



U.S. Department of the Interior
Bureau of Land Management

Wyoming

Jonah Interagency Office

Monitoring and Mitigation Project Summary



Contents

Introduction.....	1
Air Quality.....	2
Cultural Resources.....	8
Livestock.....	10
Recreation.....	14
Wildlife Projects.....	17



Jonah Interagency Office Monitoring and Mitigation Projects

Introduction

The Jonah Natural Gas Field is an area of west central Wyoming, south of the town of Pinedale, in the Upper Green River Basin. Jonah's 30,000 acres of rolling sagebrush are 94 percent federally owned. The area has one of the richest concentrations of natural gas in the United States, estimated at more than 14 trillion cubic feet.

The Jonah Interagency Mitigation and Reclamation Office (JIO) was established by the Jonah Infill Development Project (JIDP) Record of Decision in March 2006 with responsibility for on-site monitoring, off-site mitigation, and adaptive management recommendations for the Jonah Field as development proceeds.

The level of development is expected to cause impacts to some resources (especially wildlife) that cannot be adequately mitigated on-site during field development. Therefore, Operators in the JIDP contributed \$24.5 million in mitigation funds to develop projects whose focus is to enhance habitat for wildlife usage and protection.

Additionally, air quality mitigation for the JIDP was jointly developed by the BLM, EPA, WDEQ, USFS and NPS which created mitigation requirements based on results of the supplemental air quality report completed in the summer of 2005. Mitigation requirements included a reduction of projected *visibility impacts* to nearby Class I airsheds by 80 percent from the worst-case emissions scenario.

Funds for the JIDP mitigation and monitoring projects are held in the Wyoming Wildlife and Natural Resources Trust account and are administered by the JIO.



Air Quality

DEQ Ozone Study (2009)

The WDEQ conducted an intensive study of wintertime ozone formation in the Upper Green River Basin. Data from the study was used to develop a conceptual model of ozone formation in the Upper Green River Basin. The conceptual model was used along with the field data to develop accurate meteorological and air quality numerical simulations of high ozone events. Both the conceptual and numerical models acquired data that will be used to develop effective air quality management strategies needed to adequately protect public health and the environment in accordance with applicable State and Federal laws.

Additional information regarding the study is available at <http://deq.state.wy.us/aqd/Ozone%20Main.asp>

JIO Funded: \$442,000

Status: Completed



“What Can I Do?” Community Outreach Campaign (2009)

The “What Can I Do?” campaign encouraged community involvement and environmental education to create opportunities to lessen air pollution in the Upper Green River Basin. The campaign included components such as advertising for local recycling initiatives, like “Don’t Burn Trash” (reduces particulate matter); advertising to explain “What are VOCs?”; campaign to encourage people to “Don’t Top-Off” when fueling (reduces VOCs); promotions for carpooling; driving tips, idling time (reduces particulate matter, NO₂, VOC, SO₂, nitrates and



sulfates); promoting the community air quality projects funded by Jonah off-site mitigation funds including the wood stove change-out program, environmental book donations and muffler change-outs.

JIO Funded: \$8,293

Status: Completed

Environmental Campaign
Sponsored by: Pinedale, Department of Environmental Quality and the Jonah Interagency Office

What Can I Do???

"Howdy neighbor, whatcha got cookin' over there?"
"Well, that's my burning milk jugs and toilet paper that you're smellin'!"

Did you know that there are alternatives to burning your trash?

"Well, I've always burned my trash!"

Maybe so, but there are many more plastics in today's trash, and burning plastics is not so great for the air we breathe.

"Well, it's cheaper!"

Is it really cheaper when you consider the health of our children and their future? Probably not.

B-N-C Trash Service, Inc. and M&M Transfer provide residential and commercial trash pick-up...

