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March 24, 2021

Secretary Vilsack
U.S. Department of Agriculture
1400 Independence Ave., SW
Washington, D.C. 20250-0003

Secretary Haaland
U.S. Department of the Interior
1849 C Street, NW
Washington, DC 20240

Secretary Regan
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460

Matt Lee-Ashley
Interim Chief of Staff
Council on Environmental Quality
Jackson Place, NW
Washington, DC 20503

Gina McCarthy
National Climate Advisor
White House Office of Domestic Climate Policy
1600 Pennsylvania Ave., NW
Washington, DC 20500

John Kerry
Special Presidential Envoy for Climate
1600 Pennsylvania Ave., NW
Washington, DC 20500

Re: Climate action pursuant to Executive Orders 13990 and 14008

Dear Secretaries Vilsack, Haaland, Regan, Interim Chief of Staff Lee-Ashley, Ms. McCarthy, and Mr. Kerry:

We applaud the Biden administration's early measures to address the climate and biodiversity crises. The actions required by Executive Orders 13990 and 14008 and the decision to reenter the Paris Agreement are critical steps in the right direction. As the country with the highest cumulative greenhouse gas emissions since the Industrial Revolution,¹ strong and credible leadership is demanded of the United States. Mitigating and adapting to a changing climate requires an all-hands-on-deck approach from every corner of the federal government and country.

The southern United States presents significant opportunities for meeting the administration's climate and biodiversity goals. The region has more tree, freshwater fish, reptile, amphibian, bird, and endemic mammal diversity than nearly any other part of the country.² The North American Coastal Plain, which covers much of our region, is a globally

¹ See Center for Climate and Energy Solutions, *Global Emissions*, <https://www.c2es.org/content/international-emissions/>.

² Clinton N. Jenkins et al., *U.S. protected lands mismatch biodiversity priorities*, Proceedings of the National Academy of Sciences (2015), <https://www.pnas.org/content/112/16/5081>.

recognized biodiversity hotspot.³ The ecosystems of the central and southern Appalachian mountains were recently identified as the top priority nationwide for biodiversity-driven protections.⁴ The South is also the most forested region of the coterminous United States, presenting the best domestic possibility for managing existing forests to maximize carbon storage and increase carbon sequestration at the region-wide scale.⁵

Climate change also poses unique challenges for the South. Sea-level rise is already affecting the daily lives of coastal residents in cities like Norfolk, Virginia, and Charleston, South Carolina.⁶ More intense precipitation events and tropical cyclones⁷ threaten infrastructure from the coast to the mountains. Temperature increases will have negative effects on human health, the agriculture and livestock industries, water supplies, and invasive species containment, and are also expected to increase harmful aquatic algal blooms.⁸ The South is also developing more rapidly than any other region,⁹ and habitat fragmentation blocks species from migrating in response to climate-driven changes in local habitats. Notably, the South already consumes more energy than any other region of the United States and rising temperatures are likely to drive that demand even higher.¹⁰ The South is also the most poverty-stricken region of the country,¹¹ with a long history of environmental injustice, and a high likelihood of suffering some of the harshest climate-change-driven economic losses.¹²

Executive Order 14008 instructs agency heads to prepare various reports and strategies related to the climate and biodiversity crises. As that process unfolds, we want to bring the following issues and their implications for the South to the administration's attention:

³ Reed F. Noss et al., *How global biodiversity hotspots may go unrecognized: lessons from the North American Coastal Plain*, *Diversity and Distributions* 21: 236–244 (2015), <https://onlinelibrary.wiley.com/doi/full/10.1111/ddi.12278>.

⁴ See Jenkins, *supra* note 2.

⁵ Sonja N. Oswalt et al., *Forest Resources of the United States, 2017: a technical document supporting the Forest Service 2020 RPA Assessment*, Gen. Tech. Rep. WO-97, Washington, DC: U.S. Department of Agriculture, Forest Service, Washington Office, https://www.fs.fed.us/research/publications/gtr/gtr_wo97.pdf.

⁶ William V. Sweet et al., *Patterns and Projections of High Tide Flooding Along the U.S. Coastline Using a Common Impact Threshold*, NOAA Technical Report NOS CO-OPS 086, Silver Spring, MD: U.S. Department of Commerce, https://tidesandcurrents.noaa.gov/publications/techrpt86_PaP_of_HTFlooding.pdf.

⁷ Third National Climate Assessment, Southeast, <https://nca2014.globalchange.gov/report/regions/southeast>.

