

# WAFWA

WESTERN ASSOCIATION OF FISH &  
WILDLIFE AGENCIES

## WILDLIFE MOVEMENT & CONNECTIVITY INITIATIVE

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Executive Summary .....	2
Need .....	2
Background .....	4
Mission Fulfillment.....	5
Scope .....	6
Partners .....	7
Coordination .....	8
Action Plan or Connectivity Plan.....	8
Potential Project types.....	8
Moving the Initiative into Action.....	10
Interaction with other WAFWA Initiatives, Committees, and Working Groups .....	10
WAFWA and USDA MOU.....	17
Funding.....	18
Initiative Goals and Success Actions .....	20
Conclusion.....	26

## Executive Summary

The Wildlife Movement and Connectivity Initiative (Initiative) is led by the Western Association of Fish and Wildlife Agencies (WAFWA) and its member state, provincial, and territorial fish and wildlife agencies to address the needs and risks facing wildlife movement and habitat connectivity across western North America. In partnership with federal agencies, non-government organizations, tribes, and private landowners, WAFWA will collaboratively work to conserve, restore, and enhance seasonal habitats and associated migration/movement/connectivity corridors essential to numerous western fauna. The Initiative facilitates a consistent strategic approach among WAFWA member agencies that is aligned with members' jurisdictional management authority, while striking a balance between action-focused activities and not becoming overly prescriptive. Through the implementation of the Initiative, WAFWA will quickly capitalize on funding and opportunities that advance wildlife movement, migration corridor conservation and connectivity.

The foundation for this Initiative is built upon state-defined priority seasonal habitats and/or wildlife movement/migration/connectivity corridors. The Initiative does not attempt to replace the Department of the Interior Secretarial Order 3362 (SO3362). Instead, it will complement and support the ongoing successful SO3362 efforts across 11 western states, while concurrently expanding the focus to a multitude of state-identified wildlife species and provide conservation opportunities to all WAFWA member states, Canadian provinces and territories. Additionally, the Initiative will more cohesively connect WAFWA technical committees, initiatives, and workgroups regarding wildlife movement and landscape connectivity thereby enhancing optimization of sound science and land management practices. Lastly, the Initiative provides new opportunities to cultivate communications and understand conservation opportunities and needs that are jointly identified with Tribal nations in western US and Canada.

## Need

The spectacle of wildlife migrations is a phenomenon that fascinates the human mind. Not all wildlife migrates, but even those that do not need to be able to move about their localized landscape in search of food, water, shelter, and mates. In fact, the ability of fish and wildlife to move freely among necessary habitats is paramount to their persistence. The distribution of necessary resources (i.e. water, food, shelter) in the West



*Solar farm in northwest New Mexico. Photo by Orrin Duvuvuei*



demands that planning and land use decisions consider wildlife movement and habitat connectivity. Conserving and managing seasonal habitats, along with protecting the functionality of the routes wildlife use to access these habitats, is increasingly vital to sustaining ecological functionality and biodiversity conservation.



*Deer using a wildlife underpass in the winter.  
Photo © Colorado Department of*

The western half of the United States and Canada is known for its vast open spaces and large intact ecosystems. While these qualities still generally exist, landscapes are significantly altered by anthropogenic activities with rapid macro and micro change continuing. Across the West, changes in land ownership or land management are occurring, sometimes resulting in large intact landscapes (i.e. ranches) becoming subdivided or large intact grasslands, shrubland, desert, or sagebrush landscapes converted to row crop agriculture or industrial development. Pressures such as

expanding housing development and land-use zoning changes increase land fragmentation; highways impeding necessary movements or causing significant wildlife mortality; renewable and non-renewable energy development creating habitat fragmentation and, in some instances, impeding efficient wildlife movement; and habitat quality declining due to invasive vegetation, lack of necessary management, and changing environmental

conditions. Beyond physical loss or degradation of habitat, human-created obstacles and various human activities can cause wildlife to avoid historically used areas or pass quickly through important movement corridors and forgo optimal habitats that provide critical nutrition.



*Wildlife crossing in Colorado. Photo by J. Neal, from  
Colorado Parks and Wildlife*

There is a considerable shortage of information on seasonal and daily movements for many wildlife species. Yet, a reasonable amount of data exists for others. Practitioners often lack the financial resources for needed research or to

conduct habitat treatments necessary to conserve or improve habitat in a priority area. Consequently, we need an overall west-wide strategic approach and financial and human

resources to collect wildlife movement data and to conduct habitat conservation or restoration activities led by the western state, provincial, or territorial fish and wildlife agencies.

The WAFWA, and its members, take their responsibilities seriously and recognize the rapid change occurring to the social and physical landscapes within their jurisdictional boundaries. The establishment of the Wildlife Movement and Connectivity Initiative is to solidify their intention and commitment of working with partners to conserve, restore, and enhance priority seasonal habitats along with wildlife movement and migration/connectivity corridors necessary for sustaining wildlife populations. Notably, the Initiative recognizes each state, province, and territory has differing levels of scientific information and staffing capacity, so it is written broadly to encompass these differences.

## Background

In 2018, Secretarial Order 3362 (SO3362), Improving Habitat Quality in Western Big-Game Winter Range and Migration Corridors was established. This Order focused on 11 western WAFWA member states with the express goal to work cooperatively with state fish and wildlife agencies to help conserve or improve the habitat quality in state-defined priority winter range and migration corridors. Importantly, the Order provided funding to support state-led research, a habitat conservation grant program, and countless habitat projects throughout states in the West. Additionally, the Order brought forward technical support and the creation of the Corridor Mapping Team that consists of U.S. Geological Survey, university, state, and tribal scientists. As of December 2024, the Team has mapped almost 200 migration corridors and movement routes across the West for mule deer, elk, moose, pronghorn, and bighorn sheep. These corridors and routes are recorded in four volumes (fifth volume expected January 2025) of the Ungulate Migrations of the Western U.S. (<https://www.usgs.gov/programs/cooperative-research-units/science/corridor-mapping-team-ungulate-migrations-west>). Following the issuance of the Order and its subsequent implementation, a tremendous level of interest and support grew within the respective states, tribes, and among a vast diversity of non-governmental organizations. Bipartisan support in the U.S. Congress was also expressed.

