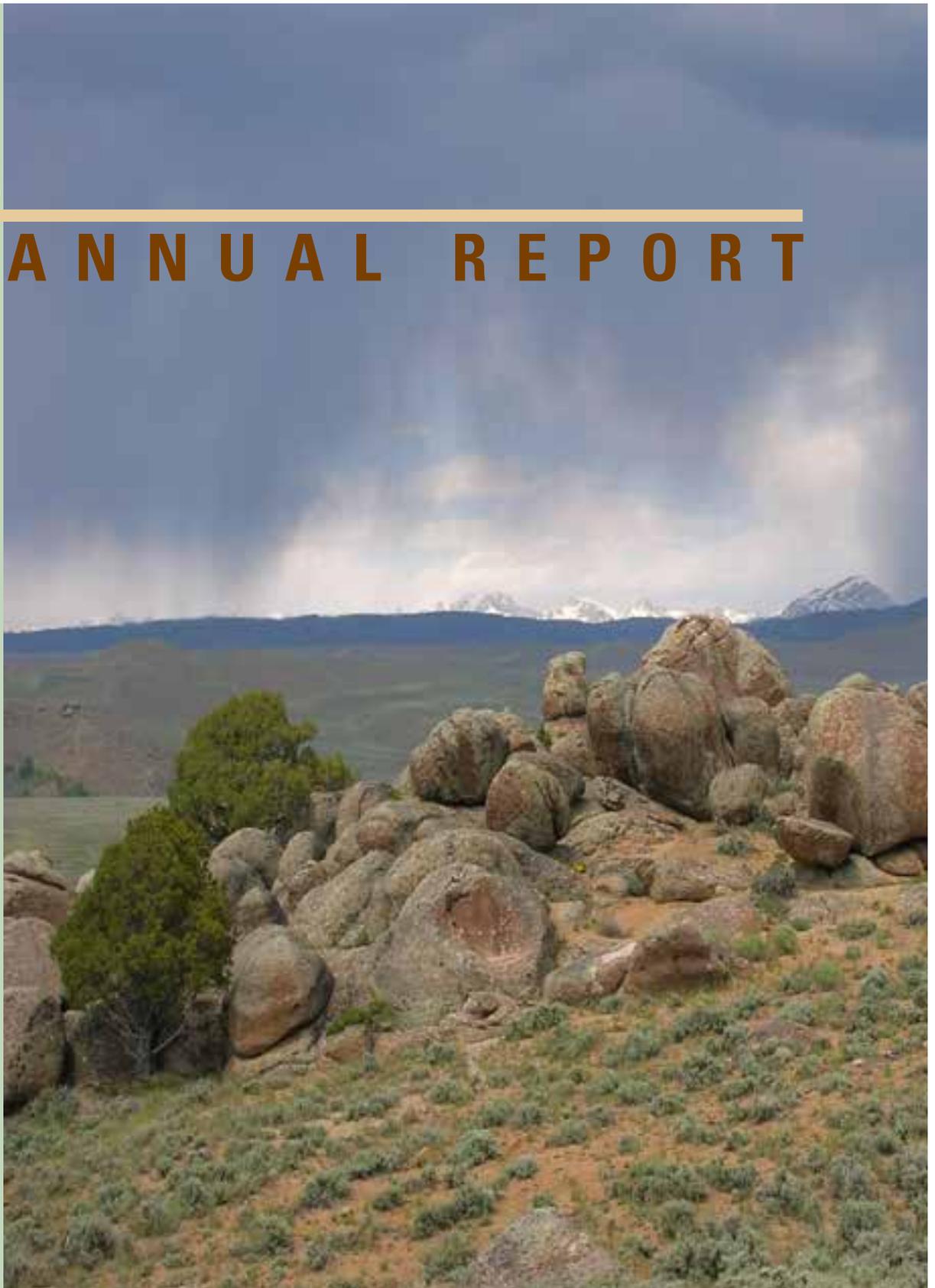


2012

# ANNUAL REPORT



**Wyoming Landscape  
Conservation Initiative**

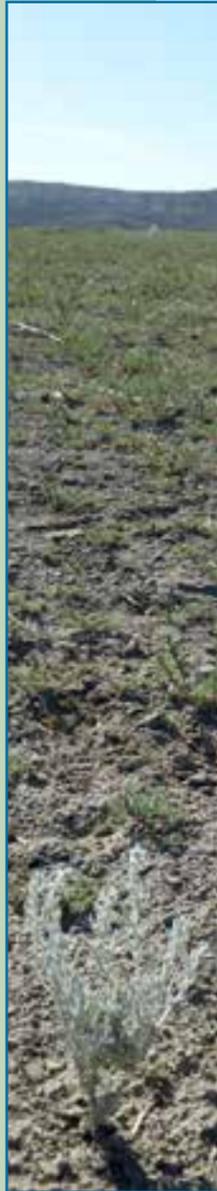


"Conserving world-class wildlife resources. Facilitating responsible development."

2012



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2012



# M I S S I O N



*The Wyoming Landscape Conservation Initiative (WLCI) is a long-term science based effort to assess and enhance aquatic and terrestrial habitats at a landscape scale in southwest Wyoming, while facilitating responsible development through local collaboration and partnerships.*

### The WLCI...

- Exchanges information, data and research findings among partners, industry and stakeholders to improve habitat conditions and long-term viability of species at a landscape scale.
- Complements existing habitat reclamation and mitigation efforts.

### WLCI Members and Cooperators...

- Conduct efficient science-based species monitoring and habitat enhancement.
- Integrate existing data with new knowledge and technologies to forecast future development of energy resources and assist in habitat conservation planning.
- Conduct habitat enhancement in all habitat types with a special focus on the sagebrush, mountain shrub, aspen, riparian and aquatic communities.
- Ensure management practices support a viable livestock industry and associated open spaces.



# A B O U T



The WLCI was established in February 2007 after discussions between the directors of the Bureau of Land Management, Wyoming, the U.S. Fish and Wildlife Service, and the Wyoming Game and Fish Department about the need for a landscape-scale approach to ensure healthy wildlife populations in areas with proposed energy development.

The WLCI program entails inventory and assessment of species and habitat to determine what habitat enhancement projects, such as vegetation treatments, are necessary. The collaborative effort represented by the WLCI is unique as it provides a means to address multiple concerns at a scale that considers all activities on the landscape, incorporates multiple needs in project implementation, and can leverage resources that might not be available for single agency projects.

Local Project Development Teams (LPDTs) identify issues that are important to the local landscape and cooperatively create projects to address identified needs for local wildlife, habitat, and other resource issues. LPDTs include biologists, range managers, conservation districts, landowners, county commissioners and interested parties, including members of the public. Four geographically based LPDTs meet quarterly:

- Carbon County
- Lincoln/Uinta Counties
- Sublette County
- Sweetwater County

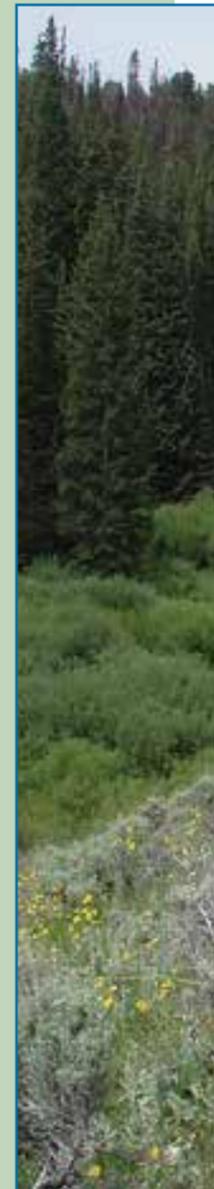
The WLCI Coordination Team works with six teams which provide support:

- Support Team
- Communication Team
- Data and Information Management Team
- Science and Technical Advisory Team
- Monitoring Team
- USGS Science Team



# M E M B E R S

Signatories on the WLCI memorandum of understanding



## Bureau of Land Management (BLM)

The BLM administers approximately 9.3 million of the WLCI's 19 million acres. It implements and monitors on-the-ground actions to enhance habitats.

