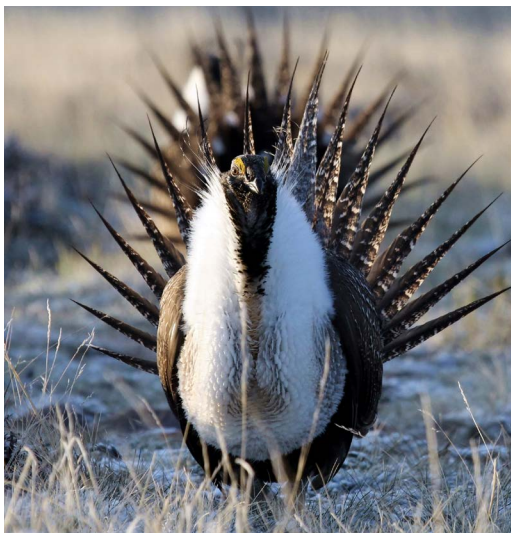
Wyoming Landscape Conservation Initiative

10 Year Anniversary Report
2007 - 2017



Letter from the Chair

Dear Members, Cooperators, and Friends,

This past year marked the 10-year anniversary of the Wyoming Landscape Conservation Initiative, providing an opportunity to reflect upon, and appreciate, our collective accomplishments over a tremendously successful first decade! Over the past 10 years, WLCI has funded more than 100 multi-faceted projects with direct support of nearly $12,500,000 from the BLM's Healthy Lands Program ($9,590,764) and the BLM Wyoming State Office ($2,881,045). When partner-based leveraged funds are included, these projects have resulted in over $64,000,000 of partner-based, collaborative, on-the-ground conservation in southwest Wyoming. That is - for every dollar we received from the BLM - our partners, the trust fund, and other sources put an additional $5.7 toward conservation projects.

The accomplishments that have accrued since WLCI's 2007 inception are truly remarkable, and something for which all WLCI partners and participants can be proud. I invite you to peruse our ten-year report to learn about WLCI, why we were formed, what our focal habitats are, who our partners are and where we work. Currently, we are striving to improve habitats through seven themes:

- Maintaining and Reconnecting Wildlife Corridors and Passages in Southwest Wyoming
- Improving Resilience and Function of Priority Habitats
- Maintaining, Enhancing and Restoring Sagebrush Communities
- Improving Aquatic Habitat and Improving the Distribution of Native Fish Assemblages
- Controlling Invasive Plant Species and Restoring Ecosystem Integrity and Landscape Connectivity
- Re-establishing Native Riparian Plant Communities
- Developing and Enhancing Wetlands

We are planning to continue to improve habitats throughout southwest Wyoming with further program development contributed by a grant steward and innovative partnership to cultivate and distribute project funds over the next ten years.

After learning all about the great things our partnerships have accomplished I encourage you to become involved with WLCI.

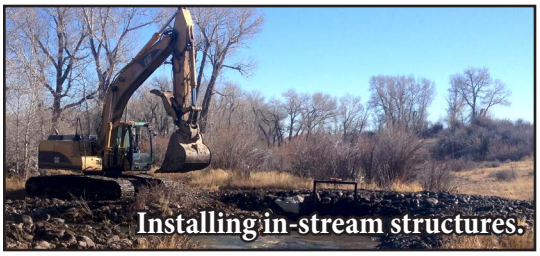
I look forward to your participation,

Tyler Abbott
Chair, WLCI Executive Committee

Highlights

Over 190,000 acres of sagebrush habitat treated or protected including water developments for improved grazing and riparian protection, conservation easements, removal of encroaching conifers and many other activities

Over 125,000 acres of habitat treated to control invasive plants including removal of cheatgrass, salt cedar, leafy spurge, Canada thistle, Dalmatian toadflax, and knapweed in terrestrial habitats across the WLCI area.

