U.S. DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, DC 20250

SECRETARY'S MEMORANDUM 1077-004
June 23, 2022

Climate Resilience and Carbon Stewardship of America's National Forests and Grasslands

1. PURPOSE AND BACKGROUND

   a. Drought, extreme weather, flooding, and catastrophic wildfires driven by the growing climate crisis threaten the health and resilience of our communities, lands, waters, and wildlife. Climate impacts, in combination with a legacy of fire exclusion and other past management practices, are already causing severe disruption in natural systems, requiring urgent action from decision makers. Our forests on Federal lands, and the forested lands of Tribal, state, local and private landowners, provide a vast network of natural infrastructure that is increasingly important for mitigating and adapting to the effects of climate change.

   b. The USDA Forest Service (USFS) manages the National Forest System, which includes 193 million acres of national forests and grasslands that provide a rich natural heritage. The USFS also provides research, technical and financial assistance for the sustainable management of 500 million acres of private, state, and Tribal forests. These forests, grasslands, and waters provide ecosystem services and benefits that we need: sequestering carbon, providing clean drinking water, stabilizing soil, buffering floods, protecting biodiversity, providing sustainable forest resources, protecting cultural resources and places of tribal importance, and enabling access to the outdoors for hundreds of millions of visitors.

   c. In addition to these vital benefits, our forests are climate change mitigation powerhouses. Attaining our global climate goals cannot be achieved in the absence of investments and policies to secure healthy and climate resilient forests. America's forests—from mature and old-growth stands to working forests—already capture more than 10 percent of our nation's carbon emissions each year, and they have the potential to do more. Yet forest mortality from climate change-induced drought, pests and wildfire is a major driver of carbon emissions from some U.S. forests and could result in additional forests becoming carbon sources rather than carbon sinks.

   d. On January 27, 2021, this Administration responded to the climate crisis through President Biden's Executive Order (EO) 14008, *Tackling the Climate Crisis at Home and Abroad,* which included the America the Beautiful initiative to conserve thirty percent of lands and waters by 2030. USDA followed the President's order with a comprehensive *Action Plan for Climate Adaptation and Resilience*, which provides

broad direction to overcome risks and generate solutions on our forests through wildfire risk reduction, climate-informed reforestation and restoration, applied science, and carbon stewardship. The Department and the USFS are taking additional actions consistent with EO 14008, including a rulemaking proposing to restore the *2001 Roadless Rule on the Tongass National Forest* and developing a *USFS Climate Adaptation Plan*. Most recently, on Earth Day 2022, President Biden issued EO 14072, *Strengthening the Nation's Forests, Communities, and Local Economies*, directing USDA, in partnership with other Federal agencies, to take actions to inventory old-growth and mature forests, accelerate reforestation, create and sustain jobs in the sustainable forest product sector, and develop policies to institutionalize these actions.

e. To complement the Departmentwide climate strategy and address one of the most significant risks to our forested land, the USFS issued the *Confronting the Wildfire Crisis* strategy earlier this year. Our national forests coevolved with fire, deliberately set by native Americans or resulting from lightning strikes. Periodic and, in some forest ecosystems, frequent fire caused many forests to be "patchier" and more open with widely spaced trees. More than a century of deliberate wildfire suppression strategies from Federal and state agencies and others have left many forests significantly different from their historic conditions and vulnerable to uncharacteristic and catastrophic fires. The climate crisis is exacerbating these unhealthy conditions through widespread drought, insect and disease mortality, and an increase in extreme weather events. At the same time, the number of people living in or near wildland forests has increased dramatically, creating additional challenges in protecting lives, communities, infrastructure, and natural resources from wildfire. The *Infrastructure Investment and Jobs Act* (herein "*Bipartisan Infrastructure Law*" or "BIL"), Public Law 117-58, combined with our annual appropriations, provide us with an unprecedented opportunity to invest in significant new landscape-level restoration efforts to support resilient forest ecosystems and forest-adjacent communities.