## US Fish and Wildlife Service (FWS)

The FWS develops conservation measures for wildlife, plants and habitats on non-federal lands. It provides assurances for engaging in conservation and expedites environmental reviews to ensure timely project completion.

## US Forest Service (FS)

The FS administers 2.8 million acres of WLCI's 19 million acres. It implements and monitors on-the-ground actions to enhance habitats.

## US Geological Survey (USGS)

The USGS provides integrated science, methodology, research and monitoring, and advances scientific knowledge and information and provides.

## National Park Service (NPS)

The NPS provides technical assistance to the WLCI effort.

## Natural Resources Conservation Service (NRCS)

The NRCS provides technical assistance to the WLCI effort.

## Wyoming Department of Agriculture (WDA)

The WDA acts as a liaison between the WLCI and the agriculture community for project planning and provides assistance and technical support.

## Wyoming Game and Fish Department (WGFD)

The WGFD inventories and monitors over 250 wildlife species to prioritize, plan and implement on-the-ground actions to conserve habitat and improve land management.

## Southwest Wyoming County Commissions

The commissions provide local representation and direction to the WLCI.

## Southwest Wyoming Conservation Districts

The districts provide local representation to the WLCI and help with technical expertise and project development at the ground level.



2012



## FROM THE CHAIR



Dear Members, Cooperators and Friends:

The WLCI has had a busy year.

This year, the WLCI, working with partners, continued development of long-term science-based efforts to assess and enhance aquatic and terrestrial habitats through numerous coordination meetings, field trips, and work sessions.



In May, the third WLCI Science Workshop was hosted in Rock Springs. The workshop included over 70 presentations within four sessions: 1) Changing Landscapes: Development and Influence of Energy and Mineral Resources, 2) Understanding the Influence of Land Use and Energy Development on Wildlife Populations and Their Habitats, 3) Assessing Landscapes and Monitoring Change (Tools, Approaches, and Methodologies), and 4) Addressing Change through Management and Conservation Actions. Over 200 participants attended the three-day workshop.



The Coordination Team (CT) traveled to Jackson Lake Lodge in the fall of 2012 for the WLCI's Executive Committee meeting. This meeting coincided with a meeting of the Great Northern Landscape Conservation Cooperative (GNLCC) to introduce the WLCI to the GNLCC Advisory Committee.

Through 2012, the CT continued to work with Local Project Development Team members and other WLCI partners to identify conservation priorities and geographic priority areas that have ecological implications from local to landscape scales. This information is being used to develop a Conservation Action Plan (CAP). The primary purpose of the CAP is to serve as a roadmap of the WLCI conservation priorities and actions through 2018.

We are excited about what the WLCI has accomplished, especially in the last year, and looking forward to a busy and productive 2013. With 32 projects carrying over, the WLCI will continue to treat invasive plants, improve migration corridors for big game and fisheries, enhance habitat for pygmy rabbits, sage-grouse and trumpeter swans and stabilize and protect the stream and riparian areas within southwest Wyoming.

Sincerely,  
Mary Thoman  
WLCI Chair

2012



## ACCOMPLISHMENTS



This year, the Coordination Team (CT) realigned so that each member is a liaison to a Local Project Development Team (LPDT). CT members also sit on at least one other team to ensure fluid communication and increase responsiveness and knowledge of projects, project areas and partners. This meets the first goal of the operation plan.



The six teams reorganized and developed short- and long-term priorities. These teams assessed membership and management plans to ensure the needs of the WLCI are fulfilled. The committees met more frequently this year, with a kick-off following the Science Workshop in May.



Outreach materials were improved in line with the operation plan's implementation strategies for internal and external outreach. Materials included an industry outreach flyer, website updates, and posters and powerpoints to be used at various outreach opportunities, and training materials. CT members attended several meetings using these outreach and education tools, including LPDT quarterly meetings, executive committee meetings, and partnership meetings with industry, agriculture, non-profits, species committees (i.e. sage-grouse working group), and county commissions.

Completion of the Conservation Action Plan (CAP) is expected in 2014, fulfilling the operation plan's goal to incorporate adaptive management strategies. Both the CAP and Integrated Assessment are adaptive in nature and will regularly be updated and assessed to ensure they are providing the most current science available.

The WLCI funded a total of 38 projects in fiscal year 2012:

- Over 1,400 acres of prescribed burns and mechanical treatments promoted a more natural vegetative community
- Over 17 miles of wildlife friendly fencing, enclosures, or modifications
- An additional underpass installed on Wyoming Highway 789 five miles north of Baggs improved mule deer migration
- Over 27,000 acres were treated for invasive weed species
- 850 acres previously treated for invasive species assessed for treatment success
- 20,400 acres inventoried for presence/absence of invasive weed species
- 266 native tree and shrub species planted by the Uinta County Weed and Pest District on the Blacks Fork
- Two culverts were replaced in the LaBarge Creek drainage
- Native fish have an additional 27 miles of stream to complete their life cycles due to culvert replacements and sheet piling improvements

2012



**P R O J E C T S**



The WLCI Local Project Development Teams (LPDTs) find and develop projects for four areas based on counties within the WLCI area: Carbon, Sublette, Sweetwater, and Lincoln and Uinta combined. Each LPDT prioritizes its projects which are then ranked by the WLCI Coordination Team (CT). The CT then makes recommendations for funding based on the the ranked projects to the WLCI Executive Committee for final approval.



WLCI projects for 2012 include fencing, wetland creation, prescribed fires, riparian enhancements, conservation easements, weed treatments and river restoration. These projects have benefitted multiple species, including Greater Sage-Grouse, trumpeter swans, cutthroat trout, various warm water fish, migratory birds and big game in the WLCI's five focus areas: aquatic, riparian, aspen, sagebrush and mountain shrub communities.



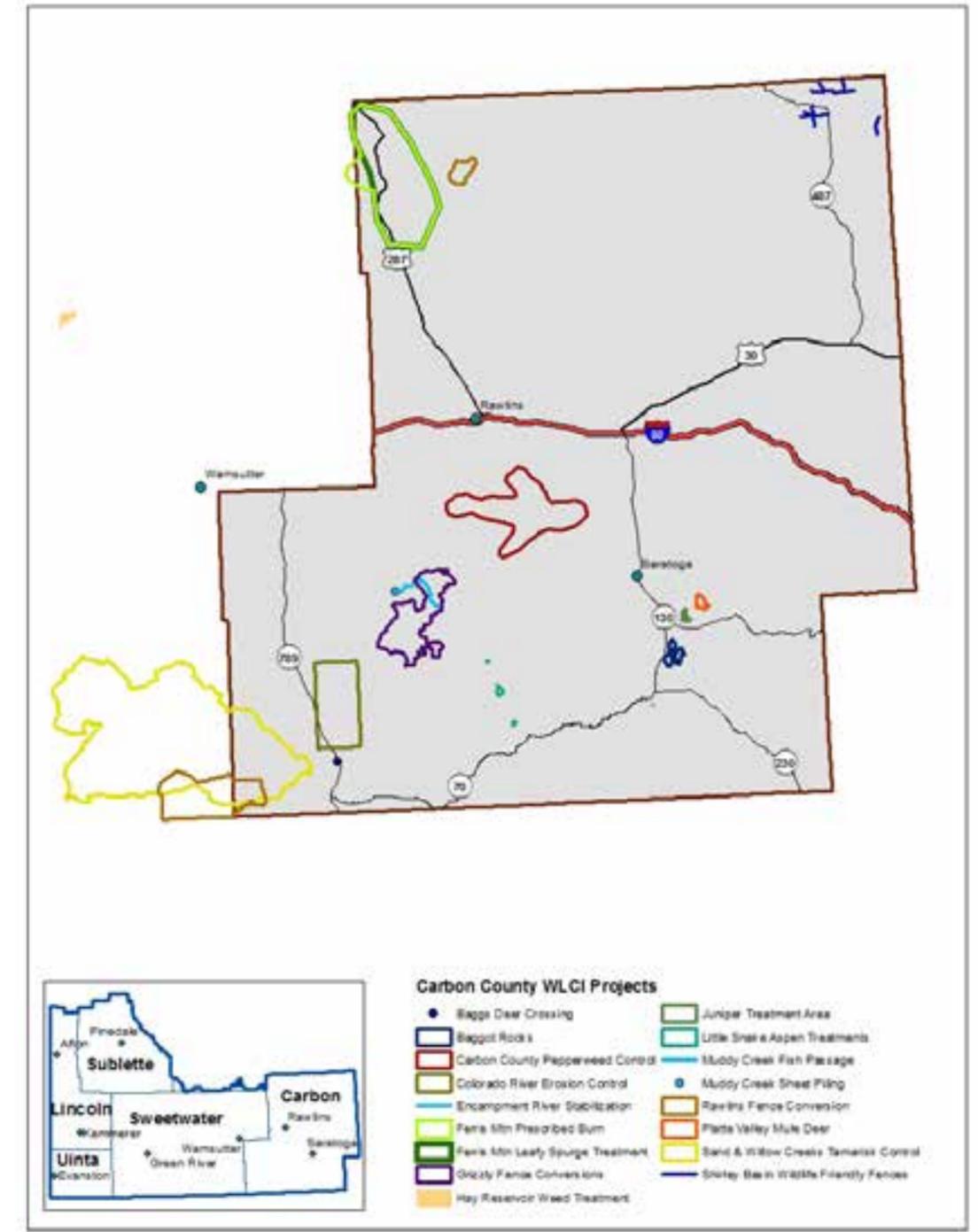
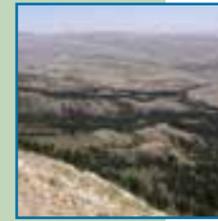
Each project title is followed by a symbol representing which focus area or areas the project benefits:

