



Beyond Boundaries

in the Greater Yellowstone Ecosystem

Ranchers and Scientists Exploring Solutions for the Future

August 2-4, 2016 - Cody, Wyoming



Final Report

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- Hoodoo Land and Cattle Company
- Ishawooa Mesa Ranch
- TE Ranch
- J Bar 9 Ranch
- Sage Creek Ranch
- The Nature Conservancy

Cover photo courtesy of Joe Riis

BEYOND BOUNDARIES IN THE GREATER YELLOWSTONE ECOSYSTEM

Ranchers and Scientists Exploring Solutions for the Future

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Final Report

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ABSTRACT

The creation of Yellowstone National Park (YNP) opened the first chapter in conservation, one which focused on the acquisition and protection of public lands. Even at 2.2 million acres in size, though, YNP is only a tenth of the "Greater Yellowstone Ecosystem" (GYE) on which it depends. Evolving knowledge, particularly about the wide-ranging movements of ungulates and the predators that hunt them, is illuminating the vital role that working lands on the edges of the GYE play for both YNP's wildlife and nearby communities. Yet these working lands are increasingly imperiled. Conserving landscapes like the GYE requires recognition of both the ecological and human needs that are at stake, and increased cooperation among private landowners and managers, scientists, government agencies, and non-governmental organizations. Therefore, in August 2016, representatives of these groups convened in Cody, Wyoming to encourage dialog within the working lands community and across the Greater Yellowstone Ecosystem (GYE). In particular, the symposium sought to elicit the perspectives of private landowners and managers (hereafter, "landowners") on costs and opportunities associated with sustaining GYE wildlife – particularly migratory ungulates, but also the predators that hunt them.

Geographically, the symposium focused primarily on private lands and adjoining public lands in the Greybull and South Fork watersheds of the eastern GYE. The symposium's specific goals were to: 1) highlight the role of working lands in the GYE; 2) Strengthen landowner relationships in the GYE; 3) discuss ways to keep working lands intact, healthy, and economically viable; 4) share experiences from landowner-led collaborations around the West; and 5) identify next steps in fostering greater regional cooperation in the symposium's focal geography. A total of 77 participants included landowners from the eastern GYE, representing the management of approximately 1.4 million acres of deeded and leased grazing lands; representatives of collaborative efforts and landowners from several other areas around the West; federal, state, and county officials, university researchers; and NGO representatives.

The symposium combined formal presentations, facilitated discussions, and topical field discussions on Cody-area ranches. During the symposium, landowners expressed a collective vision of a landscape in which the

working lands remain intact, in family ownership, agriculturally productive and supportive of both people and wildlife. Landowners also generally agreed that greater cooperation could help achieve this vision by providing “strength in numbers” within management and policy discussions; a venue for information-sharing; a platform for communicating shared values and management activities to the public; and a means to counter polarization on key issues. Landowners also expressed interest in regulatory flexibilities and/or incentives that would help offset the costs of high ungulate densities; reduce conflict with large carnivores; combat encroachment of invasive plants; and increase the value of locally-produced beef. Landowners also perceived a need to communicate more clearly with the general public about the values their lands provide, and with scientists about research needs on private lands. The primary concerns about increased cooperation were landowners’ time limitations and capacity to determine the scope of such an effort. At the end of the symposium, the Cody landowners expressed interest in a follow-up meeting to assess symposium findings and explore organizational possibilities. Further background and discussion details are elaborated in this report, which combines background material from the program with findings from the event itself.

INTRODUCTION

The Yellowstone Challenge

Yellowstone National Park (YNP) was established to protect extraordinary geological features, but is now equally valued for its wildlife. Today, YNP harbors North America’s most diverse assemblage of large mammals and is one of the few landscapes where their predatory and competitive interactions are mostly intact. The opportunity to observe wildlife in the area, and to hunt some species outside the park, plays a major role in the region’s economy. However, YNP’s wildlife depend on a mosaic of public and private lands much larger than YNP alone.

The recognition that YNP is too small to sustain key wildlife is almost as old as the park itself. Soon after the park was created in 1872, army general Philip Sheridan, charged at that time with managing YNP, recommended to Congress that the park boundary be extended 40 miles east (to present-day Cody, Wyoming) and 10 miles south, “to make a preserve for the large game of the West now so rapidly decreasing.” Congress declined, opting to avoid strict limits on economic activity. Still, Sheridan’s vision was partly fulfilled during the early 20th Century as agencies created nearby game reserves, national forests, and Grand Teton National Park. Later, state hunting regulations, federal wilderness designations, and endangered species law further protected YNP’s widely ranging wildlife.

The “Greater Yellowstone Ecosystem” concept of the 1970s and 1980s crystallized the notion of YNP as being strongly dependent upon a larger landscape. This concept grew most immediately from recognition of the expansive habitat needs of the grizzly bear population, and its eventual application to land and wildlife management fostered greater coordination of federal and state authorities in recovering that species. The Greater Yellowstone Coordinating Committee (GYCC), a federal entity, currently defines the GYE as a 22.6-million-acre area of ecologically interdependent lands, centered on the parks.

However, while sustaining wildlife and habitat beyond park and wilderness boundaries is a desirable outcome for agencies, NGOs, and the national public they represent, significant costs are borne by private landowners. For example, ungulates like elk, mule deer, and bison can compete for forage with cattle, transmit diseases, and damage fences and hay fields. Predators that follow them, like wolves and bears, can kill livestock, incur safety concerns, and change quality of life. Sustaining natural, economic, and cultural values within the GYE, then, partly requires finding new ways to alleviate such conflicts.

Though several coordinating efforts have taken place in the GYE, they have typically focused on federal land. The GYCC provides an important venue for coordination among federal agencies in the region. However, it has very limited staff and financial capacity, and while GYCC sometimes incorporates state, local, and private landowner participation on a project-by-project basis, these interests are not part of its formal governance. This can lead to mistrust, misunderstanding and conflict. As a result, there is significant need and opportunity for leadership and cooperation to conserve natural, economic, and cultural values across working lands along the GYE frontier.

Collaborative Conservation in the West

Across the American West, working lands that span the transition zone between wilderness and human communities – like those ringing the GYE – are perhaps the most complex and important yet least understood landscapes. They are the buffer between the wild and the urban; they span public and private land boundaries; and they simultaneously supply ecological services, agricultural products, and recreational opportunities. They are biologically diverse places where ecosystems transition from high to low elevations, over which many wildlife species migrate between their summer and winter ranges. Landowners themselves are also diverse, spanning the socio-economic spectrum and representing variable, complex political perspectives.

