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Submitted electronically via https://www.fs.usda.gov

Re: Land Management Plan Direction for Old-Growth Forest Conditions Across the National Forest System (88 Fed. Reg. 88042)

Clean Air Task Force ("CATF") respectfully submits these comments on the United States Department of Agriculture's Forest Service ("Forest Service") notice of intent to prepare an environmental impact statement ("EIS") for land management plans on old-growth forest conditions ("the notice"), 88 Fed. Reg. 88042 (Dec. 20, 2023).

CATF is a nonprofit organization working globally to safeguard against the worst impacts of climate change by catalyzing the rapid development and deployment of low-carbon energy and other climate-protecting technologies. With more than 25 years of internationally recognized expertise on climate policy and law, and a commitment to exploring all potential solutions, CATF is a pragmatic, non-ideological advocacy group with the bold ideas needed to address climate change. CATF has offices in Boston, Washington, D.C., and Brussels, with staff working remotely around the world.

At CATF, our Land Systems program is working to enhance ecosystem carbon sequestration and storage in ways that do not deter emissions reductions. There is enormous climate mitigation potential in ecosystem-based solutions, including through protecting long-term carbon storage in mature and old-growth forests. Forests can provide a number of ecosystem services, including carbon dioxide removal and long-term carbon storage. CATF supports the Forest Service's prioritization in the notice of long-term carbon storage, stability, and resiliency through promotion and retention of old-growth forest conditions. These comments offer support for the focus on maintaining carbon storage through management for old-growth forest conditions and provide recommendations for the analysis in the forthcoming EIS.

I. Management of National Forests for robust and resilient carbon storage is an essential component of the effort to manage the effects of climate change

The Forest Service's management of the 193 million acres in the National Forest System can play an integral role in ecosystem-based efforts to manage the worst effects of climate change. The notice presents an opportunity for the Forest Service to realize the potential of these forests to mitigate climate change, consistent with the Forest Service's statutory authority and regulations.

Forest carbon stored across the National Forest System is a critical reservoir of carbon that must be maintained. Mature and old-growth forest conditions, in particular, hold vast stores of carbon that have been captured over centuries and maintaining that storage is necessary for

meeting the nation's climate goals.[1] According to CATF's analysis, to meet the most ambitious decarbonization scenarios under the Administration's current authority, 46 million metric tons of carbon emission reductions or tons sequestered from actions in the forestry and agriculture sectors are needed compared to 2005 levels to meet the United States' Nationally Determined Contribution under the Paris Agreement.[2] Improved forest management alone has the potential for 100 million metric tons of annual carbon dioxide mitigation.[3]

Proper management can reduce the risks associated with threats such as wildfire, insects, or disease, all of which could result in the emission of long-term stored carbon stock in mature and old-growth forests.[4] The majority of forest carbon in the United States is in the soil carbon pool (>50%) with the second largest fraction stored in aboveground biomass (>25%).[5] The 2020 Resources Planning Act Assessment projects that the aboveground biomass pool for total forest ecosystem carbon will increase by 17 to 25 percent by 2070; however, forest management policy choices and changes to disturbances such as wildfire and insect damage will influence future carbon stock trajectories.[6] It is therefore important to manage for long-term storage of carbon in forests to avoid potential carbon stock reductions.

Consistent with those findings and projections, the Forest Service's inventory and analysis so far has identified the primary threats to old-growth forests as wildfires, followed by insects and disease.[7] Proactive stewardship of mature and old-growth forests can help address these threats and reduce the risk of releasing the carbon stored in these forests. Improved forest management can also secure other ecosystem services that old-growth forests provide, such as wildlife habitat, water flows, and local climate regulation.

II. The Forest Service's statutory mission and its regulations include managing for multiple uses, such as for ecosystem services include long-term carbon storage

Managing for old-growth forest conditions serves the Forest Service's statutory mission and follows the agency's planning regulations. The actions described in the notice would

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[1] *See, e.g.*, Erica A. H. Smithwick, et al., *Potential Upper Bounds of Carbon Stores in Forests of the Pacific Northwest*, 12 Ecological Applications 1303, 1314-15 (2002) (describing carbon storage potential in Pacific Northwest forests); Allie Goldstein, et al., *Protecting irrecoverable carbon in Earth's ecosystems*, 10 Nature Climate Change 287, 293 (2020) (explaining importance of protecting irrecoverable carbon stored in certain ecosystems).