⁸ *Id.*

⁹ See U.S. Census Bureau, *United States Population Growth by Region*, https://www.census.gov/popclock/data_tables.php?component=growth.

¹⁰ See *supra* note 7.

¹¹ See U.S. Census Bureau, *Income and Poverty in the United States: 2019*, <https://www.census.gov/library/publications/2020/demo/p60-270.html>.

¹² Solomon Hsiang et al., *Estimating economic damage from climate change in the United States*, 356 *Science* 1362 (2017), <https://science.sciencemag.org/content/356/6345/1362>.

- **Burning forests as biomass fuel will worsen the climate crisis, harm vulnerable communities, imperil forest ecosystems, and should not be incentivized.**

To avoid the worst impacts of climate change and achieve net-zero emissions by 2050, the United States must rapidly decarbonize its economy. Carbon released from burning wood-based biomass is irrecoverable on any timescale related to the administration’s climate objectives and should not be incentivized domestically or abroad.

Burning wood (or forest biomass of any type) for electricity immediately adds CO₂ to the atmosphere—lots of it. Combustion of forest biomass emits more CO₂ per unit of energy generated than fossil fuels like coal or natural gas.¹³ Even just storing woodchips prior to burning emits so much methane that these emissions *alone* may exceed the total greenhouse gas emissions of coal-generated electricity per unit of energy.¹⁴ In practical terms, this means that if the United States swapped all of its coal- and gas-burning power plants with forest-biomass plants today, our rate of greenhouse gas emissions would actually *increase*.

Because harvesting, processing, transporting, and burning forest biomass all emit greenhouse gases, wood-based bioenergy can quickly run up an enormous carbon debt.¹⁵ In theory, carbon sequestered by new forests that grow to replace those harvested for bioenergy will eventually pay down that debt and result in a net carbon benefit.¹⁶ But it will take decades or centuries to reach that point—if ever.¹⁷ This is true even if biomass is sourced from managed forest thinnings instead of forest clearcuts.¹⁸ Because wood-based bioenergy buries us in carbon debt for *at least* the next 40 to 100 years¹⁹—precisely when we should be cutting emissions and

¹³ U.S. Evtl. Protection Agency, Repeal of the Clean Power Plan; Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guidelines Implementing Regulations, 84 Fed. Reg. 32,520 (July 8, 2019), <https://www.govinfo.gov/content/pkg/FR-2019-07-08/pdf/2019-13507.pdf>. Specifically, burning wood-based biomass emits 65% and 285% more CO₂ per unit of energy generated than coal and natural gas, respectively. Rachel Carson Council, *Wood Pellet Production, the Destruction of Forests, and the Case for Environmental Justice* at 5 (2019), <https://rachelcarsoncouncil.org/clear-cut/>.

¹⁴ Mirjam Röder et al., *How Certain are Greenhouse Gas Reductions from Bioenergy? Life Cycle Assessment and Uncertainty Analysis of Wood Pellet-to-Electricity Supply Chains from Forest Residues*, 79 *Biomass and Bioenergy* 50 (2015), <https://sciencedirect.com/science/article/pii/S0961953415001166>.

¹⁵ Duncan Brack, *Woody Biomass for Power and Heat: Impacts on the Global Climate* (Chatham House 2017), <https://www.chathamhouse.org/publication/woody-biomass-power-and-heat-impacts-global-climate>.

¹⁶ *Id.*

¹⁷ See, e.g., John D. Sterman et al., *Does Replacing Coal with Wood Lower CO₂ Emissions? Dynamic Lifecycle Analysis of Wood Bioenergy*, 13 *Envtl. Res. Letters* (2018), <http://iopscience.iop.org/article/10.1088/1748-9326/aaa512/meta>; Giuliana Zanchi et al., *Is Woody Bioenergy Carbon Neutral? A Comparative Assessment of Emissions from Consumption of Woody Bioenergy and Fossil Fuel*, 4 *GCB Bioenergy* 761 (2012), <https://online.library.wiley.com/doi/abs/10.1111/j.1757-1707.2011.01149.x>.

¹⁸ Spatial Informatics Group, *The Carbon Impacts of UK Electricity Produced by Burning Wood Pellets from Drax’s Three U.S. Mills* (2019), https://www.southernenvironment.org/uploads/publications/2019-05-27_Drax_emissions_-_SIG_report_Phase_II.PDF.

