UNITED STATES DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
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SECRETARY'S MEMORANDUM 1077-013

October 21, 2024

Conserving and Restoring Terrestrial Wildlife Habitat Connectivity and Corridors in the United States

1. PURPOSE

This Memorandum serves to direct coordination and action within the Department of Agriculture to improve terrestrial wildlife habitat connectivity and corridors in a way that recognizes and leverages State and Tribal authorities, capitalizes on Federal land management, and respects private property rights through voluntary, locally led conservation.

2. BACKGROUND

a. The United States harbors diverse wildlife species that require large areas to survive and reproduce. Many species, such as the sage grouse in the West, or the northern bobwhite in the East, depend on vast swaths of connected habitat for their population viability and abundance. A subset of species moves seasonally between distinct ranges to meet their needs. For instance, migratory waterfowl, shorebirds, songbirds, and pollinators travel thousands of miles each spring and fall, using wetland, forest, and grassland stopovers to rest and refuel. Hoofed mammals, such as elk, mule deer, pronghorn, and bison migrate tens or hundreds of miles across Western landscapes to find seasonal food and shelter. Many other species travel shorter distances, yet still depend on a mosaic of connected habitats to thrive. These wildlife represent immense ecological value, cultural heritage, recreational enjoyment, and economic opportunity for the American people.

b. The expanding human footprint can result in habitat loss and barriers to animal movement, as well as increasing interactions between people and wildlife. At the same time, frequent and severe drought, catastrophic wildfires, and invasive species are altering the landscape for some wildlife species, introducing new stressors and conflicts.

c. Rising public concern over changing or declining wildlife populations, and the disruption of habitat connectivity, places growing demands upon public, private, and Tribal land stewards. These land stewards are increasingly asked to integrate conservation and restoration activities into the production of food, fiber, and energy.

d. Addressing these challenges requires a clear understanding of wildlife movements and habitat needs, as well as the effects of human activity and the array of locally appropriate solutions. A recent revolution in animal tracking, remote sensing, and computational analysis is improving the prioritization of conservation and restoration actions. New approaches to participatory science are increasingly used to integrate local knowledge into prioritization, planning and management.

e. Indigenous land management has been practiced in North America for millennia. Indigenous Knowledge and Traditional Ecological Knowledge are recognized as being essential to wildlife conservation, restoration and management, including the identification of priorities and best practices, and the assessment of outcomes.

f. Wildlife use the landscape regardless of jurisdictional boundaries. States and Tribes have management authority for wildlife across much of the country, and are uniquely responsible for sensitive location and population data needed for scientifically based management. Federal lands often serve as anchor points for wildlife, but most of the country's wildlife reside on private lands. Tribal lands also provide vast areas of wildlife habitat. Hence, effective conservation and restoration of wide-ranging wildlife requires multijurisdictional, coordinated approaches, delivered through localized partnerships.

g. While the successful conservation and restoration of wildlife creates benefits for many, there may be disproportionate costs and risks for some. For instance, while abundant migratory flocks and herds produce hunting and wildlife-watching opportunities that contribute to quality of life and rural economies, they can also damage crops or compete with livestock for forage. They can transmit disease and attract predators, threatening livestock and sometimes threatening human safety. In particular, successful wildlife restoration efforts on Federal lands – as for wolves and grizzly bears in the western U.S. – can affect adjacent private and Tribal lands and state management activities. Where these challenges occur, effective wildlife damage management is essential to ensure the fairness and social support required for large-scale conservation and restoration.

h. State and Tribal wildlife managers and their local partners, including agricultural producers and forest landowners – many of whom hold generations of knowledge – understand these challenges and opportunities. They are positioned to work closely with the scientific community to identify priority areas and necessary conservation practices. They know how to "keep working lands working," while improving habitat and reducing conflict. Today, many are stepping forward with innovative solutions.

i. Hunters and their associations, and a variety of other conservation organizations, have provided leadership in wildlife conservation for well over a century. Their efforts were instrumental to the establishment of Federal and state land and wildlife management agencies, and to the passage of key Federal legislation to fund wildlife habitat conservation. This legacy has continued through a variety of innovative, public-private habitat connectivity partnerships around the country.

j. For all these reasons, a locally led, incentive-based, voluntary approach is fundamental to wildlife conservation and restoration in the U.S. This approach respects state and Tribal authority to manage wildlife species, and honors Tribal treaty rights, sovereignty, and trust responsibility. It also honors private property rights, engages sportsmen and other conservationists who can serve as key partners, recognizes the importance of public lands as anchor points and population strongholds, and fosters cross-boundary solutions.

