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Comments: Comments regarding Forestry Service's Draft Environmental Impact Statement on National Old-Growth Amendment (Project #65356)

Thank you for this opportunity to provide comments on the Draft Environmental Impact Statement to Amend Land Management Plans to Address Old-Growth Forests (the "DEIS"), published by the US Forest Service on June 21, 2024.

In Executive Order 14072 (the "Executive Order" or "E.O. 14072"), President Biden ordered the Bureau of Land Management (BLM) and the U.S. Forest Service (USFS) to amend all management plans that contain Mature and Old-Growth Forests to include protections for old-growth, as well as "mature" forests, on lands managed by those agencies. Section 2, as printed in the Federal Register on April 27, 2022, begins with the following words:

To further conserve mature and old-growth forests and foster long-term United States forest health through climate-smart reforestation for the benefit of Americans today and for generations to come, the following actions shall be taken[hellip] (b) the Secretary of Agriculture, with respect to National Forest System lands, shall, within 1 year of the date of this order, define, identify, and complete an inventory of old-growth and mature forests on Federal lands, accounting for regional and ecological variations, as appropriate, and shall make such inventory publicly available[hellip] (c.ii) Following completion of the inventory, the Secretary [of Agriculture] shall analyze the threats to mature and old-growth forests on Federal lands, including from wildfires and climate change; and (iii) develop policies . . . to institutionalize climate-smart management and conservation strategies that address threats to mature and old-growth forests on Federal lands. (emphasis added)

The Executive Order consistently uses both "mature" and "old-growth" in associated conjunction. Nowhere does the Executive Order use one of these terms without the other. Yet in the DEIS the Forest Service flatly refuses to consider mature forests for protection in Regions 8 and 9, which wrongfully precludes expansion or recruitment of future old-growth forests in the eastern half of the United States. Significantly, the word "Mature" is even missing from the title of the DEIS published by the USFS. Presumably, there are more acres of mature forests than of old-growth forests. This suggests that the U.S. Forest Service intends to ignore the majority of forests identified for protection by the Executive Order in the interest of continued commercial timber production.

#### A. Definitions

To meet the objectives of the Executive Order, the President directs the agency to define the terms "mature" and "old-growth". The US Forest Service published their Definitions document in April 2024, in which they discuss various ways to define these terms and show the criteria they used to arrive at a final determination. We find their determinations problematic for the following reasons:

1. Mature forests can be defined or identified using either an economic standard or an ecological standard. The Definitions document fails to distinguish between these two standards, and it does not specify which is to be used in a particular context. We are concerned that the USFS is using this ambiguity to facilitate their plans to log and burn our forests for the sake of commercial interests.

Such vagueness in the use of these two critical terms is unacceptable and this flaw alone would render the DEIS defective. This flaw is, of course, overshadowed by the failure of the DEIS to consider mature forests for protection in the eastern U.S., contrary to the Executive Order.

Much of our eastern forests are more or less about a century old, thus falling into a vaguely defined category called "mature". The Forest Service admits they do not have accurate inventory data in national forests across these two regions, a circumstance which has not hampered the sale of public timber but prevents the Forest Service from fulfilling the requirements of the Executive Order. This results in a gross underestimate of the acreage of forests that would truly qualify as "mature" as well as amounts of any remaining patches of old-growth, which require the greatest level of protection the Executive Order intends to provide.

2. Currently, the USFS defines "old-growth", if at all, as equivalent to terms like "decadent" and "overmature", with an arbitrary number of years (110 or 111 years is common for eastern forests) as a standard. Although trees can live for centuries, there is no age-class category for anything beyond what is considered harvestable or "mature". This results from the agency's myopic focus on timber production above all other management considerations and contributes to a chronic underestimation of the actual acreage of forests meeting old-growth standards on national forest lands.

The challenges of defining old-growth in a way that allows for the range and diversity of forest types are acknowledged and discussed in the DEIS and the associated Definitions Report. The eastern US, which generally falls within USFS Regions 8 and 9, is a vast area that includes many different forest types. Crafting a national definition that recognizes this diversity requires a plan-by-plan, forest-by-forest approach. But whatever the definition or standard, there must be a variety of pathways by which forests can qualify for this status as they continue to mature, which means redesignating lands currently deemed "suitable for timber production" as instead "suitable for future old-growth". The Forest Service provides no such pathway in the plans presented in the DEIS despite explicit direction to do so in the June 23, 2022 memo written by Secretary of Agriculture Vilsack .