-  Aquatic
-  Riparian
-  Aspen
-  Sagebrush
-  Mountain Shrub
-  Easement
-  Special Status
-  Migration Corridor
-  Invasive

2012



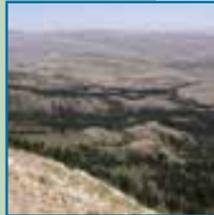
**C A R B O N**





## P R O J E C T S

### CARBON COUNTY



#### Baggs Underpass 🚧

An additional underpass and fencing were installed to allow migrating herds of mule deer to safely cross Wyoming Highway 789 and reduce the number of deer-vehicle collisions. This second underpass was installed closer to Baggs to alleviate the problem of migrating herds bypassing the first underpass and fences by migrating through town. Additionally, capture and marking methods are being used to monitor deer use of the underpasses. Fences along the migration route of this deer herd are being converted to wildlife-friendly fences to further ease pressures along their migration route.



#### Carbon County Perennial Pepperweed Partnership 🚫

The Perennial Pepperweed Partnership project involves treating two main stream branches in the Sage Creek watershed for perennial pepperweed, and some whitetop, saltcedar, leafy spurge and Russian knapweed. Chemical treatments are used to control weeds in this remote area. In 2012, 600 acres were treated; an additional 200 acres were monitored and 200 acres were inventoried. This is a multi-year project with work continuing into 2013. No new infestations were reported this year. Weed growth has slowed and weed patches were much thinner than found in the previous years. Invasive weed treatments improve the quality and quantity of forage for wildlife. To the north of this project, sagebrush improvement projects benefit Greater Sage-Grouse.



#### Ferris Mountain Leafy Spurge Treatment 🚫

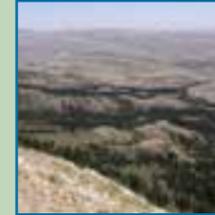
Monitoring in 2005 showed infestation of Leafy Spurge in the Ferris Mountain Wilderness Study Area (WSA) for the first time, along with a marked increase of infested acres along the fringes of the WSA. In 2012, 500 acres in this area and the adjacent hogback ridges (steeply tilted protruding rock) were treated with herbicide for leafy spurge as well as whitetop and Russian knapweed to control the invasive weeds. An additional 200 acres were monitored and 200 acres were inventoried. Work is planned for 2013. No new patches of leafy spurge were found in 2012, although whitetop seems to be increasing. There is a proposed timber enhancement project that encompasses part of this project area. Additionally, the eastern end of Ferris Mountain was burned by a wildfire during the summer of 2012.

#### Ferris Mountain Prescribed Fire 🔥🌲

This project planned fall prescribed fires on Ferris Mountain in order to remove dead, decadent, and encroaching conifers from aspen, riparian, and mountain shrub habitats. However, a summer wildfire burned nearly 9,000 acres, including a portion scheduled



## P R O J E C T S



to be treated as well as additional un-planned acreage. Approximately 1,650 acres were treated with an aerial application of Plateau herbicide in order to reduce emergence and spread of cheatgrass following the wildfire. No WLCI funds were spent on this project. The area will be re-evaluated prior to any prescribed fires and the burned area will be monitored. The fire program will assist with funding for reseeding, monitoring, and fencing. Additional herbicide applications are planned in September 2014.



#### Hay Reservoir Weed Treatment 🚫

A three-year project to treat approximately 1,200 acres for Russian knapweed, whitetop, and swainson pea invasion on public and private lands. Monitoring of previously treated areas showed the density of the weed populations is reduced and patchy as compared to thicker and larger patches the previous year. Additionally beneficial grass cover is increasing. In 2012, the final 600 acres were treated using ground applications of herbicide, treating public and private lands, and 250 acres were monitored.



#### Little Snake Aspen Conservation Initiative 🌲

This is the fifth year of a ten year project to restore up to 5,000 acres of aspen stands in the Little Snake River Basin. The project consists of removing the encroaching conifers and old aspen clones from existing stands through mechanical treatments and prescribed burns. In 2012, 621 acres were treated mechanically: 190 acres of private lands intermixed with 431 acres of BLM administered lands, in three separate parcels. Treatments have benefitted adjacent acres through increased vigor of aspen stands resulting in a two-fold increase in affected acres for a total of 1,242 improved acres.

#### Muddy Creek Sheet Piling Modifications 🚧

The BLM in cooperation with TU, WGFD, and the LSRCD modified four galvanized metal sheet piling structures that were acting as barriers to upstream fish movement. Additional rock ramp structures were placed in the stream to maintain the water table and allow for fish passage. This project is part of an ongoing effort to restore BLM and state sensitive native Colorado River Cutthroat trout to the Muddy Creek watershed. This project reconnected an additional eight miles of stream for native BLM sensitive fish species in the Muddy Creek watershed.

#### Platte Valley Mule Deer Habitat Management 🌲🐐

This project will modify fencing for mule deer migration, protect natural water sources, construct new water developments to improve livestock distribution, enhance upland habitat by increasing management flexibility, reduce juniper/conifer encroachment into riparian areas, and reduce non-native invasive weeds. In 2012, a water



P R O J E C T S



storage tank and five miles of water pipeline supporting seven new tire troughs were installed. Additionally, five miles of disturbed surface were seeded following the pipeline installation. In 2013, three miles of new pasture fence and conversion of two and a half miles of existing fence to wildlife friendly standards is planned. This project is close to the Baggott Rocks area where the WGFD and BLM have treated cheatgrass.

**Rawlins Fence Conversions** 🌿🌿🌿

Fences in the Powder Rim allotment have been converted to wildlife-friendly fences. This included converting 12 miles of 6-wire barbed fences and mesh with 2 barbed wire fences to BLM standard 4-wire fences. This completed the primary conversion of north-south fences in the Powder Rim allotment. As part of this project, a Wyoming Conservation Corp crew converted 1.1 miles of non-standard BLM fences on the north slope of Ferris Mountain (Pole Canyon allotment) to a wood post/rail top with two strands of barbed wire, and a third smooth bottom wire. Other entities in this area are working to also convert fences to improve access for migrating wildlife.



