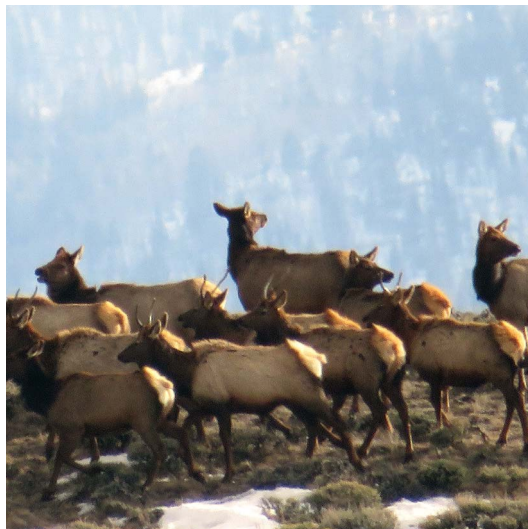


# Wyoming Landscape Conservation Initiative

## 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



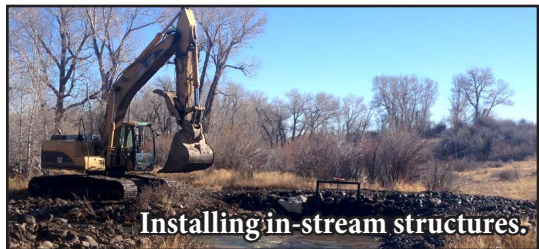
**Aerator treatments near Pinedale.**

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



**Helicopter pestifide treatment.**

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.



**Installing in-stream structures.**

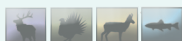
Nearly 2,000 acres of wetlands were enhanced or developed and nearly seven miles of riparian habitat enhancements including willow planting, channel stabilization, and pasture fencing.



**Aspen stand treatment.**

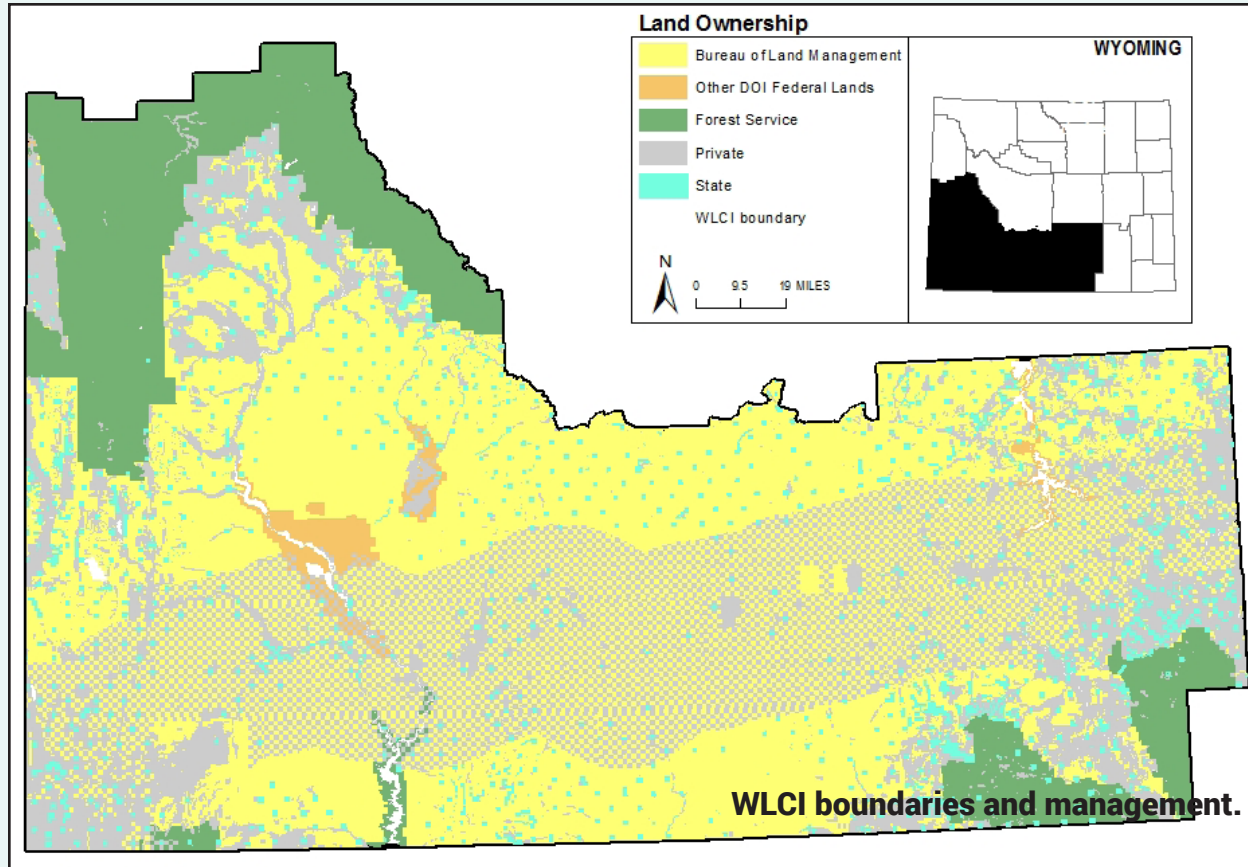
Over 27,000 acres of other priority habitat enhancements including treatments to enhance aspen stands and improving mule deer movement and migration routes by converting over 300 miles of fences.