3. The definition of "protection" needs to meet the highest standard. The USGS Protected Areas Database of the United States (PAD-US), as the nation's official and internationally recognized inventory of public green space and private protected areas, specifies four different levels of protection, of which GAP 1 and GAP 2 are the only areas managed in ways consistent with "protected lands." Standards for forest protection must be consistent with those set forth in the official USGS GAP 1 and GAP 2 designations.

4. The term "fireshed", though not identified as a definitional term, is being used by the Forest Service to view their inventory of forest lands through an unnecessarily coarse-grained resolution lens. This unit of measurement called a "fireshed" has no relationship to conventional assessments of area, such as the acre or square foot, or to recognized ecological units, nor even does it share any congruency with their own stand-analysis inventory used in generating Planning documents.

## B. Threats Analysis

The Executive Order requires the agency to analyze the various threats to both old-growth and mature forests (EO 14072 [sect] 2.c.ii). We assert that the agency has failed to do so in two key ways: first, their self-analysis minimizes the harms their own management inflicts on the forests they hold in the public trust; and second, they have effectively excluded forests in the entire eastern half of the nation from consideration in the DEIS documents by failing to generate an inventory of mature and old-growth forests there.

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In assessing threats, the USFS self-examination concluded, predictably, that their own logging plans were not a threat to the forest ecosystems, which is clearly inaccurate. The Threats Assessment, published by the Agency in June of 2024, acknowledges that logging prior to 1990 had harmful impacts and credits public pressure as a major factor in the reduction of rampant logging for commercial interests (pg. 52). Yet somehow this same logging activity is now said to be helpful for "forest health", a mysterious transformation that lacks credibility

altogether.

Shockingly, the report acknowledges that old-growth forests in the entire eastern half of the continental United States "were not evaluated" by the USFS due to a lack of inventory data. This obviously represents a critical failure of the agency to generate the foundational data needed to implement the requirements of EO 14072. No explanation is given by the agency for this signal failure to comply with EO 14072. As a result, any pending or new management proposal of the Forest Service in the eastern U.S. is rendered presumably defective if they weren't already for being excessively dated.

This USFS failure to identify and inventory mature and old-growth forests in the entire eastern half of the nation renders the Threats Assessment totally inadequate for eastern national forests and completely undermines any possible validity of the conclusions and recommendations published in the DEIS for this vast segment of the national forest system.

Not only did the USFS fail to implement the Executive Order but the agency makes clear that this failure is intentional. The USFS repeatedly states throughout the DEIS and associated documents that they do not intend to change their management plans, notwithstanding the requirements of EO 24072. This is in clear violation of the Executive Order, which directs the USFS to "develop policies[hellip] and implement strategies[hellip]" to protect old-growth and mature forests from the set of threats that must include not only the impacts of climate change but also the impacts of logging and prescribed burning. This flat refusal by the agency to implement the Order in the eastern half of the nation to protect both mature and old-growth forests is astonishing.

Currently, old growth and mature forests lack protection from a set of threats that includes the management practices of the US Forest Service itself, as stated in the Threats Assessment Report (see pg. 51).

Moreover, in their Social, Economic, and Cultural Impacts Analysis Report, the Forest Service explains their view of how old-growth forests can lose their status and be relegated back into the "timber base", while there is no mechanism for mature forests to ever gain that status and recruit from the "lands suitable for timber production" to expand old-growth habitat, as directed.

It clearly appears that the Forest Service is incapable of conducting a fair and unbiased self-examination. An adequate Threats study should be completed by an independent third party, using the best available science prior to an overhaul and correction of the DEIS.

As a result of these USFS failures, a MORATORIUM on such impactful large-scale logging and burning proposals is necessary to maintain the status quo while the public's comments on this DEIS are being considered.

Consistent with the Executive Order's directive to revise management plans protect both old growth and mature forests, the Forest Service must remove old growth and mature forest lands in

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Regions 8 and 9 from the timber base and provide genuine protection for such forests that meets USGS GAP 1 and GAP 2 standards.

