



## GREATER YELLOWSTONE COORDINATING COMMITTEE

# Greater Yellowstone Coordinating Committee workshop: Wildlife movement and migration in the Greater Yellowstone Ecosystem

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## Executive summary

The Greater Yellowstone Ecosystem (GYE) harbors some of the most diverse and abundant wide-ranging large mammals in North America. These wildlife move across broad landscapes that span not only national parks, wilderness areas, and multiple-use public lands, but also private and tribal lands where many landowners and managers are interested in partnering to advance land and wildlife conservation. However, many of the private lands with special wildlife value have very little long-term conservation protection and are susceptible to future development, and there is a recognized need to improve communication and coordination with private and tribal partners to support their conservation goals. Therefore, in November 2023, the Greater Yellowstone Coordinating Committee (GYCC) and partners convened a workshop to increase awareness and effectiveness of the unprecedented recent influx of funding and coordination opportunities available to support conservation of private and tribal lands. Workshop attendees heard from top wildlife ecologists; senior leaders in the US Departments of Agriculture and the Interior (USDA and DOI); managers of federal and state wildlife and conservation programs; and active conservation practitioners in the region. The workshop was designed to:

- Communicate and elevate the value of wildlife movements and migrations and their dependence on working and tribal lands across the ecosystem;
- Share approaches and tools the conservation community is using to advance conservation of wildlife migrations on working and tribal lands;
- Raise awareness of opportunities via state programs, US DOI's Secretarial Order 3362, and USDA's new Migratory Big Game Initiative; and,
- Discuss opportunities, barriers, and needed partnerships.

# Workshop Summary

## Introduction: Cross-boundary, ecosystem-wide conservation

The GYCC comprises representatives of state and federal government agencies who manage natural resources across the GYE. After an introduction by GYCC Chair and Custer Gallatin National Forest Supervisor Mary Erickson, Brian Nesvik, GYCC Member and Director of the Wyoming Game and Fish Department (WGFD), introduced the workshop as an opportunity for these government personnel to learn from active non-governmental partners about the challenges and opportunities experienced implementing conservation programs on the ground. Director Nesvik noted synergy in three recent developments driving broad support for ecosystem-wide conservation: (1) new advances in wildlife science illuminating needs to ensure population viability, (2) growing social awareness of the ecological and economic importance of migratory wildlife, and (3) recent influxes of public and private resources to support protection of wildlife movement corridors. These migration corridors span multiple land jurisdictions, underscoring the importance of private working lands in addition to protected public lands in sustaining these landscape-scale movements.

Dr. Arthur Middleton, Senior Advisor for Wildlife Conservation to the USDA and Associate Professor at the University of California - Berkeley, concluded the workshop introduction by looking toward future opportunities to mitigate growing conservation threats. Dr. Middleton noted that migratory ungulates (hoofed mammals like deer, elk, and pronghorn antelope, often referred to as “big game”) fuel productivity and abundance across the ecosystem, and the continued presence of these migrations speaks to responsible stewardship of the lands across which these migrants travel. However, recent increases in visitors and residents, alongside changing recreation patterns, are driving extraordinary pressure for suburban developments and other land-use changes in the region. Dr. Middleton highlighted the importance of cross-jurisdictional partnership and communication—including with tribes—so that new resources can be connected to habitat conservation and restoration efforts across the GYE.

## Wildlife science

Drs. Jerod Merkle, Knobloch Professor of Migration Ecology and Conservation at the University of Wyoming, and Blake Lowrey, Research Scientist for the U.S. Geological Survey (USGS), presented a synthesis of the latest advancements in wildlife and



*Photo by Craig Jourdonnais*

ecosystem science. Dr. Merkle focused primarily on ungulate migration ecology, showing animated maps of long-distance wildlife migrations as well as animal movements that were disrupted or halted by highways and impermeable fences. He noted the importance of landscape connectivity to migratory wildlife and highlighted the impacts of development and the need to accelerate private lands conservation, whether through regulatory approaches (e.g., county zoning) or voluntary agreements (e.g., conservation easements). Dr. Lowrey presented the ongoing efforts of the USGS's Corridor Mapping Team, which is working with state management agencies and tribes to develop ungulate migration maps that can help inform targeted conservation efforts. This Team has mapped 182 migrations of elk, mule deer, and pronghorn around the West. Dr. Lowrey and colleagues are developing focal work on migrations of the GYE with an emphasis on three aspects: (1) characteristics of migratory movements such as timing and prevalence, (2) relationships between migratory behaviors, ecological processes, and human influences, and (3) key conservation threats and priorities.