In the complexity of these landscapes, centralized bureaucracies, blanket management prescriptions, and ideological dogmas often falter. This is in large part why, over the past two decades, place-based collaborative conservation has risen spontaneously from numerous working land communities in the West. The growing success of these organizations in sustaining both ecological and human values can be attributed to the fact that they operate from an intimate knowledge of place and people, and in a context that has little alternative but to find common ground.

The concept of the “Radical Center” as applied to land was first articulated and embodied in the formation of the Malpai Borderlands Group, when ranchers, scientists and environmental organizations came together in the common interest of keeping their working landscape intact and healthy. Founding member Bill McDonald said at the time, “We’d gotten pretty good at knowing what we were against, and it was time to figure out what we were for.” Together they have restored fire, secured conservation easements, fostered wildlife populations, sustained ranches, supported scholarships and more. Similar groups have since arisen around the West, often with similar successes to show.

The “Radical Center” approach focuses on identifying common ground and seeking collaborative, constructive paths forward on key issues. It serves as an antidote to the increasingly polarized politics and rhetoric currently dividing people across the nation. Landowners who are directly engaged in the stewardship of working landscapes, and who have a vested stake in both economic and environmental outcomes, have emerged as natural leaders.

SYMPOSIUM APPROACH & FINDINGS

Symposium Goals

The Beyond Boundaries symposium was designed by the primary partners and sponsors to broaden dialog within the working lands community, especially the GYE. The original goals were to: 1) celebrate the role of working lands in this ecosystem; 2) strengthen working relationships in the region, particularly among landowners; 3) advance the dialogue about what it will take to keep these lands intact, healthy, economically viable and supportive of wildlife; 4) share lessons from landowner-led collaboration around the West; 5) identify next steps in fostering greater collaboration in the Cody area and the GYE.

In the symposium’s focal geography, the Greybull and South Fork of the Shoshone watershed, migratory ungulate populations are directly or indirectly related to a number of key challenges for landowners. A recent elk study has highlighted that this area comprises the winter range of one of the largest migratory elk herds in the GYE, which summers in one of the remotest areas of the lower 48 states. Additionally, a new mule deer study is revealing extraordinary migrations between overlapping winter ranges and the Teton wilderness south of YNP.

These migrations cause, or are central to, several challenges often cited by local landowners. When elk and deer come down from the mountains for winter, they bring hungry mouths and disease. They draw predators near livestock and people. They attract hunters in large numbers. Their productivity and abundance, like that of cattle, is adversely affected by invasive plants and subdivisions. These issues provided a natural focus for the symposium, which sought to elicit landowner perspectives on costs and opportunities associated with sustaining key wildlife and the working lands they depend on.

Symposium Participants

The symposium’s primary convening partners included the Western Landowners Alliance, National Geographic Society; Buffalo Bill Center of the West, University of California, Berkeley; Pitchfork, Hoodoo, Ishawooa Mesa, J Bar 9 and Sage Creek Ranches; Wyoming Migration Initiative; Nature Conservancy of Wyoming; and George B. Storer Foundation.

Participants were assembled in an effort to combine broad, regional experience in collaborative problem-solving with localized knowledge and influence over land and wildlife management, research, and business. A special

effort was made to include ranchers in the Greybull and South Fork of the Shoshone River. The event included 77 participants:

- 20 Cody landowners representing management of about 1.4 million acres
- 11 other landowners from elsewhere in GYE and the West
- 6 collaborative leaders representing the stewardship of >15 million acres
- 13 federal, state, and county officials
- 17 representatives from 7 NGOs
- 6 university or agency researchers
- 4 other Cody residents with experience in ranching and earlier collaborative efforts



Left to right: WLA's executive director, Lesli Allison, Wyoming Senator (former) Al Simpson and his wife, Anne. Senator Simpson delivered opening remarks for the symposium emphasizing with a blend of good humor and frank seriousness the need for honesty, integrity and thoughtful public discourse in the important work of sustaining our lands, wildlife and communities.

Symposium Findings

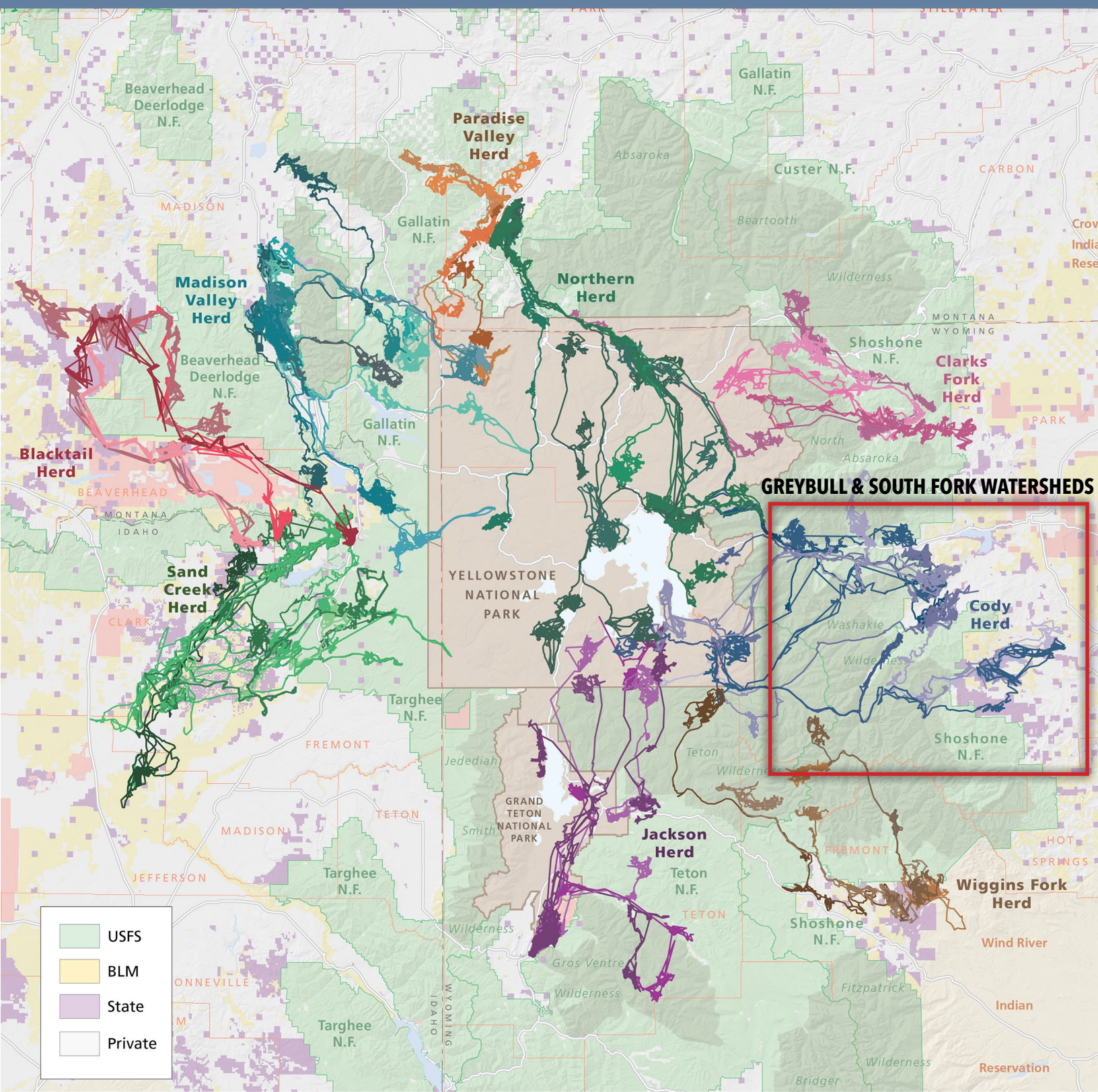
The symposium was designed to foster open discussions and enable participants to share their values and insights into the stewardship of the GYE landscape. In introductory materials, participants were offered the broad principles that the land and wildlife of the GYE deserve our best ideas; that GYE landowners might be able to learn from others' experience, and vice versa; and that "all of us know more than any of us." It featured an opening presentation on the ungulate migrations of the GYE, a panel of representatives from collaborative groups; two facilitated sessions, two field tours, and social time.