¹⁹ Sterman et al., *supra* note 17; Spatial Informatics Group, *supra* note 18.

transitioning to clean energy technologies²⁰—it is completely out of step with the administration’s climate priorities. Stated differently, releasing significant carbon *now* with the hope that it will be sequestered through new forest growth in 2100 will only intensify the climate crisis at the exact time we must act boldly to stem the tide.

Incentivizing biomass energy may also jeopardize the administration’s biodiversity and environmental justice objectives. Though touted as a “clean” energy source, “burning biomass creates air pollution that causes a sweeping array of health harms, from asthma attacks to cancer to heart attacks, resulting in emergency room visits, hospitalizations, and premature deaths.”²¹ These impacts are not distributed equally: a recent study found biomass power plants in the Southeast are 50% more likely to be located in economically depressed communities of color.²² Ecologically, harvesting wood for biomass fragments forests, degrades soil and water quality, and threatens wildlife.²³ Under no circumstances should we mortgage our ecological future by sacrificing our biodiverse—and already climate-stressed—southern forests for a hypothetical, too-little-too-late carbon benefit.

- **The Forest Service must revise its approach to carbon management.**

The administration’s climate strategy must shift the approach taken by federal land management agencies toward storing and sequestering carbon. The federal government manages about one-third of all forests in the United States, with the bulk of those acres in the care of the U.S. Forest Service.²⁴ The Forest Service is the largest federal land manager in the South.²⁵ Southern national forests store over 900 megatons of carbon²⁶ and have tremendous potential to

²⁰ Intergovernmental Panel on Climate Change, *Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C Approved by Governments* (2018), <https://www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1-5c-approved-by-governments/> (finding that limiting global warming to 1.5° C would require “rapid and far-reaching” transitions in land, energy, industry, buildings, transport, and cities; specifically, global net human-caused emissions of CO₂ would need to fall by about 45% from 2010 levels by 2030, reaching “net zero” around 2050).

²¹ Letter from Health Organizations, to Congress re: Biomass Power (2016), <https://www.naccho.org/uploads/downloadable-resources/Policy-and-Advocacy/Health-organizational-letter-health-impacts-of-biomass.pdf>.

²² Stefan Koester & Sam Davis, *Siting of Wood Pellet Production Facilities in Environmental Justice Communities in the Southeastern United States*, 11 *Envtl. Justice* 64 (2018), <https://www.liebertpub.com/doi/10.1089/env.2017.0025>.

²³ Thomas Ranius et al., *The Effects of Logging Residue Extraction for Energy on Ecosystem Services and Biodiversity: A Synthesis*, 209 *J. of Env'tl. Mgmt.* 409 (2018), <https://www.sciencedirect.com/science/article/pii/S0301479717312288>.

²⁴ There are about 740 million acres of forests in the United States. Of the approximately 240 million acres of federal forests, the Forest Service is responsible for about 150 million of those acres, about 4 times as many acres as the Bureau of Land Management (the next highest federal agency).

²⁵ Congressional Res. Serv., *Federal Land Ownership: Overview and Data* (2020), <https://fas.org/sgp/crs/misc/R42346.pdf>.

²⁶ U.S. Forest Serv., *Baseline Estimates of Carbon Stocks in Forests and Harvested Wood Products for National Forest System Units; Southern Region* (2015), <https://www.fs.fed.us/climatechange/documents/SouthernRegionCarbonAssessment.pdf>. Figures given in teragrams, equivalent to the same number of metric megatons. The figure is likely an underestimate due to recent changes in calculating carbon stored in soils. See Grant Domke et al.,

store additional carbon if left to age.²⁷ Yet the Forest Service has struggled to account for the benefits of carbon storage and sequestration in its day-to-day decision-making.

Timber project management is a prime example. Timber harvests are the primary disturbance influencing carbon stocks on southern national forests.²⁸ Nationally, carbon losses from timber harvests are five times higher than those from all other disturbances *combined*, including wildfire.²⁹ Nevertheless, the Forest Service routinely dismisses the carbon impacts of individual timber projects by either pointing to each project’s relatively small effect on the global carbon cycle or by hiding impacts behind an incomplete accounting.³⁰ The agency uses this same approach to avoid meaningful disclosure of carbon effects during forest management plan revision.³¹ In addition, the agency has no actionable target for carbon storage across the National Forest System, nor has it provided any guidance to field officers about how Regions or Units are expected to contribute to such a goal.³² As a result, hundreds of decisions proceed annually with individually small but cumulatively significant unassessed effects—both practically and for National Environmental Policy Act compliance purposes—on forest carbon stocks. To ensure the effects of management activities on carbon stocks and sequestration are properly accounted for, the Forest Service and other agencies managing federal forests should immediately issue guidance requiring carbon life-cycle analysis for individual projects and management plans incorporating the social cost of carbon.³³

Toward inventory-based estimates of soil organic carbon in forests of the United States, 27 *Ecological Applications* 1223 (2017), https://www.fs.fed.us/nrs/pubs/jrnl/2017/nrs_2017_domke_001.pdf.