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## A perspective from key federal leadership

Three senior leaders from the Departments of Agriculture and the Interior participated in the workshop and made remarks about the vision, purpose, and goals of their respective federal departments and mission areas related to the conservation of ungulate migrations: Robert Bonnie, USDA Undersecretary for Farm Production and Conservation; Sarah Greenberger, DOI Associate Deputy Secretary; and Christine Dawe, Senior Advisor to USDA's Undersecretary for Natural Resources and Environment.

Undersecretary Bonnie highlighted the importance of the GYE to the nation more broadly, noting its capacity to influence conservation far beyond the region's boundaries. He spoke at length about the importance of working together across boundaries, emphasizing this as a key consideration for the USDA both internally (e.g., across the US Forest Service, National Resources Conservation Service [NRCS], and Farm Service Agency [FSA]) and externally in building lasting relationships that help distribute the resources available to the people that need them. The Undersecretary highlighted unprecedented resources that are now available for conservation and expressed his goal of building a durable toolkit for conservation that spans political and geographic boundaries. Noting the recent partnership between the USDA and the State of Wyoming and its expansion into a [Migratory Big Game Initiative](#) newly encompassing Montana and Idaho, Mr. Bonnie urged workshop participants and attendees to come forward to help put USDA resources on the ground by getting the word out, developing projects, and streamlining programs.

Associate Deputy Secretary Greenberger explained that the GYCC was formed 60 years ago and that thanks to the development of a new Charter, the DOI is looking towards the next 60–100 years. To that end, Ms. Greenberger expressed a commitment to partnership, collaboration, listening, learning, and

sharing decision-making in order to ensure durability and success in supporting a future for generations to come. She discussed the DOI's current efforts related to land management planning, which determine what actions can take place on federal land. Particularly, Ms. Greenberger discussed the importance of taking time to communicate and coordinate, and she announced new partnerships and policies related to wildlife migrations and movement corridors that are currently underway in collaboration with the US Fish and Wildlife Service and Bureau of Land Management.

Senior Advisor Dawe emphasized opportunities for coordination and collaboration to support migrations across the GYE. First, she discussed the value of developing and advancing co-stewardship agreements allowing tribes to maintain ties to lands now managed by the USFS. Next, she noted that synergies in the conservation needs of multiple wildlife species can be used to guide forest plan revisions and land management decisions. Finally, she explored prospects of a Joint Chiefs' project that would support wildlife habitat conservation spanning the three key states in the GYE: Wyoming, Montana, and Idaho. She noted the critical role private lands play in supporting migration across the region, and she emphasized a desire to leverage investments to further support this role.

## Federal and state program managers

Three agency personnel contributed state and federal policy context to the discussion: Brian Nesvik; Casey Stemler, US Fish and Wildlife Service Senior Adviser for Western States; and Tim Griffiths, NRCS West [Working Lands for Wildlife](#) Coordinator.

First, Brian Nesvik highlighted how state authority over many wildlife populations implied a significant need for state leadership on conservation of migratory wildlife, and he detailed WGFD's approach. Specifically, in response to Governor Mark Gordon's [Executive Order 2020-01](#) WGFD has adopted a two-phased approach to informing designation of important migration corridors. In the first phase, the department uses a combination of scientific data and public feedback to present a potential corridor to the Wyoming Game and Fish Commission. In the second phase, if the Commission decides to support the designation of the corridor based on internal review and public comment, they recommend action to the governor. This phase opens the process to a broader set of stakeholders, including a working group that is appointed by the governor to represent diverse interests and bring in local knowledge. So far, this approach has resulted in the designation of three mule deer migration corridors. A fourth corridor complex, that of the Sublette pronghorn herd, is currently under review in the first phase of this process. Official



*Mr. Robert Bonnie, USDA Undersecretary for Farm Production and Conservation, addresses the group. Photo by Shaleas Harrison.*

designations provide helpful information when working with private landowners where there is consideration of development in high-use corridor areas.