C. Commercial Logging is an Inappropriate Management Goal, not a Legitimate Tool for Protecting Old-Growth And Mature Forests

The USFS presents Alternative 2 as their preferred alternative, claiming that commercial logging is an ecological management tool in old-growth forests. The absurdity of this claim is difficult to overstate. There is absolutely no

ecological equivalent to a timber sale. Even in the most catastrophic windstorm or wildfire, there is no natural set of circumstances whereby the big sawlogs are removed from the system entirely.

Today's logging on our national forests is motivated by the proceeds from sale of the timber from our public forests, with an attempt to cloak their intent behind a veil of ecological justifications.

Climate Change Mitigation Benefits. Scientists continue to discover ways that forests, especially forests in the eastern United States, play an important role in mitigating not only the near-term effects of climate change with their natural cooling effects, but also provide a crucial part of the solution to drawing down excess carbon from the atmosphere. An important study published February 2024 shows that a century of forest restoration, much of which can be credited to the Weeks Act of 1911, which created most of the National Forests in the eastern US, is responsible for an "anomalous warming hole" deriving from the ability of forests to cool their environs. Other studies have shown that mature forests possess much greater capacity to store carbon. In order to preserve this carbon storage out of harm's way, and to maximize ongoing CO2 sequestration capacity, those forests must be allowed to grow naturally, recognizing that natural disturbance is part of the process of natural regeneration.

There is a growing effort to develop ways to calculate the value of a given acre of forest, in terms of its ability to absorb carbon from the atmosphere. The value of that hypothetical acre is further enhanced by the discovery that microbes on the bark of trees absorb methane, a greenhouse gas far more potent and problematic than carbon dioxide. This significantly changes those calculations. Frequent, low-intensity fires would scorch this bark habitat, affecting microbe populations and negatively affecting this methane-absorbing capacity.

Instead, the USFS imposes a slash-and-burn prescription upon forests that are trying to grow as cool and shady as possible, nature's way of conserving the water that all life depends upon. USFS prescriptions to create open, "oak-dominated" canopy habitat in a response to the "threat" of mesophication - the very cooling mechanism we need to address the climate crisis - are the very opposite of how we need to be managing the national forests included in Regions 8 and 9, and other areas where deciduous broadleaf forest habitat is found. The USFS' approach to using fire as a management tool encompassing thousands of acres at a time is at a scale and frequency simply not found in nature, particularly in the eastern US. Again, the real purpose of this "management" approach is to generate more logging volume.

Alternative 3 would nominally prohibit logging for commercial purposes, but allows logging for "ecological restoration" and other justifications currently in use by the USFS as a means to meet timber quotas. Misuse of "salvage" and "emergency" logging is an alternative way for the USFS to

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continue extracting timber from our public lands, without the burden of public involvement. These sorts of abuses, where the need is questionable or non-existent, are chronic throughout the system, and there is concern that Alternative 3 also permits status-quo logging through these loopholes.

The assumption that eastern forests were once "oak-dominated" is asserted by the USFS to justify "oak regeneration" which is a euphemism for logging. This myth denies the American Chestnut its role in our original forests, to name but one species that is missing from the picture, and fails to recognize the true diversity of the forests found east of the Mississippi River. It also fails to consider the wide variety of forests that were not Oak dominant across the Eastern hardwood system. Historically these forests were characterized by a vast mosaic of nuanced dominant species.

The notion that forests were dominated by commercially valuable species is a myth promoted by commercial interests. Throughout Regions 8 and 9, the USFS improperly defines vast areas of each national forest as "oak-hickory" and seems to view beech-maple as basically a "weed" to be eliminated. This is an example of how their

emphasis on timber production precludes all other management priorities, resulting in a constant cycle of ecological disturbance.

The core of our eastern forests is the Mixed Mesophytic forest type, a forest ecotype best described by its diversity of co-dominant tree species. The Mixed Mesophytic encompasses primarily the Appalachian Mountain region, with the Allegheny National Forest at its northern extremity and extending down into the region that includes the Great Smoky Mountains National Park and Biosphere Reserve. More than 120 species share canopy co-dominance, and more than one thousand species can be found in the herbaceous layer.

#### D. Fire in Eastern Forests

Fire plays a complex role in forest ecology, a fact that is only partly recognized in the DEIS. The management prescriptions and practices of the USFS are actually making the problem worse. A large body of scientific evidence and opinion, including from a growing group of US Forest Service scientists, conclude that thinning - including thinning-plus-burning - and post-fire logging/clearcutting increases overall tree mortality and carbon emissions, making wildfires spread faster and/or burn more severely.