²⁷ See *id.* at Fig. 3 (showing generally linear growth of carbon stocks). National forests in the South are recovering from historical logging and continued timber production, with an age profile that is much younger than the natural range of variation. In other words, they will continue to mature and store additional carbon.

²⁸ Richard Birdsey et al., *Assessment of the influence of disturbance, management activities, and environmental factors on carbon stocks of U.S. national forests*, Gen. Tech. Rep. RMRS-GTR-402 (2019), Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, https://www.fs.fed.us/rm/pubs/series/rmrs/gtr/rmrs_gtr402.pdf.

²⁹ N.L. Harris et al., *Attribution of net carbon change by disturbance type across forest lands of the conterminous United States*, 11 *Carbon Balance Mgmt.* 24 (2016), <https://cbmjournal.biomedcentral.com/articles/10.1186/s13021-016-0066-5>.

³⁰ See, e.g., Pisgah-Nantahala National Forest, Buck Project Environmental Assessment at 116 (May 2020) (“The contribution of the proposed project activities to the carbon cycle is extremely small”), https://www.fs.usda.gov/nfs/11558/www/nepa/105221_FSPLT3_5298794.pdf.

³¹ See, e.g., Pisgah-Nantahala National Forest, Draft Environmental Impact Statement for the Proposed Land and Resource Management Plan at 67 (January 2020) (finding that “even the maximum potential management levels described by the plan alternatives would have a negligible impact on national and global emissions and on forest carbon stocks . . . [therefore] a quantitative analysis of carbon effects is not warranted”), https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd746163.pdf.

³² The main climate-change guidance the agency appears to apply was issued under the George W. Bush administration and is significantly outdated. See U.S. Forest Service, *Climate Change Considerations in Project Level NEPA Analysis* (2009), <https://www.fs.fed.us/climatechange/documents/nepa-guidance.pdf>.

³³ See Interagency Working Group on the Social Cost of Carbon, *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990* (2021), <https://www.>

At the national level, the administration must also address the tension between the need to increase carbon stocks on federal forests as a climate-change mitigation strategy³⁴ and the recent emphasis on “flagship targets” that prioritize harvests for timber production and fuels reduction. Reforestation or afforestation efforts will have minimal impact if the agency is simultaneously harvesting high-carbon stands of trees.³⁵ The Forest Service should immediately delineate at both the National and Unit level the highest priority landscapes and forest types for carbon storage based on existing models, inventories, and data, and it should cancel the portions of projects that are imprudently located. Failure to reconsider recent and current projects would mean a delay of years or even decades before the Forest Service could begin to move the climate-mitigation needle.³⁶ Stated differently, projects developed or approved under the Trump administration—which will take years to decades to implement—will be deciding factors in the Forest Service’s on-the-ground contribution to solving the climate crisis under *this* administration if they are not reconsidered.

The administration should also take immediate action to preserve the ecosystems on national forest lands that currently store the most carbon even if they are not targeted by current projects. The best available science indicates that these are intact, old-growth ecosystems.³⁷ Old-growth forests have been sequestering carbon for more than a century in vegetation and soil. Harvesting them immediately releases decades of accumulated carbon back into the atmosphere with only a fraction of live-tree carbon stored in wood products long-term.³⁸ The released carbon is irrecoverable on any timescale relevant to avoiding the worst impacts of climate change.³⁹ Preserving these ecosystems will also further the administration’s biodiversity

[whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf](https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf).

³⁴ See, e.g., Grant M. Domke et al., *Tree planting has the potential to increase carbon sequestration capacity of forests in the United States* (2020), https://www.fs.fed.us/nrs/pubs/jrnl/2020/nrs_2020_domke_001.pdf.

³⁵ Such practices persist even though the best available science shows it is ecologically inappropriate and counterproductive. See Letter from the Southern Environmental Law Center et al., to Acting Secretary Shea, Re: Forest Service Decisions Finalized Between January 20, 2017, and January 20, 2021 for Review Under Executive Order 13990 (Feb. 19, 2021) (listing projects that targeted old growth and mature forests).