k. State and Tribal governments determine the majority of wildlife regulations and policies within their boundaries, and their representative associations have provided leadership on multijurisdictional management by introducing specific measures to enhance the conservation and restoration of terrestrial wildlife connectivity. For example, the Western Governors Association, the Western Association of Fish and Wildlife Agencies, and the Native American Fish and Wildlife Society have all promoted wildlife habitat connectivity and landscape-level conservation planning. Multiple states have increased their readiness by issuing state level executive orders and action plans to protect migration corridors and identify specific areas to implement conservation practices.

l. Federal leaders have been responding. For instance, in 2018, the Secretary of the Interior issued Secretarial Order 3362, *Improving Habitat Quality in Western Big-Game Winter Range and Migration Corridors* – a policy that has been maintained by the current Administration and achieved significant positive impact. Through the 2021 Bipartisan Infrastructure Law, Congress established a Wildlife Crossings Pilot Program, administered by the Department of Transportation (DOT), to provide competitive grants for wildlife crossing infrastructure on America's roadways. In 2023, the Council on Environmental Quality issued *Guidance for Federal Departments and Agencies on Ecological Connectivity and Wildlife Corridors.*

m. The missions of several USDA agencies are directly relevant to the conservation and restoration of wildlife habitat connectivity and corridors and are well positioned to continue Department policy and coordination.

    (1) The Forest Service (USFS) manages the 193 million acres of the U.S. National Forest System. The agency's 2012 planning rule, which governs land management planning across these lands, included requirements for evaluating, maintaining, or restoring connectivity. Additionally, the agency's 2022 Climate Adaptation Plan identified the protection and improvement of connectivity as key needs, a goal furthered by the Deputy Chief's 2022 Memorandum, *Habitat Connectivity and Migration Corridors in National Forest System Planning and Decisions*. The agency has also provided resources to collaborative efforts to conserve wildlife connectivity with Federal, state, Tribal, and non-governmental partners. This includes investments through the Forest Legacy Program, which has conserved over 3 million acres of threatened forests to "keep working lands working" while protecting wildlife habitat and critical migration corridors, and contributions totaling $1.4 million to the National Fish and Wildlife Foundation's (NFWF) Western Big Game Seasonal Habitat and Migration Corridors Fund. USFS analytic

tools are improving planning, including a Climate Risk Viewer that identifies climate-driven risks to key resources, including corridors and connectivity, and migration corridor tool development among the National Forest System, Research Stations, and partners.

(2) The Natural Resources Conservation Service (NRCS) uses its conservation planning approach to incorporate terrestrial wildlife habitat connectivity and corridors into conservation strategies at a broad landscape scale, and into conservation plans with individual ranchers, farmers, and forest owners at the local scale. At the landscape scale, NRCS uses its Landscape Conservation Initiatives (LCI) and its Working Lands for Wildlife (WLFW) approach, which leverage strategic science and conservation partnerships, to identify needed practices and ensure they are targeted to achieve measurables outcomes. From 2010 to 2023, NRCS worked with over 10,000 private landowners to protect or restore more than 13 million acres through WLFW. In response to needs expressed by state and local stakeholders, the agency has introduced a number of innovations in policy and conservation practices that can benefit wildlife and working lands. For example, through WLFW's Migratory Big Game Initiative, NRCS is working with the Farm Service Agency to pilot concurrent participation in the Environmental Quality Incentives Program (EQIP) and the Conservation Reserve Program (CRP) to address both habitat connectivity and operational resource concerns. The agency has also recently used its Conservation Innovation Grants and other programs to incorporate habitat connectivity and wildlife conflict reduction considerations into conservation practice standards. Finally, NRCS is a leader in the Areawide Network to Connect Habitats and Optimize Resiliency (ANCHOR), which uses current science to rank sites for their connectivity value.

