High Divide Workshops

Water: Drought Resilience

Wildlife: Connectivity & Conflict Reduction

Forests: Forest Health & Fire

April 17-18, 2018 - Dillon, Montana

REPORT

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Acknowledgments

With heartfelt appreciation to everyone who helped with this workshop, from the agenda teams, to speakers, partners, participants and supporters. Funding support for the High Divide Collaborative work comes from the Wilburforce Foundation, Brainerd Foundation, Kendeda Fund, and Charlotte Martin Foundation.

This report was compiled by Heart of the Rockies Initiative staff.

HIGH DIVIDE WORKSHOPS

Connectivity - Water – Forests

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REPORT

Overview

The High Divide is an expansive landscape that stretches across eastern Idaho and southwest Montana along the spine of the continent. Here the Continental Divide separates the headwaters of two of North America's great rivers, the Missouri/Mississippi and the Snake/Columbia rivers that flow in opposite directions to their respective oceans. At the same time, the High Divide's wide ranging wildlife, cultural heritage, and indomitable rural people pull together a landscape that is ecologically and socially cherished for its communities and natural treasures.

Because the High Divide is not centered around a protected icon like Yellowstone or Glacier National Park, the High Divide is often referred to as "the land in between." The High Divide landscape is a continentally significant centerpiece for ecological connectivity between the Greater Yellowstone Ecosystem, the Crown of the Continent, and the vast wildlands of Central Idaho. This land in between is not only ecologically rich; the region features a deep cultural heritage, vibrant rural communities, large working ranches that graze livestock on private and public lands, and outstanding recreation opportunities.

Rural communities throughout the High Divide landscape have long histories of working in local partnerships to address conservation issues. The High Divide Collaborative scales those efforts up to a larger landscape perspective. The Collaborative is an effective partnership of landowners, local community leaders, public land managers, state wildlife agencies, scientists, and conservation groups who work together to conserve and restore resources of importance for local communities and to protect ecological and social integrity at the landscape scale.

This report documents the April 2018 High Divide Workshop, the fifth annual working meeting of the High Divide Collaborative. The workshop's focus was on four of the Collaborative's eight shared goals: wildlife connectivity and conflict reduction, healthy forests & fire, and drought resiliency. The Heart of the Rockies Initiative (a land trust partnership in the Northern Rockies) plays a key role in facilitating and coordinating the High Divide Collaborative.

We believe that conservation at the landscape scale starts locally at the community level, includes civil and open dialogue among all interested stakeholders, is coordinated collaboratively, and looks to science to support the conversation. – Gary Burnett

Introduction

Our High Divide Collaborative rests upon a foundation of local community engagement and derives its direction from grass-roots conservation needs. We invite all stakeholders to the table, listen to stakeholder viewpoints, and incorporate their needs into our collaborative goals. As such, our strategies for the High Divide landscape are open source as we strive to give all who wish to participate a voice in setting our direction. In this effort, we rely on local knowledge from landowners and community members and the latest science as derived from local, state and federal agencies and non-governmental partners.

Many High Divide families have been on the land for generations, and these families have dreams for the landscape as a secure place for wildlife and other natural resources, for families, and for family business. Our landowner partners participate with trust that collaborative partners will remain engaged for the long-term, and that ongoing participation will be rewarded with results that benefit local communities. Similarly, public land managers who work in the High Divide share that appreciation for the landscape's resources and the people and communities that make it a special place to live in and raise a family.

In the High Divide, we work across administrative and cultural boundaries to define the collaborative landscape through reference to ecological and social connections. Those connections require us to apply an all lands and all hands approach to conservation. High Divide private lands in the lower elevations are productive lands vital to rural communities and to ecological connectivity across the landscape. Public land represents a high percentage of the High Divide landscape: High Divide counties are 60 to over 90 percent public lands. The High Divide region features a rural way of life where working ranchlands are central to the region's communities and economy. Ranching is the primary land use on private lands with strong ties to public lands through grazing allotments that are essential to the sustainability of ranching operations. Recreation on public lands is also a strong economic driver for High Divide communities. Even though there are strong economic and cultural connections to public lands in the region, there has been a general mistrust of federal and state government agencies and outside interests. Through the High Divide Collaborative, we work to overcome such barriers as we seek common ground solutions to meet shared conservation goals.

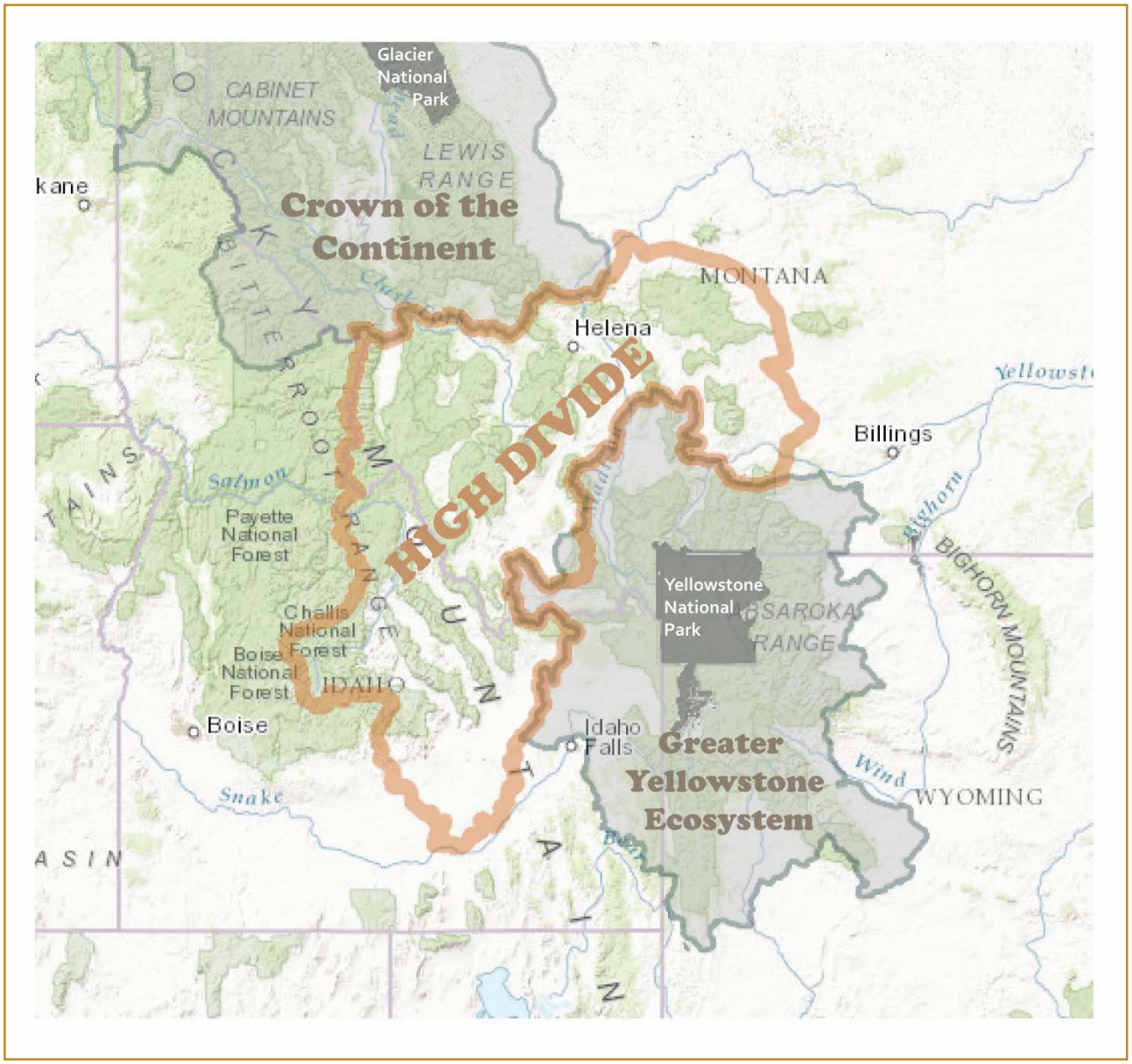
Overall

We are essentially a landscape scaled partnership of locally based collaboratives. Our core premise is that we can best provide lasting conservation outcomes at the big picture scale if we can engage the power of community-based conservation toward shared landscape goals.