Importantly, in the eastern deciduous broadleaf forests, fire suppression has historically not been a significant problem because these forests don't typically burn. That is not to say that fires never happen: like all natural phenomena, there is a natural variability that includes a rare event such as a wildfire encompassing more than just a few acres, but the vast, overwhelming majority of forest fires in most of Appalachia and the Ohio River valley range from five to eight acres. This includes everything from human-caused fires to occasional lightning strikes. Yet more and more, the Forest Service is issuing we are seeing broad-scale management proposals that impose fire on these ecosystems in units consisting of tens of thousands of acres, forcing them into a condition where they are in fact more likely to burn again, when their natural trend is towards wetter, shadier, cooler forests. The Forest service calls this latter process "mesophication" and views it as a problem to be solved, failing to recognize that this is the solution we need to address the impacts of climate change. Recent studies from the Amazon forests are indicating that the large amount of burning of tropical rainforests is beginning to transform the climate there to a drier one and threatening to erase the very existence of "rain" forest in areas suffering from extensive deforestation.

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The National Academy of Sciences has determined that the conditions predicted for our changing climate will favor this trend towards mesophication, in their publication from January of this year: Climate change determines the sign of productivity trends in US forests. (J. Aaron Hogan, Grant M. Domke, Kai Zhu, and Jeremy W. Lichstein). However, the forests must remain for this trend to continue.

The USFS needs to recognize this mesophication trend of eastern hardwood forests as a natural solution to our global warming problem, rather than a threat to their use of commercial logging as a management tool which is a wrongheaded concept.

The Forest Service often inappropriately refers to traditional or indigenous use of fire as justification for their industrial-scale scorched-earth logging plans. To compare the modern use of fire to the traditional practices of Native Americans is like asserting that habitual smoking of multiple packs a day of Marlboro cigarettes can be meaningfully compared with the traditional indigenous use of tobacco as a sacred or medicinal herb. Native people did not burn tens of thousands of acres of forests at a time to produce oak for commercial interests. The small-scale use of fire by indigenous cultures to stimulate food production is nothing like the industrial-scale use of fire to prepare a forest for commercial sale of the timber.

#### E. Socioeconomic and Cultural Impacts

EO 14072 also seeks to strengthen local economies. Section 2(d)iii directs the USFS to "develop recommendations for community-led local and regional economic development opportunities to create and sustain jobs in the sustainable forest product sector, including innovative materials, and in outdoor recreation, while supporting healthy, sustainably managed forests in timber communities."

\* Biomass (Wood Pellets) Is Not a Good Candidate.

The USFS purports to comply with this order by suggesting that, to protect old-growth forests, they need more mills able to handle large-diameter logs, as well as more mills for "non-traditional" forest products like small-diameter logs, and more mills for making fuel pellets for the biomass industry (Threats Analysis, pgs. 60-61). This Forest Service proposal is gobsmackingly shocking, given that creation of additional market incentives to log old-growth forests is totally contrary to the goal of protecting mature and old-growth forests from logging.

Burning biomass for fuel is mistakenly identified by some as "green" or renewable energy. While it can be true that trees are "renewable" in the sense that they can grow anew be it from seed or stump-sprout, forests take much longer to recover and are not, by this standard, "renewable". Nor is it clean. This misguided concept should not be promoted in any way by the Forest Service!

Biomass fuel emits as much as 300% or even 400% more carbon than from burning coal. This black carbon can linger in the atmosphere for weeks and travel thousands of miles, affecting public health across state and even national borders. We saw this with the Canadian wildfires last year, which triggered hazardous air warnings across the U.S. because of their far-reaching health impacts on our lungs, cardiovascular, and immune systems. In addition to CO<sub>2</sub>, burning wood emits benzene, benzo(a)pyrene and dibenzo(a,h)anthracene, carbon monoxide, formaldehyde, organic gasses (including aldehyde gasses and other respiratory irritants), nitrogen oxides, polycyclic aromatic hydrocarbons (PAHs), and dioxin.