[2] *See* CATF, Closing the Gap: Delivering on the U.S. Nationally Determined Contribution, at 11 (2023), https://cdn.catf.us/wp-content/uploads/2023/04/21112755/ndc-gap-analysis.pdf.

[3] *See* Alison J. Eagle, et al., Env't Def. Fund & ICF, Ambitious Climate Mitigation Pathways for U.S. Agriculture and Forestry: Vision for 2030, at 45 (2022), https://www.edf.org/sites/default/files/documents/climate-mitigation-pathways-us-agriculture-forestry.pdf.

[4] *See id.*

[5] *See* EPA, EPA 430-R-23-002, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2021, at 6-31 tbl. 6-10 (2023), https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2021; Forest Service, GTR WO-102, Future of America's Forest and Rangelands: Forest Service 2020 Resources Planning Act Assessment, at 6-25 to 6-26 (2023).

[6] *See* Forest Service, *supra* note 5, at 6-27.

[7] 88 Fed. Reg. 88042, 88043 (Dec. 20, 2023) [hereinafter Notice]; Forest Service & Bureau of Land Management, FS-1215a, Mature and Old-Growth Forests: Definition, Identification, and Initial Inventory on Lands Managed by the Forest Service and Bureau of Land Management, at 1 (2023), https://www.fs.usda.gov/sites/default/files/mature-and-old-growth-forests-tech.pdf.

"improve and protect" national forests[8] and provide for multiple uses, including outdoor recreation, watershed, and wildlife and fish purposes.[9] Furthermore, the plan amendments would "provide for ecosystem services" as required under forest planning regulations.[10] Specifically, these amendments would provide for the "regulating services" of "long term storage of carbon" and "climate regulation."[11] The proposed actions in the notice, therefore, carry out the National Forest Management Act's requirement that the Forest Service develop, maintain, and revise land management plans.[12] Additionally, the notice appropriately implements the Executive Order on Strengthening the Nation's Forests, Communities, and Local Economies.[13]

III. CATF recommends that the Forest Service's review consider proactive stewardship to reduce risks to and promote old-growth forest conditions

CATF supports the Forest Service's actions to manage the National Forest System to maximize long-term carbon storage in forests through the promotion and retention of old-growth forest conditions. These proposed plan amendments are important to implement the purpose of maintaining and expanding ecologically appropriate old-growth conditions.[14] CATF makes the following recommendations for the Forest Service as it develops a draft EIS and identifies a preferred alternative:

- **Land management plans should include direction to manage forests for long-term carbon storage, stability, and resiliency.** CATF supports the desired condition in the notice that "Carbon stored in old-growth conditions contributes to the long-term carbon storage, stability, and resiliency of forest carbon across the National Forest System."[15] Effective forest management is important to safeguard against the worst effects of climate change, and mature and old-growth forests are essential as a long-term carbon storage reservoir. Land management plans can provide the guidance necessary for forests to serve as strategic carbon reserves that mitigate climate change.[16]
- **Proactive stewardship and active vegetation management strategies for old-growth forest condition retention and promotion may be appropriate in some situations.** Considering the climate mitigation importance of preventing the release of long-stored carbon in mature and old-growth forests, CATF supports the Forest Service's consideration of appropriate, science-based, proactive stewardship and active management strategies for old-growth forest conditions. Forest restoration treatments can

[8] 16 U.S.C. § 475.
[9] *See* 16 U.S.C. § 528.
[10] 36 C.F.R. § 219.10 (requiring forest plans to provide for ecosystem services).
[11] 36 C.F.R. § 219.19 (defining ecosystem services).
[12] 16 U.S.C. § 1604(a).
[13] *See* Exec. Order No. 14072, Strengthening the Nation's Forests, Communities, and Local Economies, 87 Fed. Reg. 24851 (Apr. 27, 2022).
[14] *See* Notice at 88044-45.
[15] Notice at 88047.
[16] *See, e.g.*, Beverly E. Law, et al., *Strategic Forest Reserves can protect biodiversity in the western United States and mitigate climate change*, 2 Comms. Earth & Env't, no. 254, at 7 (2021) (describing high priority forest land for carbon storage in National Forest Sysem); Beverly E. Law et al., *Strategic reserves in Oregon's forests for biodiversity, water, and carbon to mitigate and adapt to climate change*, 5 Frontiers Forests & Global Change, no. 1028401, at 16-17 (2022) (describing "practical goal" of protecting certain federally owned forests for carbon in Oregon).

