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Comments: I have a deep connection with the land around Chittenden Reservoir and have enjoyed backcountry hiking within the project area. I remember precious times with my younger son in 2012 and 2013, during his early teen years. The Long Trail within the Green Mountain National Forest was where we could breathe freely and communicate with ease. We share fond memories of owls and bats during our times there. It would be devastating to return to beloved areas once vibrant and whole, to see them clearcut. Especially, it would be a terrible waste, knowing that our Administration's wise commitment to addressing both our climate and biodiversity crises were met with archaic approaches proven misguided by recent science (see all Sources, below).

The Telephone Gap Project ("the Project") proposal is based on obsolete information. Our new Administration has seen fit to address our dual crises of climate and biodiversity, and the Project must be modified or canceled in order to align with Biden's Executive Order 14072 ("EO"). In one month, there will be carbon inventory reports to the Administration which will be of paramount importance for compliance with NEPA. The President has spoken: carbon and biodiversity impacts are at the top of our priority list. Section 2, Forests of the EO resolves to manage "mature and old-growth forests, to promote their continued health and resilience; retain and enhance carbon storage; conserve biodiversity; mitigate the risk of wildfires; enhance climate resilience; enable subsistence and cultural uses; provide outdoor recreational opportunities; and promote sustainable local economic development." The proposed Telephone Gap project will release carbon and immediately reduce carbon sequestration rates in impacted areas, which include new roads as well as harvest areas. These must be accounted for and impacts minimized or avoided.

Claims of management for climate resilience must be substantiated. See below and Foster & Orwig in the listed "Sources" for evidence that no management regime will support climate resilience, forest health or forest fire mitigation. It is unacceptable to go forward with a forest cutting plan which disregards any goal of the EO. It is important to consider whether or not all stated goals of the Forest Plan ("the Plan") can be attained without conflicting with one another. Transparent, science-supported evaluation is required to answer that question. For example, we know that the biggest 1% of trees sequester 50% of the carbon in a mature Northeast U.S. forest and that "protecting and stewarding intact diverse forests and practicing proforestation as a purposeful public policy on a large scale is a highly effective strategy for mitigating the dual crises in climate and biodiversity" (Moomaw et al. 2019). If done, this will reveal that "sustainable forestry" conflicts with the other EO goals. This means that climate and biodiversity priorities must rule out timber harvest.

The Plan approved by the Regional Forester in February 2006 is sorely outdated, in light of recent developments of a grave nature. In those years, critical progression of climate disruption and new, essential scientific understanding have manifested. It would be irresponsible to proceed with the Project before updating the Plan.

In Notice of Proposed Action Sec. 2:

Forest Habitat, Oak Habitat.

The claim that "increasing the occurrence of northern red oak in areas where it is suited would increase resilience of the project area to future climate conditions" does not take into account the fact that opening the canopy with managed disturbance will make the forest more vulnerable to storm damage, rather than more resilient. The stated goal of managing for future generations of oaks is not likely to be reached (Foster & Orwig 2006). There is therefore a need to prioritize the maximum preservation of existing old and mature growth (Moomaw et al 2019; Law et al. 2018; Harmon et al. 1990; Stephenson et al. 2014).

## Regenerating/Early Successional Habitat.

The goal of regenerating Early Successional Habitat (ESH) in the project area is inconsistent with the historical reality of these lands. In fact, before European settlement, both young forest and open lands were rare in the Northeastern part of what is now the U.S. (Cooper-Ellis et al., 1999; Foster et al., 2002; Faison et al., 2006; Anderson et al., 2018; Oswald et al., 2020b; Frelich et al., 2021). "Early-successional habitats characterized about 1-4.5% of the Northeast..." (Kellet et al. 2022) (Lorimer and White 2003). Therefore, the stated management plan goal cannot be met by the silvicultural prescription of the Project.

## Biodiversity.

A reexamination of efficacy must be conducted based on scientific evidence and the alternative of doing nothing to support this goal must be analyzed in comparison to likely results of the proposed methods. Our best chance of restoring biodiversity is served by a no-cut approach to forestry (Alverson and Khulmann 2013).

The Northern Long-eared Bat and Brook Trout are being threatened by the Project, ostensibly for the sake of other species which may already have plentiful habitat to thrive within the Green Mountain National Forest? This must be justified.

The Notice of Proposed Action acknowledges that "...there are 43 acres of existing permanent upland openings, mostly occurring in utility corridors within the project area." It goes on to state that there are "no stands over one acre in the regenerating age class on suitable lands." There is no evidence to support the need for such contiguous areas. The NFS must compare their plan to an alternative of generating no new early successional habitat. For the Project to proceed along this trajectory, it must show that science demonstrates the need for openings of greater than one acre, and to prove that the aggregate existing ESH will not meet the needs of the subset of ESH endemic species within the list of Vermont Species of Greatest Conservation Need.