f. In addition to the risks that uncharacteristic wildfires pose to lives, property, health, and communities, wildfire-driven deforestation is a reality, with some forests unable to recover, resulting in conversion to non-forested systems. Forest values at risk are connected and often interdependent, including carbon sequestration, water, biodiversity, critical habitat, and unique ecological features such as old-growth. In particular, many old-growth and mature forests have a combination of higher carbon density and biodiversity that contributes to both carbon storage and climate resilience. While these stands may be ideal candidates for increased conservation and restoration efforts to retain large trees and maintain and restore old-growth characteristics, many are also at increasing risk of mortality through acute and chronic disturbances such as drought, wildfires, type conversion, and insect outbreaks. A primary threat to old-growth stands on national forests is no longer timber harvesting, but rather catastrophic wildfire and other disturbances resulting from the combination of climate change and past fire exclusion.

g. USDA Forest Inventory and Analysis (FIA) data indicates that there are 134 million acres of total forest area on land managed by the agency within the contiguous U.S., of

which 56 million acres are older than 100 years and approximately 11 million acres are estimated to be 200 years or older. The majority of these forests are in congressionally or administratively designated areas designed to protect and preserve their natural values. In addition, all national forests currently protect or limit management actions in old-growth stands through forest specific land management plan components or by specific Secretarial direction. This memorandum indicates leadership intent to continue protection of old-growth stands through those approaches, and to use the actions in this memorandum to inform future policy and decision-making.

h. The appropriate science-based practices that will sustain resilient forests and stabilize forest carbon are place specific. Preferential management techniques might include mechanical thinning; proactive fire use including prescribed fire and cultural burning; management approaches that consider composition, competition and structure in forest stands; promoting the growth of tree seedlings; adopting and continuing soil-friendly practices; or utilizing climate-forward reforestation techniques with the right trees in the right places and at appropriate scales.

i. As we consider actions to conserve these values, USDA will continue to recognize government to government responsibilities with Tribal Nations. We will also ensure that our work is done in accordance with USDA's *Equity Action Plan* and the landmark *Justice40* initiative. We must couple the urgent need for action on climate with the imperative to meaningfully address past inequities and advance equity and environmental justice. Equitable access to the benefits our forests provide is a matter of necessity for communities into the future.

j. As we do this work, we will vigorously pursue partnerships and opportunities for collaboration with nongovernment organizations, philanthropic organizations, academia, businesses, state and local governments and Tribes, and others to advance conservation, forest, range and watershed restoration, and reforestation and resilience projects.

k. This memorandum is intended to build on the Administration, Department and Agency's previous actions on climate change, equity and forest resilience. To that end, and consistent with EO 14008, EO 14072, the Forest Service's *Confronting the Wildfire Crisis* strategy, and other previous direction, this memorandum outlines actions that the Department and USFS will undertake so that data-informed policies, strategies, and actions are in place to provide for increased carbon stewardship and climate resilience across our national forests and grasslands. The policy of this memorandum is intended to be implemented within the context of the USFS's multiple-use mandate.

2. ACTIONS

Pursuant to this memorandum, the Secretary directs the Chief of the Forest Service, in coordination with the Under Secretary for Natural Resources and Environment, to take the following actions:

a. Spatially Identify Risks to Ecosystem Values to Inform Decision Making.

The following actions are intended to ensure that we understand where certain ecosystem values are present on the landscape, the risks to those values, and the current management direction on these respective lands:

(1) Updated Fireshed Risk Map for Ecosystem and Equity Layers.

By November 30, 2022, provide an update of the fireshed risk map included in the *Confronting the Wildfire Crisis Strategy and Implementation Plan* to:

(a) Identify wildfire risks to ecosystem values including watersheds, habitat and ecological connectivity for important wildlife and at-risk species, and carbon storage, using the best available science; and

(b) Incorporate into the fireshed risk map a spatial display of risks to underserved and socially disadvantaged communities, building on the work of other agencies throughout the Federal Government, including other agencies within USDA. Based on feedback from the national, regional and tribal roundtables, identify whether additional layers may be needed, including to identify social and economic values or other assets at risk due to increased wildfire activity, and recommend next steps to include in the Implementation Plan.

(2) Gap Analysis and Decision Support Tool.

By November 30, 2022, based on the best available information, develop a decision support tool that will:

(a) Assess climate change vulnerabilities and risks to key National Forest System resources and associated community values, including but not limited to watersheds, areas important for biodiversity and species at risk, carbon, and mature and old-growth characteristics;

(b) Identify current management direction related to those values, vulnerabilities and risks;

(c) Identify potential gaps in current management where changed or additional direction may be needed to enable more effective adaptation or mitigation actions; and

(d) Assess and prioritize reforestation opportunities.