(3) The Farm Service Agency's (FSA) Conservation Reserve Program (CRP) has a long history benefiting seasonal wildlife habitat across the U.S. In 2022, through the designation of a Greater Yellowstone Wildlife Corridors National Priority Zone, the agency enhanced incentives for producers to protect grazing land from development within state-identified migration habitats of national importance. The forthcoming expansion of several WLFW Frameworks for Conservation Action will ensure CRP compatibility with complementary programs to provide landowners, farmers, and ranchers with more tools to contribute to landscape scale conservation. FSA continues to engage wildlife experts and producers to inform CRP State Acres for Wildlife Enhancement (SAFE) proposals and competitive enrollment opportunities to address priority resource concerns, enhance wildlife populations, and target CRP enrollment objectives. FSA has also been advancing opportunities for Tribal partnership: since 2022, the agency has entered four Conservation Reserve Enhancement Program (CREP) Agreements with Tribal Nations in Montana and South Dakota to improve grassland productivity, reduce soil erosion, and enhance wildlife habitat.

(4) The Animal and Plant Health Inspection Service (APHIS) administers Wildlife Services (WS), which provides expertise to resolve wildlife conflicts to allow

people and wildlife to coexist. To that end, APHIS continues to build capacity and support inter-governmental coordination on the response to zoonotic and emerging wildlife diseases, such as a new Wildlife Disease Diagnostics Laboratory and Bioarchive Storage Facility in Ft. Collins, CO. WS has long provided technical assistance to help reduce predator damage, including non-lethal tools like electric fencing, range riding, and carcass disposal. Since Congress funded the WS Nonlethal Initiative (NLI) in 2020, the agency has expanded the delivery of these tools and is studying how new technology such as unmanned aerial systems, artificial intelligence, and robotics can be used to detect and deter predators to minimize livestock loss and wildlife mortality. WS plays an important role in determining cause of death in a number of settings where federally protected predators, such as wolves and grizzly bears, may kill livestock and cause-of-death determinations influence management decisions including livestock protection efforts or agency control actions. Recently, this has included improvements in the evidentiary standards for depredation investigations in the Mexican Gray Wolf Recovery Zone. APHIS Veterinary Services (VS) has oversight and management authority over bison quarantine facilities as part of the Bison Conservation Transfer Program (BCTP). BCTP is a cooperative program between agencies to restore bison to the prairie grasslands of Tribal communities. A cooperative effort between Yellowstone National Park, APHIS VS and the Fort Peck Tribes captures Yellowstone bison, ensures they are free from brucellosis, and distributes them to Tribal lands across the United States. To date, 414 Yellowstone National Park bison have been shipped to Tribal communities across the United States for conservation herds. Veterinary Services is also a partner agency in the Interagency Bison Management Plan that cooperates to manage Yellowstone bison at the Yellowstone National Park and State of Montana boundary to reduce the risk of brucellosis infection to cattle and maintain a wild free-ranging herd of bison.

n. USDA and its agencies, by policy and practice, implement science-based and evidence-driven decision-making. In the course of their work to conserve and restore wildlife habitat connectivity and corridors and to reduce associated conflicts, agencies recognize and respect science and data from a variety of sources, including but not limited to agencies, universities, Tribes, non-governmental organizations, and individuals.

o. This Memorandum is intended to build on USDA agency as well as state, Federal, Tribal and non-governmental partners' previous actions on terrestrial wildlife habitat connectivity and corridors. The Memorandum is to be implemented within the context of the USDA Forest Service's multiple-use mandate and the other agencies' voluntary, incentive-based, and service-oriented approach to conservation and restoration.

3. ACTIONS ORDERED

Pursuant to this Memorandum, the Secretary directs the Chief of NRCS, the Administrator of FSA, the Chief of USFS, and the Administrator of APHIS, working closely with the Under Secretaries for Farm Production and Conservation (FPAC), Natural Resources and

Environment (NRE), and Marketing and Regulatory Programs (MRP), to take the following actions:

a. Incorporate consideration of terrestrial wildlife habitat connectivity and corridors into relevant planning processes, programs, and assessments, as appropriate, including:

   (1) USFS land management plans, fuels reduction and wildfire crisis planning, national and regional reforestation implementation plans, State Forest Action Plans, Tribal Forest Management Plans, Collaborative Forest Landscape Restoration Program (CFLRP), Forest Legacy Program (FLP), Forest Stewardship Program (FSP), Landscape Scale Restoration (LSR), and Community Forest Program (CFP).

   (2) NRCS and FSA Farm Bill conservation programs, including the Agricultural Conservation Easement Program (ACEP), Environmental Quality Incentives Program (EQIP), Regional Conservation Partnerships Program (RCPP), Conservation Stewardship Program (CSP), Conservation Innovation Grants (CIG), Conservation Reserve Program (CRP), and Grassland CRP.

   (3) USFS and NRCS jointly administered Joint Chiefs Landscape Restoration Partnerships program.