Geography

Where is the High Divide?

The High Divide is often referred to as the "land in between" two of the West's iconic landscapes: the Greater Yellowstone and the Crown of the Continent. It straddles the Continental Divide along the Idaho/Montana border.



What is the High Divide Collaborative's area of interest?

The High Divide Collaborative's area of interest is determined by the stakeholders involved in the partnership. This area is a subset of the full High Divide landscape and it brings in some parts of adjacent landscapes, like the GYE, Crown of the Continent, and the central Idaho. Our interest in cultural and ecological connectivity necessarily bleeds into these adjacent systems as we envision our conservation future for the High Divide.

A more in depth explanation of maps and the High Divide's various boundaries is in Appendix A.

Background of the Collaborative

How we started

We originated our High Divide Collaborative to a make our case for heightened deployment of federal Land and Water Conservation Fund resources in the High Divide landscape. As we worked together to articulate our shared conservation goals, we took the concept of stakeholder engagement far deeper than federal decision makers may have imagined. It was simply clear as we brought people together that we needed to build a platform of trust and open sharing of viewpoints if we were going to engage honestly and respectfully with the High Divide's diverse interests. We built a foundation upon which people from all sectors could come together, share perspectives, find common values, and jointly discover new ways to respond to the challenges of our ever-changing environment.

The Collaborative's success at bringing people together for a shared effort to capture increased conservation funding led stakeholders to acknowledge that by working together at scale we could add value for communities and nature in many other ways. Here was the genesis of our ongoing work together to flesh out goals, develop conservation strategies, and collaborate for on the ground conservation delivery.

Vision

High Divide Collaborative stakeholders have identified and stated eight primary conservation goals, which are to conserve:

- Ecological Linkage among core habitat areas to conserve wide-ranging fish and wildlife populations that are resilient to climate change
- A cultural legacy of traditional food sources, tribal treaty lands, and travel ways such as the Nez Perce, Continental Divide, and Lewis & Clark Trails
- Working Ranchlands that are central to communities, economy and way of life
- Nationally important dispersed recreation lands and waterways where people enjoy nature
- Clean & abundant water for headwaters fisheries, wildlife, healthy riparian communities, and human uses.
- Intact, resilient sagebrush steppe ecosystems that support sustainable ranching communities and are critical for many wildlife species, including the greater sage grouse
- Healthy forest lands managed for sustained economic, social and ecological values
- Open land in the wildland urban interface to protect life and property, reduce fire costs, and allow wildfire to play its natural role.

Framework

Beginning in late 2015, we adopted Landscape Conservation Design (LCD) as a process framework for our ongoing collaboration. Our premise is that we can inform the Collaborative in its goal setting and development of conservation strategies with actionable science if we can better understand and display current conditions for the resources that we collectively value and incrementally gain consensus around where we want to go. We start with providing stakeholders ample opportunity to find common ground and build trust. Our goals come from the stakeholders. The hoped for result is that our conservation strategies will be owned and supported long term by the stakeholders, and that we can thus create durable conservation outcomes. We build from the middle—the outliers are then clearly outliers.

The eight characteristics of this LCD framework are:

1. Collaborative / Multi-sector / Partner-Driven
2. Shared Goals
3. Holistic / System Level
4. Conservation Features
5. Desired Future Conditions
6. Assessment / Situation Analysis
7. Strategies
8. Iterative / Adaptive

2018 Workshop Approach and Proceedings

Workshop Goals

These workshops focused on three of the Collaborative's stated shared priorities: Wildlife Connectivity and Conflict Reduction, Drought Resiliency, and Forests and Fire. Teams of stakeholders helped us formulate the workshop agenda, and our Landscape Conservation Design science team pulled together spatial data to depict current conditions.

Goals

In these workshops, we advanced our planning process to help High Divide Stakeholders express their vision for the desired future condition of the High Divide Landscape, a vision that sustains vibrant local communities, economies and resources. To this end, we identified the following workshop goals:

- Confirm stakeholder community and conservation goals for the High Divide
- Share current information on the status of some of our High Divide priority resources and issues: Wildlife Connectivity and Conflict Reduction, Drought Resiliency, and Forests and Fire
- Update one another on resource issues and conservation
- Learn stakeholder perspectives of the future for three more of our primary goals: Wildlife Connectivity and Conflict Reduction, Drought Resiliency, and Forests and Fire
- Advance the High Divide Collaborative
- Continue to build trust and credibility within the collaborative and amongst stakeholders
- Continue to discover added value through collaboration
- Build capacity to work toward our collaborative goals

Participants

As coordinators of the High Divide Collaborative, the Heart of the Rockies Initiative recruited a team of stakeholders to help plan the workshops. Teams were set up around our three themes: ranching, forests and recreation. Those teams set the agenda, and identified and recruited speakers.

The workshops included 111 participants from throughout the region, representing:

Beaverhead Deerlodge National Forest
Beaverhead Watershed Committee
Beyeler Ranches
Big Hole Watershed Committee
Big Sky Watershed Corps, One Montana
Blackfoot Challenge
Boise State University
Bureau of Land Management - Dillon Field Office
Bureau of Land Management - Idaho Falls District
Bureau of Land Management - Salmon Field Office
Caribou-Targhee National Forest

Centennial Valley Association
Center for Large Landscape Conservation
Craighead Institute
Craters of the Moon National Monument & Preserve
Future West
Gallatin Valley Land Trust
Great Northern LCC
Hagenbarth Management
Heart of the Rockies Initiative
Henry's Fork Foundation
HoloScene Wildlife Services LLC
Idaho Department of Fish and Game
Idaho Farm Bureau Federation
Idaho State University
Island Park Preservation Coalition
Jefferson County Commission
Lemhi Regional Land Trust
Lolo Watershed Group
Madison River Foundation
Madison Valley Ranchlands Group
Martinell Ranches
Montana Dept. of Natural Resources Conservation
Montana Fish, Wildlife & Parks
Montana Forest Collaborative Network
Montana Land Reliance
Montana Watershed Coordination Council
National Wildlife Federation
Natural Resource Conservation Service
Red Rock Lakes National Wildlife Refuge
Rocky Mountain Elk Foundation
Ruby Habitat Foundation
Salmon Valley Stewardship
Salmon-Challis National Forest
Swan Valley Connections
Teton Regional Land Trust
Teton Water Users Group
The Conservation Fund
The Nature Conservancy - Arizona
The Nature Conservancy - Idaho
The Nature Conservancy - Montana
The Trust for Public Land
The University of Montana Western
The Wilderness Society
University of Idaho
University of Montana
University of Utah
US Fish and Wildlife Service
US Forest Service
US Geological Survey
Western Landowners Alliance
Wilburforce Foundation
Wildlife Conservation Society
Yale School of Forestry & Environmental Studies
Yellowstone to Yukon Conservation Initiative

Workshop Proceedings

The workshop framework was created to encourage open discussions among a broad array of stakeholders and provide a platform for participants to share their values and vision for wildlife connectivity, drought resilience, and healthy forests.