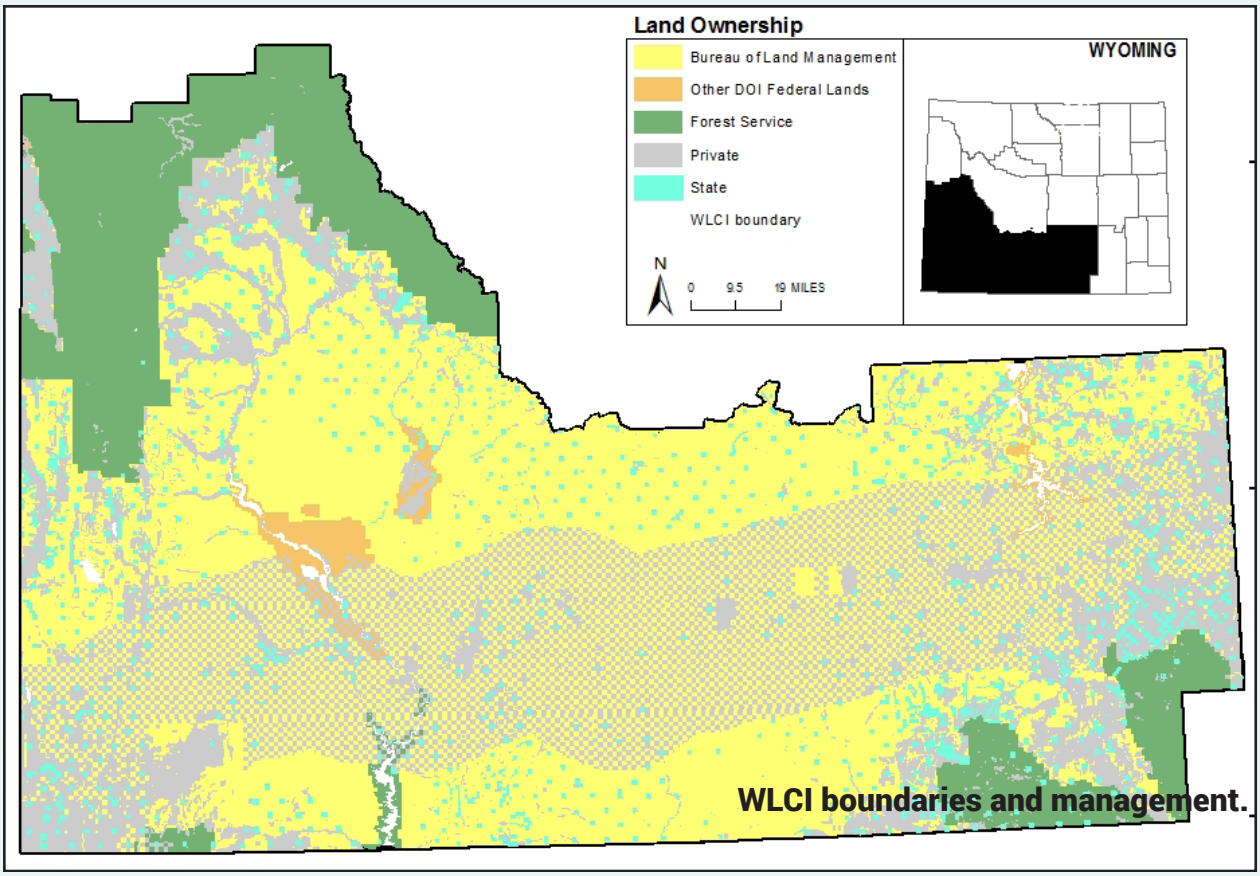


Nearly 2,000 acres of wetlands were enhanced or developed and nearly seven miles of riparian habitat enhancements including willow planting, channel stabilization, and pasture fencing.

Over 27,000 acres of other priority habitat enhancements including treatments to enhance aspen stands and improving mule deer movement and migration routes by converting over 300 miles of fences.