**Grizzly Wildlife Habitat Management Area Fence Conversion** 🌿🌿

This project includes the conversion of existing woven wire fences to wildlife friendly four-strand wire fences in mapped mule deer migration routes. The grant will pay for fence materials and private sector contract labor for removal of woven wire and reconstruction of wildlife friendly fences. In 2012, four and a half miles of fence was converted on the Daley Wildlife Habitat Management Area. Additional fence materials will be purchased in 2013 with additional fence conversion work to be bid upon and completed in 2013.



**Sand Creek Salt Cedar Control** 🌿🚫

The Sand Creek saltcedar control project will treat approximately 30 miles of stream bottom in the Colorado River Watershed with aerial and ground applications of herbicide to remove saltcedar (tamarisk). In 2012, 75 acres were treated, 200 acres were monitored, and 20,000 acres were inventoried. Some resprouts were found on the previously treated acres. Saltcedar was found on a third of the reservoirs that were inventoried. Complimentary projects in this area are improving sagebrush health and vigor.

**Shirley Basin Area Sage-Grouse Habitat Management** 🌿

The Shirley Basin watershed provides habitat for a variety of wildlife species including identified core areas for Greater Sage-Grouse, as well as historic sage-grouse ranges outside of core areas. Project objectives center on improving upland and riparian vegetation, wildlife habitat, and watershed health to improving nesting and



P R O J E C T S



brood-rearing habitat in the Shirley Basin area. Archeological and wildlife clearances on three miles of fence were completed in 2012. A contractor was hired and materials were ordered for work to be completed in 2013.

**Upper Colorado River Erosion Control** 🌿

The goal of this effort is to reduce erosion from roads in the Colorado River watershed by adding culverts, wing-ditches, moving a road, and other actions to improve drainage along or across roads. The current focus is on the BLM road along Muddy Creek in the Grizzly grazing allotment and the Carbon County road on either side of McKinney Creek. Planned roadwork was not accomplished in 2012 due to drought conditions, as disturbances might have created loose dirt that would end up in the creeks. However, in 2012 funding was used to purchase culverts for use in 2014, and used on re-routing the BLM Wild Horse Road to benefit wildlife, primarily mule deer migration corridors. Engineering and hydrology consultation and planning will take place in 2013; roadwork is planned for 2014 by the BLM force account crew.



**Riverside Stream Enhancement Phase II** 🌿🐟

Replace existing dam structures to fish friendly Rosgen rock structures on the North Platte and Encampment Rivers and tributaries

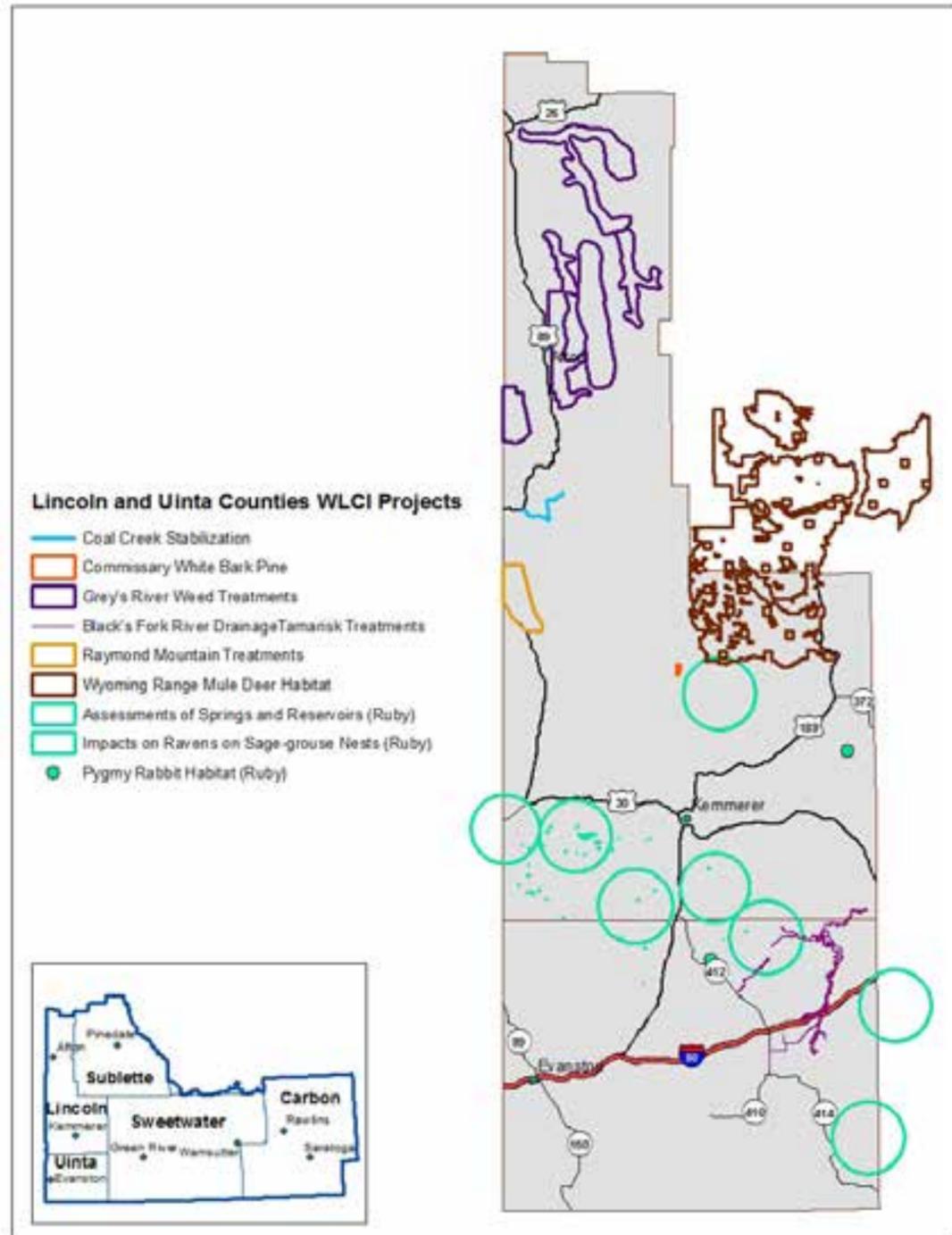


**Baggot Rocks Invasives** 🌿🚫

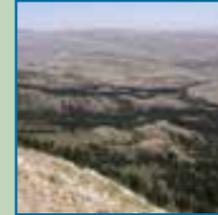
Objectives for the project include controlling the spread and prevalence of invasive plants within the winter range complex for mule deer on Baggott Rocks, maintain the area as a crucial winter range, and prevent the area from increased fire frequency and conversion to annual grassland



# LINCOLN / UINTA



# P R O J E C T S



## LINCOLN AND UINTA COUNTIES

### Commissary Ridge Whitebark Pine

To enhance Wyoming's southernmost whitebark pine stand on Commissary Ridge, an estimated 250 acres will be thinned to increase viability, production, and regeneration of whitebark pine. Removal will include all pine with mountain pine beetle infestation and competing subalpine fir within 50' of all whitebark pine that is 5" in diameter or less. In 2012, activities were delayed due to drought and extreme fire hazard.

### Raymond Mountain Treatments

Two aggressive invasive species will be removed to improve the forage base for wild-life species over a five-year period. The primary goal is to control/eradicate Dalmatian Toadflax and Dyer's Woad within the Highland Cooperative Weed Management Area. Lincoln County Weed and Pest (LCWP) treated 150 infested acres near Raymond Canyon and Border Junction. The total area influenced by this spraying was close to 2,000 acres. LCWP was also able to do a significant amount of monitoring, showing a significant decrease in infestations. This has been a highly successful program with the cooperation of the BLM, Lincoln County Weed and Pest Control District, and WLCI.