## 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.





## Contact Us



280 Highway 191 N  
Rock Springs, WY  
82901

307-352-0227

blm\_wy\_wlci\_  
wymail@blm.gov

www.wlci.gov

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

## Did You Know?

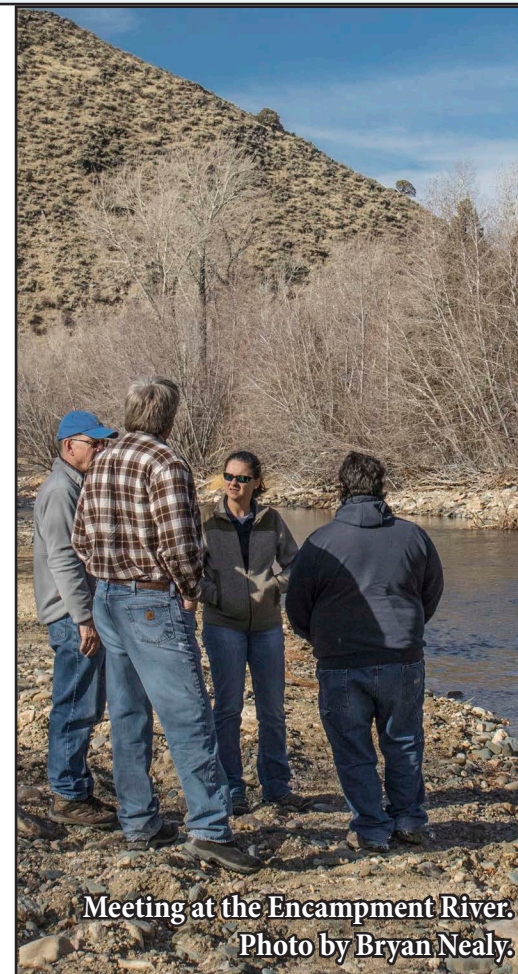


A recent USGS study\* indicates that every million dollars spent on sagebrush projects in western states adds 16.9 job years and at least 1 million dollars in labor income.

## 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).



\* 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.