Benefiting Local Communities

WLCI conservation projects are designed to result in restored or improved ecosystems that support agriculture, forestry, local landowners, and stakeholders on both public and private lands. These efforts also provide economic benefits to many small rural communities across southwest Wyoming. This is accomplished through the purchasing of equipment and materials, providing local and state level employment opportunities, and direct spending associated with food, lodging, and gas that support local communities and their livelihoods.



WLCI boundaries and management.

Contact Us

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Please consider making a donation for the habitat improvement project of your choice. We would love to hear from you!

Did You Know?

A recent USGS study* indicates that every million dollars spent on sagebrush projects in western states adds 16.9 job years and at least 1 million dollars in labor income.

About Us

Wyoming has extensive public lands, with checkerboard patterns of private and state lands containing sagebrush steppe environments and wildlife that are highly valued by the public. Energy and mineral exploration has been occurring for over 100 years in Wyoming. With the advent of newer technologies concentrating development associated with directional drilling and hydraulic fracking, Bureaus within the Department of the Interior and state entities agreed to create a formal partnership, which became the Wyoming Landscape Conservation Initiative (WLCI), in order to help maintain Wyoming's world-class wildlife.

- The WLCI was established in 2007 as a long-term, science-based effort to conserve and enhance fish and wildlife habitats while facilitating responsible development through local collaboration and partnerships on 14 million acres.
- The formal partnership included: Bureau of Land Management, U.S. Geological Survey, U.S. Fish and Wildlife Service, U.S. Forest Service, Wyoming Department of Agriculture, Wyoming Game and Fish Department, six county commissions, and nine conservation districts.
- Over the past 10 years, the partnership has expanded to include the National Park Service, National Resources Conservation Service, and two more conservation districts. Additional landowners and industry partners have also participated. The program area has also expanded to include over nineteen million acres (nearly the size of South Carolina).

Meeting at the Encampment River. Photo by Bryan Nealy.

* Cullinane Thomas, Catherine; Huber, Christopher; Skrabis, Kristin; and Sidon, Joshua, 2016, Estimating the economic impacts of ecosystem restoration—Methods and case studies: U.S. Geological Survey Open-File Report 2016–1016, 98 p., http://dx.doi.org/10.3133/ofr20161016.

LPDT team planning.

Green River enhancement project.

On-the-Ground

WLCI encompasses all land ownerships in southwest Wyoming, with sagebrush, mountain shrub, aspen, riparian and aquatic communities being the focus for conservation work.

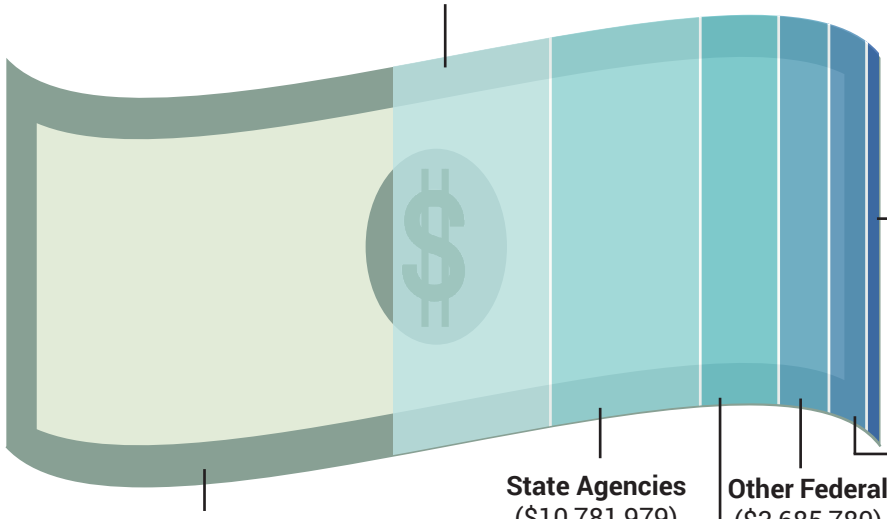
- These five communities are critically important to the customs and culture of Wyoming's citizens, to wildlife, agriculture, and the open space unique to southwest Wyoming.
- Numerous wildlife species depend on the connectivity and proper functioning of these communities, including Greater sage-grouse, mule deer, pronghorn, moose and cutthroat trout.
- This initiative strategically creates an atmosphere of cooperation between land managers, private landowners, industry and the public to maintain the long-term viability of these communities.