The Western Governors Association has long recognized the value and importance of wildlife migration corridors and associated habitat by passing numerous policy resolutions. Those resolutions included:

- Policy resolution 07-91, Protecting Wildlife Migration Corridors and Crucial Wildlife Habitat in the West (2007)
- Policy resolution 2019-08, Wildlife Migration Corridors and Habitat (2019)
- Policy resolution 2021-04, Species Conservation and the Endangered Species Act, that included a stand-alone section titled, Wildlife Migration Corridors and Habitat (2021)
- Policy resolution 2024-03 expanded on policy resolution 2021-04 (2024)

As evidenced by numerous actions over the years, Western Governors have publicly articulated their support for and policy position on wildlife migration corridors and habitat. Further, state legislative bodies and individual governors across the West have passed and signed countless legislative measures focused on wildlife movement and migrations, and overall landscape connectivity.

## Mission Fulfillment

The WAFWA's stated mission is to advance collaborative, proactive, science-based fish and wildlife conservation and management across the West. In its 2019-2024 Strategic Plan, Goal 2 states: Support multi-jurisdictional and landscape-scale fish and wildlife conservation and research initiatives. Strategies to address this goal include the following:

- a. Facilitate wildlife management coordination, standards, and best practices across WAFWA jurisdictional boundaries
- b. Facilitate research and stock assessment activities and standards across WAFWA jurisdictional boundaries
- c. Facilitate rapid response capability of members to important emerging issues
- d. Facilitate programs and projects that address the highest priority resource challenges as agreed to by the WAFWA leadership.

The Initiative addresses all four of these strategies. The WAFWA membership has been gaining momentum and clarity on the topic of wildlife movement and connectivity over the course of the past several years. Establishing the Initiative provides durability, continuity, and consistency in the conservation of seasonal habitats and related movement and migration corridors among the states, provinces, and territories that constitute the membership of the WAFWA.



*Rocky Mountain bighorn sheep in snow. Photo by Darryn Epp*





*Elk herd. Photo by Mark Whitney*



*Greater sage-grouse lek in Axial Basin, CO. Photo by Erin Duvuvuei*



*Pronghorn running. Photo by Orrin Duvuvuei*



*Prairie dog in North Dakota. Photo by Craig Bihrlle*

## Scope

The scope of this Initiative is broad-reaching in both wildlife species and in the array of habitat types that support wildlife needs, migration/movement, and overall landscape connectivity. Consequently, the range of wildlife species include land-based mammals, migratory and resident birds, amphibians, and reptiles that annually travel between seasonal habitats. Given the success of SO3362, it would have been easily justifiable to limit the Initiative to big game species. However, the WAFWA made the deliberate decision to be more inclusive of other wildlife species and habitats to expand conservation impact and better address ecosystem health.

The expansive geographic scope of this Initiative covers the WAFWA states and the respective Canadian provinces and territories including Alaska, Arizona, California,

Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington and Wyoming, Alberta, British Columbia, Saskatchewan, the Yukon, and the Northwest Territory.

## Partners

The foundation of this Initiative is built on constructive relationships with a diverse suite of partners. The most critical partnerships are among and between the WAFWA member agencies. Other partnerships that are invaluable in the implementation of the Initiative are with:

- Private landowners (private land accounts for up to 98% of landownership in some member states)
- U.S. Department of Agriculture agencies:
  - Natural Resources Conservation Service (multiple private land programs, science)
  - Farm Services Agency (multiple private lands programs, science)
  - U.S. Forest Service (national forests that typically serve as summer range, science)
- U.S. Department of the Interior agencies:
  - U.S. Geological Survey (research and technical mapping support)
  - Bureau of Land Management (largest federal land manager in the West)
  - U.S. Fish and Wildlife Service (private lands program, national wildlife refuges across the West, research and spatial planning support)
  - National Park Service (large parks across the West and migratory wildlife that move in and out of respective parks, research)
- U.S. Department of Transportation:
  - Federal Highways Administration (highway crossing grant programs)
- U.S. Department of Defense (large landholder)
- Numerous sovereign tribal nations (vast landholdings that include important areas for wildlife movement throughout the West)
- Migratory Bird Joint Ventures (coverage across all WAFWA member states and provinces with on-the-ground staff with considerable knowledge about migratory bird species)
- Countless non-governmental organizations (overall support, shared priorities, collaborations, capacity)
- Industry operating throughout the WAFWA jurisdictional boundaries (funding support, collaborative opportunities)



*Map of WAFWA member states and provinces.*



## Coordination

The Initiative will have the greatest chance of success if a full-time person is overseeing its implementation. Consequently, the WAFWA will fill a position to serve as the coordinator whose primary responsibility will be, among other tasks, to develop an implementation plan (approach) to address the goals and actions identified in the Initiative. The coordinator will interact closely with WAFWA membership and conservation partners to fulfill the spirit and intent of the Initiative. Additionally, aside from the technical and administrative support provided by current WAFWA staff, the Initiative would benefit from an additional staff member to help support the coordinator by facilitating the delivery of specific projects and grants developed through the implementation of the Initiative.

## Action Plan or Connectivity Plan

Conducting large landscape conservation with a diversity of partners requires careful thought and planning. This planning and thought most often is captured in some type of plan. The foundation for this Initiative is strategic and well-considered plans. The Action Plan (or Connectivity Plan) is foundational for the implementation of the Initiative as it provides transparent and consistent strategic focus for WAFWA and each respective state. Additionally, this plan creates partnership opportunities, informs grant decisions and will help secure funding for the overall implementation of the Initiative. The Action Plan or Connectivity Plan is the respective state's plan which can take the form of a SO3362 Action Plan, Action Plan developed in response to the NFWF American the Beautiful grant, state-specific Connectivity Plan, or a State Wildlife Action Plan. The contents of these plans are developed by each respective state and represent their chosen priorities.