Next, Casey Stemler provided the first of two federal perspectives by describing his work developing and coordinating implementation of DOI's Secretarial Order 3362 (SO 3362), "Improving Habitat Quality in Western Big-Game Winter Range and Migration Corridors." The order primarily aims to conserve, enhance, and restore the habitats of elk, mule deer, and pronghorn antelope using science, honest collaboration, and respect. Through SO 3362, the DOI requested each of the 11 state wildlife agency directors in the intermountain West identify their top 3–5 migration corridors or winter ranges and their top 2–3 related research priorities. After priorities were defined, the federal government committed to providing fiscal and other resources to support corridor conservation. Mr. Stemler detailed initial sources of funding, now expired, that supported habitat conservation on private and tribal lands in all 11 states. He further detailed two new efforts at the federal level relevant to corridor conservation. First, the recent passage of the Bipartisan Infrastructure Law established a well-funded 5-year pilot program for wildlife crossings. Second, the Council on Environmental Quality recently provided guidance focusing on ecological connectivity and wildlife corridors to all federal departments, with a goal of delivering more conservation across jurisdictional boundaries. Mr. Stemler specified the overarching principles of his work, including respecting state and private authorities and rights, making action-focused plans, recognizing federal land managers' multiple-use mandates, developing trust, and collaborating for lasting impact.

Tim Griffiths provided a second federal programmatic perspective, with background and guidance related to Farm Bill programs administered by USDA's NRCS and FSA. Through the Farm Bill, the NRCS and FSA work with private landowners, tribes, and other partners to support voluntary conservation measures. Mr. Griffiths highlighted the agency's commitment to working closely with locals to provide effective, flexible programs that engage science partners and landowners. To that end, the NRCS works through its State Conservationists, and FSA through its State Executive Directors, to bring Farm Bill programs to bear on immediate local needs. Mr. Griffiths highlighted the importance of the Agricultural Conservation Easement Program (ACEP), the Environmental Quality Incentives Program (EQIP), and the Grassland Conservation Reserve Program (Grassland CRP) to wildlife conservation efforts across the nation and in the GYE in particular. Drawing on these and a few other programs, USDA's new Migratory Big Game Initiative has already brought an additional \$40 million to habitat protection and restoration in high-priority corridors and seasonal ranges, including about 12,000 acres of easements and 300,000 acres of habitat treatments (e.g, cheatgrass management and fence modification). The Initiative has also seen more than 70,000 acres of ranch land enrolled in Grassland CRP, and provided about \$1,000,000 in new research support for natural and social science to improve conservation outcomes. Much of this effort has focused in the GYE due to the priority corridors and seasonal ranges there.

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## Panel: Perspectives from active conservation partners

Much of the workshop was dedicated to hearing from a diverse array of local conservation practitioners about their experiences implementing conservation programs on the ground. Panelists were asked to share success stories as well as challenges encountered. The panel was moderated by Temple Stollinger, Associate Professor and Wyoming Excellence Chair in the University of Wyoming's Haub School of Environment and Natural Resources and College of Law who noted that these nine local panelists had played a key role in driving the success of conservation programs on the ground to date.

Panelists spoke from a broad range of perspectives.

One group of participants represented land trusts actively working on private land easements: Max Ludington, President of Jackson Hole Land Trust; Shaleas Harrison, Wyoming Resource Coordinator of the Western Landowners Alliance; Steve Sharkey, board member with Wyoming Stock Growers Agricultural Land Trust; Chet Work, Executive Director of the Gallatin Valley Land Trust; and Tamara Sperber, Conservation Director of Teton Regional Land Trust. Leadership from nongovernmental organizations also participated including: Brian Yablonski, Chief Executive Officer of the Property and Environment Resource Center (PERC), Scott Christensen, Executive Director of the Greater Yellowstone Coalition (GYC), and Wes Martel, GYC's Senior Wind River Conservation Associate. Jason Baldes provided additional perspectives from his roles as Tribal Buffalo Program Manager for the National Wildlife Federation, Tribal Buffalo Coordinator for the Tribal Partnerships Program, and Eastern Shoshone Tribal Buffalo Representative. Perspectives on funding and coordination were provided by Chris McBarnes, President of the WYldlife Fund, based on his experience working with 5 foundations to develop a Pooled Migration Fund supporting capacity-building and providing matching resources to leverage federal investments in conservation.