Local Project Development Teams

WLCI's greatest collaborative asset was realized with the creation of four regional Local Project Development Teams (LPDT). These teams are comprised of land managers and resource specialists from federal, state, and local government agencies, special interest groups, agriculture and other private landowners, and industry, all having a desire to participate in cooperative conservation.

- LPDTs are the "partners living on the ground," working together to address conservation issues, actions, and priority areas.
- Members of individual teams work together to design, disseminate information, prioritize their team's projects, and find and or share funding to implement projects.
- All four LPDTs collaboratively define issues and needs that inform the WLCI Conservation Action Plan, which defines WLCI conservation priorities and documents conservation actions in five-year increments.

WLCI Partner Funding (2007 - 2017)



$64M

Total Funding

5.7:1

Leveraged Funds Ratio

Maintaining & Reconnecting Wildlife Corridors and Passages

Red Desert to Hoback Migration. Photo by Mark Thonhoff.

Some of North America's longest big game migrations occur in the WLCI area, but land use and vegetative changes to habitat have altered some migration routes in harmful ways. WLCI partners are applying new information, identifying movement impediments, and taking action to keep migration corridors intact and reduce big game vehicle accidents

WLCI partners are studying how land use and vegetative changes affect big game migrations. In addition, federal, state, and local teams are working together to identify and remove movement barriers, improve forage quality, and enact easements to ensure long-term viability of migration routes.

WLCI Partners have accomplished:

70,600
Acres of habitat improvements

19,777
Acres of corridor conservation easements

312
Miles of fence removal & replacements

2
Highway underpasses constructed

Mule deer at Baggs Underpass. Photo by WGFD.

Wildlife meeting with WGFD, USFWS and other partners.

Pinedale pronghorn migration. Photo by Mark Thonhoff.

Improving the Resilience and Function of Priority Habitats

Aspen stand. Photo by Sam Cox.

Sagebrush, aspen and mountain shrub communities are important breeding, wintering and migration habitats for Greater sage-grouse, big game and numerous other wildlife species. WLCI partners are working to maintain the health of these communities and the wildlife they support through a variety of activities.

Aspen stand before treatment.

Aspen stand post-treatment.

Sagebrush habitats are threatened by fragmentation, conversion to other land uses, drought, fire and invasive plants. Habitat treatments to improve sagebrush health include measures to control invasive plants and reseeding with native seed mixes. Large tracts of sagebrush habitat have been designated Greater sage-grouse core areas, where all forms of human activity (e.g., energy development and off-road vehicle use) are monitored closely.

Mountain shrub communities lie between sagebrush and high elevation coniferous habitats, and provide parturition cover and high-quality forage during spring and fall migration for mule deer, other big game and many songbirds. Mountain shrubs are susceptible to fragmentation, excessive browsing, altered fire regimens and juniper encroachment. Treatment priorities include removing juniper, reducing excessive herbivory, maintaining connectivity between shrub stands and recruitment into tall height classes.

Aspen stands may experience sudden aspen decline, excessive herbivory, and encroachment by conifer species. These threats can affect aspen regeneration, and stand age vegetative structure, and can lower the value of aspen habitats to wildlife. Treatment activities in aspen stands include removing conifers, opening stands to increase aspen regeneration, and reducing herbivory on young trees.

WLCI Partners have accomplished:

108,888
Acres of invasive plant control

39,485
Acres of habitat enhancements & restoration

27,400
Acres of mechanical & controlled burn treatments in aspen

8,535
Acres of encroaching conifer reduction

26
Acres protected from heavy browsing

Sagebrush Communities and Sagebrush Obligate Wildlife

Greater sage-grouse and mule deer. Photo by Mark Thonhoff.