## Potential Project types

Research: Results from various types of research projects build the foundation for this Initiative. Examples of projects supported through this Initiative may include

- basic capture, collaring, and wildlife tracking activities
- assessing conservation effectiveness of habitat or highway crossing projects
- understanding movement patterns of less studied species (e.g. reptiles or amphibians)
- evaluating impacts of all forms of land-use change



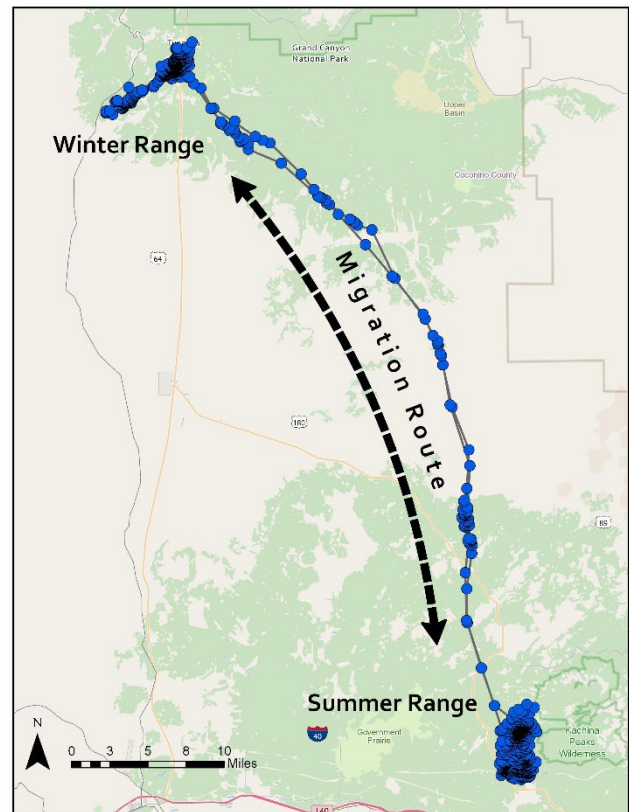
*Stewart Liley releasing a darted and collared bighorn sheep. Photo by Orrin Duvuvuei*

- determining areas for various types of highway crossings
- uncovering interstate herd or population movements
- understanding impacts of increased outdoor recreation
- discovering impediments to landscape permeability

**Mapping:** Using data to develop spatial maps allow targeted conservation efforts in the more important areas within vast landscapes. The Corridor Mapping Team established through the implementation of SO3362 remains active and effective and is critical to ongoing mapping efforts. This Team currently focuses on the movements of ungulates. The Initiative may be able to provide new financial and staffing support to expand their focus in those states, provinces, or territories who seek to map other wildlife movements.

**Habitat Conservation:** Completing habitat conservation activities in state-defined priority areas using scientifically collected data and mapping products is the pinnacle of the Initiative. The following are commonly used practices to conduct habitat conservation work in big game seasonal habitats and migration corridors, but these activities also support habitat needs for a wide diversity of other species and numerous ecological functions. The type of habitat-related activities supported through this Initiative may include:

- annual invasive grass management
- control or removal of woody vegetation
- forest thinning
- fence removal or conversion, highway exclusion fencing or virtual fencing
- fee title or conservation easement acquisition
- water development such as installing guzzlers
- reintroducing a natural disturbance regime
- revegetation activities following land disturbance



*Graphic by Lucas Olson depicting the migration of mule deer from winter range to summer range in Arizona.*

## Moving the Initiative into Action

This Initiative tries to find the balance between action-focused activities, while not becoming overly prescriptive. The WAFWA will act as a coordinating body among the WAFWA agencies to address stated goals and specific actions identified in this Initiative. The WAFWA will also serve as a facilitator to coordinate with a diversity of partners, and will pursue agreements, grants, and other funding opportunities to benefit the WAFWA member agencies. Furthermore, the technical expertise and scientific projects emanating from other WAFWA initiatives, committees, or working groups will provide support for this Initiative and ultimately each member agency. The foundation for this Initiative is built upon state-defined priority seasonal habitats and/or wildlife movement, migration or connectivity corridors. These priorities are, or will be, articulated in respective existing State Wildlife Action Plans, SO3362 Action Plans, state-specific connectivity plans, or newly developed wildlife movement and connectivity plans.

This Initiative is aligned with numerous standing WAFWA initiatives, committees, and working groups. However, the Initiative most closely integrates with the WAFWA's Wildlife Movement and Migration Committee. This Committee will have numerous roles in the implementation of the Initiative, including hosting a workshop or symposium two years into each implementation cycle to evaluate the progress and effectiveness of the Initiative. Consequently, the Initiative will be updated at least every three years to keep it accountable and adaptive to progress made and lessons learned. Additionally, multiple other committees and initiatives will have important roles in the implementation and the updates to the Initiative.

## Interaction with other WAFWA Initiatives, Committees, and Working Groups

The breadth of the Initiative requires meaningful coordination and communication with numerous other WAFWA initiatives, committees, and working groups. In this respect, one function of this Initiative is to add value to the applicable bodies, while concurrently capitalizing on their strengths and creating coordination and communication opportunities.