Migrations of the Greater Yellowstone Ecosystem

In this presentation, recent studies of migratory herbivores as well as accompanying photography and film were used to illustrate the GYE concept. Though some area residents have long known the migrations, the advent of GPS technology and new analytic approaches have greatly expanded public awareness of their extent and importance. For example, collaring of mule deer and pronghorn in the southern GYE have identified 100-150-mile corridors with unprecedented detail, and a new synthesis of elk collaring data details the movements of 20-25,000 elk in nine herds between core areas and private, working lands. It is now clear that herds of elk, mule deer, pronghorn, bighorn sheep, moose, and bison migrate 25-150 miles twice a year between low-elevation winter ranges on the edges of the GYE and high-elevation summer ranges near its core. At the same time, nutritional studies are showing that migrants can grow fatter and more productive than their resident counterparts. Altogether this work suggests that the migrations' productivity sustains biodiversity, tourism, hunting, and related business around the ecosystem.

These new findings are bringing greater recognition of the role of private lands in the GYE, which comprise about 6 million acres – or more than 30% – of the entire ecosystem. Importantly, due to historical patterns of cultivation and settlement in the West, the private lands of the GYE are often productive areas at low elevations along riparian corridors, and are used heavily by herbivores (and the carnivores and scavengers that follow them). Along with associated public grazing leases, these lands play an outsized role in maintaining key wildlife and other natural values.





Elk Migrations of the Greater Yellowstone Ecosystem

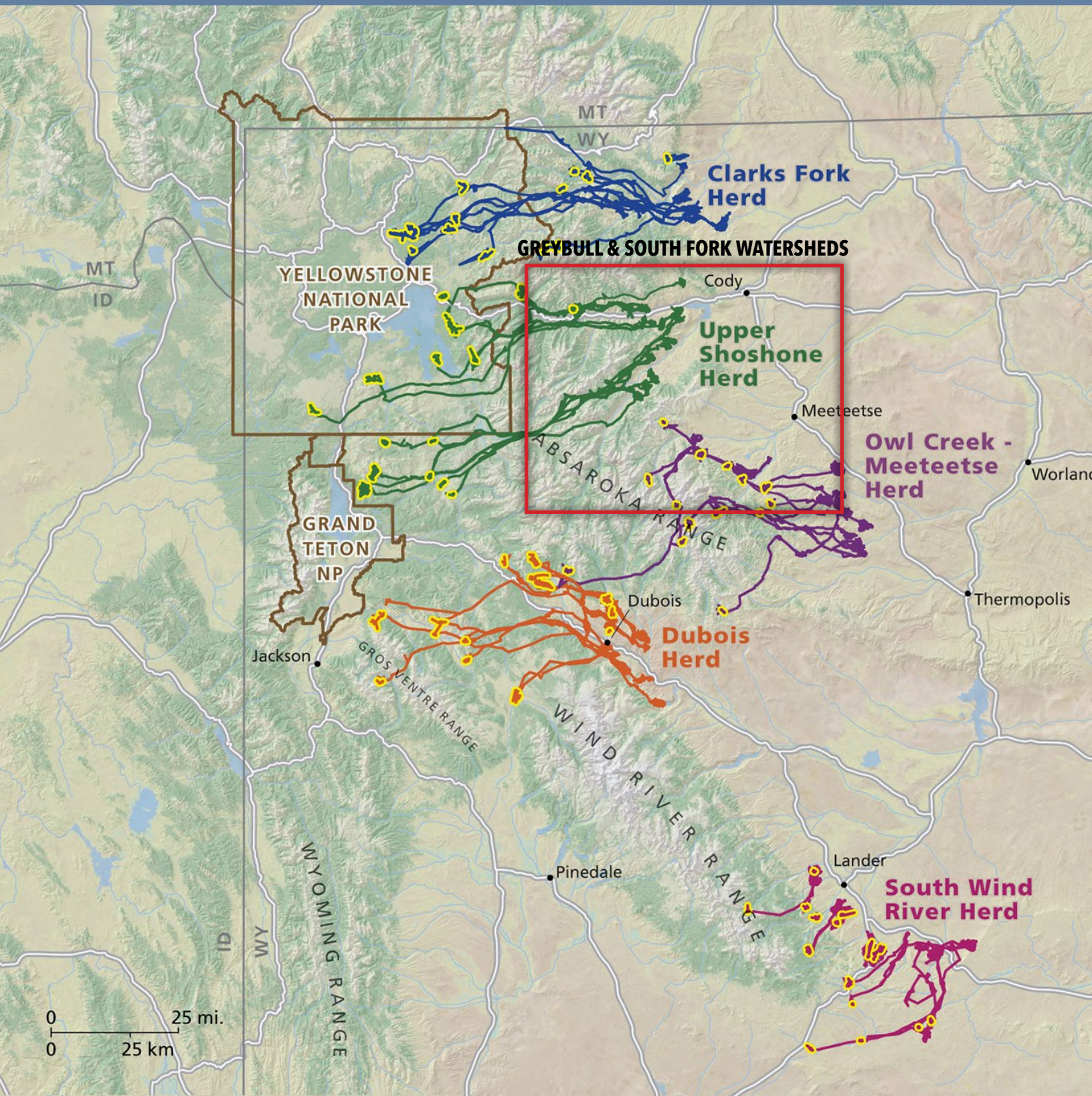
- Blacktail Herd
- Clarks Fork Herd
- Cody Herd
- Jackson Herd
- Madison Valley Herd
- Northern Herd
- Paradise Valley Herd
- Sand Creek Herd
- Wiggins Fork Herd



