



Terrestrial Wildlife Movement and Migration Strategy Montana Fish, Wildlife and Parks

Purpose

The purpose of this strategy is to clarify how wildlife movement and migration conservation is incorporated into the existing habitat conservation efforts of Montana Fish, Wildlife and Parks (FWP). As the state agency statutorily assigned responsibility for the stewardship of Montana's wildlife resources for present and future generations, FWP has long focused on a science-based approach to conserving and improving important habitats. This strategy outlines how FWP will continue its statutory role and science-based approach while emphasizing and enhancing programs to conserve habitat and improve landscape permeability for wildlife movements and migrations critical for their survival and life functions. This strategy, as a publicly visible part of FWP's approach to wildlife movement and migration, explains to staff, stakeholders, and the general public how FWP work related to wildlife movement and migration will be organized, coordinated, and ultimately inclusive. FWP staff will develop work plans consistent with this strategy describing implementation efforts and plans to interested partners.

Key Issues

As part of its mission, FWP conserves important wildlife habitat, including those areas important for wildlife movement and migration. The agency works closely with private landowners, local government, state and federal agencies, tribes, and non-profit organizations to ensure wildlife have habitat and can move as they need to, between seasonal ranges (migration), within seasonal ranges (movement), and when dispersing (movement). Functional wildlife habitat allows for wildlife to move across the landscape at a variety of spatial and temporal scales to facilitate access to food, breeding, and shelter, and to facilitate genetic exchange among populations or subpopulations over longer time horizons. Conserving habitat and improving landscape permeability for wildlife movement and migration continues to be important as ecosystems face changing conditions including human development and use, invasive species, and climate change. Recently, a group of hunting, conservation, and private landowner organizations began asking FWP to formally address wildlife movement and migration through policies and programs, including education. Concurrently, a federal effort is underway to protect big game winter range and migration corridors that includes policies and funding in western states. At the same time, private landowners with properties that represent critical wildlife habitats are concerned about impacts they face from wildlife movement including damage to agricultural fields, livestock losses, human safety, and disease transmission among and between wildlife and livestock. FWP's challenge is how to promote habitat conservation and landscape permeability for wildlife movement in a way that builds on the agency's mission and conservation legacy, meets and leverages public expectations and interest, and is tangibly responsive to private landowner concerns.

Vision

Montana Fish, Wildlife and Parks envisions a broadly supported network of functional wildlife habitat across public and private lands where people live, work, and play. FWP further envisions that FWP

programs, policies, and partnerships will maintain, build, and apply tools to identify, conserve, enhance, and restore connected functional habitats capable of supporting self-sustaining populations of wildlife, while also providing for the needs and expectations of Montana residents and visitors.

Functional wildlife habitat includes lands primarily comprised of native vegetation and associated natural ecosystem processes, which includes everything from wilderness to working lands, both public and private, managed in a way that supports these processes. Agricultural lands and other working landscapes with altered vegetation can also fulfill some seasonal wildlife needs. FWP recognizes wildlife movement and migration can have negative consequences for agricultural and livestock operations. Staff will continue working with private landowners, communities, and other partners to reduce adverse impacts and increase resources to support voluntary conservation practices on working lands.

FWP already recognizes priority wildlife habitats from Montana's State Wildlife Action Plan, Habitat Montana's priority habitats, the state's Forest Legacy Assessment of Need, and other conservation plans and initiatives. These priority habitats will remain focus areas for our habitat conservation initiatives, but FWP may add new priority areas important for wildlife movement or migration and not otherwise captured. Additionally, habitat improvement efforts designed to facilitate wildlife movement and migration may be focused within any existing or newly identified priority habitat. Efforts to facilitate wildlife movement and migration are therefore recognized in this strategy as a priority among other habitat conservation priorities. In addition, FWP recognizes the wildlife value that some non-native habitats can represent for wildlife movement and migration. While not the primary focus of FWP habitat programs and plans, open lands dominated by non-native vegetation can contribute in this regard.

Many wildlife species in Montana currently reside in large tracts of functional habitat as the result of a long history of private landowners, government agencies, and conservation partners working together to conserve and improve habitat. Continued habitat conservation cannot occur without collaboration and cooperation among willing partners. FWP's approach to wildlife movement and migration will build from a history of success. The department will focus on voluntary incentives and the development of local partnerships to facilitate wildlife movement and migration in a way that works for people who are directly affected.