*Wildlife Movement and Migration Committee (WMMC):* Given the alignment of mission with the Initiative, the WMMC will have a considerably stronger relationship compared to other committees, initiatives, or working groups. The WMMC will serve a critical role in the overall implementation and success of the Initiative. The approved WMMC Charter includes the scope of work for committee business. The tasks outlined for the WMMC show strong overlap with many important activities necessary for a successful Wildlife Movement and Connectivity Initiative. Specifically, the Scope of Work for the WMMC is:



1. Share, communicate about, and collaborate on efforts to identify and conserve movement and migration data, habitats, dispersal pathways, seasonal ranges, stopover areas, and the connections between these habitats on a landscape scale.
2. Share, communicate about, and collaborate on efforts to use this information to inform local, state, tribal, and federal efforts and programs to manage for these important habitats and facilitate wildlife movement and migration.
3. Share, communicate about, and collaborate on data and analysis techniques and platforms for the distribution of results, geospatial maps, and other work products. This working group would help bring together independent efforts among agencies, resulting in a more coordinated effort.
4. Identify research needs for development of new information on wildlife movement and migration among important seasonal habitats in western North America.
5. Capitalize and expand on the improved working relationships between state, federal, and tribal agencies. Develop novel approaches for shared conservation objectives.
6. Coordinate and collaborate with SO3362 implementation and the USGS-led Corridor Mapping Team.
7. Communicate progress, findings, and recommendations with all agencies, NGOs, the public, legislators, and other leaders. This communication would be information, maps, and other visual products through traditional media and social media.
8. Coordinate and collaborate with other groups, such as the AFWA Landscape Conservation Working Group, academia, and other WAFWA committees and working groups such as State/Federal/Tribal Relations, Habitat Committee, Wildlife Chiefs Committee, Mule Deer Working Group, Wild Sheep Working Group, Climate Adaptation, etc.
9. Identify and pursue funding opportunities to advance the mission of this committee. Work closely with NGOs to develop opportunities for leveraging funds and conserving public and private lands within important migration and movement areas.
10. Report to directors on WAFWA engagement at all levels.
11. Create partnership opportunities between and among the agencies where wildlife populations are a shared resource.

***Relationship with the Initiative*** - The WMMC will help play an essential role in the success of the Initiative. For instance, they can help identify multi-state research needs; create and host symposiums or workshops to evaluate the effectiveness of the Initiative, offer needed adjustments to the content of the Initiative or its implementation approach, and facilitate an overall discussion on the items necessary to make the Initiative more effective and impactful; create a team to help craft grant proposals that support implementation of goals set forth in the Initiative; as applicable, a subset of members can

serve to review and rank any applicable proposals that are submitted to the WAFWA; establish a standing agenda item for committee meetings to specifically discuss Initiative activities; as appropriate, invite non-traditional attendees including NRCS, Federal Highways Administration, various non-governmental organizations, industry, and others to committee meetings to learn about their interests and the work of the Initiative and committee while also discussing possible collaborative opportunities; and serve as an overarching communication vehicle for developing a stronger understanding and appreciation for migration and movement corridors, the seasonal habitats those corridors connect and overall landscape connectivity.

Other important WAFWA initiatives, committees, and working groups include:

*Mule Deer Working Group Technical Committee:*

The committee’s approved Statement of Purpose: 1) Develop and refine strategies to conserve black-tailed and mule deer populations and their habitat throughout western North America; 2) Improve communication and collaboration among black-tailed and mule deer biologists throughout the West; 3) Provide research and management information to stakeholders that fosters collaborative conservation; and 4) Provide a forum of experts to respond to information needs from wildlife and habitat management agency administration.



***Relationship with the Initiative*** - The Initiative will benefit if this committee establishes a standing agenda item at their committee meetings to specifically discuss Initiative activities. The members of this committee consist of state, provincial, and territorial deer biologists. These individuals often have additional responsibilities for elk, moose, and other ungulates within their jurisdictions. This is the most active WAFWA committee that shares a considerable amount of information (i.e. fact sheets, reports, guidelines) among the WAFWA membership and the public at large. Consequently, the work of this committee helps inform the understanding of mule deer movement and conservation of its habitat. Additionally, this committee has identified the top 10 priority research needs for mule deer management and several are directly relevant to the Initiative. For instance, their membership seeks to develop a stronger understanding of the impact from energy development, conduct an evaluation of habitat treatments on mule deer populations, and conduct migration studies for planned highway projects.

*Habitat Committee:* The committee’s approved Statement of Purpose: “To advance wildlife and fishery health by reviewing and recommending methods to conserve, restore, and manage habitats on both public and private lands and waters in the West”.

***Relationship with the Initiative*** - This committee provides a forum to discuss multi-agency or large-scale habitat conservation concerns or opportunities. Beyond the intrinsic value of engaging with state and federal land managers, the committee could support the Initiative by establishing a session at each of their committee meetings specific to private land conservation and to share lessons learned and needs as they relate to effectively working with private landowners to conduct habitat conservation activities. Further, the committee could hold a session(s) to discuss how best to optimize opportunities present within the WAFWA-USDA 2024 MOU (see [WAFWA and USDA MOU](#) section).

***Wildlife Chiefs Committee:*** The committee’s approved Statement of Purpose: “Discuss policy, biology, and environmental influences affecting terrestrial wildlife management throughout the West.” The Wildlife Chiefs are often the administrative leads on wildlife within their agency.

***Relationship with the Initiative*** - An important goal of the Initiative is to support the efforts of WAFWA membership as they seek to sustain wildlife populations, ecological integrity, and overall biodiversity conservation within their respective jurisdictional boundaries. The engagement and support of the Wildlife Chiefs is a critical component to the immediate and long-term success of the Initiative. Therefore, the Initiative will benefit if this committee creates a standing agenda item specific to the Initiative at their annual meeting. This agenda item will provide space to give progress updates and if necessary, raise concerns that might impact multiple states. Additionally, the chiefs can share feedback or seek clarity on the implementation of the Initiative.

***Climate Adaptation Committee:*** The committee’s approved Statement of Purpose: Increasing coordination and communication among western states/provinces on key climate change related issues; Providing a venue to share information with state, federal, and provincial partners, as well as other conservation partners to improve development, integration, and implementation of fish and wildlife conservation plans and habitat objectives into state and federal agency planning; Identifying regional approaches for fish and wildlife monitoring, evaluation, and management responses; Creating a network of climate change contacts in Western North America that will work together to share information; Supporting regional efforts to develop strategies to manage the effects of climate related changes to fish and wildlife habitats; Identifying cross cutting issues that require multi-state coordination and collaboration; Advancing priorities or actions for discussion and consideration by the designated committee(s) within WAFWA; and Monitoring and informing western states about the potential for future funding from federal climate change legislation.