While presenting a diverse array of perspectives and conservation tools, many panelists collaborate frequently, and several of the Wyoming-based panelists have recently acted as partners to USDA on the Migratory Big Game Initiative. Panelists also work with conservation tools funded by private supporters and nonprofit entities, for example wildlife occupancy agreements, payment for presence programs, and compensation funds.

From the panelists' varied perspectives emerged three consistent themes around successes in implementing conservation programs.

- First, many panelists noted a growing cultural appreciation for voluntary conservation practices administered by local groups. Multiple panelists mentioned that landowners strongly prefer



*Photo by Kristin Barker*

proactive, incentive-based conservation approaches to the more traditional top-down regulatory approaches. Ms. Sperber, Ms. Harrison, and Mr. Ludington all noted that conservation easements are more politically and culturally palatable than federal land acquisitions in rural areas. Similarly, Mr. Martel and Mr. Baldes highlighted recent conservation successes on tribal land driven primarily by tribal members, including the ongoing reintroduction of bison to the Wind River Reservation.

- Second, panelists have experienced a rapidly-growing awareness of and interest in program participation among local landowners, underscoring the effectiveness of recent communications and messaging efforts. Some organizations, including the Western Landowners Alliance and Gallatin Valley Land Trust, are experiencing such high demand that it outstrips their groups' ability to enroll landowners in programs.
- Third, nearly all panelists have benefited considerably from recent increases in federal funding that have provided direct support for private land conservation. As noted by Mr. Christensen, there is more federal money available now for private lands conservation than ever before. Importantly, however, much of this funding is challenging to apply to tribal lands.


Panelists also shared opportunities to improve their capacity for conserving private and tribal lands. At least half of local practitioners have experienced one or more of four common challenges to implementing conservation programs on the ground.

- Nearly all panelists' work suffers from resource limitations, particularly staffing deficiencies and financial constraints. Mr. Sharkey and Ms. Sperber expressed a need for funding to cover transaction costs of conservation easements, the burden of which currently falls to NGOs. Mr. Christensen and Ms. Sperber spoke of delays in landowner enrollment being caused by limited federal staff and a lack of qualified appraisers. Mr. McBarnes, Ms. Harrison, and Mr. Yablonski all spoke to the need to increase the amount of funding available to make additional types of conservation economically viable for private landowners.
- Timing delays in the implementation of federal programs also emerged as a common setback experienced by panelists. Mr. Sharkey described how easements can be difficult to plan, or worse, can fall through, when it takes NRCS multiple years to process the easement funding. Mr. Sharkey stressed the importance of efforts to address these timing delays. Mr. Work further noted that timing delays can devalue compensation for landowners when closing easements takes so long that land values have increased considerably since the easement application was submitted.
- Many panelists expressed a need for enhanced flexibility and creativity in program offerings. Mr. Baldes explained that the land-use system currently imposed on tribes has no mechanism for buying

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back land, which severely limits the capacity for conservation programs on tribal lands. Additional opportunities to improve include: increased flexibility in Regional Conservation Partnership Program funds to allow renewal at the new rather than the old cap (posed by Mr. Work), modification of current parcel size limitations to allow protection of smaller properties (posed by Mr. McBarnes), and the ability to layer multiple applicable programs to better support private land stewards (posed by Ms. Harrison).

- Conservation programs would further benefit from increased science and technological capacity to help inform planning and decision making. For example, customized decision support tools built around priority migration corridors would help local groups target landowner outreach and area-specific resource concerns, such as cheatgrass expansion. Data specific to migratory big game, such as locations of GPS-collared animals and migration routes, would help guide land trusts to focus on areas that have the greatest broadscale impact, Ms. Sperber explained. Efforts to conserve tribal land would benefit from upgraded in-house scientific and technical capacity; Mr. Martel and other Wind River associates are currently working with the University of Wyoming Haub School and the High Plains American Indian Research Institute to assist in this endeavor.



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### Migration routes

- Mule deer
- Pronghorn
- Elk
- Moose
- Bighorn sheep
- Bison