FWP has a mission to steward all wildlife species in Montana, and the FWP strategy appropriately encompasses a variety of species. This builds on recent public attention and funding focused on migration corridors for big game. In addition to big game, the FWP strategy will include carnivores and birds. Montana is the only state outside of Alaska with viable populations of the full complement of native carnivores. Connectivity among populations has been a major issue in carnivore conservation in Montana, and FWP and partners have been working to identify key habitats and manage human-carnivore conflicts to facilitate connectivity. Montana is also the breeding stronghold for many migratory grassland birds, which have declined more than any other bird assemblage in North America. Montana winter and summer habitat anchors continental-scale raptor migrations, and we have critical stopover areas for many other migratory birds, including waterfowl.

Strategies

Action 1: Strengthen FWP's existing organizational structure to improve coordination on wildlife movement (within seasonal ranges or dispersing) and migration (between seasonal ranges).

FWP will coordinate wildlife movement and migration activities by emphasizing and increasing the consistency of communications and planning across the agency's organizational structure. The Chief of

Staff will be the agency lead and will track FWP activities and update the Director. A team of Headquarters staff representing the Responsive Management Unit, Wildlife Habitat Bureau, Game Management Bureau, Nongame Wildlife Management Bureau, Wildlife Research and Technical Services Bureau, and Wildlife Division Administrator will coordinate statewide activities related to wildlife movement and migration and facilitate internal communication among Headquarters and FWP Regions regarding statewide activities. This Headquarters coordination team will involve other divisions as projects and efforts necessitate. Wildlife movement and migration will become a standing topic at Wildlife Program Manager meetings to facilitate communication and coordination among Regional and Headquarters staff. In some cases, designated coordination teams will be formed to implement specific projects or initiatives. For example, big game movement and migration activities under the U.S. Department of Interior's Secretarial Order 3362 are coordinated by a team of Headquarters staff and Regional staff leads from each priority area that is identified in the Montana Action Plan. Any assignments to FWP staff must follow an assessment of already-assigned work priorities and confirmation of staff capacity to engage new or additional tasks.

Action 2: Develop and implement a partners-oriented communications plan that confirms the value of conserved wildlife movements and migrations and the habitats that support them, provides clarity about FWP's work related to wildlife movement and migration, outlines a framework to facilitate partnerships, and builds trust and credibility between FWP, partners, and the general public.

Efforts related to wildlife movement and migration have traditionally been part of FWP's habitat and research programs, but the recent influx of funding, federal directives, and public interest has elevated the focus on migration and created a need for FWP to increase communications with external partners and the general public. Consistent with their wildlife advocacy, partners want to understand the research and habitat conservation work FWP is doing related to wildlife movement and migration. And they want to help. The Headquarters coordination team will work with the Communication and Education Division to develop and implement a communication plan that highlights FWP and partner efforts related to wildlife movement and migration. The communication plan will provide for a consistent, credible message from FWP to help when developing partnerships with private landowner groups, conservation organizations, or other partners focusing on wildlife movement and migration. In addition, the communication plan will outline a comprehensive framework for FWP to engage partners and for private landowners, traditional partners, and newer partners to engage FWP on wildlife movement and migration. This framework will cross scales, from working with FWP regional biologists on local projects to providing input on FWP policies and programs at the statewide level. The framework will clarify appropriate communications pathways, contacts, venues, and relevant timelines.

Action 3: Consistent with available resources and reasonably measured against other priorities, conduct research and mapping of wildlife movement and migration for ungulates and carnivores; work with conservation partners on mapping habitats important for bird movements; and develop a phased approach to incorporating and prioritizing other species or groups of species.

FWP and partners, like universities, have conducted a large amount of GPS tracking and spatial research on a wide variety of species, including dozens of big game herds, several carnivore species, and several bird species. FWP staff are actively conducting more GPS tracking and spatial research projects and are planning additional research for species and areas that have already been prioritized. New research projects related to wildlife movement and migration will be developed using the wildlife research prioritization process or other Wildlife Division prioritization exercises, as needs are identified around Montana by FWP staff as well as external partners.

