrowing time when the effects of the current level of global climate warming are already creating catastrophes incessantly worldwide. Scientists have warned us that CO emissions and deforestation must cease if we are to remain within the climate boundaries of the Paris Accord. It is imperative that the 91,813,380 acres of mature and old-growth forest on the lands managed by the US Forest Service be completely protected from any logging or other management and preserved.

Globally, "forest ecosystems store large reservoirs of carbon, together holding more than double the amount of carbon in the atmosphere "; with "(t)he largest 1.4% of trees account(ing) for 49.4% of aboveground biomass, underscoring the importance of large trees for providing the ecosystem service of carbon storage. "

The old-growth forests identified in the Mature and Old-Growth Forest Report amount to only 4 percent of the over 800 million forested acres in the US , and even less of the over one billion acres of forest estimated to have existed prior to colonization. This loss of the pre-colonization old-growth forests has greatly contributed to Global Warming in a number of ways and also resulted in the concurrent biodiversity crisis. Timber harvesting produces large amounts of CO emissions and is even the largest source of emissions in Oregon State . These emissions, combined with the foregone greater CO sequestration rates when the larger mature and old-growth trees are logged, create a vicious cycle contributing to evermore climate warming which has been identified as the cause of a doubling of acreage burned by wildfire in the western United States in recent decades .

While these facts are all very sobering, there is a vast opportunity offered by protecting old-growth and mature forests. Contrary to the long-standing view that old-growth forests are carbon neutral, they continue to accumulate carbon for centuries and sequester large quantities of carbon . The protection and recruitment to old-growth conditions of the identified mature forests with their greater rates of sequestration , many of which are on the verge of becoming old-growth forest, would greatly increase sequestered carbon while also providing insurance against the inevitable incremental loss of old-growth forest. The future increased and protected old-growth forests would also augment biodiversity which would further potentiate carbon sequestration. With decarbonization, these forests would then begin to draw down atmospheric CO levels for centuries to come.

These forests must also be protected from misguided thinning projects purported to be addressing wildfire. Decades of studies, including studies published by the Forest Service, have stated that such management practices "can increase the severity of the fireclimate enough to materially increase the number of days when disastrous crown fires can occur. (Alternately), the moderating effect that a dense stand has on the fireclimate usually results in slow-burning fires. " The Fuels Specialist Report for the Crystal Clear Restoration Project cited in BARK V. USFS, No. 19-35665 (9th Cir. 2020) clearly stated: "However, reducing canopy cover can also have the effect of increasing ROS (rate of spread) through allowing solar radiation to dry surface fuels, allowing finer fuels to grow on the forest floor, and reducing the impact of sheltering from wind the canopy provides."

The combined acreage of old-growth and mature forests that were identified on Forest Service and Bureau of Land Management lands amount to only 14 percent of US forests. All of these forests could be protected to partially fulfill Executive Order 14008, issued the week after President Joe Biden was inaugurated, which pledged "to achieve the goal of conserving at least 30 percent of our lands and

waters by 2030. " Hopefully more federal forest land could be identified and placed under protection to fulfill the pledge and safeguard 30 percent of US forestlands before the 2030 deadline.

Hundreds of millions of years ago, ancestral trees changed Earth's atmosphere, creating the conditions leading to the world we live in. The trees we're familiar with have existed for tens of millions of years; long before the advent of even the most primitive humans in Africa. The forests and the creatures that evolved with them didn't need our help and would best be served by ending our interference in their processes. We owe our livable environment to forests and need to protect existing old-growth forests and regenerate future old-growth forests for our own sake. The US Forest Service needs to truly become a forest service, cultivating and nurturing the regenerating old-growth forest instead of being the lumber service it has apparently become.

Thank you for your attention,

1. Pierrehumbert, Raymond. (2019). There is no Plan B for dealing with the climate crisis. Bulletin of the Atomic Scientists. 75. 1-7. 10.1080/00963402.2019.1654255.

<https://www.tandfonline.com/doi/abs/10.1080/00963402.2019.1654255>

2. Canadell JG, Raupach MR. Managing forests for climate change mitigation. Science. 2008 Jun 13;320(5882):1456-7. doi: 10.1126/science.1155458. PMID: 18556550.

[https://citeseerx.ist.psu.edu/document?](https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=067843e3715eb614a21b64d3af78d432ae4e15c8)

[repid=rep1&type=pdf&doi=067843e3715eb614a21b64d3af78d432ae4e15c8](https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=067843e3715eb614a21b64d3af78d432ae4e15c8)

3. Lutz JA, Larson AJ, Freund JA, Swanson ME, Bible KJ (2013) The Importance of Large-Diameter Trees to Forest Structural Heterogeneity. PLoS ONE 8(12): e82784. doi:10.1371/journal.pone.0082784

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3869720/pdf/pone.0082784.pdf>

4. <https://www.fs.usda.gov/sites/default/files/mature-and-old-growth-forests-tech.pdf>

5. <https://forest-atlas.fs.usda.gov/>

6. Law BE, Hudiburg TW, Berner LT, et al. Land use strategies to mitigate climate change in carbon dense temperate forests. Proceedings of the National Academy of Sciences of the United States of America. 2018 Apr;115(14):3663-3668. DOI: 10.1073/pnas.1720064115. PMID: 29555758; PMCID: PMC5889652.

<https://www.pnas.org/doi/epdf/10.1073/pnas.1720064115>

7. https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf

8. Luyssaert, Sebastiaan & Ernst Detlef, Schulze & Borner, A. & Knohl, Alexander & Hessenm[uuml]ller,

Dominik & Law, Beverly & Ciais, Philippe & Grace, John. (2008). Old-growth forests as global carbon

sinks. Nature. Nature, v.455, 213-215 (2008). 455(11).

[https://www.researchgate.net/publication/42089659_Old-](https://www.researchgate.net/publication/42089659_Old-growth_forests_as_global_carbon_sinks_Nature)

[growth_forests_as_global_carbon_sinks_Nature](https://www.researchgate.net/publication/42089659_Old-growth_forests_as_global_carbon_sinks_Nature)

9. Mildrexler DJ, Berner LT, Law BE, Birdsey RA and Moomaw WR (2020) Large Trees Dominate

Carbon Storage in Forests East of the Cascade Crest in the United States Pacific Northwest. Front. For.

Glob. Change 3:594274. doi: 10.3389/ffgc.2020.594274

<https://www.frontiersin.org/articles/10.3389/ffgc.2020.594274/full>

10. Countryman, C. M. (1955). Old-growth conversion also converts fire climate. US Forest Service

Fire Control Notes, 17(4), 15-19.

<https://www.hsdl.org/?view&did=845298>

11. <https://www.govinfo.gov/content/pkg/FR-2021-02-01/pdf/2021-02177.pdf>

Attachment: Comment on MOG.pdf - is the letter text above.