Sagebrush obligate wildlife spend at least one critical season (e.g., breeding, winter) in sagebrush habitat. This includes burrowing owls, spadefoot toads, sagebrush lizards, pygmy rabbits, Greater sage-grouse, and many other species.

WLCI partners have identified areas where large numbers of sagebrush obligate species occur. However, many of these areas have competing uses, degraded vegetation, and changing climate patterns. The WLCI Coordination Team supports conservation in these areas by funding projects that improve or protect the health of sagebrush habitats that provide direct benefits to sagebrush obligate wildlife.

Sage Thrasher (*Oreoscoptes montanus*).

Pygmy Rabbit (*Brachylagus idahoensis*).

Brewer's Sparrow (*Spizella breweri*).

WLCI Partners have accomplished:

92,803
Acres of sagebrush protected through easements & forage reserves

90,664
Acres treated for invasive plants

9,433
Acres burned or revegetated

274
Acres of juniper removal

Improving Aquatic Habitat and Improving the Distribution of Native Fish Assemblages

Coal Creek.

The WLCI area has abundant rivers and blue-ribbon trout streams that support native fish populations. Southwest Wyoming is considered the best-kept fly fishing secret left in the lower 48 states!

One of the conservation objectives of the LPDTs and partners is to work together to ensure native fish have access to as much suitable habitat as possible for seasonal movements and reproductive needs. Treatment approaches include:

- Removing barriers and impediments to fish movement.
- Creating or maintaining fish barriers to protect native fish populations from non-native fish.
- Protecting genetics.
- Developing stream enhancements to improve hydrologic function and increase water flow to side channels.
- Increasing the distribution of native fish and maintaining their diversity.
- Removing or treating unwanted invasive fish species.
- Increasing the resilience of aquatic habitats to buffer against prolonged droughts.

WLCI Partners have accomplished:

87.2

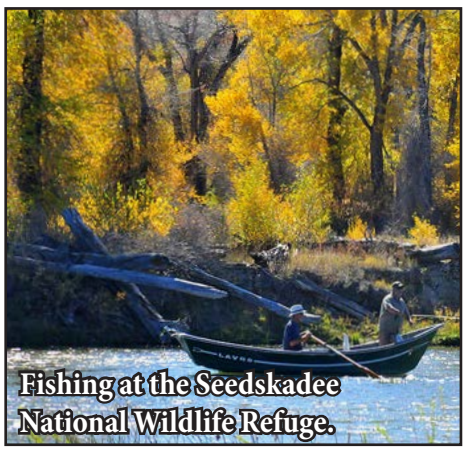
Miles of stream opened to fish passage

6.6

Miles on in-stream habitat restored/ enhanced

18

Barriers to fish migration removed or modified



Fishing at the Seedskadee National Wildlife Refuge.

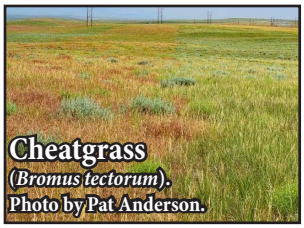
Grand Valley pre-in-stream structure enhancements.

Grand Valley post-in stream structure enhancements.

Controlling Invasive Plant Species and Restoring Ecosystem Integrity and Landscape Connectivity

Cheatgrass in red phase. Photo by Ken Henke.

WLCI Partners have accomplished:



Cheatgrass (*Bromus tectorum*). Photo by Pat Anderson.

54,395

Acres treated for cheatgrass

Spotted Knapweed (*Centaurea maculosa*) Photo by Ken Henke.

56,313

Acres treated for other noxious plants

Russian Olive (*Elaeagnus angustifolia*).

14,803

Acres treated for salt cedar & Russian olive

WLCI LPDTs are focused on the most aggressive or threatening invasive plants, which include cheatgrass, toadflax, leafy spurge, salt cedar, spotted knapweed and perennial pepperweed. Invasive species such as salt cedar, cheatgrass, Russian olive, and knapweeds are expanding their distribution and displacing native plants.