These GPS and other spatial data have been and will be used both locally, to coordinate and collaborate with partners, as well as centrally, to develop maps depicting important seasonal ranges, migration routes, dispersal habitat, connectivity habitat, and other depictions of functional habitat or movement needs for ungulates and carnivores. These maps are intended to represent wildlife location and use data, not for any formal wildlife corridor land designation. Mapping efforts and products will be consistently assembled and presented. Analysis methods to accurately estimate important habitats for each species, dataset, sample, and area will be used, with attention also paid to using standardized, consistent approaches to the extent possible. FWP will coordinate data analysis methods and research with other states, agencies, and researchers using both informal professional networks and formal coordination structures such as the Western Association of Fish and Wildlife Association's Wildlife Movement and Migration Working Group and the U.S. Geological Survey's Big Game Corridor Mapping Team. To ensure consistency among FWP staff, once maps depicting important habitats are created and updated through central analyses and approved by field staff, those maps will be relied on by FWP, in both a local and statewide context. In some cases, this process may rely on local knowledge gained over time and experience, not necessarily through formal research or surveys. Through close coordination with the Technology Services and Communication & Education Divisions, these analysis results and maps will be made available to FWP staff and the public via the FWP Website, using mapping applications, infographics, data dashboards, and/ or other methods to aid understanding and appropriate application of data. Inclusion of analysis results and maps on other distribution platforms covering parts or all of Montana, or larger areas involving coordination with other states or nations, will be considered on a case-by-case basis. To the extent possible, this should include common research objectives and methods. Substantial attention will be paid to ensuring that enough local coordination and communication about GPS tracking data, analyses, and maps, especially with private landowners, has occurred prior to release of analysis products and maps on any publicly available platform. FWP will create mapping products in a way that protects wildlife and is sensitive to private landowners but is also fitting to the management need. For example, FWP will be careful to avoid showing data at a fine resolution that would affect fair chase hunting ethics or show individual properties but would identify an important seasonal range.

FWP partners have led most efforts to develop maps depicting bird migration and important habitats for facilitating bird migration. As part of this action, FWP will work to assemble these maps into a cohesive set, similar to the way ungulate and carnivore maps are being assembled. This will facilitate their use in habitat conservation and improvement efforts and will help determine if additional bird movement or migration research is needed to fill information gaps. Finally, while FWP currently does not have the capacity to develop such maps for other wildlife taxa, FWP will consider expanding efforts as that capacity becomes available.

Action 4: Incorporate wildlife movement and migration areas more explicitly in FWP habitat programs and plan updates to make resources available for conserving habitat and improving landscape permeability specific to wildlife movement and migration.

FWP administers a variety of programs that support habitat conservation. Each program funds activities intended to achieve specific habitat objectives. These include but are not limited to Habitat Montana, Forest Legacy, Migratory Bird Wetland Program, Wildlife Habitat Improvement Program, Upland Game Bird Enhancement Program, Working Grasslands Initiative, and programmatic funding to manage habitats within Wildlife Management Areas (WMAs). A variety of projects result from these programs that directly and indirectly affect wildlife movement and migration. Projects generally fall into three broad and overlapping categories: restoration/enhancement, conservation, and maintenance. For each of these, considerations for wildlife movement and migration will be more explicitly incorporated in

project prioritization and funding allocation to make resources available for wildlife movement and migration. Following are examples for how this will be accomplished.

Prioritize Conservation and Restoration Projects

- Add mapped wildlife movement and migration areas as criteria in each ranking process, including land acquisitions (fee title and conservation easements), long term habitat leases, and vegetation restoration proposals.
- Recognize mapped wildlife movement and migration areas as priorities for the Forest Legacy Program, as part of the Montana Forest Legacy Assessment of Need 2020 update.
- For both of the above, update geographic priorities as research findings and new maps become available.
- Continue to focus habitat conservation on areas with large existing conservation footprints, State Wildlife Action Plan focus areas, priorities of existing programs (e.g., the Working Grasslands Initiative), partner initiatives, and landscape scale conservation and restoration opportunities when ranking project proposals.

Update Standards for Conservation and Maintenance Projects

- More explicitly recognize and support wildlife movement and migration needs in WMA Maintenance Standards, particularly related to fences (e.g., wide gates, drop down segments, ongoing fence specification improvements, and open periods when livestock are absent).
- As new science becomes available, incorporate improvements into fencing specifications as part of FWP's fencing and grazing standards, affecting conservation easements, term grazing systems, and WMAs.

Emphasize Wildlife Movement Priorities Beyond FWP

- Utilizing the findings and maps from research and predictive modeling, FWP habitat staff will work in collaboration with other funding partners to recognize priorities and to determine funding sources that are suitable for a variety of wildlife movement and migration conservation opportunities. For example, croplands or other types of open space could be identified as important connectivity habitat. Whereas croplands may not fit with many of FWP's habitat conservation programs, these types of projects may align well with farm bill programs and partnering land trusts, where private landowners are interested in such programs.
- As a follow-up step, a list of potential easement holders and funding sources will be assembled with the assistance of Montana Association of Land Trusts and periodically updated as a reference for local FWP and partner use.

Action 5: Work collaboratively with local, multi-state, federal, and tribal governments to increase consideration and maintain functionality of wildlife movement and migration in land use, recreation, mining and energy, community and economic development, and transportation planning.