WELCOME & INTRODUCTION

Merrill Beyeler, Jim Berkey, and Gary Burnett – High Divide Coordinating Committee Representatives
Merrill, Jim, and Gary discussed the framework of the collaborative: open, transparent, and building trust. They addressed why we are here and how can we be relevant, how does participation in this collaborative move things forward on the ground in our local communities? They reviewed our shared priorities and workshop goals.

THE HIGH DIVIDE COLLABORATIVE AND LWCF - Michael Whitfield

What is the Land and Water Conservation Fund (LWCF)?

Congress enacted the Land and Water Conservation Fund Act in 1965 as a bipartisan commitment to safeguard natural areas, water resources, and cultural heritage, and to provide recreation opportunities for all Americans, now and in the future. The Act established a fund in the U.S. Treasury dedicated to preserving, developing and assuring accessibility to outdoor recreation resources and to strengthening the health and vitality of U.S. citizens by using a portion of the proceeds from the development of our public lands and waters for investments in conservation and recreation. Initially authorized for a 25-year period, the LWCF was extended for another 25 years and expired September 30, 2015. The fund was temporarily extended for 3 years in the Consolidated Appropriations Act, 2016, and will expire September 30, 2018. Expiration of this incredibly valuable source of conservation funding is a mere 5 months away.

The LWCF Act provided that each fiscal year not less than $900 million must be deposited into the LWCF. These funds consist of certain revenues from offshore oil and gas activities, along with proceeds from the sale of surplus real and personal property and motorboat fuel taxes. The LWCF is a "trust fund" that accumulates revenues from the federal motorboat fuel tax and surplus property sales. To supplement these sources to reach the annual authorized level of $900 million, the fund accumulates revenues from oil and gas leases on the Outer Continental Shelf (OCS). For many years, the OCS revenues have accounted for almost all of the deposits. By reinvesting revenues from offshore oil and gas activities into public lands, the LWCF has proven to be one of the nation's most effective tools for preserving treasured landscapes; expanding historic, cultural and outdoor recreation sites; protecting rivers, lakes and other water resources; enabling access for sportsmen and hunters; and providing grants to states for recreation and conservation projects. Simply put, the LWCF has greatly contributed to the quality of life of our citizens.

Although set aside in a discrete fund, these moneys are currently only available for expenditure through annual congressional appropriations. Each year, in accordance with the Act, the Administration submits to Congress, along with the budget, a comprehensive statement of estimated requirements for appropriations from the LWCF. Congress then appropriates moneys from the LWCF for assistance to the states and for federal acquisition of lands and waters. Congress determines the level of appropriations each year, and yearly appropriations have fluctuated widely since the origin of the program. Of the total revenues that have accrued throughout the history of the program, less than half have been appropriated.

The LWCF has been used for three general purposes. First, it has been the principal source of monies for land acquisition by the four federal land management agencies—the National Park Service, Bureau of Land Management, Fish and Wildlife Service, and Forest Service. Second, the LWCF also funds a matching grant program to assist states in recreational planning, acquiring recreational lands and waters, and developing outdoor recreational facilities. These funds have been used to acquire community parks and build facilities such as ball fields across the country. Third, beginning in FY1998, LWCF has been used to fund other federal programs with related purposes.

The LWCF includes Federal LWCF acquisitions, state grants program, and other programs such as the Cooperative Endangered Species Conservation Fund (Section 6) and the American Battlefield Protection Program. The Forest Legacy Program, administered by the U.S. Forest Service, provides grants funded by

the LWCF to protect environmentally important forest lands while maintaining private ownership and working forests.

What are the current Issues?

The most pressing current issue is reauthorization of the LWCF Act—it expires in a little over 5 months from now, September 30, 2018. Reauthorization is vitally important. Another recurrent issue is whether to provide permanent appropriations for LWCF, rather than continue the current procedure of providing appropriations each year. Also of current debate is whether to direct additional monies to LWCF, to be used for purposes provided for in the LWCF Act or for other purposes. Perennial congressional issues include (1) deciding the amount to appropriate for federal land acquisition, determining the level of acquisition funds for each of the four agencies, and identifying which lands should be acquired; (2) deciding the level of funding for the state grant program; and (3) determining what, if any, other purposes should be funded through LWCF and at what level. The primary context for debating these issues traditionally has been the annual Interior appropriations legislation. Much of the current debate has been around funding for agency management backlogs, particularly for infrastructure in our national parks. Our position has been that whereas such funding is vital to conserve these national park treasures, funding for our parks should stand along-side LWCF for funding, but not as a replacement for LWCF. Funding the traditional LWCF programs should not take a back seat to any other conservation needs.

Why LWCF matters to High Divide stakeholders

The Land and Water Conservation Fund (LWCF) has been one of our nation's most successful conservation programs—the LWCF has played a crucial role in protecting habitat and opening up public access. Montana has received over $400 million in funding from LWCF. These funds have protected important lands in the Blackfoot Valley, on the Rocky Mountain Front, in the Greater Yellowstone region, and all over the state. The Land and Water Conservation Fund has helped secure nearly 70% of the fishing access sites in Montana. LWCF funds have also been used to acquire key parcels that open up large areas of "land-locked" public land for hunting and fishing.

In Idaho the LWCF has provided funding to help protect many of our state's most special places and ensure recreational access for hunting, fishing and other outdoor activities. Idaho has received approximately $262 million over five decades to conserve places like the Sawtooth National Recreation Area, Hell's Canyon, Boise foothills, the Salmon River, the South Fork of the Snake, and the Upper Henry's Fork. Forest Legacy Program grants have done much to protect working forests in Idaho.

When preparing our 2015 High Divide Collaborative proposal for FY2017 LWCF investments in our High Divide landscape, we were able to document that our partners had invested $103,643,000 LWCF dollars in the High Divide through 2014, funds that were augmented by other federal and non-federal funds, and assisted by state agencies and conservation NGOs. These investments secure public access, protect unique ecosystems of threatened and special status species, such as grizzly bears, wolverine, and lynx, and increase management efficiency by consolidating ownership. These funds were invested in land conservation in the Henry's Lake/Sands area, upper Salmon, the Frank Church Wilderness Area, and the Sawtooth NRA in Idaho; and in the Dillon, Selway Valley, Taylor Fork, and Centennial Valley in Montana. The LWCF funding is a big deal for the High Divide, and will continue to be a big deal for our conservation agenda.

- The BLM Salmon completed 7 projects on 935 acres at a cost of $2,087,850 from 2003-2005.

- The BLM Dillon closed 3 projects on 2,324 acres from 1999 to 2003. These projects cost $748,900.
- Region 1 USFS invested $18,300,000 in 8 parcels over years 1997-2007 in the Selway Valley (BDNF) and the Taylor Fork (GNF).
- Region 4, USFS invested $3,185,000 to protect 657 acres in 8 parcels in the Frank Church Wilderness area and near Salmon from 2003 to 2015.
- Region 4, USFS has invested $16.08 million for fee purchase of 452 parcels 5,738 acres and $48 million to secure conservation easements on 105 parcels over 17,000 acres in the Sawtooth NRA since 1972.
- The USFWS invested $11,572,000 to secure 9,835 acres in 19 parcels in Montana's Centennial Valley from 1998 to 2015.

What is the status of LWCF collaborative landscape projects in the High Divide

In April 2013 the Departments of Interior and Agriculture announced the launch of Collaborative Landscape Planning component for FY 2015 LWCF Funding. The program was launched a couple of years earlier to support highly leveraged community based conservation efforts that make the best use of science and partnerships to deliver a high return on federal conservation investments. The effort was designed to ensure that federal resources were targeted to achieve meaningful biological, recreational, cultural and socio-economic outcomes. The CLP became a central pillar of the federal conservation agenda.