Since 2008, WLCI has funded numerous projects designed to control or remove invasive plants in the WLCI area. Attention is also given to invasive plants in crucial winter habitats, migration stop-over areas, riparian corridors and areas adjacent to rare and endemic plant species. These have predominantly been associated with larger lower elevation streams and rivers in Lincoln, Sweetwater, and Carbon counties.

Cheatgrass has become the most widespread invasive plant affecting crucial habitats for elk, mule deer, pronghorn, and Greater sage-grouse. Post-treatment monitoring information is being used to identify the most effective methods to control cheatgrass.

Helicopter landscape treatment.

Invasive weed treatments.

Re-Establishing Native Riparian Plant Communities

Riparian areas provide important functions across their entire watershed. Proper functioning riparian zones help control water temperature, reduce erosion and stream sedimentation, control flooding, and recharge ground water, which in turn recharges stream flows that supports aquatic and wildlife species during dry periods.

The WLCI priority issues related to riparian function include the loss of vegetation and connectivity of corridors, increased invasive species such as salt cedar and perennial pepperweed, increased bank erosion and stream down cutting, increased sediments, loss or degraded adjacent wetland habitats, and reduced in-stream water flows.

WLCI partners work collaboratively in priority areas where issues can be addressed at the watershed scale and where there is an interest by private landowners to be involved with conservation activities.

Native vegetation planting. Photo by Trout Unlimited.

Native vegetation planting during National Public Lands Day.

WLCI Partners have accomplished:

14,859
Miles of riparian habitat treated & protected

2,754
Acres of riparian protective enclosures

4,497
Yards of stream bank stabilization

5,161
Trees and shrubs planted

4
Improved pipelines or springs

Wetland Enhancement and Development

Trumpeter swan and coots. Photo by Mark Thonhoff.

Wetland habitats are somewhat limited in southwest Wyoming, yet support many wetland dependent wildlife species. This includes resident and migratory bird species and amphibians.

WLCI continues to support the enhancement and development of wetlands, including proposed wetland projects to support the expansion of trumpeter swan habitat and population numbers; wetland enhancements and maintenance at Seedskadee and Cokeville Meadows National Wildlife Refuges; wetland function associated with fish and riparian projects; fencing projects designed to protect wetlands and springs; and wetland maintenance and development through activities (e.g. planting woody vegetation).

WLCI Partners have accomplished:

1,534
Acres enhanced or developed

330
Acres protected through conservation easements

73
Acres developed for trumpeter swans

7
Miles of improved dikes and infrastructure

2.1
Acres protected by fencing

Wetland enhancement and development.

Waterfowl in a wetland habitat.

Seedskadee National Wildlife Refuge. Photo by Tom Koerner.

Keys to Future Success

For the past decade, WLCI has been instrumental in bringing local, state, and federal government; landowners; industry; non-profit organizations; and communities together to engage in on-the-ground habitat improvement projects that address fish and wildlife resource issues and maintain agricultural based livelihoods.

The success of the initiative is founded not only in its science and restoration projects, but also in the positive relationships that have developed between all of its partners.

In the years ahead, WLCI will balance landscape conservation with demands on resources by expanding existing partnerships and seeking new ways to be more innovative and collaborative. We will work to combine efforts from local project proponents to effect contiguous landscape-level conservation accomplishments and objectives across southwest Wyoming. We plan to continue working with industry to collaborate on shared issues, shared conservation objectives, and vision towards balancing species recovery and our country's energy independence.

WLCI field presentation with partners.

Culvert construction to improve riparian habitat.

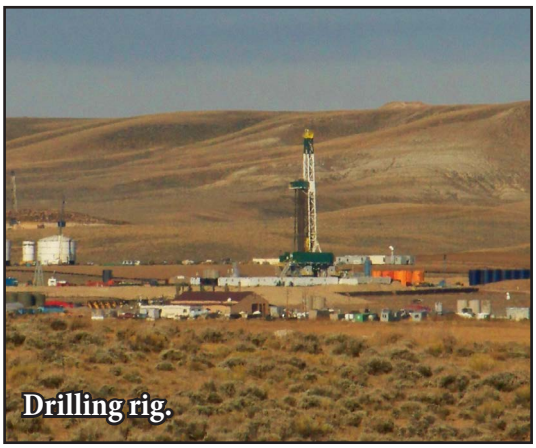
WLCI efforts make public lands more productive and enjoyable for partners and local communities.