This tool should be updated annually to incorporate significant new information. Using this tool, provide recommendations to the Secretary on how to address any identified gaps, and how to prioritize and design projects while considering multiple interrelated outcomes.

b. Develop Policy Recommendations for Climate Resilience and Carbon Stewardship on National Forest System Lands.

Based on the best available science about current and future risks including FIA data and the data and analysis derived from the action items in Section 2a and incorporating learning from the actions outlined in Section 2d by November 1, 2023, provide the Secretary with specific policy recommendations for:

(1) Carbon Stewardship.

Develop recommendations to leverage partnerships and private-sector capital in science and policy-based carbon optimization projects on National Forest System lands, including analysis of potential carbon benefits derived from National Forest System lands, utilizing a carbon accounting certification process that builds on existing work throughout the Administration, is consistent with international standards, and is informed by sound science.

(2) Wildlife Habitat and Connectivity.

In collaboration with the Farm Production and Conservation Mission Area, state and tribal wildlife agencies, and other important partners, develop recommendations for increasing and replicating successful cross-jurisdictional partnerships and programs to foster increased biodiversity, enable wildlife migration, and enhance habitat integrity and resilience.

(3) Water and Watershed Restoration and Conservation.

Develop recommendations for building on and replicating successful cross-jurisdictional partnerships and programs for water and watershed conservation, including building on recent Forests to Faucets geospatial data and other cross-boundary initiatives, and implementation of programs like the Watershed Condition Framework and Water Source Protection Program.

(4) Integration with Planning.

Develop recommendations for methods to incorporate new analyses and data and the use of new and innovative tools and technology to ensure climate resilience, and carbon stewardship considerations are integrated into forest and relevant project planning. For land management planning, this should include recommendations for how to support the explicit consideration of carbon stewardship optimization and climate adaptation in defining desired conditions, and how to evaluate whether certain National Forest System lands are appropriate for designation as "not suitable for timber production" pursuant to 16 United Status Code (U.S.C.) 1604(k), *Development of land management plans*, based on those considerations.

(5) Incentivizing Utilization of Restoration Byproducts and Wood Product Innovation.

Develop recommendations to:

(a) Support investment strategies that incentivize new utilization technologies and uses of forest restoration byproducts;

(b) Develop wood product innovations such as cross-laminated timber, wood composites to address affordable housing, nanomaterials, aviation biofuels, and urban wood utilization to enhance carbon sequestration while providing economic opportunities and increasing demand for small-diameter wood that will be generated through hazardous fuels and restoration treatments; and

(c) Identify related opportunities for jobs and economic benefits, including in underserved and socially disadvantaged communities.

(6) Outdoor Access and Recreation.

Develop recommendations for supporting climate-resilient community well-being, jobs and economic opportunity through equitable access to the outdoors and the outdoor recreation economy. Recommendations should reflect wildfire and climate-related risks to recreation infrastructure and assets and opportunities for integrating recreation outcomes into wildfire risk-reduction and restoration projects, where appropriate.

c. Further Policy Recommendation Development Guidance

(1) The recommendations in Section 2b should include guidance on how to use new data, analysis, tools, indigenous traditional ecological knowledge, and technology in multiple use decision-making to ensure that the policy recommendations called for in this section and related considerations are integrated into and informed by:

(a) Implementation of the *Confronting the Wildfire Crisis* strategy, including wildfire risk reduction and reforestation prioritization and project design;

(b) Implementation of the forthcoming USFS *Climate Adaptation Plan*;

(c) Implementation of the BIL;

(d) Implementation of priorities and opportunities in America the Beautiful, the Civilian Climate Corps, and Public Land Corps; and

(e) Other priority actions, including any recommendations for new programs or policies that would advance ecosystem integrity, climate mitigation and

resilience, and stewardship of ecosystem benefits including carbon, water, and wildlife.

(2) Recommendations must reflect the Department's and agency's Equity Action Plans, Justice40, and the *Joint Secretarial Order on Fulfilling the Trust Responsibilities to Indian Tribes in the Stewardship of Federal Lands and Waters* (Order No. 3403) and related direction.

(3) The set of recommendations as a whole should reflect and build on existing Forest Service actions and expertise in these areas and should include an assessment of what is realistically achievable under current and expected budget and staffing scenarios.

d. Carry Out Immediate Actions to Accelerate Climate Resilience and Carbon Stewardship.