promote old-growth characteristics.[17] Old-growth forests possess a high degree of biological and structural diversity which creates resiliency in the face of environmental changes. Due to extensive human intervention in the global climate system, however, old-growth forests may experience stressful events at a higher rate and thus proactive management strategies may be required to promote the resilience of affected forests. Forest restoration treatments can do just that – improve the ecological resilience of old-growth forests to disturbance and thereby reduce the risk that old-growth ecosystems will change from carbon sinks to carbon sources due to preventable losses of carbon.[18]

- CATF therefore concurs with the Forest Service's assertion of the "importance of strategic conservation and proactive stewardship for wildfire resilience, including science-based vegetation treatments and restoring prescribed fire in fire-adapted ecosystems, for the long-term retention and future recruitment of old-growth forest conditions."[19] CATF also recommends that the Forest Service adds proactive science-based stewardship to increase the potential for and reduce risks to long-term carbon storage in forests as a permissible goal for proactive management activities in subsection 2 of the plan amendment section titled "Standards for Management Actions within Old-Growth Forest Conditions."[20]
- **The Forest Service should evaluate management for promotion or recruitment of old-growth forest conditions to realize long-term carbon storage and resiliency beyond areas already identified as having old-growth characteristics.** The notice includes several references to managing for the promotion of–or recruitment for–old-growth forest conditions.[21] Because of the climate mitigation benefits of long-term carbon storage in soils and aboveground biomass, CATF supports this direction as a means to increase and maintain the size of that carbon pool. CATF therefore recommends that the EIS's scope cover not only the 24.7 million acres of old-growth included in the Forest Service's inventory, but also the 68.1 million acres of mature forest conditions that already store vast quantities of carbon and will continue to sequester carbon into the future.[22]
- **Appropriate management strategies will vary based on geography and forest ecosystem types, and land management plans should reflect this.** The Forest Service correctly notes that old-growth forest conditions vary based on geographic location and forest ecosystem types.[23] These differences make it essential to incorporate place-based differences in management plans that are consistent with the overall plan direction.

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[17] *See* Michael J. Case, et al., *Forest restoration thinning accelerates development of old-growth characteristics in the coastal Pacific Northwest, USA*, 5 Conservation Sci. & Prac., no.e13004, at 10 (2023)
[18] Susan J. Prichard, et al., *Adapting western North American forests to climate change and wildfires: 10 common questions*, 31 Ecological Applications 8, no. e02433, at 19 (2021).
[19] Notice at 88044.
[20] *Id.* at 88047.
[21] *See, e.g.*, *id.* 88042 ("recruit future old-growth forest conditions"); *id.* at 88044 ("future recruitment of old-growth forest conditions"); *id.* ("recruiting old-growth forest conditions"); *id.* at 88045 ("recruitment of old-growth forest conditions"); *id.* at 88046 ("promote the development of resilient old-growth conditions adjacent to existing old-growth conditions"); *id.* ("promote the development of old-growth conditions where current conditions are likely to provide old-growth conditions in the shortest timeframe possible"); *id.* at 88047 ("promotion of old-growth forest conditions"); *id.* ("recruitment of old-growth forest conditions through proactive stewardship").
[22] *See id.* at 88043; Forest Service, *supra* note 5, at 1.
[23] *See* Notice at 88043.

CATF therefore supports the inclusion of a geographically specific *Adaptive Strategy for Old-Growth Forest Conservation* with each land management plan.[24] As the Forest Service explains, "proactive climate-informed stewardship, conservation, and management approaches as needed to effectively achieve the desired conditions" in these strategies should be specific to the National Forest System unit.[25]

Conclusion

CATF is pleased that the Forest Service is taking the steps proposed in the notice to retain and recruit old-growth forest conditions in the National Forest System. We look forward to reviewing a draft EIS that includes the recommendations included in this letter. Considering the importance of acting quickly to mitigate the effects of climate change, CATF asks that the Forest Service promptly complete the analysis and release a draft EIS on the timeline provided in the notice.[26] CATF also encourages the Forest Service to take additional actions, such as through revising management and planning regulations or in individual project decisions, that prioritize the carbon removal and storage potential of the National Forest System. Thank you for your consideration of these comments.

Respectfully submitted,

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[24] *Id.* at 88045.
[25] *See id.* at 88047.
[26] *See id.* at 88043.