### Blacks Fork River Drainage Tamarisk Treatment

Twenty-two acres of tamarisk (salt cedar) was sprayed in the Muddy Creek, Little Muddy, Blacks Fork, Smiths Fork, Dry Creek, Levitt Creek and Cottonwood Creek drainages. Over 3,400 acres were protected. 87 miles of stream bank was surveyed. Minimal retreatment due to 85 percent mortality in the first year. First year plants were found in sand bars and the Blacks Fork. 210 seedlings, 20 1-gallon buffaloberries, 14 5-gallon cottonwoods and 12 5-gallon sandbar willows were planted along the Smiths Fork and Blacks Fork for riparian rehabilitation.

### Noxious Weed Management

This is a long term project to keep tamarisk from encroaching on stream banks, preserve existing riparian habitat and improve native vegetation capacities.

### Greys River Weed Treatments

Prevent the establishment of noxious weed species on USFS lands in the Greys River Ranger District. Prevent infestations of spotted knapweed, leafy spurge, yellow toad-flax, and Dyer's woad beyond existing perimeters along roads, trails, and adjoining lands. Eliminate existing patches or reduce weed densities so that native plant diversity is being approximated.



**P R O J E C T S**



**Ruby Pipeline Focus Group**

The Ruby Pipeline Focus Group was established to find mitigation projects for the pipeline under the direction of the WLCI.



**Impacts of Ravens on Sage-Grouse Nests**

This study compared sage-grouse nesting success and productivity in raven removal and non-removal study sites. The goal was to identify a method to mitigate adverse impacts of anthropogenic development of sage-grouse. In 2012, 180 sage-grouse were tracked using radio collars, 109 sage-grouse nests were found, data of survival rates during the breeding season were collected and a paper was submitted for review.



**Assessment of Springs and Reservoirs**

This project began in 2011. In 2012 additional springs, seeps, and reservoirs within the Ruby priority areas were assessed for their ability to provide water and habitat for livestock and wildlife. The 209 reservoirs and springs have been prioritized in the order of importance and repair needs.

**Pygmy Rabbit Habitat Occupancy**

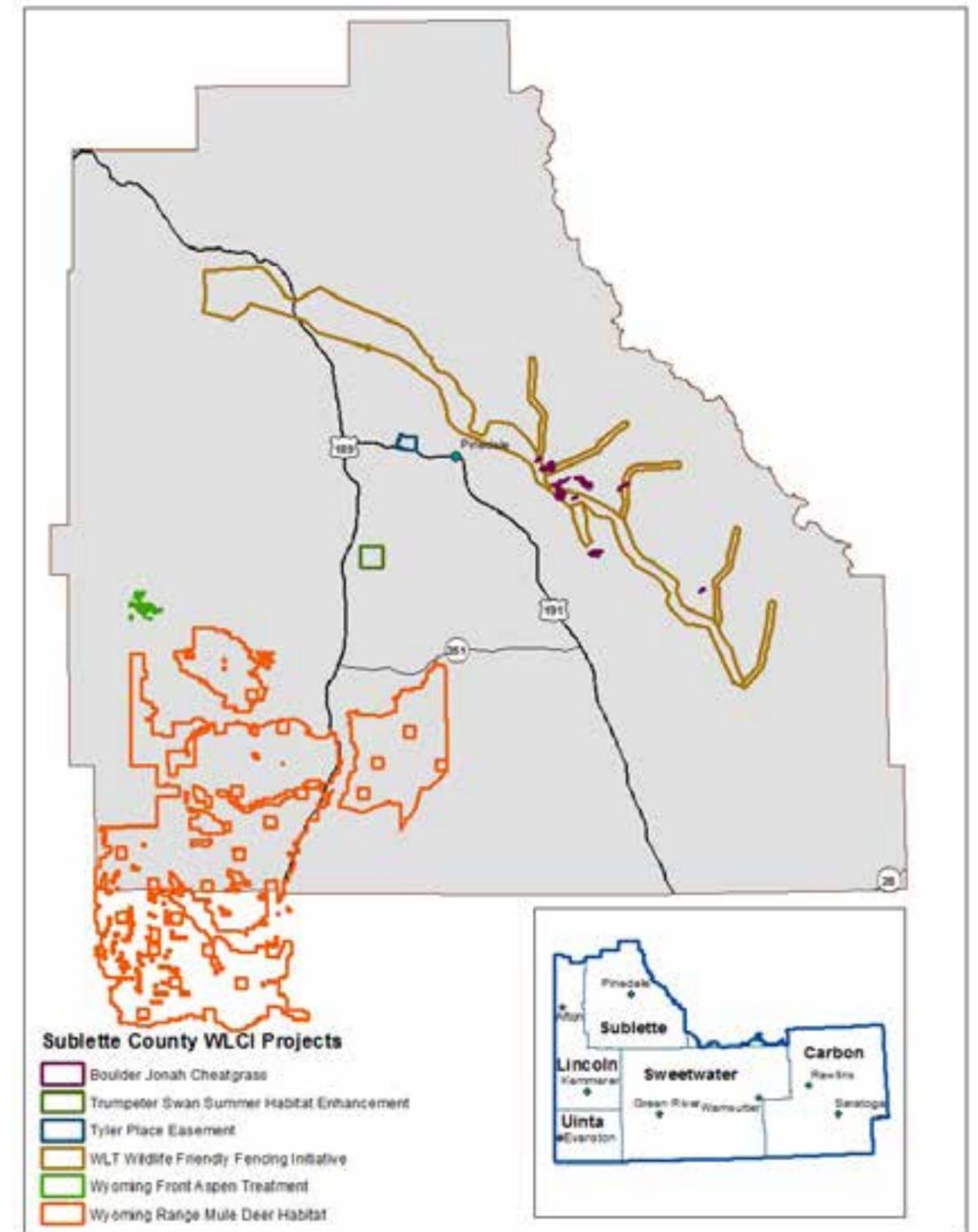
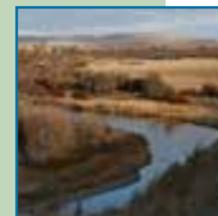
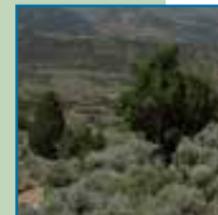
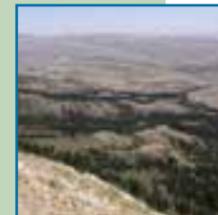
Infrared motion-activated cameras will be placed on the Pinedale Anticline near known pygmy rabbit burrow complexes to draw correlations between those levels and rabbit presence/absence. New camera equipment was purchased to provide additional camera traps. Field work is scheduled for September through November 2013 due to the increased ability to detect rabbits at their burrows in the fall months.

**Pygmy Rabbits, Habitat and Gas Field Infrastructure**

The primary goal is to spatially relate pygmy rabbit distributions with variations in habitat, including gas field infrastructure. In 2012, two occupancy surveys at 28 plots in the vicinity of the Moxa Arch gas field were completed. In 2013, an additional 70 plots will be surveyed. This data will refine a USGS pygmy rabbit habitat map/model. The tools, products and information generated will include an up-to-date habitat map (including marginal habitat and non-habitat), a map predicting current distribution, and information on levels of gas field development that are compatible with continued pygmy rabbit site occupancy. Once completed, the pygmy rabbit map may be used to identify and conserve areas of habitat when any action is planned. The map may also identify areas where habitat enhancements will result in colonization and occupancy. Information resulting from this project may be used during new gas field planning stages by helping guide the spatial location and compatible densities of well pads and roads in areas where pygmy rabbit conservation is a management priority.



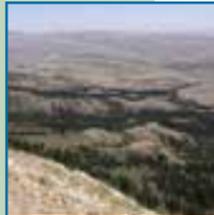
**S U B L E T T E**





## P R O J E C T S

### SUBLETTE COUNTY



#### Boulder Jonah Cheatgrass 🌿🚫

The Sublette County Weed and Pest District treated 1,140 acres of cheatgrass in 2012 and established three additional photo points to a total of five monitoring sites. Monitoring shows that herbicide applications are effective at controlling cheatgrass.