   (4) APHIS and WS wildlife damage, wildlife disease, and invasive species management programs and APHIS bison quarantine/BCTP program.

   (5) Each agency's monitoring, assessment, and evaluation efforts, including the efforts of NRCS' Resource Inventory and Assessment Division and Working Lands for Wildlife science team; FSA's CRP Monitoring, Assessment and Evaluation Program; and USFS monitoring programs and platforms including the Climate Risk Viewer.

b. Improve the coordination, compatibility, and delivery of USDA planning processes and programs to improve outcomes for terrestrial wildlife connectivity by:

   (1) Ensuring coordination among USDA's public land managers, wildlife biologists, and private land conservation planners at the regional and state levels as they deliver technical and financial assistance for wildlife habitat conservation and restoration, wildlife damage management and other services, particularly where this coordination can improve habitat and conflict reduction outcomes across adjacent public, private, and Tribal lands within identified state and Tribal priority areas. This includes Regional Foresters and Forest Supervisors; Regional, State, and District Conservationists; and State and County Directors.

   (2) Enhancing opportunities for agricultural and forest landowners to participate in concurrent Farm Bill programs. This includes making appropriate regulatory or policy changes that would enable better compatibility or transitions between

programs or program components (e.g. EQIP, Grassland CRP and ACEP-Agricultural Land Easements).

(3) Identifying and addressing barriers that limit Tribal access to, and participation in, USDA's planning processes and conservation programs. This includes making appropriate improvements to program eligibility and technical assistance.

(4) Utilizing Landscape Conservation Initiatives funding and Working Lands for Wildlife Frameworks for Conservation Action (including Frameworks in progress, such as those on Western Migratory Big Game, Southeast Aquatic Connectivity, Eastern Deciduous Forest, and the Southeastern Pine Ecosystems) to align NRCS and FSA programs to maximize habitat connectivity outcomes.

(5) Using a science-based approach to identifying priorities, delivering programs, and monitoring outcomes. This includes leveraging the full suite of data from Federal, state, Tribal, and non-governmental partner organizations, seeking new ways to include traditional ecological knowledge and support the co-production of science with partners, maintaining science adviserships at universities to improve the prioritization and outcomes of this conservation, and working with communications teams across the Department to share outcomes with the public.

(6) Evaluate current disaster assistance programs, such as FSA's Emergency Conservation Program (ECP), to examine effectiveness and geographic applicability of current fence repair and replacement standards as they relate to land management, while exploring alternatives to better harmonize fencing standards with wildlife friendly practices.

(7) Support producer, permittee, and Tribal innovation by expanding conservation practices, financial assistance, and other partnership opportunities to reflect modern technology and management, including:

(a) Supporting grazing management techniques that improve habitat permeability, such as virtual fencing and wildlife-friendly fence designs.

(b) Expanding wildlife conflict management options by building upon the WS Nonlethal Initiative and incorporating conflict reduction considerations further into EQIP practice standards and payment scenarios.

(8) Gathering and sharing best examples of how climate change and/or climate adaptation is being incorporated in terrestrial connectivity planning.

c. Improve inter-jurisdictional coordination with States, Tribes, and other Federal agencies.

(1) With respect to States:

(a) Recognize state authorities to manage wildlife, and coordinate with states to identify priorities for terrestrial wildlife habitat connectivity and corridors. Focus resources to help achieve goals consistent with identified priorities.

(b) Incorporate information provided by states that improves understanding of wildlife connectivity and related conservation needs, including, for example, state data on multi-jurisdictional big game migrations.

(c) Provide technical and other assistance to states as available, and collaborate directly with states to build on existing efforts and identify new opportunities to conserve wildlife habitat connectivity and corridors.

(2) With respect to Tribes:

(a) Recognize Tribal sovereignty and coordinate closely with Tribal wildlife agencies to identify priorities for wildlife habitat connectivity and corridors. Focus resources to help achieve goals consistent with identified priorities.

(b) In accordance with *Joint Secretarial Order 3403 on Fulfilling the Trust Responsibility to Indian Tribes in the Stewardship of Federal Lands and Waters,* endeavor to engage in tribal co-stewardship of wildlife and wildlife habitat, including migration corridors, where appropriate.

(c) Incorporate information provided by Tribes that improves understanding of wildlife connectivity and related conservation needs, including incorporating Indigenous Knowledge regarding wildlife connectivity and related stewardship needs whenever possible, while honoring Tribal data sovereignty.