Our High Divide Collaborative made its initial proposal for LWCF funding under the Collaborative Landscape Planning program in 2013 for funding in FY2015. We did not receive funding for that year, but did get the High Divide landscape onto the national radar screen—the High Divide was mentioned as an important conservation landscape in the National Register. Subsequent proposals for FY2016 and FY2017 were successful with funding promised of over $30 million. Those proposed projects are still in process, but progress has been much slower than we hoped. There were rather long delays in gaining passage of federal budgets for these fiscal years, and many of the projects have changed over this time.

In total, over 2,000 acres have been conserved through fee acquisitions, with additional projects expected to close in the near future.These projects acquired in-holdings that

- protect a high priority segment of the Nez Perce NHT
- enhance public access
- conserve wildlife habitat and migration routes for elk and deer
- protect habitat for pergrine falcon and sharp-tailed grouse
- conserve waterway corridors important for cutthroat trout, salmon and steelhead

The proposed High Divide conservation easement projects have been slower to progress due to problems with mineral rights issues, appraisal issues, and changes in interest from landowners. In many cases there has been a need to find new projects to replace earlier priorities. We remain hopeful that these issues will get worked out soon.

How we can work together to make the case for LWCF going forward

The FY2018 Omnibus budget bill is an example of how we are still gaining good support for conservation programs even in a time of tremendous political division at the national level. The bill demonstrates that

outreach to Congress is more vital than ever at a time when the federal administration is pushing for cutbacks in conservation funding. Some good news examples from the Omnibus are:

- $425 million for the Land and Water Conservation fund, which is $25 million more than the FY 2017 enacted level;
- Adds a General Provision to reauthorize Payment in Lieu of Taxes (PILT) for one year and fully funds the program;
- Ten year fire fix, funding to cover wildfire costs and protect agency funding for management of public lands; and
- SRS temp renewal, 2 years retro-active to 2017, and SRS program funding.

<u>What we can do together to advance the LWCF</u>

1. We need to provide a steady drum beat of expressed support for reauthorization and full funding for LWCF in messages from the full array of non-federal High Divide stakeholders. We intend to reach out to each of you and your partners to schedule timely notes of thank you and 'let's get this done' messages to our Idaho and Montana delegations.
2. Create as many earned media opportunities as we can to report LWCF project successes and display the broad base of local support for the LWCF program.
3. Build momentum for successful field tours with national legislators and their staffs plus local community leaders to occur later in the summer. In Idaho a primary focus will be getting Congressman Simpson and potentially his guest, Congressman Bishop of Utah on the ground to see how LWCF can work well for local communities. Merrill Beyeler and the Lemhi Regional Land Trust would like to host this event in their neighborhood with hopefully a broad array of other High Divide stakeholders as co-hosts. An alternative would be the South Fork of the Snake with the array of partners. In either case visits with key landowners will be the centerpiece of the outreach agenda. Montana is also working on field tours to celebrate LWCF successes.

WILDLIFE CONNECTIVITY & CONFLICT REDUCTION

Results from the Idaho-Montana cooperative elk modeling project

Bray Beltran presented a transboundary model of suitable elk habitat in the High Divide region. His hope is that we can learn more by looking at the area as a whole, instead of Idaho and Montana separately. He wanted to understand where private lands come into play when we look at elk habitat across the region. Bray also emphasized that the objective is to protect lands for the local communities while conserving connectivity.

Current elk locations were used to better understand the environmental conditions that support elk. Once identified, those conditions were used to project where else elk are/could be. This was done for both summer and winter, as seasonal habitats change elk distribution (in winter herds are forced to be closer to humans.) Maps of private lands were overlaid on to the models to show where habitat overlaps with private lands. Bray hopes to include human influence variables, such as roads and structures, in future modeling.

Brent Brock asked the questions:

- What is the connectivity for elk?

- How do elk move across the landscape?
- How will the answers to those questions change in the future?

The trend we see now, is that elk are moving more through private lands in the winter, and public lands in the summer. There is a much higher potential for conflict and habituation in areas where elk have to move through developed areas. Further development, in turn, will be a stressor for elk if we don't conserve areas for connectivity. Brent is looking at areas of risk, where there is currently connectivity, but might be uncertain with future landscape and development changes. He described a ranch turnover simulation, which predicts what future development might look like with ranchettes and roads. These simulations can show what impacts those changes might have on connectivity.

Wildlife Disease Panel – Brucellosis and Chronic Wasting Disease An information sharing panel

Kimberly Szcodronski

Kimberly shared her research about the spread of brucellosis through infected elk fetuses. The longer that an infected fetus is present on the landscape, the higher chance of transmitting the disease to other animals. Kimberly noted that in habitats with scavengers, fetuses are gone quickly, meaning less exposure of brucellosis to healthy animals. Her research involved placing a camera near healthy elk fetuses (to safely mimic infected ones), to see how long the fetuses last at each site, and what type of scavengers approached/ate the fetus.

Kelly Profitt

Kelly shared about the high-risk period for transmission of brucellosis from an infected elk fetus to livestock. She identified March – May as the time that management goals should be focused on keeping elk away from livestock. Kelly spoke about the importance of managing this disease in a way that reduces restriction and cost to livestock industries, and in turn improving tolerance of wildlife. As part of her research, she monitored the fate of several seropositive cow elk. Many of these elk produced healthy live calves, but also several abortion events. With lots of overlap in elk populations, there is potential for the disease to move between those populations.

Emily Almberg

Emily presented on Chronic Wasting Disease (CWD), which is a fatal neurological disease of deer, elk and moose. CWD is passed through animal to animal contact, as well as contaminated environments. Emily covered the CWD planning efforts for Montana; hunter's harvests were sampled, as well as road kill and symptomatic animals. To get a better sense of infected populations, they used special hunts. The response to CWD is to manage it, but not eradicate it, as it's coming from all borders. The goal is to keep its prevalence below 5%. This goal will be met through increased harvests of antlered animals in infected areas, targeted removal in limited areas, minimizing large groups of deer, transport restrictions and continued monitoring.

Tricia Hosch

Tricia presented on Idaho Fish and Game's (IDFG) response to brucellosis and Chronic Wasting Disease (CWD.) There is an ongoing memorandum of agreement between IDFG and the Idaho State Department of Agriculture regarding brucellosis. As the state sees a slow spread of the disease out of the DSA boundary, they are using more hunter-based surveillance and working cooperatively to prevent contact between livestock and wildlife.

Idaho has not detected CWD in the state yet but are currently reviewing and revising their 2010 plan. The new plan will address:

- New surveillance methods around the state, focused heavily on the Eastern border
- The "no carcass restriction rule"
- Enhanced modeling
- Communication strategy with the public
- How to proactively tackle this ahead of time

John Crumley

As a rancher, John spoke about what it's like to live with these diseases in a Designated Surveillance Area that is always expanding. One of the difficulties is setting up a herd plan to determine how often a rancher needs to test their cows. John has to test his cows every three years, which takes a lot of time and resources. There are also severe economic effects, including previously consistent buyers who have shied away from buying John's heifers. Some future concerns for John and other ranchers are the possibility of heifer calves being tested before Fall shipping, and quarantines that would eliminate supplemental public grazing. Many ranchers share land, so if one of those rancher's cows tested positive, it would be a catastrophe.

Conflict Reduction and Connectivity Presentation of the recent Interagency Grizzly Bear Connectivity Study with discussion of what people are experiencing in their communities. Overview of locally-led human-wildlife conflict reduction projects and how they come together across the landscape.

Cecily Costello

Cecily presented on a grizzly bear connectivity study, specifically connecting the Federal Recovery Zones in the NYE and NCDE through the High Divide. Populations have greatly expanded in the NYE (still with low genetic diversity due to isolation) and NCDE, lowering the connectivity need of 90 km between the areas. There are concerns about genetic connectivity, which ideally will occur naturally, and the public interest regarding the delisting process. Cecily described the step-selection model that was developed to determine how a bear moves south to north, and north to south between these areas. The model randomized shortest paths and showed other routes with different amounts of randomness. The goal is to see expansion of bears into zones where it is biologically suitable and socially acceptable. Right now the two recovery zones are predominantly public land, but the connectivity corridor is about half public, so work needs to be done with private land owners.