***Relationship with the Initiative*** – Coordination with this committee could help identify the available science or help to address research questions related to seasonal and long-term changes in weather patterns. For instance, what is the impact of changing climate conditions on habitat conditions within state priority migration corridors and movement



areas? Will vegetation conditions within these areas change to the extent that wildlife use changes? How important will current known corridors and movement areas be to wildlife as they adapt to changing conditions? The committee can also help by identifying sources of funding, identifying state employees to lead research projects, and utilizing its membership to help develop research proposals.

*Public Affairs Committee:* The committee's approved Statement of Purpose: "To share best practices and leverage the resource disciplines (Legislative Advocacy, Education, Public Relations, Marketing, etc.) of members to better understand and develop recommendations on how to address wildlife conservation and related outdoor recreation public policy issues across the West."

***Relationship with the Initiative*** - The expertise, advice, and technical assistance by members of this committee is critically important to fully realizing the intent and outcomes of the communications goals and success actions identified in the Initiative. Throughout implementation, the committee will be sought for support and assistance.

*Nongame and Endangered Fish and Wildlife Species Committee:* The committee's approved Statement of Purpose is to identify and address nongame and endangered species issues and provide support on them to the WAFWA member states and provinces. Further, coordinate relevant activities with, and among, WAFWA member states and provinces, federal agencies, nongovernmental organizations, and the Threatened and Endangered Species Policy Committee of the Association of Fish and Wildlife Agencies."

***Relationship to the Initiative*** – Coordination with this committee will enhance the Initiative's ability to include the needs of a broad array of birds, mammals, amphibians, and reptiles that fall within the scope of the Initiative. Joint research needs or opportunities, co-developing restoration projects, and identifying priority habitats and areas are just a few examples of the collaboration opportunities with this committee.

*Western Grassland Initiative:* The mission of the Western Grassland Initiative is to serve as the primary contributor to the implementation of conservation and management actions, through partnerships and cooperative efforts, resulting in improved species status, grassland habitats, and recreational opportunities for grassland dependent species across North America.

***Relationship with the Initiative*** – Some of the priority areas identified in respective state Wildlife Movement and Migration Action Plans or Connectivity Plans will undoubtedly overlap with priority grassland areas identified in the Western Grassland Initiative. Consequently, there may be opportunities for the Wildlife Movement and Connectivity Initiative and the Western Grassland Initiative to develop joint grant proposals seeking funding to conserve or restore shared priorities.

Sagebrush Conservation Initiative: The mission of this initiative is evolving, but it was formed to identify and fill the highest priority gaps in scientific knowledge needed to effectively conserve sagebrush dependent species and the sagebrush habitats they depend on. A Sagebrush Conservation Strategy was developed and now the initiative is transitioning into implementation of strategic landscape scale conservation actions across the sagebrush biome.

**Relationship with the Initiative** – The overlap between the Wildlife Migration and Connectivity Initiative and Sagebrush Conservation Initiative are equally as significant as the overlap with the Western Grassland Initiative. Correspondingly, some of the priority areas identified in respective state Wildlife Movement and Migration Action Plans or Connectivity Plans will overlap with priority sagebrush areas identified in the Sagebrush Conservation Initiative. Moreover, the considerable amount of science collated in the Sagebrush Conservation Strategy can help inform conservation actions taken through this Initiative. Like the Western Grasslands Initiative, there may be opportunities for the Wildlife Movement and Connectivity Initiative and the Sagebrush Conservation Initiative to develop joint grant proposals seeking funding to conserve or restore shared priorities within sagebrush ecosystems.

Wild Sheep Initiative: The mission of the Wild Sheep Initiative is to identify priority topics and management challenges to wild sheep in western North America; collaboratively develop solutions to those challenges; and foster strong relationships between state/provincial/territorial jurisdictions, federal land management agencies, indigenous groups, and wild sheep advocates; and engage with domestic livestock owners and users that share the same landscapes inhabited by wild sheep.



**Relationship with the Initiative** – The Wild Sheep Initiative serves as a technical resource to the larger wild sheep community. This initiative will provide the same benefits to the Wildlife Movement and Connectivity Initiative. Their assistance will be important to understand cross jurisdictional movements of wild sheep, seasonal habitat needs and connectivity concerns, and interactions with other animals within a respective landscape. Given disease concerns in wild sheep populations, migrations and movement of wild sheep is not always desirable, so this initiative will be critical to understanding this dynamic. Additionally, specific wild sheep movement or connectivity research questions might arise, and the Wild Sheep initiative has the capacity to support projects.

*Tribal and Indigenous Engagement Working Group:* The goal of this group is to create Tribal engagement opportunities that enhance conservation and management of fish and wildlife through shared knowledge, experience, and improved relationships.

***Relationship with the Initiative*** – This working group was appointed by the Executive Committee to provide meaningful regional engagement with tribes and to help inform the use of grant funds specifically targeted for engaging tribes in big game migration strategies that have proven effective with state partners. Members of the Working Group can help identify and facilitate opportunities for sovereign tribal nations to participate in migration corridor or connectivity communication efforts, shared advancements in science, potential research, or habitat conservation projects related to tribal lands and needs.

*State Wildlife Action Plan Working Group:* Currently the group is focused on supporting each other as states undergo major revisions of their State Wildlife Action Plans and develop shared regional components where desired. Once revisions are complete, this working group will shift their focus to implementation of their completed SWAPs, continuing to seek and support broader funding models, either through legislation, grants, partnerships, etc. that support implementation of SWAPs, identify shared science needs, and coordinate on landscape level efforts such as habitat restoration and range wide species information.

***Relationship with the Initiative*** – State Wildlife Action Plans are an important source of state-specific wildlife priorities, including movement and connectivity, for biodiversity. The Initiative will benefit in a variety of ways, such as by being informed of the broad biodiversity conservation goals and actions of states; identified research needs; areas of conservation opportunities that likely overlap with identified ungulate migration corridors; develop co-produced science, and identified opportunities for species-specific, multi-state conservation efforts (e.g. bat migration).