(d) Identify opportunities to support and partner on Tribal priorities for wildlife habitat connectivity and corridors as well as related conflict mitigation needs, including, for example, Tribal buffalo restoration and accompanying needs for fencing, fence permeability, and disease risk mitigation.

(e) Provide technical and other assistance to Tribes as available, and collaborate directly with Tribes to build on existing efforts and identify new opportunities to conserve wildlife habitat connectivity and corridors.

(3) With respect to Federal Agencies:

(a) Improve and expand direct USDA collaboration on terrestrial wildlife habitat connectivity and corridors with the Department of the Interior (DOI), Department of Transportation (DOT), Department of Defense (DoD), and other Federal agencies and collaboratives, particularly within identified priority areas across public, private and Tribal lands. Specifically:

1 Increase coordination with DOI on Secretarial Order 3362 and with DOT's Wildlife Crossings Pilot Program, particularly where these align with the WLFW Migratory Big Game Initiative.

2 Strengthen and expand coordination and partnerships with the U.S. Fish and Wildlife Service, particularly where consultation processes (e.g., Section 7 consultation), regulatory assurances (e.g., Safe Harbor agreements), and shared capacity (e.g., via the Partners for Fish and Wildlife Program) can enhance the delivery of USDA voluntary conservation programs.

3 Continue to participate in the Sentinel Landscapes Partnership, a coalition of Federal agencies, state and local governments, and nongovernmental organizations that work with private landowners to conserve landscapes around DoD military installations and ranges.

4 Coordinate with the Bureau of Indian Affairs to advance tribal stewardship and ensure that Tribes can shape the direction of wildlife management on Federal lands that are their ancestral homelands.

5 Continue to engage with relevant Joint Venture collaboratives that engage Federal, state, and non-governmental organizations in regional or species-specific wildlife connectivity efforts.

6 Continue coordination with the National Park Service, Tribes and other partners to ensure brucellosis-free bison.

(b) Ensure that USDA actively engages with the National Terrestrial Wildlife Habitat Connectivity and Corridors Working Group ("Working Group") established by the Council on Environmental Quality.

1 Collaborate with the Working Group to determine what connectivity modeling assessments are already available, for what geographies, and at what scale (national, regional, species-agnostic or species-specific, etc.) to leverage those evaluations and to avoid duplication of effort.

2 Develop, in coordination with the Working Group, methods for how the Federal agencies will measure improvements to terrestrial connectivity (i.e., measure success).

(4) With respect to non-governmental organizations:

(a) Collaborate with non-governmental organizations to facilitate engagement with and support of communities and local collaboratives.

(b) Foster innovation through the pursuit of partnerships to create new solutions to achieving positive conservation outcomes for wildlife and habitat connectivity.

(c) Work with NGOs to jointly develop science that informs priorities for conservation.

(d) Increase capacity to implement of cross-boundary conservation work through development of agreements and partnership arrangements.

d. Coordinate within USDA to implement the actions outlined in this Memorandum, with the goal of improved delivery of USDA programs and outcomes for terrestrial wildlife habitat connectivity and corridors.

(1) Implementation of the actions in the above sections will require staff coordination across USDA agencies. Within 45 days of the signing of this Memorandum, the Chiefs of NRCS and the USFS and the Administrators of FSA and APHIS, will establish a USDA Terrestrial Wildlife Habitat Connectivity and Corridors Committee. The Committee will be charged with ensuring implementation of this Memorandum. The Committee will provide the Secretary with its first report on implementation progress by June 30, 2025, and provide subsequent reports to the Secretary on a biannual basis thereafter.

(2) This Committee is to be composed of one senior agency representative from each signatory agency and any additional subject matter experts that are deemed necessary and chaired on a rotating basis by NRCS and USFS. To support the Committee, appropriate USDA agencies will identify regional terrestrial connectivity liaisons that include regional and/or state-level USFS, NRCS, FSA, and APHIS representatives to ensure coordination on specific regional issues.

4. EFFECTIVE DATE AND TERMINATION

a. This Memorandum is effective immediately and will remain in effect for 1 year, at which time, per Departmental Regulation (DR) 0100-001, *Departmental Directives System,* it must be codified into a DR, or until such earlier time as its provisions are implemented and completed or it is superseded or revoked.

b. This Memorandum does not create any substantive or procedural right or benefit enforceable by law or equity, nor does it create any private right of action.

/s/ Thomas J. Vilsack
Secretary of Agriculture