Paper: https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/ecs2.1969 or google search "Ecosphere 8(10):e01969"

GIS layers - https://www.sciencebase.gov/catalog/ and then search "grizzly bear paths"

Jamie Jonkel

Jamie's presentation was highly visual, with lots of photos of bears throughout western Montana. Jamie showed maps of grizzly bear movement throughout the High Divide, noting that bears are slowly moving between the north and south recovery zones. Jamie asked for the public's continued help reporting sightings and tracks and collecting hair samples.

Overview of locally-led human-wildlife conflict reduction projects

Gary Burnett – Landowner-led conflict reduction efforts

The National Fish & Wildlife Foundation recently funded a project that is augmenting existing efforts and supporting new efforts across the landscape to reduce conflict between wildlife, particularly grizzly bears and wolves, and people. In 2016, landowner-led groups in the corridor between the NCDE and GYE began visiting about a partnership to continue and build funding for individual efforts. Participants recognized that wildlife funders were interested in connecting the NCDE and GYE, the largest and possibly most robust populations of grizzly bears in the Rocky Mountains, and that recovery efforts for grizzly bears and conservation of wolf populations, and reducing livestock loss as these predators repopulate habitat, will benefit from supporting community-based efforts.

The participants are building on the history of success of community-based conservation in our region, and the use of tools to reduce conflict between grizzly bear, wolves and livestock. This will create a permeable, nine million-acre corridor of critical grizzly bear habitat that addresses landscape-scale connectivity, and supports working family ranchlands.

The partnership will:

- Expand Livestock Carcass Removal from 4.8-9.2 million Acres
- Expand Composting Sites from three to five
- Sustain Range Riders and Build Capacity
- Expand Electric Fencing to Deter Grizzly Bears and Wolves
- Expand Bear-Proof Garbage Cans
- Expand Outreach & Education
- Initiate Big Game Fencing

This project supports the USFWS 1993 Grizzly Bear Recovery Plan for the NCDE and GYE, and Montana's Draft Programmatic EIS Grizzly Bear Management Plans for Western and Southwestern Montana.

Kara Maplethorpe

Kara presented on the Centennial Valley's Range Rider Program, which wrapped up its 5th season. She emphasized the importance of hiring people with a stronger cattle background and building relationships with landowners. Both of which will help understand and better meet the needs of ranchers. Landowners named the following as 'pros' of the Range Rider Program: Riders can help find down fence, empty water troughs, sick or injured cattle (which are a big target for predation), track predators and identify the cause of death in the herd. Centennial Valley Association feels that to gain more support of this program, it needs to convey the perception that protecting cattle is the priority, and ultimately leads to predator success on the landscape. CVA identified the goal, which is to reduce the number of unconfirmed cattle loss. Kara shared some statistics about cattle loss:

4% = percentage of confirmed depredation cattle loss

49% = percentage of 'unconfirmed' cattle losses, which are believed to break down as the following…

35% = *toxic plants* as cause of death
3-4% = *depredation* as cause of death
2 % = *drowning* as cause of death
1% = *lightning* as cause of death

For more information, or to follow the CVA Range Rider Program, check out their blog @ http://www.centennialvalleyassociation.org/blog/1

Tana Nulph

Tana talked about the Range Rider Program happening in the Big Hole Valley Watershed. In the Big Hole, the program is mainly focused on wolf activity around cattle ranches. The benefits for ranchers include identification of loss and predation, and getting reimbursed for those losses, having eyes and ears on the landscape to note open gates, injured livestock etc…and overall help for ranchers to maintain their operations.

John Crumley

John spoke briefly about the establishment of a carcass removal program in the Madison Valley and their search for a composting site.

Brendan Boepple

Brendan presented his ongoing research about conservation finance. While a focus of this research is around conflict reduction, it will have broader uses in the conservation world. Currently, funding for conflict resolution is dispersed into smaller pots of money across the landscape, and is mainly focused on start-ups, not long-term projects/goals. The research isn't completed, but patterns so far point to the following recommendations regarding financing:

- Aggregate Funding, which will increase funding resiliency, with less gaps and more buy-in.

- Maintaining programs versus catalyzing new ones
- Funding to be spent as groups see fit
- Should be paying for outcomes, rather than actions
- Flexibility about how groups get to those outcomes
- Determining how to measure what reduced conflict looks like
- Compensating programs based on performance.

A final report will be attached or sent out when Brendan and his colleagues complete their research.

FOREST AND FIRE SESSION

Neil Chapman

Neil presented on a proposed project in Arizona, focused on forest thinning with a variety of benefits. He emphasized the importance of our forests, and that many rural areas survive off our forests through water, forestry economies, restoration, recreation and hunting. We should be investing more money into these areas, and in turn will spend less managing them. There is an urgency to act now and invest in healthy forests. Currently, forest thinning is not adequate, and we are moving from fire-dependent forests to ones that create catastrophic fires.

The project 4FRI that Neil shard about, has four forests cooperating, with broad public support, but no agencies are showing up. Some of the challenges 4FRI are facing:

- Decision are made district by district, each with their own interpretations. So how do we consistently communicate with people doing the work?
- There is low-value wood, with high agency overhead
- Agencies are focused on generating revenue rather than reducing risks
- High risk, low incentive for industry investment

Neil described the future for this project including a modernization of agency rules and guidelines, strategic partnerships and collaboration. It also leans on advanced technologies like the following

- Designating prescription areas, not individual trees
    - Areas would be designated as fine to mid-scale thinning, and operators would make the decisions of what to cut
    - Money and time doesn't exist to pay flaggers at this scale, so its advantageous to have loggers figure out prescriptions
- Using Lidar for timber cruising
    - Operators would mark a GPS as they cut, helping implement monitoring in real time
    - GPS layer could be overlaid on to the LIDAR
- Effectiveness monitoring

Neil proposed that we need more 'good' fire, and that this is a chance to turn a 1-billion-dollar challenge into clean water, good jobs, and safer communities.

Neil Simpson

The major overarching goal of the Montana DNRC Federal Forest Engagement Program is to increase the pace and scale of forest restoration in priority landscapes while revitalizing and retaining industries necessary to help communities achieve forest health and restoration goals.

GNA Refresher:

Partnerships between the Forest Service and states to accomplish authorized restoration services across land jurisdictions. Refer back to the language in the Farm Bill:

(a) DEFINITIONS-

1) "Authorized Restoration Services *means* similar and complementary forest, rangeland and watershed services carried out on (A) Federal land and non-Federal land"

2) "Forest, Rangeland and Watershed Restoration services *means*-

- Activities to treat insect and disease infected trees
- Activities to treat hazardous fuels
- Any other activity to restore or improve forest, rangeland, and watershed health including fish and wildlife habitat"

Exclusions: new permanent road construction (Temporary roads are permitted when necessary to complete restoration or improvement work) and possibly work in Roadless areas

Lesson: Know the authority – stay within bounds but be creative.

Unique Features of GNA:

- Has elements of partnership agreements without a matching requirement
- Allows states to follow their own procurement policies for sub-contracts; the state will have primary oversight of the work performed under the agreement.
- Allows program income from GNA timber sale receipts to fund restoration work within a watershed on all ownerships (does not have to be adjacent to the project.)
- Authorizes States to act on behalf of the FS to perform work on NFS lands.

Allows flexibility in funding the project(s) using FS, State, and third-party contributions to perform work collaboratively.