*Deer and Elk Workshop:* The Western States and Provinces Deer and Elk Workshop is a biennial meeting held in odd numbered years sanctioned by the WAFWA. The workshop provides a forum where leading deer and elk managers and researchers share research results, management strategies, and emerging issues in the realms of deer and elk management throughout North America.

*Pronghorn Workshop:* The Pronghorn Workshop is a biennial meeting held in even numbered years sanctioned by the WAFWA. The workshop provides a forum where leading pronghorn managers and researchers share research results, management strategies, and emerging issues in the realm of pronghorn management throughout North America.

*Northern Wild Sheep and Goat Council Symposium:* The Northern Wild Sheep and Goat Council is a non-profit, international scientific, and educational organization sanctioned by WAFWA and is dedicated to the management and conservation of northern wild sheep and



mountain goat populations and their habitats in North America. The Council’s purpose is achieved by:

- Providing for timely exchange of research and management information.
- Promoting high standards in research and management; and
- Providing professional advice on issues involving wild sheep and mountain goat conservation and management.
- Membership in the NWSGC includes professional research and management biologists and others active in the conservation of wild sheep and mountain goats.

***Relationship with the Initiative*** - Both workshops and the Symposium provide the opportunity to share technical advances and understanding of wildlife movement and the risks/threats to migration and movement corridors and overall landscape permeability. Equally important, the workshops provide the venue for developing collaborative opportunities between states and among other workshop participants.

## WAFWA and USDA MOU

In August 2024, the WAFWA entered a Memorandum of Understanding (MOU) with the Natural Resources Conservation Service (NRCS), Farm Services Agency (FSA), and U.S. Forest Service (USFS). The purpose of the MOU is to establish and define a working relationship that enhances implementation of voluntary working lands conservation across boundaries and land ownerships. Establishing and defining this partnership enables the signatories to coordinate resources, streamline program delivery, better serve stakeholders, and maintain a continuous flow of science and communications to leadership and to partners.

The objectives of the MOU are the following:

1. Promote proactive, voluntary, and incentive-based approaches in partnership with others who have capacity and authority within a state, as a preferred method to organize and deliver conservation services across private, public, and tribally owned western lands.
2. To the extent practical, align delivery of conservation programs to focus resources strategically to achieve working lands conservation goals on eligible western lands, including priorities identified from State Fish and Wildlife Agencies and the USDA’s Working Lands for Wildlife “Conservation Frameworks” for Big Game Migration, Great Plains Grasslands, and the Sagebrush Biome.
3. Ensure FSA, NRCS, and USFS conservation programs and conservation practices applied in western landscapes address primary threats facing the landscape and/or target species.
4. Collaborate on science to produce targeting tools that maximize conservation benefits and to conduct evaluations that quantify the resulting outcomes.

5. Communicate jointly the benefits of resulting outcomes to both agricultural producers and wildlife audiences in the West.
6. Utilize State Fish and Wildlife Agencies' expertise and current documented conservation planning priorities to inform and align conservation strategies for working lands within their borders.

The successful conservation of migration and movement corridors must include private land. This fact is particularly potent when considering that some WAFWA member states are comprised of up to 98% private land. Even in states with less than 25% private land, wildlife that use migration and movement corridors will inevitably cross or utilize private land during their annual journeys. Consequently, the agreement with NRCS and FSA provides meaningful opportunities to engage private landowners in advancement of this Initiative. Exploring these opportunities should occur at the MOU signatory level and perhaps most importantly at the individual state and field staff levels. The wildlife migration and movement corridor priorities identified in each states' respective Action Plan or Connectivity Plan provide the focal point for optimizing USDA programs through this MOU.

Additionally, the USFS is a signatory to the MOU, and national forests are particularly critical for seasonal habitat (summer range) and parts of migration and movement corridors. Working closely with USFS Washington and Regional offices, along with Forest Supervisors and Ranger Districts, is another important approach to ensure the intent of this MOU.

The MOU could also provide opportunities to secure or cost share positions that reside in either state or federal agency offices. These positions would help optimize the application of USDA programs on landscapes identified in the respective state Action Plans or Connectivity Plans.

## Funding

Funding was secured from two sources to support this Initiative. These funds provide the financial resources to expedite implementation. With the foundation built, the WAFWA will strive to develop consistent and reliable sources of funding to build a long term and vibrant Initiative that produces results expected by the WAFWA and its member states, provinces, and territories.

The Rocky Mountain Elk Foundation entered into an agreement with the WAFWA late in 2023 to provide \$400,000 over three years to support individual efforts of WAFWA member states to conserve, restore, or enhance priority big game seasonal habitat or habitats within priority migration corridors. The overarching objective for this funding is to support the intent of the WAFWA Wildlife Movement and Connectivity Initiative and ultimately solidify WAFWA's role in supporting the long-term focus on seasonal habitat and corridor conservation and landscape permeability. There are three primary priorities (in



priority order): Protection/Conservation of land/habitat/movement pathways; Habitat Stewardship; and Research.

In addition, the Wyoming Game and Fish Department successfully secured a National Fish and Wildlife Foundation America the Beautiful Challenge Grant titled, “Implementing Landscape Connectivity and Permeability Plans Across the Western Continent.” This \$5 million grant was sub-awarded to the WAFWA for implementation. Funding was identified for various purposes and tasks including the hiring of a coordinator for the Wildlife Movement and Connectivity Initiative. The specific objectives identified in the grant include the following:

- Implement habitat restoration and conservation priorities as identified in existing migration corridors and seasonal habitat Action Plans already established in 11 western states under the joint leadership of U.S. Department of Interior and State Fish and Wildlife Agencies. There is \$202,500 available per state to implement existing priorities from Action Plans.
- Engage an additional seven state fish and wildlife agencies that do not currently have connectivity Action Plans, to develop and implement new plans and projects focused on their unique landscape connectivity and permeability priorities. There is \$202,500 available per state to develop an Action Plan or Connectivity Plan and to implement projects found in priority areas identified in said plans.
- Provide opportunities for each of the WAFWA 18 states to engage with tribal communities on the topic of migration corridors and seasonal habitats, landscape connectivity, and to document existing models of shared tribal/state success. There is \$207,000 available to support tribal and state coordination on landscape level conservation projects.
- Build a Canadian transboundary strategic plan for connecting shared migratory resources that align opportunities and resources between states, provincial, and territory governments, and indigenous peoples. There is \$105,000 to establish necessary communication channels, a workshop, and creation of guidance documents to map future collaborations and opportunities for transboundary connectivity planning.
- Develop improved modeling framework and toolkits for ecosystem connectivity planning and climate research as it relates to increased environmental stochasticity and severity and potential impacts to migration corridor, landscape connectivity, and permeability. There is \$115,000 available for this purpose.