September 18, 2015 DRAFT



© 2015 University of Wyoming
 Source: *Atlas of Wildlife Migration: Wyoming's Ungulates* (in production)
 Cartography: University of Oregon InfoGraphics Lab
 Elk data contributed by: Wyoming Game and Fish Department, Montana Fish, Wildlife, and Parks; Idaho Fish and Game, National Park Service, US Fish and Wildlife Service, Wildlife Conservation Society, Wyoming Cooperative Fish and Wildlife Research Unit, Iowa State University, and Yale School of Forestry and Environmental Studies



**Tracking Mule Deer Migrations
of the Eastern Greater
Yellowstone Ecosystem,
June 23, 2016**

Past week's progress

WINTER RANGE

Migration route



Cartography by InfoGraphics Lab,
University of Oregon



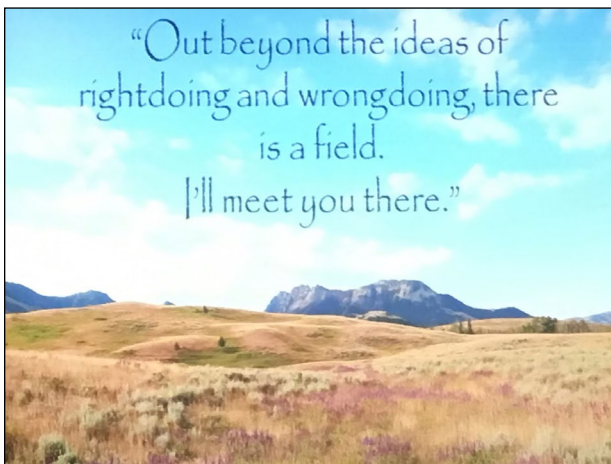
Working lands and wildlife in the GYE: challenges and opportunities for landowners

Wildlife biologists Rick Danvir, representing Western Landowners Alliance, and Doug McWhirter, representing the Wyoming Game and Fish Department, provided an introductory overview of challenges and opportunities facing ranchers and wildlife managers in the GYE. Among the most pressing challenges are disease transmitted between wildlife and livestock, forage competition, harvest/hunting management, development, carnivore-livestock conflict and invasive species. At the same time, wildlife can also provide for ecological and economic diversity and resilience. McWhirter also spoke about the passion that agency biologists have for wildlife and that it's not just a job for them, but a deep personal commitment. When landowners and biologists engage together in addressing these challenges it can create productive and meaningful relationships and outcomes. Danvir, who was the long-time wildlife manager for Deseret Land and Livestock, told participants that the Deseret operation was profitable because of the fact that they were able to generate income both from wildlife and livestock. This combination also enabled the ranch to increase land health and resilience. As he said, "Diversity equals stability." Danvir also highlighted the role of collaboration and the value of diverse perspectives among people. He offered a quote from "Old Joe Longhurst" that "Two heads are better than one--even if one is a knothead."



Doug McWhirter of the Wyoming Game and Fish Department explained strategies and challenges in managing migratory ungulate populations, and also the personal commitment he and other agency biologists have to both people and wildlife in these landscapes.

Presentation and panel discussion of place-based collaboration around the West



Panelist Hilary Anderson of the Tom Miner Basin Association framed her presentation around the theme illustrated in this slide.

As part of the symposium, Beyond Boundaries brought together representatives of landowner-led collaborative conservation organizations from around the West to offer their experiences and insights into improving management across large landscapes. These included Malpai Borderlands Group, Blackfoot Challenge, Chama Peak Land Alliance, Thunder Basin Grasslands Prairie Ecosystem Association, Granger Ranches O'Dell Creek Restoration, and the Tom Miner Basin Association. In summary, common observations and recommendations conveyed by this group included:

- Collaboration works. Representatives of landowner-led collaborative groups spoke of their successes in reducing conflicts between wildlife and livestock, improving relationships between people and in slowing land development.
- Collaboration requires long-term investments in relationships. Hilary Anderson from the Tom Miner Basin captured this notion with the following quote: "Out beyond the ideas of right-doing and wrong-doing there is a field. I'll meet you there."
- Landscapes, people and issues vary such that each community needs to identify the tools and strategies that work best for them.
- Improving partnerships and incorporating science can help landowners manage well, drive policy action, and respond more effectively to anti-ranching groups.
- Successful conservation begins at a manageable scale and grows from there. Groups that now measure their impact in the millions of acres started at a smaller scale.
- It is important to recognize and celebrate successes.

Facilitated Session 1: Hoodoo Ranch¹

In this session, participants were divided into 8 groups by professional and geographic affiliation, i.e., Cody-area landowners, other landowners, researchers, agency officials, non-profit organizations, and collaborative leaders. A facilitator then asked them to identify individual values (on notecards) and shared values, then perceived threats to those values. Additionally the entire symposium group was asked to identify any recent successes.