- 550k of NFTM funding to DNRC
- 170k of FIF funding to USFS
- Other non-profit partners, agencies, counties

LEARNING FROM OTHERS LOCALLY

Tim Love

Tim has been a part of 22 statewide collaborative groups. He shared about the Montana Forest Collaborative Network, which assists collaborative groups across Montana in forest and grassland

restoration, conservation and resource utilization for the benefit of all. He encouraged everyone to check out their website https://montanaforestcollaboration.org

Alex Dunn

Alex spoke about the Beaverhead Deerlodge Working Group, which he describes as having a robust social license in the community. BDWG emphasizes early and often communication, good data and technology, and engaging constituencies at a landscape scale.

Leonard Wortman

Leonard is a County Commissioner, and part of the Beaverhead-Deerlodge Working Group. Leonard said that trust is an essential foundation for a successful collaboration. A difficulty that faces the BDWG is the constant change of leadership within participating agencies. With language in some bills that mandate collaboration, Leonard says it is the wave of the future. He hopes that BDWG will have influence on travel plans with the Forest Service.

Toni Ruth

Toni spoke about her experience with Salmon Valley Stewardship. Some lessons she shared were how to increase pace and scale and coming to a social agreement in a community around smoke management. Toni reflected on the 2012Mustang Fire, showing how previous thinning had a huge effect in keeping that fire 'healthy' and under control. This work was the result of one of the first projects of the Lemhi Forest Restoration Group. This group now has four in the Lemhi region. Some lessons learned:

- walking community members through project rationale early through field trips help to build social agreement early on in the process.
- difficult to link stewardship activity to local economic benefit when the timber industry infrastructure no longer exists

Matt Ward

Matt's presentation was focused on better preparing communities for wildfire. Forest restoration on the greater landscape is crucial for forest resiliency, in addition to better firefighter ingress and egress. Work on private lands can be done through fuel reduction, education, and risk evaluations.

DROUGHT RESILIENCE SESSION

Current Status and Trends

Brandon Hoffner

Brandon focused on what we can do as a group to build capacity for increasing drought resilience. Water is a huge part of the Idaho economy and we need to safeguard that in a changing climate. What happens with water in the High Divide can be felt many other places, as we are at the headwaters. Recharge efforts and aquifer management are a large part of Idaho drought resiliency. A big issue is maintaining momentum

and awareness of these efforts even during the wet years. Perhaps on a limited scale, we can provide an incentive or market to help achieve goals.

Ann Schwend

Ann emphasized that coming together is one of the important things we can be doing to plan for our water resources. Solutions also need to start with 'first order' people, like landowners, who are closest to the ground, then use agencies as a connector for our communities. These stakeholders also need resources, and to start the conversation about building resiliency, not just responding. Ann expressed concern about how we engage our resources, and the nexus of science/planning/policy. A focus of Ann's work right now is on wetlands and beaver mimicry as a way to address water storage and recharge. Ann also spoke about our tendency to work in 'silos' and the importance of getting everyone to the table. The Water Summit was a great opportunity of that state-wide conversation and a reminder that need to strengthen the following areas regarding water in Montana

- Linking science, policy and management
- Data and knowledge
- Communication and outreach
- Increase collaboration across disciplines like land-use planning and water managers
- Focusing on wetlands/beaver mimicry

The next step is planning at a basin level, by bringing together watershed leaders. We also need to figure out how we plan at a community level, not just about water, but the overall health and sustainability of our High Divide communities.

Learning from Our Peers: Examples of Action

Tana Nulph

Tana described the building blocks of drought planning as vulnerability assessments, capacity, monitoring, data and cooperation. She provided background information on the Big Hole River drought management plan. Ranchers were at the formation of this plan, working on local solutions to avoid being listed as a 'chronically de-watered' river. Now the Big Hole is the most gauged river in the state. Drought mitigation efforts and ideas include natural water storage (restoring degraded wetlands with beaver mimicry), irrigation infrastructure improvements, education and outreach and cloud seeding. Tana and Jim emphasized the importance of partnerships, and the power that communities hold when they are all behind an effort. This is shown through unlikely partners like fishing guides and ranchers, phone trees to keep the community abreast of water conditions, etc.

Lynn Bagley & Max Ludington

Lynn and Max spoke on behalf of Teton Water User's Association. Lynn reflected on the switch from flood irrigation to sprinklers, which made for better farmers (more crops), but wetlands were lost and water resources suffered. With the help of TWUA, they want to keep working lands working, by securing and maintaining a reliable and affordable supply of water to sustain agriculture in the valley. Lynn and Max

showed some great examples to explain how water leaves and enters the stream via water rights holders. They discussed the option to incentivize smart water usage; be liberal when there is a lot of water, and conservative when water is low. A big issue is that there is less water in the late season, so they described their plan to combat that:

- Recharge the aquifer in spring by:
    - Turning on ditches earlier than usual
    - Flooding where possible
    - Improve canal infrastructure
- Conserve water later in the season
- Delaying water delivery will create more value
    - April water becomes July water…
    - Delaying will mean more water availability in late season

Breann Green

Breann, from Lemhi Regional Land Trust, presented a case study of the Lemhi River and adjacent property. Breann noticed that pivots have affected the rate of recharge, though not as much as expected. She relayed the importance of stream flow for anadromous salmon and steelhead, but also keeping in mind the overall picture. Breann described their effort to understand where water was going in and out of Big Springs (area of concern) and how long it took to arrive there. Using a special dye, they were able to identify the ingress/egress of the water which arrived back to the stream system 11 weeks after leaving. This helped tell the story of aquifers and when we see recharged water arriving back into the system.

Long-term Monitoring Consistent Across Basins

Tana Nulph

Tana talked about the critical importance of stream gauge monitoring. There are currently significant funding cuts to the USGS network, which affects monitoring capacity. Tana proposed the creation of a council to support this continued gauging effort, including getting legislators on board.

Nathan Korb

Nathan presented some ongoing research about ground-water monitoring. This monitoring is crucial for both quality and quantity of our resource. MBMG groundwater assessment is on their website and shows monitored wells. Nathan also spoke about research from Andy Bobst, quantifying amount of water stored in wetlands. There is a threat from conifer encroachment, particularly junipers, which are drying up water in these wetlands. He also talked about focusing on areas where beavers would do well both physically and socially. Nathan talked about the following as what we can do to protect our groundwater:

- Restore floodplains and wetlands
- Beaver mimicry
- Community-based solutions

- Learn about it and educate others
- Increase natural storage at a large scale

Bryce Contor

Bryce spoke about work at the Henry's Fork Foundation. They are utilizing local 9th grade science classes to help test nitrates in the water. This is a way to get some data, while educating the community. Bryce expressed a need for improved mapping of the well network. He also made the link that groundwater data drives aquifer data. The metric for this being groundwater levels, and sentinel wells that have been selected to represent the area, with a long history of data. The water quality monitoring program at Henry's Fork is in place to improve their understanding of a complex system, enhance trout growth, habitat and survival, and improved resource stewardship.

FUTURE SCENARIOS AND STRUCTURED DECISION-MAKING

The High Divide Collaborative has a broad vision identified by our eight conservation goals. Many aspects of these goals overlap, intertwine, and sometimes present tradeoffs and challenges. This session introduced the goals of a multi-year structured decision-making process to assess the desirability of a range of possible landscape futures in the High Divide related to drought resilience. The group discussed perceived outcomes and tradeoffs between actions that can be taken to achieve drought resilience strategies for (i) resilient working ranchlands that are central to communities, economy, and way of life; (ii) ecological linkages among core habitat areas to conserve wide-ranging wildlife populations; and (iii) preserving clean waterways and fish habitat. This process will build on our ongoing landscape conservation design process.