Other potential sources and types of funding opportunities include:

- Association of Fish and Wildlife Agencies – grants
- U.S. Fish and Wildlife Service – grants; agreements
- Bureau of Land Management – grants; agreements

- U.S. Forest Service – agreements
- National Fish and Wildlife Foundation – multiple grants
- Department of Defense - grants
- Other Foundations – grants
- Other grants and agreements opportunities
- Industry – contributions
- WAFWA member agency assessments

## Initiative Goals and Success Actions

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### *Goal – Full and Successful Implementation of the NFWF America the Beautiful Grant*

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*Success Action:* Implement habitat restoration and conservation priorities as identified in existing Action Plans or Connectivity Plans established for Arizona, California, Colorado, Idaho, New Mexico, Nevada, Oregon, Montana, Utah, Washington, and Wyoming.

*Success Action:* Engage and work with Alaska, Kansas, Nebraska, North Dakota, Oklahoma, South Dakota, and Texas to develop and implement Action Plans or Connectivity Plans.

*Success Action:* Provide opportunities for each of the WAFWA states to engage with tribal communities on the topic of migration corridors, seasonal habitats, and landscape connectivity.

*Success Action:* Facilitate transboundary communication and cooperation between respective states and Canadian provinces and territories to conserve shared migratory resources and connectivity.

*Success Action:* Support research that examines the impact of increased environmental stochasticity and impact on seasonal habitat quality, habitat quality in migration corridors, and overall landscape connectivity.

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### *Goal – Full and Successful Implementation of the Rocky Mountain Elk Foundation Grant*

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*Success Action:* Optimize this non-federal funding by matching with federal or state funding to amplify seasonal habitat or migration/movement corridors conservation impact.



*Success Action:* Support a research and/or conservation project(s) in a WAFWA state that manages elk and wasn't one of the 11 states (Arizona, California, Colorado, Idaho, New Mexico, Nevada, Oregon, Montana, Utah, Washington, and Wyoming) included in SO3362.

*Success Action:* Contribute funding to a land protection or habitat management project within an identified seasonal habitat or a high priority corridor.

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*Goal – Each State Develops and Maintains a  
Migration/Movement Action Plan or Connectivity Plan*

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*Success Action:* All WAFWA states have an Action Plan or Connectivity Plan within the first or second year of Initiative implementation.

*Success Action:* Each Plan identifies - preferably science based - up to 5 priority seasonal habitats and/or migration or movement corridors.

*Success Action:* Each priority includes 1-3 accompanying habitat conservation, restoration, or enhancement project needs identified and listed in the Plan.

*Success Action:* As applicable, specific Plans contemplate collaboration on data collection and advancing conservation opportunities for species that cross state/provincial/territory jurisdictional boundaries.

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*Goal – Facilitate Effective Coordination*

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*Success Action:* The coordinator establishes a recurring Teams/Zoom call every two months with the state-identified Initiative contacts and the Chair and Co-chair of the Wildlife Movement and Migration Committee. The purpose of the call is to share relevant updates, notifications, and knowledge with each other.

*Success Action:* The coordinator will host a recurring Teams/Zoom call every two months among identified contacts within federal agencies and the Native American Fish and Wildlife Society to learn about relevant federal activities, provide updates, and capitalize on potential opportunities.

*Success Action:* The coordinator will host a Teams/Zoom call once every three months with non-governmental organizations, industry, and other interested partners to provide updates on implementation of the Initiative.

*Success Action:* The coordinator will serve as a resource for each state, province, or territory if they need access to technical or policy expertise.

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### *Goal – Regularly Communicate with Internal and External Audiences*

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*Success Action:* Create a Wildlife Movement and Connectivity Initiative website. As applicable and appropriate, integrate information from the Wildlife Movement and Migration Committee website (<https://wafwa.org/committees-working-groups/wmmc/>) into the Initiative’s website.

*Success Action:* Promote and consistently update the website with relevant and timely information. The updates should occur at least bi-monthly or as often as is appropriate.

*Success Action:* Work with the Association of Fish and Wildlife Agencies (AFWA) to set up Capitol Hill, Administration, and Office of Management and Budget fly-in meetings to raise awareness on the importance of wildlife migration, movement corridors and landscape connectivity in the West; introduce and educate others on the purpose and goals of the Initiative; highlight the role of state leadership; and seek partnership opportunities. Participants include Directors, appropriate staff, WAFWA Executive Director, and the Initiative coordinator.

*Success Action:* Seek opportunities to highlight outcomes resulting from implementation of the overarching Initiative, while assisting individual states, provinces, and territories to share their success stories.

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### *Goal – Facilitate Sharing of Lessons Learned*

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*Success Action:* Develop a system/process for gathering connectivity or corridor conservation successes and lessons learned from states, provinces, and territories.

*Success Action:* Establish a page on the website to house examples of Best Management Practices (i.e. highway crossing projects, restoration techniques, effective approaches for working with various federal agencies, etc.).

*Success Action:* Hold periodic Webinars with WAFWA membership to share Best Management Practices.

*Success Action:* The WMMC hosts a session at one of their two annual meetings specifically to showcase lessons learned from an approach taken or a project implemented.

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## *Goal – Capitalize on Private Land Conservation Opportunities*

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*Success Action:* Recognize and utilize the full potential of the WAFWA USDA Memorandum of Understanding by actively addressing the appropriate stated objectives.