Specifically, the first question for landowners was: "There are a lot of reasons to ranch... but what do you really love about ranching? Based on your individual answers, identify three shared core values as a group." The commonly cited values among landowner groups included: family, a ranching and outdoor lifestyle, community, keeping lands intact and in family ownership, and the desire to leave the world a better place than they found it. The simultaneous question for non-landowner groups was: "There are a lot of career paths that you could have taken, but what do you love about what you do? Based on your individual answers, identify three shared core values as a group." The commonly cited values among non-landowner groups included:



Park County Commissioner and professional outfitter Lee Livingston (right) underscored the importance of both ranching and wildlife to the community and local economy.

¹For a full report on facilitated discussion results, see Appendices A through C which are available upon request.

wild places and the natural world, a sense of larger purpose or meaning, relationships with diverse people, an outdoor lifestyle, learning, teaching, and the desire to steward land and wildlife well for future generations.

The next question for the individuals and their groups was, "What are the greatest threats or challenges that impede your ability to achieve core ownership or management objectives that support these values? As a group, which of these do you believe are most immediate/urgent (indicated in bold)?" The perceived threats among landowner groups included: limited qualified labor force, regulatory complexity, low commodity prices relative to costs, overpopulation, difficulty finding common ground among stakeholders, and lack of time and money. The perceived threats to values among non-landowner groups included: adverse public perceptions and attitudes, lack of education, political polarization, overpopulation and development, policy and legal complexity, lack of resources (time, money, and qualified labor), fear of change, and administrative constraints.

As a whole, then, the entire symposium group found common ground in the desire to keep landscapes, including working lands, intact; improve relationships and trust between people; and improve the world for future generations. They also commonly identified a lack of time, money, and qualified labor and political polarization as threats.



Photographer/filmmaker Joe Riis presented photographs to Greg Hertel, Lenox and Fran Baker, JD Radakovich and his family, and Mary Anne Dingus in appreciation for the support and encouragement their ranches provided in the Yellowstone elk migration study.

The final question, asked of all participants at once, was, "What's working well that should be sustained?" Individual responses referenced existing cooperation and trust among Cody-area agencies and landowners; the occurrence of the symposium itself; positive relationships resulting through a recent project on elk migration ecology; a recent black-footed ferret reintroduction in the Greybull River valley; the fact that numerous large ranches have remained intact up to the present; a sense that problems can be solved together; several landowner-led efforts in other landscapes; the resilience of landowners and their commitment to stewardship; and next-generation engagement.

Beyond Boundaries: the public-private interface

Opening day two of the symposium, USDA Undersecretary for Natural Resources and the Environment Robert Bonnie and DOI Deputy Assistant Secretary for Land and Minerals Jim Lyons addressed the future of large landscape management and conservation.

Bonnie began with a story of his connection to a long-time family property that was identified as supporting the endangered red cockaded woodpecker. His family is conservation minded but also wondered what the presence of the bird was going to mean for their management. They eventually entered a safe harbor agreement so they could have greater certainty that they could continue to use and manage the land as they long had. He related through that experience to ranchers in the Cody landscape.

"You have ranches that are providing enormous public benefits and they have challenges maintaining those benefits," he said. "We in the public sector have a responsibility to facilitate and help those folks keep doing what they are doing."

He cited several themes that need to be addressed in this effort, including locally-driven collaboration in which government agencies are not leading but participate as partners; a larger-scale approach; keep working lands working so they remain economically viable; technical and financial support for conservation actions; certainty through assurance agreements, better market opportunities and public recognition for the values ranches are providing.

He then provided insight into what he felt the opportunities were in interacting with the USDA, including the use of Farm Bill and NRCS funding and programs, opportunities to apply Land and Water Conservation Funds



USDA Undersecretary for Natural Resources and the Environment Robert Bonnie spoke about the many public benefits provided by ranches in the GYE and opportunities to improve the economics, assurances and public recognition necessary to sustain working lands and the habitat benefits they provide into the future.

to keeping large landscapes intact through conservation easements, and the opportunity to lay groundwork for positive and productive engagement with the next administration.

Lyons suggested that the research showing elk migrations sprawling across the landscape reminds him of a quilt, and that the business of conservation is to patch that quilt together. For Lyons, cooperative and partnership-oriented conservation work that balances natural and social values at large scales is the essence of "21st Century Conservation" and a major departure from the last century's business model. He cited the recent success of West-wide collaboration to conserve greater sage grouse populations and their habitat as an example.

Both federal officials impressed strongly upon participating landowners that their collective voice holds significant weight among agencies and decision makers in Washington, DC.

Facilitated session 2: Ishawooa Mesa Ranch

In this session, participants were divided into two groups: Cody-area landowners and all other participants. The first group was asked to share their visions for the future of the landscape, and the degree of their interest in working cooperatively toward that vision. Other participants were divided into random groups and asked to answer a series of questions related to sustaining working lands, connectivity, and wildlife. At the conclusion of these two, separate group discussions, all participants gathered for a discussion of the results. Numerous participants commented that they wished for more time than the symposium schedule permitted in order to discuss these issues in greater depth.

Specifically, the Cody-area landowner group was led through the following, five-minute exercise: "Think of a young person (under 30) you care about, either in your own family or the broader community, who has a stake in the future of this landscape. Choose a postcard (blank postcards featuring images of Cody area land, people and wildlife were provided) and address it to the person you are thinking of. Placing yourself ten years down the road, write a postcard to this person about what you're most proud of contributing to this landscape and its values." Facilitators then asked for volunteers to read their postcards aloud. Common themes expressed in the postcards included a desire to keep the landscape open and wild, to see wildlife continue to prosper and for families to be able to continue ranching.



Cody rancher Lenox Baker (left) recently reintroduced black-footed ferrets to his Pitchfork Ranch. U.S. Department of the Interior Deputy Undersecretary for Land and Minerals Jim Lyons (right) spoke during the symposium about a different, more collaborative model of conservation for the 21st Century.

Concerns expressed during the related discussion among Cody-area landowners included:

- A need for people with the knowledge and commitment to manage land
- Planning for next generation/succession
- Family ranches being sold and subdivided in the area
- Being able to maintain privacy and personal enjoyment of property
- Impacts to quality of life due to the increasing presence of large predators

The Cody-area group was then asked, “We have identified shared goals, challenges and visions for the future. Is there value/utility in working together toward shared goals, what would that look like and is now the right time?” Participants agreed that greater collaboration and “strength in numbers” might help achieve their shared vision and ensure their values are supported into the future. When asked to identify outcomes they might be able to achieve through increased collaboration, they cited:

- Telling the story of working-land stewardship
- Building community support for projects and policy regarding working lands
- Increased flexibility in regulations and land management practices
- Improved noxious weed management
- Improved public relations with non-resident landowners
- Accelerated development of a brucellosis vaccine

Though Cody-area landowners agreed that increased cooperation could be of value in achieving shared goals for the landscape, time constraints prohibiting extensive participation were a prominent concern for most present. Still, all were interested in exploring organizational options, starting with the models being used by other landowner-led collaborative organizations in the West².