³⁶ We recognize, of course, that reorienting the timber sale program to prioritize carbon storage will be an iterative and multi-year project, affecting everything from local projects to forest management plans to agency-wide budget requests. The need to take quick action does not replace the need to improve on current models and maps, using the best available science and allowing for public involvement.

³⁷ See, e.g., Mark E. Harmon et al., *Effects on carbon storage of conversion of old-growth forests to young forests*, *Science*. 247: 699-702 (1990), <https://andrewsforest.oregonstate.edu/sites/default/files/lter/pubs/pdf/pub1046.pdf>; Sebastiaan Luyssaert et al., *Old-growth forests as global carbon sinks*, 415 *Nature* 213 (2008), https://www.researchgate.net/publication/23250353_Old-growth_forests_as_global_carbon_sinks; David Mildrexler et al., *Large Trees Dominate Carbon Storage in Forests East of the Cascade Crest in the United States Pacific Northwest*, *Front. For. Glob. Change* (2020), <https://www.frontiersin.org/articles/10.3389/ffgc.2020.594274/full>.

³⁸ James E. Smith et al., *Methods for Calculating Forest Ecosystem and Harvested Carbon with Standard Estimates for Forest Types of the United States*, Gen. Tech. Rep. NE-343, Northern Research Station: U.S. Department of Agriculture, Forest Service, https://www.nrs.fs.fed.us/pubs/gtr/ne_gtr343.pdf.

³⁹ Allie Goldstein et al., *Protecting irrecoverable carbon in Earth’s Ecosystems*, 10 *Nature Climate Change* (2020), <https://forestcarboncoalition.org/wp-content/uploads/2020/04/goldsteinetal2020wSI.pdf>.

objectives.⁴⁰ To accomplish these objectives, the administration should ban the commercial harvest of old-growth forests, and ensure that mature forests are allowed to continue to age into old-growth conditions consistent with the natural range of variation, before it is too late.

Identification of the highest-value carbon-storage landscapes should drive a reevaluation of the agency's annual targets and objectives. Specifically, the flagship targets of volume of timber sold and acres of hazardous fuels treated should be abandoned and replaced with measurable objectives that more accurately reflect the values provided by national forest lands, including carbon storage. The Forest Service should establish a strategic carbon-bank program that seeks to move carbon-dense lands currently open to commercial timbering, mining, oil and gas extraction, and/or grazing into management for long-term carbon storage.⁴¹ The overall carbon-savings goal should be based on each Region's ability to contribute to it,⁴² and those expectations should be clearly communicated to the field. Many areas are clearly appropriate to include in a carbon bank immediately.⁴³ After making those initial deposits, additional progress toward filling this carbon bank can happen on a plan-by-plan or project-by-project basis similar to Forest Service Region Eight's process for identifying old-growth patch networks.⁴⁴ The maps, life-cycle analysis, and social-cost-of-carbon tool discussed above, along with fire condition class and forest type, will help the agency identify the most appropriate lands for inclusion in the carbon bank. To summarize, the agency should proactively move its stored-carbon assets into management that protects those carbon stocks and focus its active climate mitigation in areas that are not currently carbon strongholds. Measuring annual progress toward filling the carbon bank should be one of the replacements for the flagship targets.

⁴⁰ See, e.g., Thomas Spies, *The Diversity and Maintenance of Old-growth Forests*, in *Biodiversity in Managed Landscapes: Theory and Practice* (R.C. Szaro, & D.W. Johnston eds., 1996) (noting the biodiversity values provided by and rarity of old-growth forests in the United States), <https://andrewsforest.oregonstate.edu/sites/default/files/lter/pubs/pdf/pub1414.pdf>.

⁴¹ To ensure carbon stored in the carbon bank achieves an environmental benefit by preventing its emission to the atmosphere it should not be viewed as an "offset" to emissions elsewhere. Viewing carbon stored on national forests as an "offset" will unnecessarily prolong the burning of fossil fuels resulting in no net environmental gain.

⁴² Generally, the Forest Service must do a better job of taking regional differences into account when setting objectives or "targets." For example, national forests in the South are, in general, at much lower risk of wildfire than drier regions of the country; setting high hazardous fuel reduction targets for our region is counterproductive.