*Success Action:* Work closely with USDA to expand their Migratory Big Game Migration Initiative to other WAFWA states beyond WY, ID, and MT.

*Success Action:* In conjunction with the Western Grassland and Sagebrush Conservation Initiatives, share the Wildlife Movement and Connectivity Initiative Action Plan priorities with the Working Lands for Wildlife coordinator of the Great Plains Grassland Biome Framework and Sagebrush Biome Framework and seek to collaborate on shared priorities and goals.

*Success Action:* Actively engage with the Working Lands for Wildlife program as they develop their Western Migratory Big Game framework to encourage private land and other habitat conservation needs stemming from the Wildlife Movement and Connectivity Initiative are considered and incorporated into the final framework product.

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## *Goal – Establish and Develop a Consistent Funding Stream to Support Research and Habitat Conservation*

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*Success Action:* Work cooperatively to develop sole source agreements or contracts with the BLM, FWS, and USFS that transfer funding to the WAFWA specifically to support state research or habitat conservation efforts in priority seasonal habitats or wildlife migration/movement corridors.

*Success Action:* Work cooperatively to develop an agreement (or other appropriate mechanism) with USDA that provides national and/or state-level targeted funding for private land conservation projects within state identified priority seasonal habitat, migration/movement corridors, or other connectivity areas.

*Success Action:* Through this WAFWA Initiative, apply for AFWA/FWS Multistate grants to support research and management projects using the latest animal tracking technologies or habitat-focused projects that help support wildlife population sustainability across jurisdictional boundaries.

*Success Action:* The Wildlife Movement and Migration Committee establishes a grant development subcommittee that actively works with the Initiative coordinator to develop grant applications to support the implementation of the Initiative.

*Success Action:* Create a Federal Grant opportunity clearinghouse, within the Initiative webpage, to facilitate WAFWA membership awareness of relevant funding for research, habitat conservation, or highway crossing opportunities.

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*Goal – Pursue Research Funding to Address Topics Impacting Multiple States or Cross-border Wildlife Management*

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*Success Action:* Pursue funding to examine the impacts of energy development on wildlife migration or movement.

*Success Action:* Pursue funding to identify individual and cumulative impacts of land fragmentation on wildlife migration and movement.

*Success Action:* Pursue funding to develop an understanding of interstate or international wildlife migrations and movements.

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*Goal - Facilitate Partnership Opportunities Between and Among the States, and Between Canada and the U.S.*

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*Success Action:* Pursue funding (grants or other) when two or more states seek to work collaboratively on a wildlife population that migrates/moves across jurisdictional boundaries.

*Success Action:* Create a forum for professional development and networking among those engaged in wildlife movement and migration research or habitat conservation.

*Success Action:* Encourage Canadian members of WAFWA to fully engage in the relevant WAFWA committees (as specified earlier) so cross-border partnerships can develop and flourish so that their connectivity knowledge and needs are shared and heard.

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*Goal - Build on Strategic Ecosystem Connectivity Processes Underway in Canada or the U.S. to Incorporate a Transboundary Perspective and Promote Cross-border Collaboration*

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*Success Action:* Support a collaborative workshop in British Columbia, Canada, with government, First Nations, and academics, to include attendance from neighboring



provinces and states and to identify a set of relevant, spatialized opportunities for future collaboration across the Canada/U.S. border.

*Success Action:* Promote cross-border communication and knowledge transfer through funding at least one cross-border pilot project that facilitates international connectivity planning and information development.

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*Goal – Conduct Periodic Evaluation of Effectiveness and Progress*

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*Success Action:* The coordinator will develop a means (i.e. database, spreadsheet) to capture activities related to the implementation of the Initiative (i.e. projects, funding, etc.) to provide a basis for evaluation of the effectiveness of the Initiative and to adapt and make changes to it every three years.

*Success Action:* The coordinator will request annual accomplishments focused on improving wildlife movement and connectivity from each state, resulting from implementation of their respective Action Plan or Connectivity Plan. The accomplishments will be summarized into a succinct annual report to be shared as an informational document for partners and as a tool to solicit additional funding support for the Initiative.

*Success Action:* The Wildlife Movement and Migration Committee will host a symposium or workshop to evaluate the implementation effectiveness, needed adjustments, and facilitate an overall discussion on the items necessary to keep the Initiative relevant and impactful. This activity will occur every two years into a new implementation cycle.

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*Goal – Update Initiative on Consistent 3-year Cycles*

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*Success Action:* After year three of implementation, quantify information from the Initiative's program tracking database or spreadsheet, the Wildlife Movement and Migration Committee evaluation symposium or workshop and annual reports and other experiences to update and improve the Initiative. Account for progress on each goal and success action, and specifically highlight major accomplishments or modifications needed that impact the overall Initiative.

*Success Action:* With each new iteration of the Initiative, update with new partnership opportunities that emerge.

## Conclusion

The Western Governors Association has recognized the importance of migration corridors dating back to 2007. Unfortunately, many years passed before significant attention returned to this important topic. Today, there is appropriately renewed focus and enthusiasm to identify and protect important seasonal habitats and associated migration and connectivity corridors. The WAFWA Wildlife Movement and Connectivity Initiative is a timely action to articulate the leadership role of the states, provinces, and territories in the conservation of wildlife and the habitat necessary for sustainable populations and ecological biodiversity. The success of this Initiative rests with the ability to achieve the identified goals and actions while strengthening the ability of member states, provinces, and territories to conserve the wildlife habitat within their jurisdictional boundaries. With that said, it is also dependent on the full support and cooperation of the WAFWA membership and leadership. It is essential the actions in this Initiative be approached in a respectful, collaborative, and non-regulatory manner – completely in the spirit of cooperation and collaboration. Ultimately, the committed collaboration among many individuals, agencies, and organizations working toward the shared objective of conserving wildlife seasonal habitats and associated movement/migration corridors will improve habitat connectivity and the populations of wildlife that depend on them. This is important and difficult work requiring significant effort and support, but the wildlife that will benefit deserves no less.