As the Cody-area landowners discussed their vision for the future and the potential to increase local cooperation, other participants numbered off into six small groups. Each group was assigned one question and allowed to choose one question, in both cases from the list below. Groups then reported out on their recommendations, which are summarized here³.

²See Appendices D and E for more information on how place-based collaborative conservation efforts have been organized and implemented in other landscapes. Appendices D and E are available upon request.

³See Appendix C for more detail. Appendix C is available upon request.

1. Agree to one policy change that could better support both working lands and wildlife in the GYE.

- Delist wolves and grizzlies throughout the GYE to increase management flexibility.
- Develop new public wildlife-private lands elk hunting programs to increase rewards for supporting wildlife populations.

2. What are three ways to best engage the scientific community to better respond to land management needs and community values?

- Including scientists in collaborative groups can help landowners increase knowledge-sharing and the promotion of innovative or successful practices.
- Funding from government agencies including National Science Foundation should be more strongly tied to community research priorities.
- Researchers need to connect with people on the ground and build relationships.
- Research results need to be made available to landowners.

3. What advice do you have related to the mapping of wildlife habitat and species presence on private or leased lands. Can it be positive for landowners? If so, how?

- While telling the important story, recognize concerns of publicly sharing .
- Use maps to support what is working (rather than what should be restricted).

4. What are the three most relevant messages landowners in the West could bring to policy makers in DC to improve support for working land stewardship? Would they be any different at the state level?

- Working lands create major public benefits at cost of private landowners.
- Many valuable changes can be made without major policy shifts if the will exists.
- Need for increased cooperation and trust between state and federal agencies.
- Financial programs to allow landowners to simultaneously support families and provide habitat..



Ishaoowa Mesa Ranch owner Paul Klingenstein (on left with Pitchfork Ranch owner Lenox Baker) hosted lunch and flipped burgers made from homegrown beef.

5. Agree on three options to better align the economics of supporting wildlife with the need to make a living/income from the land? Should landowner compensation/assistance programs be improved, and if so, how (if more \$, where would it come from?)
 - Develop additional public wildlife-private land hunting programs that support landowners in recognition of the public benefits of habitat they provide.
 - Labeling of beef/agricultural products as locally produced and/or wildlife friendly.
 - Property tax relief if a landowner is managing for wildlife.
6. What could the Cody-area landowners accomplish together that they couldn't accomplish as individuals?
 - Strength in numbers, i.e. a landowner seat at the table for policies and initiatives.
 - Educate others about ranching and public values provided by ranches.

Field Discussions

A series of field discussions were held while touring participating ranches. The topics had been identified during one-on-one discussions with landowners during the months leading up to the symposium. The discussions generally focused on common challenges associated with harboring high densities of wintering ungulates on private lands. On each topic, a subject-matter expert such as a scientist or agency official provided an overview at the regional or the ecosystem scale, then a landowner shared a perspective on that topic, then the group asked questions and discussed the topic. The subject-matter experts provided advance briefs on each issue⁴.

The topic of hunter harvest was addressed on the Hoodoo Ranch. Big game hunting is critical to the economy and culture of the GYE and to the operations of the Wyoming Game and Fish Department. The group heard an overview of elk harvest in northwest Wyoming, including how the state manages harvest, with emphasis on issues surrounding hunter access to private lands and the challenges and opportunities for area ranches. Related discussion focused on ideas of how to provide or allow landowners revenue streams that incentivize wildlife conservation, such as modifying state regulations to allow landowners to sell hunting licenses. However several constraints were identified. Some ranches do not currently accept government money. Others will accept government money but some programs, particularly of the USDA, come with prohibitive income caps (which landowners understand, but still feel frustration about). Finally there is not public support for allowing landowners to market hunting licenses at the state level in Wyoming. It was generally agreed here (and throughout the symposium) that a key to future policy change is greater outreach to the public to articulate the benefits ranches provide public wildlife.

⁴See Appendix F. Appendix F is available upon request.

The topic of brucellosis was also addressed on the Hoodoo Ranch. Brucellosis was originally passed from cattle to elk, which are now a reservoir. The disease poses a major threat to livestock operations in the region and has incurred severe costs on adjacent ranches. Landowners confirmed that the disease looms large in their cattle operations. Several landowners supported increased investment in research, including but not limited to vaccines, to address brucellosis. In addition, at least one landowner identified the need for better land-use planning to minimize contact between wildlife and livestock. As an example, new oil and gas facilities located in important elk habitat might displace some infected elk into areas with heavy livestock use, increasing the risk of disease transmission. Several landowners felt that greater cooperation and coordination among landowners and agencies could potentially help reduce conflicts.



Chuck Preston, Natural History Chair and Founding Senior Curator of the Draper Museum of Natural History leads a field discussion near a golden eagle nest on the Hoodoo Ranch.

The topic of invasive plants was addressed on the TE Ranch. Species such as cheatgrass and Dalmatian toadflax are spreading quickly across public and private lands in the GYE, with important and poorly understood impacts on forage for both wild and domestic ungulates. The group heard an overview of current distribution across the GYE followed by concerns of several area ranches. For several major landowners, cheatgrass is a primary concern with the potential to significantly reduce forage for both wildlife and livestock and because it is particularly prone to fire. In fact, during the symposium, a grassfire on a local ranch rapidly grew into a major wildfire that destroyed at least one residence and forced temporary evacuations of people and livestock. The concerns of both landowners and agencies strongly overlapped on this topic. Several of the landowner-led collaborative organizations, such as the Blackfoot Challenge, have developed integrated weed programs spanning multiple ownerships and jurisdictions and demonstrated the benefits of working together on the issue. Recommendations offered during discussions included collaboration locally on weed control, continued research on control strategies for cheatgrass, and local information sharing on successes and failures combating the invasion.