⁴³ Inventoried roadless areas and large, unfragmented forested landscapes that meet the criteria in Forest Service Handbook 1909.12, Chapter 70 for inclusion in each forest's potential wilderness inventory are appropriate for immediate inclusion in a carbon bank. These areas are identified on several southern national forests as "Mountain Treasures." See North Carolina's Mountain Treasures, <https://wilderness.maps.arcgis.com/apps/MapJournal/index.html?appid=8be30b5c39a04fe3932ab692abfa46c5>; Georgia's Mountain Treasures, https://gafw.org/wp-content/uploads/2019/01/GMT.book_final2018.pdf; Virginia's Mountain Treasures, <http://www.vawilderness.org/vmtgw.html>.

⁴⁴ Region 8 Old-Growth Team, *Guidance for Conserving and Restoring Old-Growth Forest Communities on National Forests in the Southern Region* (1997), <https://www.fs.fed.us/outernet/r8/planning/R8%20Old%20Growth%20Report.pdf>.

- **The Forest Service should shore up or decommission vulnerable infrastructure.**

Collectively, the Forest Service manages more than 370,000 miles of road⁴⁵—enough to stretch all the way to the moon and halfway back again—along with hundreds of thousands of culverts and over 13,000 bridges. Most of these roads were constructed decades ago when design and management techniques did not meet current standards, making them more vulnerable to erosion and decay.⁴⁶ But due to chronic budget shortfalls, the Forest Service has never been able to conduct needed systematic repairs; instead it has accumulated nearly \$3.5 billion in deferred maintenance for roads alone.⁴⁷

Neglected forest roads cause numerous adverse ecological impacts. For example, roads remain one of the greatest contributors to erosion and sedimentation in our national forests and grasslands.⁴⁸ Increased sedimentation is linked to a host of negative aquatic community impacts, including decreased fry emergence, decreased juvenile fish densities, loss of winter carrying capacity, increased predation, and reduced populations of benthic macroinvertebrates.⁴⁹ Roads and poorly designed culverts can also act as physical barriers to both aquatic and terrestrial species, further fragmenting scarce habitat and restricting natural migrations.⁵⁰ Undersized and aging culverts create a high risk for acute failures that are expensive to fix and even costlier for aquatic wildlife.⁵¹ At the same time, forest roads are primary vectors for the spread of non-native invasive species.⁵²

Climate change is expected to exacerbate all of these impacts, further deteriorate the Forest Service’s network of roads, and cause the already extensive deferred maintenance backlog to balloon.⁵³ Increased precipitation and flooding will wash out roads and plug or blow out

⁴⁵ U.S. Forest Serv., *National Forest System Statistics Fiscal Year 2020*, https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd878809.pdf.

⁴⁶ WildEarth Guardians, *The Environmental Consequences of Forest Roads and Achieving a Sustainable Road System* (2020), https://pdf.wildearthguardians.org/support_docs/Roads-Lit-Review-2020.pdf.

⁴⁷ *Id.*

⁴⁸ Hermann Gucinski et al., *Forest Roads: A Synthesis of Scientific Information*, U.S. Forest Serv. Gen. Tech. Rep. PNWGTR-509, 2001, <http://www.fs.fed.us/pnw/pubs/gtr509.pdf>.

⁴⁹ *Id.*

⁵⁰ See, e.g., *id.*; J. Erkinaro et al., *Road Culvert Restoration Expands the Habitat Connectivity and Production Area of Juvenile Atlantic Salmon in a Large Subarctic River System*, 24 *Fisheries Mgmt. and Ecology* 73 (2017), <https://onlinelibrary.wiley.com/doi/abs/10.1111/fme.12203>; David Marsh et al., *Forest Roads as Partial Barriers to Terrestrial Salamander Movement*, 19 *Conservation Biology* 2004 (2005), <https://conbio.onlinelibrary.wiley.com/doi/abs/10.1111/j.1523-1739.2005.00238.x>.

⁵¹ Benjamin Rasmussen, *U.S. Forest Service Transportation Resiliency Guidebook* (U.S. Forest Serv. 2018), <https://www.volpe.dot.gov/FS-Transportation-Resiliency-Guidebook>.

⁵² Jonathan L. Gelbard & Susan Harrison, *Roadless Habitats as Refuges for Native Grasslands: Interactions with Soil, Aspect, and Grazing*, 13 *Ecological Applications* 404 (2003), [https://doi.org/10.1890/1051-0761\(2003\)013\[0404:RHARFN\]2.0.CO;2](https://doi.org/10.1890/1051-0761(2003)013[0404:RHARFN]2.0.CO;2).