## Climate Change.

There is no scientific evidence to support the notion that adaptation, a stated goal, can be facilitated by management. Adaptation is a natural process and cannot be improved upon with management. Neither is there evidence to support the theory of management for resilience. On the contrary, "little evidence exists to suggest that it is possible to manage for increased resistance or resilience to the array of disturbances and stresses that temperate forests may experience." (Foster et al. 2006). Several other recent peer-reviewed papers conclude that a hands-off approach results in the greatest resilience. (Cooper-Ellis et al. 1999); (Aber et al. 2000).

Old-growth forests continue to sequester carbon while storing vastly more than even- or uneven-age management (Keeton 2018). We must prioritize maximum carbon sequestration and storage immediately, and plan based on evidence that old-growth forests do so more effectively than harvested forest (Stephenson 2014), and perhaps perpetually, when compared with all other terrestrial ecosystems. The EO mandates this as a priority. Clear-cutting and two-age management are the most carbon-costly approaches possible, while the no-cut approach is the most favorable for climate change mitigation (Nunery and Keeton, 2010). Therefore, the proposed methods must not be employed in the Green Mountain National Forest, and specifically for the Telephone Gap area.

## Impacts on Water.

Four watersheds will be potentially impacted by this project, through erosion, pollution by fossil fuels, the application of pesticides and herbicides, and the loss of water-purification benefits of intact forest. I am especially concerned about impacts on the Chittenden Reservoir and the headwaters of Otter Creek. Impacts must be analyzed and, if not defensible, the project must not go forward.

I respectfully object to all parts of the Project and ask that it be halted in its tracks. Alternatively, I ask that all of the above concerns be fully explored via a full NEPA EIS review process. Thank you for your consideration.

#### Sources

Aber, J., N. Christensen, I. Fernandez, J. Franklin, L. Hiding, M. Hunter, J. McMahon, D. Mladenoff, J. Pastor, D. Perry, R. Slangen, and H. Van Miegroet. 2000. Applying ecological principles to management of U.S. National Forests. *Issues in Ecology*. Issue 6. 20 pp. Ecological Society of America. Washington, D.C.

Alverson, W. S., Waller, D., and Kuhlmann, W. (1994). *Wild Forests: Conservation Biology and Public Policy*. Washington, DC: Island Press.

Cooper-Ellis, S., Foster, D. R., Carlton, G., and Lezberg, A. (1999). Forest response to catastrophic wind: Results from an experimental hurricane. *Ecology* 80, 2683-2696. doi: 10.1890/0012-9658(1999)080[2683:FRTCWR]2.0.CO;2

Foster, David R., Orwig, David A., Harvard Forest, Harvard University (2006). Preemptive and Salvage Harvesting of New England Forests: When Doing Nothing Is a Viable Alternative. *Conservation Biology* Vol. 20, No. 4, August 2006

Harmon, M. E., Ferrell, W. K., and Franklin, J. F. (1990). Effects on carbon storage of conversion of old-growth forests to young forests. *Science* 247, 699-702. doi: 10.1126/science.247.4943.699

Keeton, W. S., Whitman, A. A., McGee, G. C., and Goodale, C. L. (2011). Late-successional biomass development in northern hardwood-conifer forests of the Northeastern United States. *Forest Sci.* 57, 489-505. doi: 10.1093/forestscience/57.6.489

Kellett MJ, Maloof JE, Masino SA, Frelich LE, Faison EK, Brosi SL and Foster DR (2023) Forest-clearing to create early-successional habitats: Questionable benefits, significant costs. *Front. For. Glob. Change* 5:1073677. doi: 10.3389/ffgc.2022.1073677

Law, B. E., Hudiburg, T. W., Berner, L. T., Kent, J. J., Buotte, P. C., and Harmon, M. E. (2018). Land use strategies to mitigate climate change in carbon dense temperate forests. *Proc. Natl. Acad. Sci. U.S.A.* 115, 3663-3668. doi: 10.1073/pnas.1720064115

Lorimer, C. G., and White, A. S. (2003). Scale and frequency of natural disturbances in the Northeastern US: Implications for early successional forest habitats and regional age distributions. *For. Ecol. Manag.* 185, 41-64. doi: 10.1016/S0378-1127(03)00245-7

Moomaw WR, Masino SA and Faison EK (2019). Intact Forests in the United States: Proforestation Mitigates Climate Change and Serves the Greatest Good. *Front. For. Glob. Change* 2:27. doi: 10.3389/ffgc.2019.00027

Nunery, J. S., and Keeton, W. S. (2010). Forest carbon storage in the northeastern United States: Net effects of harvesting frequency, post-harvest retention, and wood products. *Forest Ecol. Manag.* 259, 1363-1375. doi: 10.1016/j.foreco.2009.12.029

Stephenson, N. L., Das, A. J., Condit, R., Russo, S. E., Baker, P. J., Beckman, N. G., et al. (2014). Rate of tree carbon accumulation increases continuously with tree size. *Nature* 507, 90-93. doi: 10.1038/nature12914