The topic of livestock depredation by large carnivores was also addressed on the TE Ranch. High densities of wintering ungulates are one major factor that determines where wolves and some bears den and roam in spring – but then, when the native prey migrate away for summer, cattle sometimes become an alternative prey. The group

heard an update on the status of large carnivore management in Wyoming, followed by ranch perspectives. The management of large carnivores was also a topic of much discussion throughout the forum. Capturing the views of many participants, one landowner stated during the meeting that he recognizes the biological significance of large carnivores but that with populations now exceeding recovery goals, better management is needed to minimize conflicts with livestock and people. Landowners and managers repeatedly cited the high numbers of grizzly bears now present in and around ranch buildings and pastures, causing them to keep children under close supervision and exercise high vigilance during common ranch chores such as irrigating. They also highlighted the lack of US Fish and Wildlife Service personnel available in the area to provide management support. Representatives from the Blackfoot Challenge and the Tom Miner Basin Association spoke about their successes in reducing conflicts through carcass removal, routine monitoring, shared riders, and specific grazing strategies, and recommended that Cody ranches consider some of these options. Some landowners felt that monitoring and information sharing on predator locations could help them reduce conflict, but noted that wildlife agencies are not typically willing to share such information. Overall participants hoped for better cooperation among agencies and between agencies and ranches on this issue.



Dan Thompson of the Wyoming Game and Fish Department addresses depredation and predator management at the TE Ranch. The TE once belonged to Buffalo Bill Cody and the original ranch buildings seen here have been carefully restored and preserved. One of the current owners, Carlos Duncan, described the experience of regularly watching wolf packs and grizzly bears in close proximity to these buildings and the need to improve management of the species as their populations continue to grow.

The topic of exurban development was also discussed on the TE Ranch. An overview demonstrated that perversely, the beauty, open space, and rich wildlife of the GYE create a strong draw for development, which can in turn undercut these same values in the long run. Private ranches on the frontiers of the GYE are often situated in critical habitat not just for migratory ungulates but many other species. Intact ranches have done a great deal to conserve these species to present. In the ensuing discussion, Cody landowners generally expressed a desire to slow or stop future development, and felt that policies which increase revenue associated with wildlife and help sustain cattle production could work against pressure to subdivide and develop land. Some collaborative groups discussed successes in protecting key working lands and habitats with conservation easements.

DISCUSSION & RECOMMENDATIONS

Several elements of this symposium were aimed at simply describing key ungulate migrations of the GYE, the ecosystem services they provide, and the degree to which these depend on working lands at the edges of the ecosystem. This message was clearly illustrated by research indicating that nine migratory elk herds whose productivity anchors critical ecological, economic, and cultural values around the GYE spend 20%-80% of their winter, including late spring and early summer, on private lands. Landowners who harbor hundreds or in some cases thousands of these animals in winter described resulting conflicts, including financial costs that can pose serious, long-term threats to the agricultural operations that help many ranches to remain economically viable and intact.

Landowner-led Collaborative Conservation

Representatives from collaborative groups in other parts of the GYE and the West presented case studies showing the potential benefits of increased cooperation to address diverse types of conflicts. These groups' experience



From this hilltop during a Hoodoo Ranch field visit, a fire can be seen burning on the neighboring TE Ranch.

demonstrates traction in reducing conflicts between wildlife and livestock, improving working relationships, slowing land development, enhancing water quality, and restoring land health. However, successful cooperation started at a manageable scale, invested significant time and skill into building relationships, focused on common-ground issues rather than those likely to divide participants, and partnered with outside groups that understood the context-dependency of such efforts.

The Policy Process

Landowner participants in the symposium highlighted a number of broad concerns about the contemporary public policy process. Many expressed frustration that regulatory complexity and poorly conceived public policies present significant challenges to those landowners who seek to keep working lands intact and productive for both livestock and wildlife. Landowners felt that they are not included often enough in the development of public policies and regulations, and suggest that agencies and non-profit organizations make special efforts to engage them early in the policy process. At the same time, participants agreed that political polarization is a major and growing threat to any sound public policy process, and to achieving a shared vision. Many landowners explicitly stated that a collaborative approach might help address both these issues by helping them gain a "seat at the table" and by fostering common-ground pragmatism to counter polarization.

Economics and Labor

Landowner participants also highlighted broad, market-based challenges to keeping working lands intact and productive, including a limited qualified work force and low commodity prices relative to costs. When the profitability of ranches is reduced as a result of regulatory compliance or litigation and national and international economic and trade policies, it becomes less feasible to keep operations economically viable or to support well-paying jobs that can attract qualified workers. Landowners repeatedly, strongly, and universally expressed that if ranches could capture more economic value for the diverse values and services they provide, it would increase profitability along with the number of quality jobs they can support. This can help strengthen local economies and communities, which can in turn support better schools and services needed to maintain the work force.

Wildlife Conflicts

Conflicts with wildlife, a focus of this symposium, were discussed within this broader context by many landowners. Wildlife bring costs yet at the same time, pressures are mounting for landowners to support large wildlife populations and provide other ecosystem services for public benefit. Participants recommended a number of strategies to help ranches remain economically viable while sustaining wildlife. Some focused on increasing revenue to offset costs. In this vein, a common refrain was the need for hunting programs or other wildlife-related sources of revenue for ranches. In these discussions, landowners cited a need for outreach to help the public understand that they care about wildlife and open space, and that caring for public resources on private lands comes with a significant economic cost to landowners, so that in future the public may be more supportive of relevant programs. Another potential source of revenue discussed by landowners was the ability to market locally produced, wildlife-friendly products, whether through labeling or new local finishing and processing operations to bring consumers closer to land operators. Other discussions focused on alleviating specific costs. For example, many landowners felt that costly, labor-intensive, and stressful carnivore-livestock conflicts might be reduced through enhanced public-private partnerships focused on better monitoring, information-sharing, flexibility to try new approaches to grazing on public land, and other conflict management strategies. An essential part of this equation was to increase management flexibility through removal of the wolf and grizzly bear from the endangered species list.



Wyoming State Treasurer Mark Gordon speaks with Malpai Borderlands Board Member Peter Warren at the Hoodoo Ranch. Gordon also addressed the symposium on the need for integrated and thoughtful management of the many resources important to Wyoming.