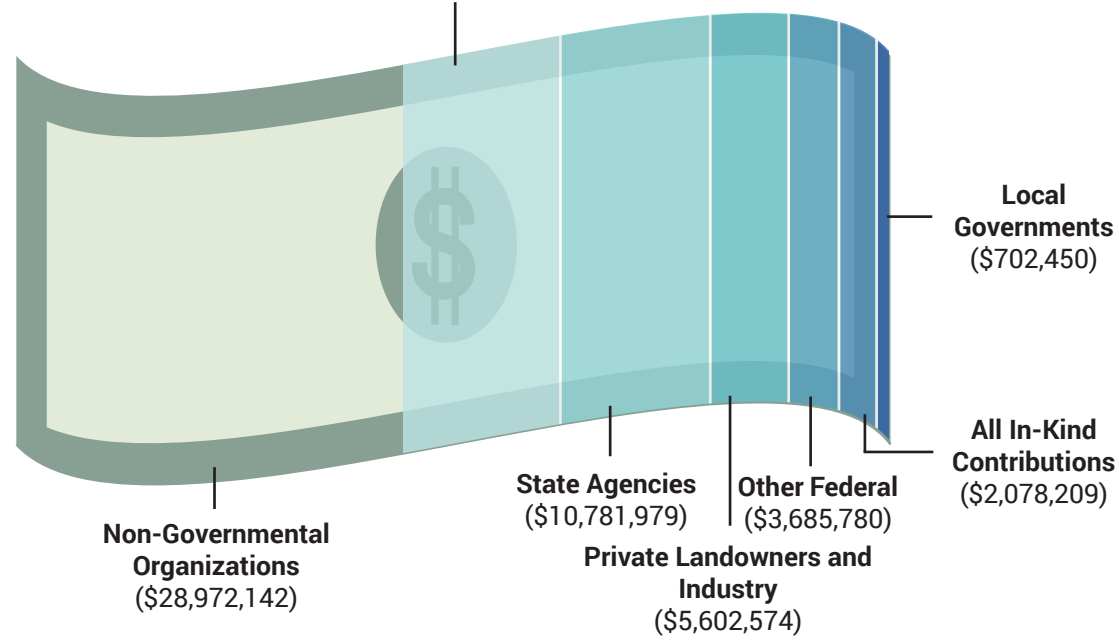
- LPDTs are the "partners living on the ground," working together to address conservation issues, actions, and priority areas.
- Members of individual teams work together to design, disseminate information, prioritize their team's projects, and find and or share funding to implement projects.
- All four 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)

### WLCI (BLM)

BLM Healthy Lands Initiative - (\$9,590,764)

BLM Wyoming State Office - (\$2,881,045)



**\$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 reseedling 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	39,485	27,400	8,535	26
Acres of invasive plant control	Acres of habitat enhancements & restoration	Acres of mechanical & controlled burn treatments in aspen	Acres of encroaching conifer reduction	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**

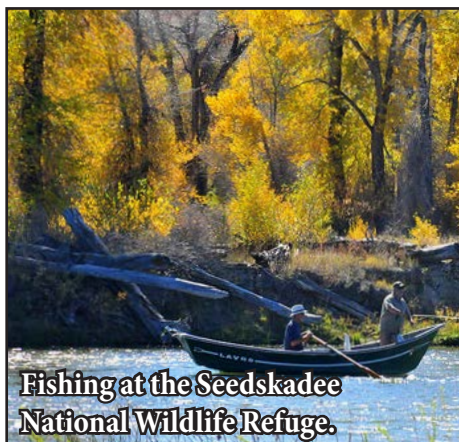
Miles of stream opened to fish passage

**6.6**

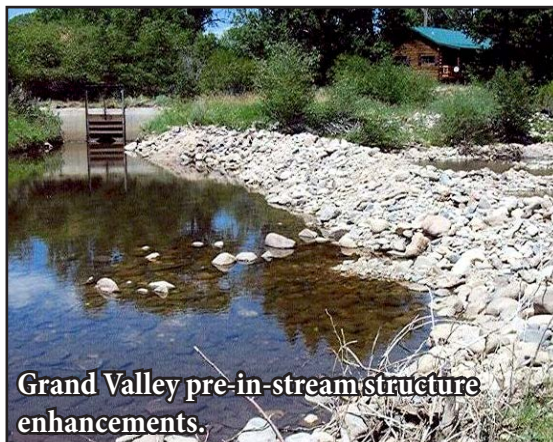
Miles on in-stream habitat restored/enhanced

**18**

Barriers to fish migration removed or modified



Fishing at the Seedskaadee National Wildlife Refuge.



Grand Valley pre-in-stream structure enhancements.



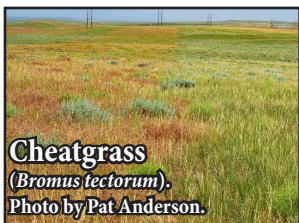
Grand Valley post-in stream structure enhancements.



# 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.



## 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 Seedskaadee 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).



Wetland enhancement and development.



Waterfowl in a wetland habitat.

## 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



Seedskaadee 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.







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







## 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  
 Seedskaadee National Wildlife Refuge  
 Seedskaadee 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.







*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*