Partnerships

WLCI thanks all the partners identified below and the many private landowners, without whose collaboration WLCI projects would not be possible.

47 Ranch
Anadarko
Aster Canyon Consulting
Big Creek Ranch
Bow Hunters of Wyoming
Boy Scouts of America
Breitburn Energy Partners LP
Bridger Coal
Brigham Young University
British Petroleum Corporation
Cameco
Carbon County Weed and Pest
Chicago Botanical Gardens
Circle B Ranch
Circle Nine Ranch
City of Green River
Condict Cattle Company
CET Technology
Currant Creek Ranch
Denbury Resources, Inc.
Devon Energy
Doris Duke Foundation
Ducks Unlimited
DuPont
EnCana Corporation
Exxon Mobil Corporation
Ferris Mountain Ranch
Great Basin Landscape Conservation Cooperative
Great Northern Landscape Conservation Cooperative
Greater Yellowstone Coalition
Green River Basin Cooperative
Green River Greenbelt Task Force
Green River Valley Land Trust
Habitat Conservation Assistance Network (Western Wyoming RC&D Program)
Intermountain West Joint Venture
Jack Creek Ranch
JC Johnson & Sons Ranch
John Bunning Transfer Co.
Jolley Ranch
Jonah Interagency Project Office
Kanda Lateral Mitigation Fund
Knight Oil Tools
Lazy River Ranch
Lincoln County Conservation District
Lincoln County Predator Board

Ferris Mountain fence replacement with the Montana Conservation Corps.



Drilling rig.

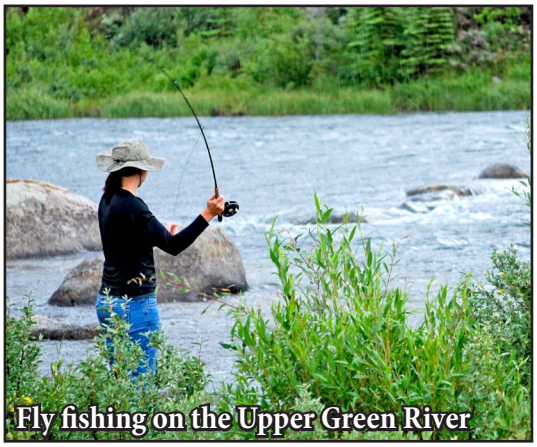
Riparian habitat field visit.

Partnerships

Deer trapping near Baggs.

Lincoln County Weed and Pest
Linn Energy Inc.
Little Snake River Conservation District
Lonetree Ranch
M&N Trucking LLC
Medicine Bow Conservation District
Mule Deer Foundation
Montana Conservation Corps.
Muley Fanatic Foundation
National Fire Plans Operating Service
National Fish and Wildlife Foundation
North American Wetlands Conservation Act Grant Program
Northwest Management, Inc.
NRCS - Plant Materials Center, Meeker, Colorado, and Bridger Plant Materials Center, Bridger, Montana
Overland Trail Ranch
Pathfinder Ranches
Pew Charitable Trusts
Platte Valley Habitat Partnership
Pinedale Anticline Project Office
QEP Resources, Inc.
Questar Corporation
Red Creek Ranch
Rimfire Ranch
Rock Springs Grazing Association
Rocky Mountain Elk Foundation
Rocky Mountain Power
Rolling Thunder Ranch
Ruby Pipeline LLC
RY Timber Inc.
Safari Club International
Saratoga Encampment Rawlins Conservation District
Seedskadee National Wildlife Refuge
Seedskadee Trout Unlimited Chapter
Southland Royalty Company
South Central Sage Grouse Local Working Group
Southern Rockies Landscape Conservation Cooperative
Southwest Wyoming Sage Grouse Local Working Group
Southwest Wyoming Mule Deer Foundation
Stantec Consulting
Star Valley Conservation District
Sublette County Conservation District
Sublette County Weed and Pest
Sweetwater County Conservation District
Sweetwater County School District #1
Sweetwater County School District #2
Sweetwater County Predator Board
Sweetwater County Weed and Pest
Terra Firma
Teton Science School
The Conservation Fund
The Nature Conservancy

Wind energy tour.