FWP reviews and comments on development projects and land use plans for a variety of agencies. For example, FWP has a Memorandum of Agreement with the Montana Department of Transportation (MDT) that formalizes collaborative work to reduce wildlife-vehicle conflicts and conserve wildlife movement and migration across highways. FWP is actively engaged with the Montana Wildlife and Transportation Steering Committee and will bring forward important wildlife movement and migration areas to help define areas of greatest need for wildlife accommodation projects. Another example is

how FWP staff work closely with local Bureau of Land Management and U.S. Forest Service offices as they create management plans and evaluate specific projects. FWP also leases DNRC lands for wildlife use. As FWP collects and analyzes more data on wildlife movement and migration, this information will be shared and incorporated in land use, recreation, mining and energy, community and economic development, and transportation planning and recommendations. FWP has found the most success by working collaboratively with other agencies and authorities to incorporate wildlife information early in development or land use planning processes. In these efforts, FWP will not advocate for formal wildlife corridor land designations, given the potential to alienate local communities, landowners, and governments.

Action 6: Work with partners to explore options to create dedicated funding for wildlife movement and migration.

Based on a survey and interviews with FWP regional wildlife staff, funding is a significant obstacle to completing work related to wildlife movement and migration, including research and projects to conserve habitat or improve permeability. As noted under Action 4, FWP has existing programs that can fund habitat conservation and restoration/ enhancement. However, there has been a lack of funding to improve permeability on the landscape through fence modifications and wildlife accommodations on transportation corridors. FWP will work with partners to explore new funding sources. For example, there are many highway infrastructure needs across the state and limited highway funding. As part of the Montana Wildlife and Transportation Steering Committee, FWP will work with MDT, Montanans for Safe Wildlife Passage and other partners to explore alternative funding sources for wildlife accommodation projects. FWP will explore project options that are not only tolerated but supported by landowners.

Action 7: Collaborate with partners in a way that supports this vision and strategy.

FWP sees its public trust manager role as a critical step in providing professional wildlife and habitat conservation recommendations to the trustees (the Fish and Wildlife Commission, legislature, governor, and other elected officials) for the beneficiaries (the public). Additionally, private landowners make decisions about habitat conservation on their private lands. Both private landowners and FWP can work with members of the public and organizations formed to further wildlife and habitat conservation. Conservation organizations provide ideas, input, advocacy, and feedback regarding their perspectives on wildlife management activities. These same organizations provide human and physical resources to complete conservation projects. These organizations may provide fiscal resources to achieve objectives that cannot be achieved with agency funding alone. Often, these organizations provide social support and explanations of wildlife and resource management activities that improve our ability to communicate with the public. Following are ways conservation organizations can support wildlife movement and migration. This list is intended to represent the diversity of conservation organizations involved in wildlife movement and migration work; it is not intended to be a complete list of the organizations involved or summary of the ways that each organization is involved.

- **Increase Volunteer Labor and Other Resources**

Conservation organizations often provide volunteer labor and resource commitments. Volunteer labor can often be used as in-kind match for federal funding as well. Recently, the Greater Yellowstone Coalition and National Parks Conservation Association have assisted with fence removal and modification at important locations identified using GPS telemetry collars on pronghorn. This project is an example of conservation organizations providing volunteer labor and other resources on public and private land, including FWP WMAs.

- **Increase Funding**

Conservation organizations can provide independent funding for projects or funding that is used as match for federal aid grants. For example, Safari Club International has provided funding for many research projects that have furthered our knowledge of management practices. Five Valley's Land Trust contributed funding toward an inholding purchase on Fish Creek WMA. The National Wild Turkey Federation contributed toward the purchase of conservation easements along the Milk River. Similarly, Ducks Unlimited, Inc. has financially supported many wetland complex restoration projects and conservation easements on wetland-grasslands that are important for waterfowl.

- **Broaden Public Support and Awareness**

Conservation organizations frequently provide the public and social support needed for management actions. For instance, the Mule Deer Foundation and Rocky Mountain Elk Foundation have been active on citizen working groups that helped craft plans for activities like wildlife disease surveillance and management, and then championed those plans with their membership and social influence. Montana Audubon has partnered with FWP on golden eagle migration monitoring, bringing awareness of raptor migration corridors to their membership and the general public.

- **Identify and Facilitate Project Opportunities**

Both through their membership and staff, conservation organizations have often initiated or helped facilitate opportunities that result in conservation accomplishments. For example, Pheasants Forever chapter members have initiated numerous upland game bird habitat projects. The Trust for Public Lands has worked with timber companies and in collaboration with FWP to facilitate completion of an extensive list of forested conservation easements. The Conservation Fund stepped in to facilitate the purchase of a critical inholding on Dome Mountain WMA. The Nature Conservancy has helped facilitate several FWP conservation easement and WMA purchases. In this role, partners can also help FWP confirm or adjust priorities, and help to identify, measure, and communicate successes and failures.