#### Lynx Habitat Assessment 🐾🏔️

This assessment of lynx habitat will help the BLM gain an understanding of pre and post treatment impacts to localized snowshoe hare (SSH) populations from aspen regeneration treatments. The information garnered from the assessment will allow for a greater understanding of when and where to thin forested areas in the Wyoming Range. Work completed included 50 permanent snowshoe hare pellets plot within the Camp Creek treatment 1-year post burn area and 50 permanent snowshoe hare pellet plots within the proposed Miller Mountain treatment area. Additional data collected at each of the above locations included stand measurements, SSH browse, horizontal cover, and photo points. In the Camp Cr treatment area the plots were split among: slashed but unburned; burned; and un-slashed unburned.



#### BLM Pinedale Field Office Noxious Weed Management 🚫

This is an annual, on-going project to survey and treat noxious weeds on BLM-lands within the Pinedale Field Office management area. In 2012, 24,035 acres were spot treated for leafy spurge, perennial pepperweed, whitetop, Dalmatian toadflax, Russian knapweed, spotted knapweed, musk thistle, Canada thistle and others.

#### Trumpeter Swan Summer Habitat Enhancement 🦢

This project includes construction and restoration of shallow water wetland ponds on private lands to enhance summer habitat for trumpeter swans and other waterfowl, waterbirds, and wildlife in the Green River Basin. At the Swift Ranch, island construction for nesting, head gate installation on a feeder to the pond, and site reclamation and cleanup work were completed in 2012. At the Sullivan Pond, project planning for construction of two ponds was completed in 2012. At Rimfire Ranch, eight pre-planted vegetation mats were installed which completes work at this site.

#### Wyoming Front Aspen Restoration Project 🐾🏔️

The project is focused on improving the ecological condition of aspen stands along the Wyoming Range. The project will treat approximately 9,000 acres of aspen through mechanical removal of conifer trees within aspen stands on BLM-land, im-



## P R O J E C T S



plemented over a 10-year period. In 2012, the Upper Billies project treated 850 acres of conifer encroached aspen with prescribed fire. All of the prescribed burn project objectives were achieved in 2012. Mechanical treatments will be used in future years.

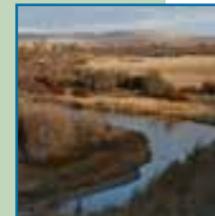
#### Wyoming Range Mule Deer Habitat Project 🐾🐾🏔️

A 300 acre spike treatment was completed in fall 2012. The next phase is undergoing the NEPA process, with inventory and monitoring occurring as part of it. An environmental assessment draft should be available in September 2013.



#### Tyler Place Easement 🏠

This project involves the purchase of a conservation easement on the ±1,268-acre "Tyler Place" owned by William (Mike) Fenn in Sublette County, Wyoming by the Wyoming Land Trust (WLT.) WLT's purchase is subject to agreement on purchase price based on a qualified appraisal and satisfactory completion of necessary due diligence.

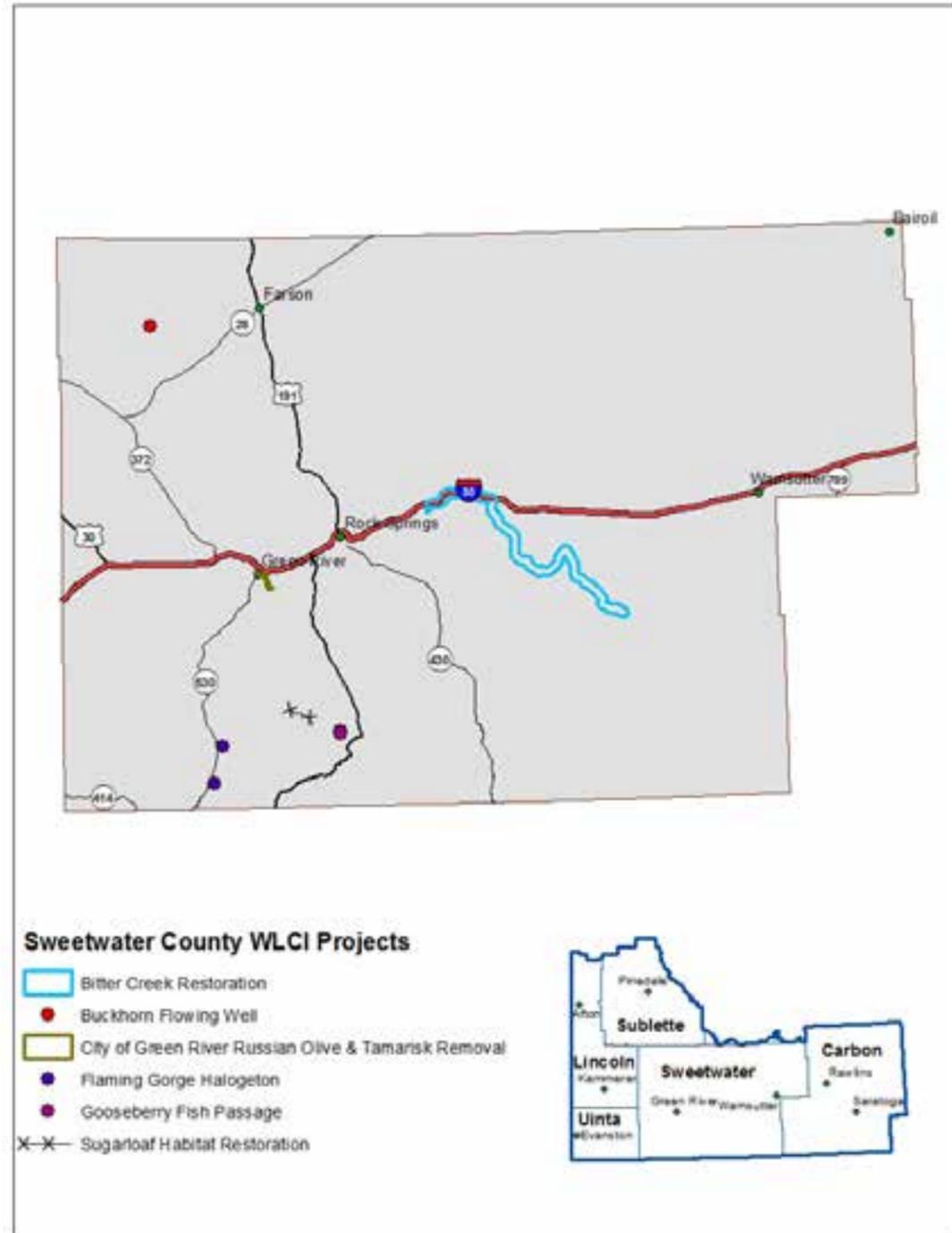


#### Wyoming Land Trust Wildlife Friendly Fence Initiative 🦌🦌🦌

Working in collaboration with state, federal, and private partners, Wyoming Land Trust (WLT) seeks funding for Phase II of its Wildlife-and Livestock-Friendly Fencing Initiative. The second phase of this five-year initiative offers cost-free wildlife- and livestock-friendly fence improvements to interested public and private landowners within a portion of a key mule deer migration route.



# SWEETWATER



# PROJECTS



## SWEETWATER COUNTY

### Aspen Effectiveness Monitoring ●

Aspen communities in the WLCI area are widely dispersed across mountains and ranges that connect the vast shrub-steppe system separating the northern and southern Rocky Mountains. The influence and response of aspen communities to change agents is inconsistent and consistently applied indicators to address change agents and to monitor effectiveness of treatments are lacking. To address this, we propose to establish ecological indicators associated with aspen communities that are sensitive to change caused by invasive species, altered wildland fire cycles, climate change, energy development and other stressors that can be applied across ecoregions. Some indicators will be used to evaluate how the ecological and hydrological settings of aspen communities are affected by different change agents. WLCI and USGS funding was used to: 1) cross date previously collected tree cores and develop establishment dates for aspen and conifer trees in the Savory and Little Mountain Project areas; 2) meet with BLM and investigators with the Wyoming Natural Diversity Database to implement common sampling protocols for aspen and cheatgrass in the Little Mountain Ecosystem; and 3) complete Global Positioning System-based mapping and effectiveness monitoring of aspen treatments in the Sierra Madre from 2008 to present.