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Even if these highly negative impacts of using wood pellet biomass for fuel did not exist, wood pellets would seem a questionable product for economic development. Enviva, the world's biggest maker of wood-pellets for biomass incineration, went bankrupt at the beginning of 2024.

\* Outdoor Tourism and Recreation

The economic sector most compatible with protection of old-growth and mature forests is Outdoor Tourism and Recreation (OTR). While this industry is not without its adverse ecological impacts, those impacts are far less than the markedly negative impacts of commercial logging for lumber or wood pellets for the biomass industry. The OTR industry also best meets the demands of the American people when it comes to how our public forests should be managed. The success of this economic base relies upon intact forests, free from the scars and impacts of industrial extraction.

The OTR value of national forests is further enhanced by their value as carbon sinks that help mitigate climate change. This value will continue to grow over time and is much higher for mature and old growth forests.

\* Sustainable Forest Products

While there certainly is an important market for lumber and other forest products, these seem best done on commercial timber farms where pine and other fast-growing trees can be grown on tracts with successive plantings where new annual plantings occur immediately after a "crop" of timber trees is cut. In any event, it should be clear that publicly-owned mature and old growth forests should be off limits as sources of timber

products.

#### F. Conclusions: The DEIS Fails to Protect Old-Growth and Mature Forests

From the information outlined in the foregoing comments, it is clear from the DEIS that the U.S. Forest Service not only has failed, but does not intend, to comply with the directives in Executive Order 14072. More specifically, the Forest Service:

\* Has failed to address mature forests and provide the protections required for such forests under EO 14072, which also would improperly result in undermining protections for old-growth forests by failing to acknowledge that mature forests need protections not only based on that status but also because mature forests are the source of future old-growth forests.

\* Has failed to generate the inventories of mature forests and old-growth forests in the eastern U.S. (Regions 8 and 9), which precludes performance of the threats analysis concerning mature and old-growth forests on federal lands in the eastern U.S. and the development of policies to implement climate-smart management and conservation strategies that protect mature and old-growth forests from identified threats.

\* Has stated repeatedly in the DEIS that the USFS does not intend to change their forest management plans, despite the clear direction in the Executive Order that management plans be revised to reflect the threat analysis results and to incorporate the policies to be developed to implement climate-smart management and conservation strategies, which refusal is a clear violation of the Executive Order.

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\* Apparently intends to utilize Alternative 2 in the USFS' alternatives analysis of the DEIS in future forest management, which involves the use of commercial logging as an "ecological management tool" in old-growth forests, which is an absurdity.

\* Has failed in its Threats Analysis to honestly evaluate the adverse impacts of currently employed management plan elements in eastern U.S. forests, such as large-scale burning of thousands of acres of forest as a management tool, and intends to continue using such methods to facilitate "regeneration" of deciduous forests dominated by oak-hickory species, which happen to be the species desired by the timber industry.

The failures of the USFS to comply with EO 14072 necessitate the imposition of a MORATORIUM on the extensive and damaging large scale logging and burning project proposals affecting various national forests in order to maintain the status quo and comply with NEPA while the public's comments on this DEIS are being considered and DEIS inadequacies are addressed.

The flaws in the DEIS, as described in these comments, are so stark and problematic that the process must be considered not only a gross failure of the agency to meet the directives ordered by the President, but also a failure to meet the fundamental requirements of the Administrative Procedures Act (APA) and NEPA, including the NEPA requirements to fully evaluate both the adverse environmental impacts of proposed actions and the

benefits of reasonable alternative actions. These flaws in the DEIS, and the USFS' failure to complete adequate inventories of mature and old growth forests, especially in the Eastern U.S., also reflect arbitrary and capricious agency action contrary to law.

As a result, the USFS has set a course that will fail to meet the climate mitigation goals set forth in the Executive Order. The USFS needs to complete the inventory of mature and old-growth forests in all federally-owned forests in the U.S., revise and extend the Threat Analysis to include all mature and old-growth forests, and correct the Threat Analysis to include consideration of adverse impacts of management plans. The DEIS must then be rewritten consistent with the corrected foundational data and analysis, and subjected to further public review and comment. A moratorium on existing projects and planned projects must be immediately imposed until these actions are completed.

Thank you for this opportunity to comment on this important matter for the public record. In these comments, we have utilized the general outline provided by the Comments of the Heartwood cooperative network as a vehicle for incorporating our specific comments.

Regards,

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