⁵³ Gucinski et al, *supra* note 48.

culverts;⁵⁴ indeed, because of increased storm severity, the Forest Service is sitting on a vast road network in systemic violation of its obligations under the Clean Water Act.⁵⁵ Larger wildfires will reduce slope stability and lead to more frequent landslides.⁵⁶ Species will become increasingly fragmented and prone to extirpation.⁵⁷ And the spread of invasive species will accelerate.⁵⁸ Therefore, it is imperative that the Forest Service take a “proactive approach” to “prepare its transportation infrastructure for future climate change impacts *today*.”⁵⁹ Doing so will not only save money in the long term, “but can also help minimize the destruction and disruption that climate change can have on National Forests and Grasslands as well as the surrounding communities that rely upon these lands.”⁶⁰ This proactive approach should involve decommissioning and hydrologically restoring unneeded or problematic roads to regain habitat connectivity and reduce erosion, and resisting further expansions of the road system particularly in light of budgetary shortfalls.

- **The South will be critical to achieving the objectives of the 30x30 initiative.**

We welcome the administration’s embrace of the goal of conserving at least 30% of our lands and waters by 2030 and we share the administration’s desire for “broad participation” in achieving that goal.⁶¹ Conserving 30% of southern lands and waters presents exceptional opportunities to protect biodiversity but also poses substantial challenges given the social and environmental complexities of the region. Transparency throughout the development of the 30x30 plan will be key. As an initial step, the administration should clearly outline the goals of the 30x30 initiative. These should include: 1) protecting biodiversity, 2) protecting climate-resilient and carbon-dense landscapes, and 3) ensuring the benefits of these protections are shared on an equitable basis by all.

With clearly defined goals as markers, the administration must move toward defining what qualifies as “protected” in the 30x30 context. Lands identified in the U.S. Geological Survey’s National Gap Analysis Program as GAP Status 1 and 2 lands should qualify. Publicly owned GAP Status 3 lands that are open to commercial logging, mining, oil and gas extraction, and grazing generally should not. These extractive activities entail risks to biodiversity and

⁵⁴ *Id.*

⁵⁵ Under 33 C.F.R. § 323.4(a)(6)(iii), culverts must “prevent the restriction of expected flood flows.” Many culverts were undersized when installed, and as expectations of flood severity and frequency have increased dramatically the problem is even worse than before. *See also* 33 C.F.R. § 323.4(a)(6)(vii) (“The design, construction and maintenance of the road crossing shall not disrupt the migration or other movement of those species of aquatic life inhabiting the water body”).

⁵⁶ *Id.*

⁵⁷ Len Ruggiero et al., *Wildlife and Climate Change* (U.S. Forest Serv., Climate Change Res. Ctr., 2008), <http://www.fs.fed.us/ccrc/topics/wildlife/>.

⁵⁸ *Id.*

⁵⁹ Rasmussen, *supra* note 51 (emphasis added).

⁶⁰ *Id.*

⁶¹ *See* Executive Order 14008.

increase greenhouse gas emissions relative to other realistic options for federal land management. In other contexts, however, such as some state or private lands, different classifications or restrictions may further 30x30 goals. Again, public participation and transparency will be essential to defining “protection” for different contexts.

After defining the objectives, and what it means to be “protected” for 30x30 purposes, the administration should develop annual milestones for adding areas to the “protected” classification. Separate milestones for both lands and waters should be developed at the national level but also at the Level III–ecoregion and/or state level, ensuring adequate representation and coverage to protect existing biodiversity.

Significant work has already gone into identifying southern national forest lands whose protection would generate the most biodiversity and carbon value. These lands include inventoried roadless areas, as well as other generally unfragmented areas identified as “Mountain Treasures” on many southern national forests.⁶² Many of these areas can also be identified using The Nature Conservancy’s Resilient Lands Mapping Tool.⁶³ Development of a carbon bank on national forest lands, as discussed above, should also help the administration prioritize areas for protection under the 30x30 initiative. Moving publicly owned Mountain Treasure, resilient lands, and carbon-bank areas into 30x30 protected status will jumpstart the administration’s efforts to take meaningful action on climate and biodiversity fronts.

Success in achieving 30x30 protections should also account for increased access to public, natural land for those communities that lack it. All Americans deserve to share the benefits of public land ownership. Studies indicate that affluent majority-White communities have superior access to public spaces than communities with larger concentrations of low-income ethnic minority people.⁶⁴ Righting these inequities must play a central role in prioritizing expenditure of public funds to achieve the 30x30 objective. Ensuring that public-land-deprived communities are invited to participate in discussions regarding the 30x30 initiative—and that their voices are elevated—is vital to its long-term success. The administration must also seek out the involvement of communities that currently rely on public lands for subsistence and other uses.