The Role of Science

Landowners generally viewed science as an important element of addressing these challenges that can help them innovate and increase knowledge and the sharing of knowledge. However, many felt that academic research often does not address working land management needs. Some recommended that academic researchers need to “get out on the ground,” connect with people, build relationships and understanding, and make research results more available and accessible. Some also felt that landowners should more proactively engage with scientists to improve coordination, identify research needs, and let universities know their interests, and cited extension services as one way to connect to universities and researchers. One policy suggestion was that funding from entities such as National Science Foundation and state wildlife agencies should be tied to research priorities identified by communities.

Public Outreach and Education

Outreach and education of both the general public and policymakers was a significant theme of discussion because landowners and other participants felt that public support is necessary to creating new policy, adding flexibility in existing policy, and building durable partnerships. When asked to identify key messages to the public, a common response was that healthy working lands provide clean water, clean air, wildlife and recreational opportunities, and landowners bear the majority of the cost for providing these public benefits. When asked to identify key messages to policy makers, common responses were that those making policy need to experience and understand Western landscapes first-hand, that clearer and more flexible regulation is needed to manage land well, and that many valuable changes can be made within existing policy. All the participants recognized that respect and trust is lacking between many landowners and government agencies and that while it takes time and money to build relationships and trust, this investment is critical to cooperation and future successful outcomes.

Future Collaboration in the Eastern GYE

An important goal of the symposium was to evaluate the degree to which participants, especially landowners, shared core values and topical interests sufficiently to warrant a cooperative approach to conservation of working lands and wildlife in the eastern GYE. During the symposium, a strong collective vision emerged among landowners in which the working lands remain intact, in family ownership, agriculturally productive and able to sustain both people and wildlife. The values expressed by non-landowner participants largely supported this vision. Ultimately, landowners agreed that greater cooperation and collective action would be valuable to ensure their shared values are supported into the future. As Undersecretary Bonnie said during his presentation, this type of “place-based, collaborative conservation” is the way of the future in large landscape management. While many voiced concern about the requirements of time and energy necessary to participate in a new initiative or organization, they nevertheless agreed to participate in follow-up conversations and meetings to assess symposium findings and discuss organizational options⁵. Based on symposium discussions, immediate issues in the eastern GYE that could potentially be better addressed through a collaborative effort than by individuals

operating in isolation include: cheatgrass, livestock depredation, scientific research, land fragmentation, and educational outreach to increase understanding of the vital role these ranches are playing and the needs they have in sustaining both people and wildlife in the GYE and beyond.

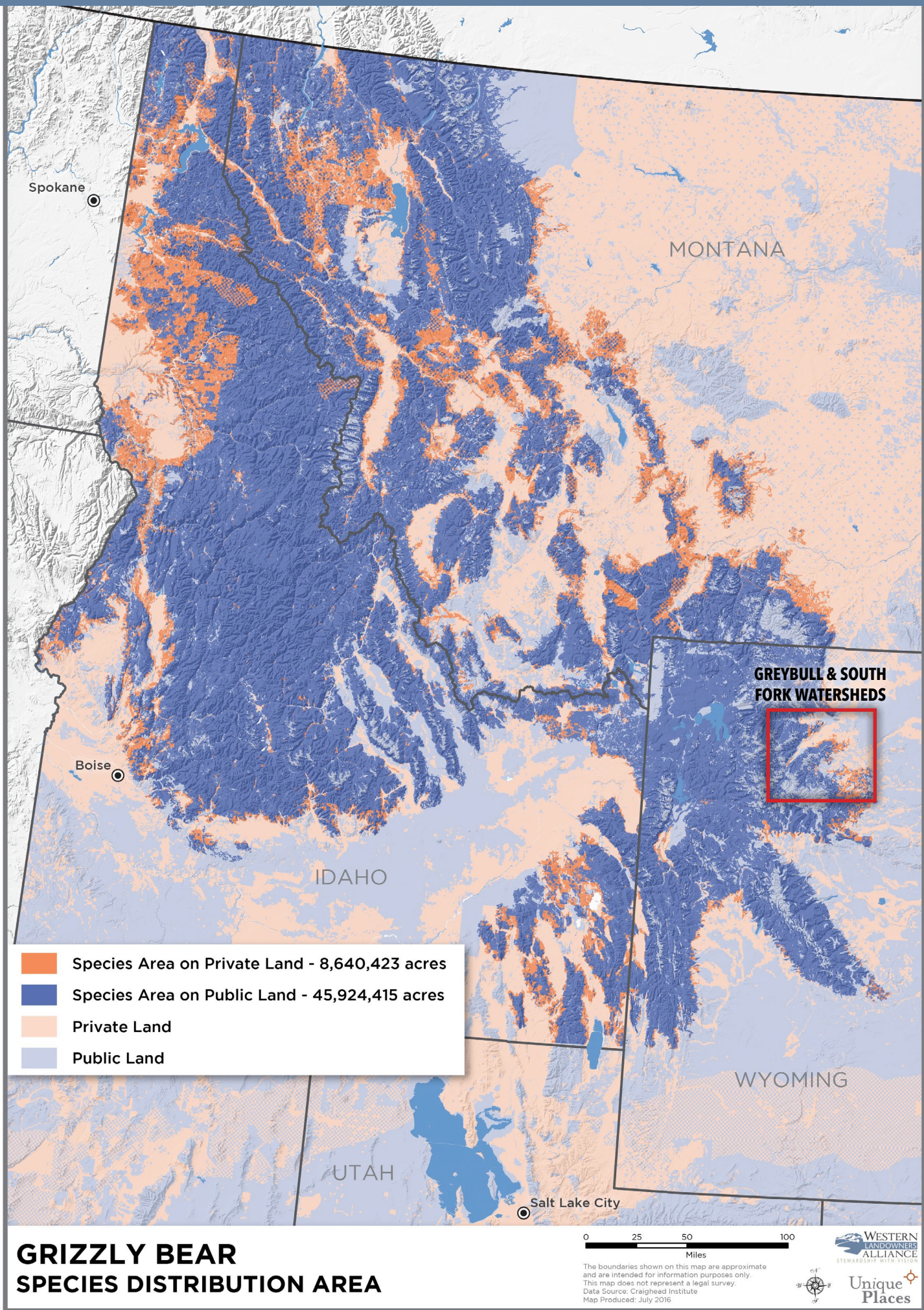
⁵See Appendix E for organizational models and related case studies



Left to right: GYE landowners Wasim Hassan, Kelly Bennett, Jeff Laszlo, Anne Young and Anne Duncan gather in the original ranch home of Buffalo Bill Cody on the TE Ranch.

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