### Bitter Creek Restoration ←→

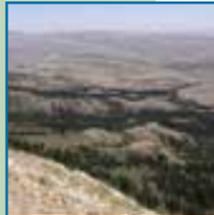
This project involves replacing a failing in-stream structure, controlling invasive plant species in the riparian corridor, and reestablishing native vegetation in the Bitter Creek watershed. The Pierotto ditch diversion off Bitter Creek is in danger of being rendered dysfunctional as a channel incision moves upstream. The Sweetwater County Conservation District's boring contractor collected core samples near the structure. These core samples will be analyzed to determine the best location and method for installation of a new structure to benefit the Pierotto Ditch.

### Buckhorn Flowing Well ●

This is a three phase project dependent upon donated materials to enclose approximately 100 acres around a flowing well and associated riparian area southwest of Farson. The well head was protected last year. This year, a post pounder was purchased for the High Desert District to be used by BLM and WLCI on this and future fencing projects. Enough material has been donated to enclose a 40 acre area and posts have been driven for the second phase. During winter 2012-13, time and weather permitting, BLM field staff will weld railing to posts until materials are depleted.



# PROJECTS



### City of Green River Russian Olive and Tamarisk Removal

A multi-phase project involving assessments, control measures, planting of native vegetation and monitoring. Russian Olive and Tamarisk (ROT) are at a density that, if left unchecked, has the potential to become a monoculture along the Green River. Phase one removed the ROT along the Green River within the city's limits and within the Targeted Focus Area (TFA) comprising 20.3 acres from Expedition Island through Scotts Bottom Nature Area along riparian areas. Phase two will plant native vegetation within the TFA in the spring of 2013.



### Flaming Gorge Halogeton

The native plant communities (i.e. Gardner saltbush) within exclosures have been displaced by halogeton. Treatments to improve habitat conditions included soil preparation and seeding techniques as well as introducing different plant materials. Both the new seed trial and transplant trial were not successful. Very little germination could be seen and many of the transplants appeared to have died, probably from late freezes followed by below average precipitation. In both seeding studies and the spaced-plant study, some grasses had germinated and/or become established, though many were dead by late summer. Due to low precipitation, very little growth occurred on established transplants and biomass yield was not collected as a determination of vigor.



### Sugarloaf Habitat Restoration

Constructed about five miles of wildlife-friendly three-strand fence with a smooth bottom wire and installed a cattle guard and four gates. The fence will protect Jane's Meadow from cattle drifting into the pasture from the bottom and grazing.

### Sweetwater County Invasive Weed Control

An on-going annual survey and treatment of weeds on private and public lands.

### Native Plant Materials Development Program

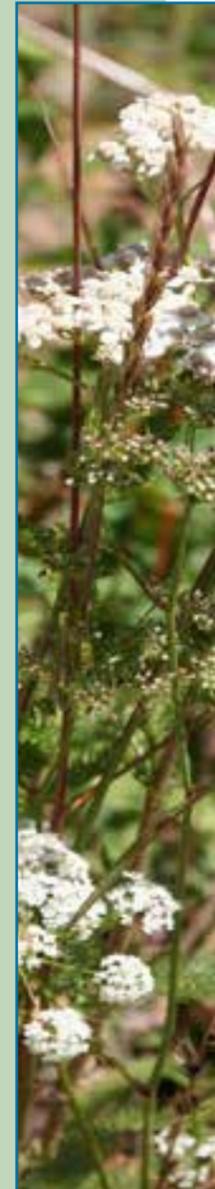
The success of a long-term program to develop and produce native plant materials for restoration efforts primarily in the desert shrub, grassland and sagebrush zones in the Green River Basin and surrounding areas would provide an adequate supply of native plant materials needed to rehabilitate and restore native plant communities. Part of this program includes seed trials.

### Gooseberry Fish Passage

Enhance the Colorado River cutthroat trout fishery within the Upper Sage Creek drainage by addressing fish passage issues on Gooseberry Creek.



# PROJECT FUNDING



### Carbon Local Project Development Team

Lead Agency	Project Name	Funding Request	Funding Allocation	Cost Share Amount
BLM	Colorado River Fishery Control	\$11,000	\$1,000	\$2,000
BLM	Hay Reservoir Weed Treatment	\$5,000	\$0,000	\$3,900
BLM	Muddy Creek Sheet Piling Modifications	\$30,000	\$0	\$267,000
BLM	Plate Valley Vole Deer Habitat Management	\$25,000	\$0,500	\$1,210,207
BLM	Kawkins Fence Conversions	\$50,000	\$0,000	\$48,300
BLM	Sage Creek Salceda Control	\$25,000	\$2,000	\$28,340
BLM	Ferns Mountain Prescribed Fire	\$50,000	\$0	\$5,000
BLM - Rawlins	Fish Passage Improvement (Belt Area)	\$80,000	\$0	\$275,000
Carbon County Weed and Pest District	Carbon County Perennial Pepperweed Partnership	\$25,000	\$25,000	\$1,070
Carbon County Weed and Pest District	Ferns Mountain 7 mile Spurge Treatment	\$21,000	\$21,000	\$2,602
Little Snake River Conservation District	Little Snake Aspen Conservation Initiative	\$75,000	\$75,000	\$2,365,500
Medicine Bow Conservation District	Strategic Basin Sagebrush Habitat Management	\$50,000	\$5,000	\$5,000
Saratoga-Environment Rawlins Conservation District	Riverside Stream Enhancement Phase II	\$20,000	\$2,000	\$225,000
Wyoming G&E	Briggs Underpass	\$37,000	\$3,000	\$1,300,000
Wyoming G&E	Grizzly WTPVA Fence Conversion	\$35,000	\$35,000	\$0
Wyoming G&E	Briggs Rocks Invasives	\$40,000	\$0	\$1,05,000



# PROJECT FUNDING

## Lincoln/Uinta Local Project Development Team

Lead Agency	Project Name	Funding Request	Funding Allocation	Cost Share Amount
BLM	Commissary Ridge White Bark Pine	\$40,000	\$41,500	\$40,000
BLM	Lincoln/Uinta County Noxious Weed Management	\$22,000	\$23,000	\$97,000
BLM	Keywood Noxious Treatments	\$27,000	\$10,000	\$97,000
Lincoln County Weed and Pest District	Black Fork Silver Chertage Fumigant Treatment	\$30,000	\$24,000	\$0
USFS	Greys River Weed Treatments	\$47,500	\$20,000	\$77,500
Wyoming DNR	Coal Creek Stabilization	\$80,000	\$75,000	\$117,800

## Sublette Local Project Development Team

Lead Agency	Project Name	Funding Request	Funding Allocation	Cost Share Amount
Sublette County Weed and Pest	Boaker Jordan Oniongrass	\$35,000	\$5,000	\$13,000
BLM	Wyoming Range Vine Deer Habitat	\$50,000	\$5,000	\$15,000
BLM	Pinedale Field Office Noxious Weed Management	\$50,000	\$1,000	\$0
BLM	Wyoming Front Aspen Treatment	\$50,000	\$0	\$65,000
Wyoming R&E	Trumpeter Swain Summit Habitat Enhancement	\$107,000	\$54,000	\$107,000
BLM	Lyons Habitat	\$15,000	\$15,000	\$15,000
Wyoming Land Trust	Tyler Pass Easement	\$75,000	\$5,000	\$1,000,000
Wyoming Land Trust	WLT Wildlife Friendly Fencing Initiative	\$100,000	\$75,000	\$554,000