This session was facilitated by a research team led by:

Dr. Chloe Wardropper, Assistant Professor in the University of Idaho's Department of Natural Resources and Society with research interests in natural resource policy and planning, watershed management, and environmental social psychology

Dr. Morey Burnham, Research Assistant Professor of Sociology at Idaho State University with specialties in climate adaptation and vulnerability, agriculture, water and livelihoods.

Participants broke-out into small discussion groups to address the following:

- How has drought affected you in the past?
- What do you see as the defining characteristics of an ideal drought-resilient landscape (for wildlife connectivity, water availability and quality, and ranch livelihoods)?
- What needs to change to achieve a drought-resilient landscape?

(As of this printing, the synthesized results were not yet completed by U of I)

CLOSING DISCUSSION

Does population growth limit the success of these ideas (viability)

Can we influence how much of that growth is happening in rural areas (where it has more effect)

Need to address that creatively

- Is being addressed carefully behind the scenes (to build relationships) constituents would bail if they were told what to do…tempered message
- This is why we partner up – to address these ideas and do something about it…to help other communities work on the messages
- What it is that stakeholders want on the landscape, to see what HD will look like in the future…so it's supporting local communities, ranching, wildlife etc…
- More education about the importance of ranching etc…the little guys. We need to protect them. What can we do to support them.
- Ag lands allow adaptability/flexibility to manage our water (not just other qualities) We should be talking about their vitality for water and use for recharging the aquifer. Flooding can't occur if we subdivide.
- Snow-pack, holding capacity in veg, beaver… having a hard time adapting to the changes in the watershed

- Energy here to move beyond the conversation into action… how to we do this? How do we support these local actions.
  - Brendan's revolving fund…interest rate, revolving loan fund – incentivizing watersheds
  - Community resilience is the undercurrent in all of these problems
  - Montana Community Foundation – financially supporting the HD Collaborative??
- Things are siloed and they are funding dependent…
  - There has been a ton of investment, can we pull that together?
  - Need to sell it that we are a priority headwater…we are protecting the downwater areas as well… can we eventually get the agency partner to look into reducing flood risk. Demonstrate how important we are together…high elevation, intact ecosystem that can help the downstream neighbors
- Communication needs to be highlighted. Especially with agency partner and rural communities.
  - HD has the power to go into the smaller communities with clear messaging… we need to build that communication messaging
  - Building trust is bottomline. Have to have those conversations to make progress and see commonalities. Focus on common ground… gift giving/trust/tangible progress.
- Small communities are at risk. Need resources for families.
- Messaging is key (again) - who do we focus o ? Young generation is the missing piece.
  - They are detached from the land… we need to build awareness (*) – can we build a curriculum??
  - Focus on working landscape/ manage resource as a whole (instead of focusing on protecting… we need the word enhance…)
  - Need to get away from individual ownership – change our focus to include everyone

- We are in a position to look at funding sources….

How can we advance achievement of our collaborative conservation goals?

ECOLOGICAL LINKAGE (High Divide Collaborative Workshop 2016, 2018)

Sub-goals:

- Sustain regional fish and wildlife and biodiversity;
- Secure networks of connected habitats;
- Healthy and resilient ecosystems;
- Recognize people and wildlife interactions and problems and resolve people/wildlife conflicts.

Data needs: Fine scale data for key terrestrial, aquatic, and avian species to identify priorities, identification of bottleneck areas

Key messages:

- Recent empirical research by wildlife agencies and NGO scientists are confirming that the High Divide is of continental significance for wide ranging wildlife.
- Habitat connectivity is critical for healthy and abundant fish and wildlife populations, access to seasonal habitats, gene flow, a means of repopulating areas, and sustained biodiversity.
- In the High Divide, we must think big picture (landscape scale) when we consider connectivity.
- Even species like sage grouse are moving great distances between important seasonal ranges.
- Connectivity modeling can leverage telemetry data to predict wildlife movement over broader areas and into the future under predicted environmental changes.

Challenges/opportunities:

- Need resources to study migrations and locate weak links—the bottlenecks.
- The quality of the connectivity habitat is vital as it determines how rapidly wide-ranging species must move.
- Identify and mitigate significant barriers to wildlife movement.
- Work collaboratively to resolve people/wildlife conflicts with respect for private land issues
- Recognize and respond to challenges of invasive species and disease.
- Public awareness and education, public safety.
- Need increased capital and capacity to support interested private landowners in conservation and stewardship efforts
- Need comprehensive understanding of movements across mosaic of land ownership and management approaches on all
- The Collaborative can be a partnership and information clearinghouse.
- Understand relationship of connectivity with disease transmission, e.g. brucellosis, chronic wasting disease

WORKING RANCHLANDS (High Divide Collaborative Workshop 2017, 2018)

Sub-goals:

- Tell the story of working ranchlands to key audiences, develop more incentives and tools for private landowners,
- advocate for public land grazing with flexibility and adaptation

Data Needs: understanding run-off timing and subsoil aquifer hydrology

Key Messages:

- Ranching in the High Divide is integral to economy and communities and provides a host of ecological services and public benefit.
- Stories illustrating these services and benefits need to be told to correct misconceptions.
- Many resources and partnerships are available to assist with conservation and restoration that can increase productivity/profitability.

Challenges/Opportunities:

- Changing hydrology, runoff patterns and irrigation efficiencies need to be considered and adjustments made to capture earlier runoff
- The Collaborative can help to build and collect content for storytelling
- Opportunity to join with similar rural organizations to have strong voice in DC
- Workshop dedicated to incentives and tools, value-added ag products and branding opportunities
- Intermountain West Joint Venture continues to develop decision support tools for conservation action and investments.

RECREATION (High Divide Collaborative Workshop 04-05-17)

Sub-goals:

- access,
- planning,
- safety, ethics and education,
- funding needs,
- minimizing conflicts

Data Needs: landscape-specific data, rec user impacts, broad range planning

Key Messages:

- Increasing populations are recreating on public land, with improving technology.
- User etiquette is a great concern, as well general safety knowledge.
- Infrastructure, maintenance and enforcement budgets are a concern.

Challenges/Opportunities:

- Several agencies are undergoing plan updates, which are an opportunity for stakeholders to provide input.
- GYC's recreation summit in April 2018 in Bozeman.
- Maintaining balance of providing opportunities and conserving resources is big challenge.
- How can the Collaborative help or support educating public about living with bears, safety in the backcountry, etc.?
- Explore new funding mechanisms.

CLEAN AND ABUNDANT WATER (High Divide Collaborative Workshop 2016, 2018)

Sub-goals:

- Water quantity and quality,
- protect native fish,
- sustain working farms and ranches,
- drought resiliency,

- wetland & riparian habitats,
- flood control,
- natural storage,
- supply for downstream users.

Data needs: Need to integrate local knowledge into regional picture; regional picture of water infrastructure; landscape mapping of native fish occurrence, connectivity, resilience, priority;

Key messages:

- High Divide is in a precipitation shadow, relatively arid, water supply primarily from snow melt.
- Changes in water management may create a greater challenge to natural water flow than does climate change.

Challenges/opportunities:

- Manage ground water recharge;
- restore floodplain connectivity;
- retain traditional irrigation systems (limit groundwater withdrawal);
- drought resilience planning needed.
- Good network of local NGOs, agencies, but need sustained local organization capacity funding;
- coordinated data collection and improved monitoring;
- shared learning and training.
- Creating a curriculum (Project WET) in school systems
- Creating a structured presentation as a marketing strategy with a water focus
- Tagging fish as an educational tool
- Labeling or certification of food produced sustainably in High Divide as an incentive tool for producers
- Creating a collaborative approach to legislative action
- Upscaling of educational curriculum to include realtors, legislature, etc.
- Creating more collaborations (forest, rangeland, etc)

SAGEBRUSH STEPPE ECOSYSTEMS (High Divide Collaborative Workshop 2016)

Sub-goals:

- Habitat for many sage dependent wildlife species;
- important rangeland for many ranching operations.