While data continues to be gathered and analyzed and programmatic strategies and guidance developed, there are a series of immediate actions needed to secure ecosystem benefits, community values, and ensure equity. As the data gathering and analysis derived from the action items in Section 2a are completed, they should inform the actions outlined below – similarly, information gained through actions in this section should be incorporated into the tools identified in Section 2a. To immediately implement the direction of this memorandum, the Chief of the Forest Service, in coordination with the Under Secretary of Natural Resources and the Environment, will:

(1) BIL Implementation.

Within the confines of Congressional direction in Section 40803(g), *Priorities*, of the BIL, use the direction provided by this memorandum to inform BIL project selection, design, and implementation so that investments reflect the intended outcomes of restoring ecosystem integrity and fostering ecological resilience alongside community resilience and include consideration of multiple ecosystem values for risk reduction and restoration, including carbon, water, biodiversity and old-growth.

(2) Inventorying and Retaining Old-Growth and Mature Forest Characteristics.

(a) By April 22, 2023, implement the direction in EO 14072, in close coordination with Department of the Interior, to define, identify and complete an inventory of old-growth and mature forests on NFS lands, accounting for regional and ecological variations as appropriate; and

(b) Following completion of the inventory, recommend measures, including robust opportunities for public comment, to protect, maintain, restore, and cultivate old-growth and mature stand characteristics within the National Forest System, grounded in science-based principles of carbon stewardship optimization,

considering a range of management strategies, and recognizing complementary opportunities and tradeoffs with other ecosystem values including water, wildlife, and biodiversity and social values such as wildfire risk to communities and source-water watersheds.

(3) Scale up and Optimize Climate-Smart Reforestation.

By April 22, 2023, and in accordance with EO 14072, develop strategic guidance and an implementation plan to:

(a) Immediately increase climate-informed afforestation, agroforestry, and reforestation (planting and natural regeneration) including critical consideration given to climate-informed reforestation in areas such as fire scars that can help avoid carbon loss from forest soils; and

(b) Increase Federal cone and seed collection, and seed and seedling nursery capacity sufficient to meet anticipated demand, including collaboration with additional USDA agencies, and other Federal, state and local government, Tribal and private-sector partners.

(4) Community and Forest Product Sector Sustainability.

By April 22, 2023, and in accordance with EO 14072, develop in coordination with the Secretary of the Interior and the Secretary of Commerce, and with input from State, local, Tribal, and territorial governments, the private sector, nonprofit organizations, labor unions, and the scientific community, recommendations for community-led local and regional economic development opportunities to create and sustain jobs in outdoor recreation, and the sustainable forest product sector, including innovative materials.

(5) Proactive Fire Use.

By December 15, 2022, and in accordance with the *Confronting the Wildfire Crisis* strategy, develop strategic guidance and a plan to invest in capacity to support the safe use of prescribed fire, cultural burning, and where appropriate managed wildfire, to restore desired conditions and increase resilience in fire-adapted ecosystems.

(6) Measures and Accountability.

By December 15, 2022, develop outcome-based performance measures and systems for tracking and reporting progress on fire and climate resilience, climate adaptation, reforestation, ecosystem and watershed restoration, ecosystem services, and carbon stewardship activities, and related investments in community engagement, partnerships, collaboration, and equity.

We need our nation's forests and grasslands to serve as a critical defense in the face of climate change. Restoring, maintaining, and fostering resilient landscapes, and achieving the outcomes I have outlined above, will position our forests and grasslands to continue playing that role while providing benefits and services to the people of this country.

3. INCIDENTAL TRANSFERS

The Assistant Secretary for Administration, the Chief Financial Officer, and the Director, OBPA, are authorized to approve such transfers of funds, personnel, employment authority, space, records, property, and incidentals as may be necessary to implement the provisions of this Memorandum.

4. EFFECTIVE DATE AND TERMINATION

a. This delegation is effective immediately and will remain in effect for 1 year from the effective date or until such earlier time as the Department's published delegations of authority have been revised to incorporate the provisions of this Memorandum.

b. This Secretarial memorandum rescinds the Secretarial memorandum dated June 12, 2020 and titled *Secretarial Memorandum to the Chief of the Forest Service [to] Establish vision, priorities, and direction on: Increasing the productivity of National Forests and Grasslands, [etc.]*.

/s/ Thomas J. Vilsack
Secretary of Agriculture