Fly fishing on the Upper Green River

Highway underpass tour.

Partnerships

Fence conversion with the Wyoming Conservation Corps.

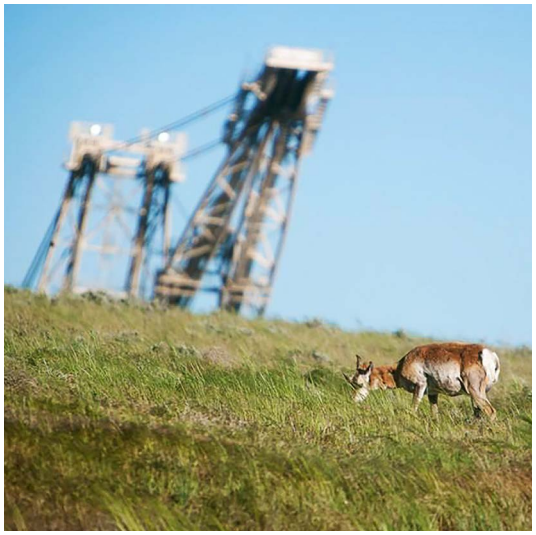
The Wilderness Society
Theodore Roosevelt Conservation Partnership
Trout Unlimited
Trust for Public Lands
Uinta County Conservation District
Uinta County Predator Board
Uinta County Weed and Pest
Uinta Development Company
Union Pacific
University of Wyoming
Upper Green River Basin Sage Grouse Local Working Group
Upper Snake River Sage Grouse Local Working Group
U.S. Army Corps of Engineers
U.S. Bureau of Reclamation - Central Utah Project
U.S. Department of Agriculture-Agriculture Research Service
U.S. Fish and Wildlife Service - Partners for Fish and Wildlife Program
Utah State University
Walton Foundation
Warren Resources, Inc.
Water for Wildlife Foundation
Western Governors Association
Western Landowners Alliance
Western Native Trout Initiative
Westmoreland Kemmerer Inc.
Wexpro Company
Wind River Seed
Wyoming Animal Damage Management Board
Wyoming Audubon Society
Wyoming Community Foundation
Wyoming Conservation Corp
Wyoming Department of Agriculture
Wyoming Department of Environmental Quality
Wyoming Department of Transportation
Wyoming Game and Fish Department Private Lands-Public Wildlife
Wyoming Game and Fish Department Trust Fund
Wyoming Governor's Big Game License Coalition
Wyoming Fly Casters
Wyoming Migration Initiative
Wyoming Mining Natural Resource Foundation
Wyoming Natural Diversity Database
Wyoming Office of State Lands and Investments
Wyoming Outdoor Council
Wyoming Sportsmen for Fish and Wildlife
Wyoming State Forestry Division
Wyoming Stock Growers Land Trust
Wyoming Wildlife Federation
Wyoming Wildlife – The Foundation
Wyoming Wildlife and Natural Resource Trust
Wyoming Water Development Commission
ZN Ranch

Prescribed burn treatments.

Rangeland health monitoring.

Energy facility tour.

Summer 2018
BLM/WY/GI-18/016+1110

All photography of the WLCI partners and agencies, and as individually indicated.

Front Cover: (Bottom Left) Nancy Patterson, (Bottom Center) Emmet Pruss, (Bottom Right) Mark Thonhoff
Back Cover: (Top) Bryan Nealy, (Bottom Left) Stacie Thompson