Data needs: Resilience/resistance assessment regarding climate change, soil moisture, temperature

Key messages:

- Sage steppe ecosystems are important for many wildlife species, including sage grouse.
- The High Divide supports high quality sage grouse habitats that are in better condition than are many Great Basin habitats.
- Wildfire induced vegetation conversion is a major habitat threat.

Challenges/opportunities:

- Build private/public partnerships to build trust.
- Land protection/conservation easements to maintain sagebrush habitat.
- Restoration, particularly in mesic (wet/green) areas.
- Manage vegetation to reduce conifer encroachment and increase rangeland health.

- Rangeland fire protection partnerships with landowners and pro-active management of agency fire-fighting resources to more effectively contain wildfire.
- Reduce wildlife conflicts from invasive species, pesticide use, fence collisions, etc.

HEALTHY FOREST LANDS (High Divide Collaborative Workshop 2017, 2018)

Sub-goals:

- active management for robust diversity and resilience,
- local economies,
- watersheds,
- fire,
- disease

Data Needs: infrastructure, harvests, forest types and age class, fire activity

Key Messages:

- High Divide forests are some of the most intact, remote, and primitive in the lower 48, retaining more wildlife species than other regions.
- Infrastructure is a continued problem for getting forest products to market.

Challenges/Opportunities:

- Pay attention to Governor Bullock's effort with the Western Governors Association on forest management.
- Engage more citizen science in monitoring.
- Be involved in Forest Plan updates. Participate in collaborative processes. Encourage watershed approach in updates: forests need flexibility within adaptive management to react faster that management plans allow them to. Encourage flexibility to include emerging science and data into plans.
- Analyze stakeholders and what power they have to influence change
- Identify and map existing collaboratives for cross-learning and to identify gaps
- Pool voices of collaborative efforts across a bigger High Divide landscape
- Find key stakeholders to serve as good example to the rest of the industry, ambassadors
- Use our High Divide platform to influence policy changes for stewardship contracting, to include some preference to local contractors. The ability to include localness in the consideration and give it some weight would help local contractors compete, contribute to the local economy, and would help tamp down the anti-federal sentiment.

WILDLAND URBAN INTERFACE (High Divide Collaborative Workshop 2016)

Sub-goals:

- Promote community and personal safety and reduce fire-fighting costs;
- keep natural fire functions on the land;
- conserve habitat and watershed values in WUI.

Data needs: Landscape-scaled wildfire risk modeling can provide for integrated risk assessment.
Inclusion of WUI in landscape scaled conservation planning.

Key messages:

- Across the West, fires are bigger, burn longer and hotter with a longer season. More homes are being built in WUI, more homes are burning.
- Fuels have changed dramatically on the landscape, in part because of past fire management.

- Change in climate is creating more extreme wildfire conditions.
- Counties with very little private land are very limited in where they can build and avoid wildfire risk.
- Vegetation management (fuel treatment) options are limited due to lack of mills and harvest capacity, high treatment costs, and in some cases, social opposition to vegetation management.

Challenges/opportunities:

- Community planning assistance for wildfire, in some cases derived from detailed fire modeling.
- Find opportunities to put fire back in the landscape.
- Find ways to more efficiently and more cost effectively manage fuels.
- Community based collaborative projects can gain broad support and positive outcomes.
- Use land conservation and land use management tools in WUI.

CULTURAL LEGACY—TRIBAL and TRADITIONAL – *to come*

Appendix A – Common Acronyms

ACEC – Area of Critical Environmental Concern

AUM – amount of forage needed by an "animal unit" (AU) grazing for one month

BDNF – Beaverhead-Deerlodge National Forest

BHA – Backcountry Hunters and Anglers

BHNB – Big Hole National Battlefield

BHWC – Big Hole Watershed Committee

BLM – Bureau of Land Management

BMP – Best Management Practices

BPA – Bonneville Power Administration

BSU – Boise State University, Idaho

CCAA – Candidate Conservation Agreement with Assurances

CDNST – Continental Divide National Scenic Trail

CE – Conservation Easement

CFLRP –Collaborative Forest Landscape Restoration Program

CFS – stream flow measurement in cubic feet per second

CHAT – Crucial Habitat Assessment Tool

CIRN – Central Idaho Ranchlands Network

CLLC – Center for Large Landscape Conservation

CLP – Collaborative Landscape Proposal

CRP – Conservation Reserve Program

CVA – Centennial Valley Association

CWMA – Cooperative Weed Management Area

DEQ – Department of Environmental Quality

DNRC – Montana's Department of Natural Resources Conservation

DSS – Decision Support System

EQIP – Environmental Quality Incentive Program

ESA – Endangered Species Act

FHA – Federal Highway Administration

FLTFA – Federal Land Transaction Facilitation Act

FO – Field Office

FRPP – Farm and Ranch Protection Program

FWP – Fish, Wildlife and Parks

FY – Fiscal Year

GIS – Geographic Information Systems digital mapping format

GNF – Gallatin National Forest

GPS - Global Positioning System

GRP – Grassland Reserve Program

GVLT – Gallatin Valley Land Trust

GYC – Greater Yellowstone Coalition

GYE – Greater Yellowstone Ecosystem

HFF – Henry's Fork Foundation

HMA – Habitat Management Area

HOTR – Heart of the Rockies Initiative

IDFG – Idaho Department of Fish & Game

IOGA – Idaho Outfitters and Guides Association

IWJV – Intermountain West Joint Venture

ISU – Idaho State University in Pocatello

LCC –Landscape Conservation Cooperative

LCD – Landscape Conservation Design

LCNHT – Lewis & Clark National Historic Trail

LRLT – Lemhi Regional Land Trust

LWCF – Land and Water Conservation Fund

MILES – Managing Idaho's Landscapes for Ecosystem Services

MLR – Montana Land Reliance

MOGA – Montana Outfitters and Guides Association

MTFWP – Montana Department of Fish, Wildlife & Parks

MOU – Memorandum of Understanding

MSU – Montana State University in Bozeman

MVRG – Madison Valley Ranchlands Group

MWA – Montana Wilderness Association

NAWCA – North American Wetland Conservation Act

NDRP – National Drought Resilience Partnership

NEPA – National Environmental Protection Act

NF – National Forest

NFWF – National Fish & Wildlife Foundation

NGO – Non Governmental Organizations

NHT – National Historic Trail
NMFS – National Marine Fisheries Service
NOAA – National Oceanic & Atmospheric Administration
NP – National Park
NPNHT – Nez Perce National Historic Trail
NRCS – Natural Resources Conservation Service
NST – National Scenic Trail
NWR – National Wildlife Refuge
OHV – Off Highway Vehicle
OSC – Office of Species Conservation
PILT – Payment in Lieu of Taxes
REA – Regional Ecosystem Assessment
RMEF – Rocky Mountain Elk Foundation
SCNF – Salmon-Challis National Forest
SNRA – Sawtooth National Recreation Area
SRMA – Special Recreation Management Area
SWAPs – State Wildlife Action Plans
T&E – Threatened and Endangered
TCF – The Conservation Fund
TRCP – Theodore Roosevelt Conservation Partnership
TNC – The Nature Conservancy
TPL – Trust for Public Land
TWS – The Wilderness Society
UMW – University of Montana Western in Dillon, MT
USFS – United States Forest Service
USFWS – United States Fish & Wildlife Service
WCS – Wildlife Conservation Society
WGA – Western Governors Association
WLA – Western Landowners Association
WMA – Wildlife Management Area
WRLT – Wood River Land Trust
WRP – Wetland Reserve Program
WUI – Wildland Urban Interface
YNP – Yellowstone National Park