Equity considerations connect to other priorities set forth in Executive Order 14008 as well. We appreciate the goals to improve air and water quality, restore natural assets, revitalize recreation economies, address climate-change impacts, and confront environmental injustice in communities historically reliant on fossil-fuel extraction and in disadvantaged communities. Many communities in historically coal- and natural-gas-producing areas of the South would benefit from investments in enhancing natural resources and recreation on public lands.

⁶² See *supra* note 43.

⁶³ See The Nature Conservancy, *Resilient Land Mapping Tool*, <https://maps.tnc.org/resilientland/>.

⁶⁴ Alessandro Rigolon et al., *Inequities in the quality of urban park systems: An environmental justice investigation of cities in the United States*, 178 *Landscape and Urban Planning* 156 (2018), https://www.srs.fs.usda.gov/pubs/ja/2018/ja_2018_jennings_003.pdf.

Southern national forests already provide clean drinking water⁶⁵ and opportunities for a range of recreational activities, from hiking and birdwatching to hunting and fishing, which sustain local communities and economies. These forests, if managed as high-quality natural areas, are assets that can and should have a key role in the economic future of our region, especially for historically disadvantaged or extraction-dependent communities.

If 30x30 goals are going to be achieved in the South or other areas with limited public land, private lands must be a part of the solution. Within one year, the administration should present a suite of new tools to incentivize keeping private, natural lands in a natural state that is durable enough to further long-term climate and biodiversity goals. The administration should consider options such as: reallocating subsidies for fossil fuels to compensate private land owners for making their lands eligible for 30x30 “protected” status, expanding and potentially restructuring conservation programs such as USDA’s conservation reserve and forest legacy programs, incentivizing conservation easements by recommending changes to the U.S. tax code, creating new markets aimed at reducing greenhouse gas emissions that recognize the value of long-term carbon storage in forests, and generally increasing information about and access to federal conservation easement programs.

- **The South offers significant potential for Civilian Climate Corps work.**

The impact of the New Deal’s Civilian Conservation Corps on the South continues today. For example, the Conservation Corps had a hand in developing many of our most popular public recreation facilities—such as the Blue Ridge Parkway—which drive local tourism economies. Beloved trails in our parks and national forests still sit on the stonework from CCC-era projects. The proposed Civilian Climate Corps offers a similar opportunity to leave a lasting impact on the region while developing the next generation of conservation professionals and putting diverse Americans to work, shoulder to shoulder. To that end, this next generation of public land stewards must reflect the full diversity of America—recruiting a diverse Climate Corps workforce must be a top priority of the administration.

Once created, the Climate Corps’ work in the South should prioritize the following: removing non-native invasive species, addressing the backlog of maintenance projects on federally administered lands, decommissioning unsustainable roads, upgrading trails and other recreation infrastructure to prepare for climate-driven changes in weather patterns, increasing access to public lands for all residents, investing in natural climate solutions such as restoring wetlands, educating communities about the threats of wildfire and assisting communities in mitigating those threats, and installing renewable energy infrastructure. Tackling the climate and biodiversity crises will require us to change the way we approach land management and the Climate Corps will be well positioned to aid in that transition. For example, past practices of “creating” habitat for some wildlife species on public lands through commercial logging should be reconsidered where the commercial aspect of the logging operations encourages removing the oldest, largest, and most carbon-dense trees, and the infrastructure and machinery necessary to

⁶⁵ Peter Caldwell et al., *Quantifying the Role of National Forest System Lands in Providing Surface Drinking Water Supply for the Southern United States*, USDA Forest Service, Southern Research Station, GTR-SRS-197 (2014), https://www.srs.fs.usda.gov/pubs/gtr/gtr_srs197/gtr_srs197.pdf.

remove trees threatens biodiversity. Where ecologically appropriate, completing noncommercial restoration and habitat work is a logical fit for the Climate Corps.

We look forward to working with the administration to further its climate and biodiversity objectives in the South. If we can answer questions or provide additional information, please do not hesitate to let us know.

Sincerely,

A handwritten signature in black ink that reads "Sam Evans". The signature is fluid and cursive, with the first name "Sam" being larger and more prominent than the last name "Evans".

Sam Evans
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