# PROJECT FUNDING

## Sweetwater Local Project Development Team

Lead Agency	Project Name	Funding Request	Funding Allocation	Cost Share Amount
BLM	Buckhorn Blewing Weed	\$2,000	\$20,000	\$5,000
BLM	Sugarloaf Habitat Restoration	\$45,000	\$30,000	\$20,000
BLM	Sweetwater County Invasive Weed Control	\$21,000	\$1,000	\$0
BLM	Native Plant Materials Development Program	\$45,000	\$45,000	\$0
Meeker	Seed Trials	\$2,000	\$20,000	\$20,000
Sweetwater County Conservation District	Butter Creek Restoration	\$1,000	\$10,000	\$0
Town of Unkempt	Deeseberry Park Passage	\$25,000	\$8,000	\$112,000
USFS	Flaming Gorge Hologram	\$94,820	\$90,000	\$211,000
USFS	Aspen Pileolite Assessment	\$31,000	\$30,000	\$0
Wyoming DNR	City of Green River Reservoir Inflow and Fumigant Removal	\$3,000	\$25,000	\$225,000



## Ruby Focus Group - Funded and Potentially Funded Projects

Partners	Project Name	Funding Allocation
Sage-grouse working groups, Animal Damage Management, State Industry	Sage Impacts on Sage-grouse	\$37,000
BLM Landowners, Farm Rees, WLT/D	Map, Monitor and Inventory Springs, Seep and Reservoirs	\$30,000
USFS, BLM, WLT/D	Agony Rabbit Habitat Occupancy	\$75,000
USFS, BLM, WLT/D	Integrating Pygmy Rabbits in Old Field Infrastructure	\$75,000

## Leveraged Funding - \$5 Average Leverage for Fiscal Year 2012

Leverage per County	County	Funding Request	Funding Allocation	Cost Share Amount
\$3	Lincoln	\$572,000	\$430,500	\$1,322,145
\$4	Lincoln/Uinta	\$252,000	\$122,500	\$437,380
\$10	Sublette	\$482,000	\$290,500	\$2,460,000
\$2	Sweetwater	\$341,520	\$249,000	\$935,680



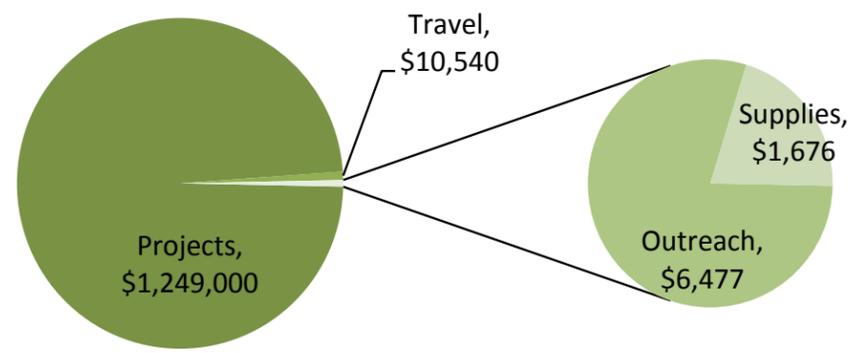
# PROJECT FUNDING



**\$6,599,673 - Total WLCI Expenditures - Including Cost Share**



**\$1,267,693 - Total BLM WLCI Budget**



# PROJECT COOPERATORS



- Boy Scouts of America
- BP
- Bridger Coal
- City of Green River
- Devon Energy
- Ducks Unlimited
- Encana
- Fremont Weed and Pest District
- Great Northern Landscape Conservation Cooperative
- Knight Oil and Tool
- Lincoln County Weed and Pest District
- The Nature Conservancy
- Private Landowners
- Questar
- Rocky Mountain Elk Foundation
- Sublette County Weed and Pest District
- Sweetwater County Weed and Pest District
- Teton Science School
- Trout Unlimited
- Uinta County Weed and Pest District
- Uinta Development Company
- University of Wyoming
- US Army Corps of Engineers
- Utah State University
- Wyoming Community Foundation
- Wyoming Natural Diversity Database
- Wyoming Wildlife and Natural Resource Trust



# T E A M S

## Executive Committee (EC)

*Provides guidance and decision-making authority*

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Randy Updike, USGS	updike@usgs.gov

## Coordination Team (CT)

*Coordinates all WLCI activities and manages daily and fiscal operations*

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## Communications Team (CommT)

*Conducts outreach about the WLCI and its work*

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## Science and Technical Advisory Team (STAT)

*Provides science and technical advice and support to WLCI teams and committees*

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# T E A M S

## Data and Information Management Team (DIMT)

*Shares WLCI data and information and pulls together resources and tools that assist with information management and data analysis*

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## Monitoring Team (MT)

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## Support Team (ST)

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# T E A M S

## USGS Science Team

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Stephen Germaine  
Sarah Hawkins  
Collin Homer  
Matthew Kauffman  
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## Ruby Pipeline Focus Group

*Focuses on conservation actions associated with the Ruby Mitigation Fund*

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Ted Huss, Anadarko  
Erik Norelius, BLM  
Robert Pernal, Lincoln CD  
Shaun Sims, Uinta CD  
Basia Trout, BLM  
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Mark Zornes, WGFD

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# SCIENCE SUMMARY



During 2012, the U.S. Geological Survey (USGS) science and technical assistance activities continued to focus on addressing management needs identified by WLCI partners; providing assistance with identifying, implementing, and tracking habitat projects in priority areas; conducting research and effectiveness monitoring to reveal patterns in and mechanisms behind species and habitat responses to land-use changes, habitat projects, and management actions.

In 2012, there were 33 ongoing, completed, or new projects conducted under the five major multi-disciplinary science and technical-assistance activities: (1) Baseline Synthesis, (2) Targeted Monitoring and Research, (3) Data and Information Management, (4) Integration and Coordination, and (5) Decision making and Evaluation.

Three new projects include the mapping of mixed mountain shrub communities, a retrospective assessment of groundwater occurrence and existing water wells in the Normally Pressured Lance Formation, and the use of remote sensing approaches to conduct a landscape assessment of aspen and semi-arid woodlands.

Five projects were completed during 2012. These included the Western Energy Citation Clearinghouse, a study designed to assess wildlife vulnerability to energy development, regional bank-full curves, salinity patterns in Muddy Creek (Carbon County), and an analysis of periphyton and bed sediments on the New Fork River (Sublette County).

The USGS continues to address WLCI partner technical-assistance needs, including development of Web tools and associated systems for storing, managing, displaying, downloading, and analyzing data, products, and other information.”

2012



# LEARN MORE



**Ducks Unlimited**

[www.ducks.org](http://www.ducks.org)

**Fish and Wildlife Service Partners Program**

[www.fws.gov/pacific/ecoservices/habcon/partners/](http://www.fws.gov/pacific/ecoservices/habcon/partners/)

**Great Northern Landscape Conservation Cooperative**

[greatnorthernlcc.org](http://greatnorthernlcc.org)

**Greater Yellowstone Coalition**

[www.greateryellowstone.org](http://www.greateryellowstone.org)

**Jonah Interagency Project Office**

[www.wy.blm.gov/jio-papo/jio/index.htm](http://www.wy.blm.gov/jio-papo/jio/index.htm)

**The Nature Conservancy**

[www.nature.org](http://www.nature.org)

**Pinedale Anticline Project Office**

[www.wy.blm.gov/jio-papo/papo/](http://www.wy.blm.gov/jio-papo/papo/)

**Rocky Mountain Elk Foundation**

[www.rmef.org](http://www.rmef.org)

**Trout Unlimited**

[www.tu.org](http://www.tu.org)

**Wyoming Natural Diversity Database**

[www.uwyo.edu/wyndd](http://www.uwyo.edu/wyndd)

**Wyoming Wildlife and Natural Resource Trust**

[wwnrt.wyo.gov](http://wwnrt.wyo.gov)