<p>B-N-C Trash Service Inc. offers commercial and residential trash pick-up in</p> <ul style="list-style-type: none">• Pinedale• Ehman Lane• Cora• Forty Rod Road• Green River Ranches• Daniel• Pole Creek• Big Country Ranches• High Meadow Ranches. <p>They have been servicing the Pinedale Area for ten years AND they know the business!</p> <p>They even work all holidays! Call them at (307) 367-4122!!!</p>	<p>M&M Transfer offers commercial and residential trash pick-up</p> <p>Call them at (307) 367 2767!!!</p> 
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Information from an EPA study showed that smoke from burning trash in a barrel contains **particulate matter, carbon monoxide, hydrogen chloride, hydrogen cyanide, benzene, styrene, formaldehyde, arsenic, lead, chromium, benzo(a)pyrene, dioxins, furans and PCBs.**

Although substances such as particulate matter, carbon monoxide and formaldehyde can cause immediate health effects with enough exposure, some chemicals such as dioxin can build up in foods and in your body. Some of these chemicals can remain in the environment for a long time and can remain on your property (for example, soil outside and dust inside your home).

Please consider the alternatives before burning your trash!

Environmental Book Donation for Sublette County Libraries (2009)

Each of the six public libraries in Sublette County (Sublette County School District #1, Big Piney School District, two county day care centers, and Pinedale and Big Piney Libraries) received funding to purchase materials, including books or other media determined by each director to improve the libraries' collection of information relevant to natural resources and environmental health and protection.



Approximately 100 books, 15 DVDs, and other media were purchased.

JIO Funded: \$8,000

Status: Completed

Environmental Campaign
Sponsored by: Wyoming Department of Environmental Quality and the Jonah Interagency Office

What Can I Do???

BE INFORMED!!!

A Few of the New Books at the Sublette County Library in Pinedale and Big Piney:

- After Earth: Living on a Different Planet*
- American Environmental Leaders: from Colonial Times to the Present*
- Childhood and Nature*
- Over the Rivers, an Aerial View of Geology*
- Over the Mountains, an Aerial View of Geology*
- Life in the Cold: an Introduction to Winter Ecology*
- Ecological Intelligence: How Knowing the Hidden Impacts of What We Buy Can Change Everything*
- Good Earth Art: Environmental Art for Kids*
- Global Casino: Introduction to Environmental Issues*
- The Thoreau You Don't Know: What the Prophet of Environmentalism Really Meant*
- What is Environmental History?*
- Sinister Sludge*
- Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder*
- Climate Change: Picturing the Science*
- True Green Home: 100 Inspirational Ideas for Creating a Green Environment at Home*
- Winter World: the Ingenuity of Animal Survival*

New DVD Documentaries at the Sublette County Library

- Blue Planet, Seas of Life*
- How the Earth Was Made*
- Living Rock: Introduction to Earth's Geology*

Wood-Stove Change-Out Program (2009, 2010, 2011, & 2013)

The Wood Stove Change-out Program provided an opportunity for Sublette County citizens to replace their older, non-certified wood stoves for newer, less polluting EPA-certified stoves. Any individual, business or public or private organization was allowed to register to win a certificate which would provide up to \$3,500 towards the purchase and installation of an EPA-certified wood stove to replace an existing wood stove or to replace an existing wood stove with a natural gas stove. Certificates were awarded in a raffle.

Jonah Interagency Office



A total of 191 EPA-certified stoves have been installed and approximately 12 tons per year of pollution has been reduced.

2009

JIO Funded: \$149,687

Status: Completed

2010

JIO Funded: \$105,485

Status: Completed

2011

JIO Funded: \$131,020

Status: Completed

2013

JIO Funded: \$72,000

Status: Completed



Diesel Emission Reduction Strategies (2010)

This project provided an incentive-based option for contractors to reduce diesel emissions through retrofits, repowers, preventive maintenance programs, employee training, and idle reduction practices.

JIO Funded: \$107,411

Status: Completed

Partner: WDEQ

Non-Road Equipment Muffler Change-Out (2010)

The State of Wyoming DEQ successfully executed a project to provide emissions control solutions for non-road construction equipment providing services to the natural gas fields in Sublette County, WY, with the generous assistance of Environmental Protection Agency's Diesel Emissions Reduction Act grant.



This project achieved significant reductions in diesel emissions reducing 423 tons of nitrogen oxides, 48 tons of particulate matter, 47 tons of hydrocarbons, and 226 tons of carbon monoxide pollution reduced. Working with 11 grant recipients, 30 pieces of equipment were identified, totaling 36 eligible engines.

Contributions by the EPA offset costs while providing solutions such as engine retrofits including engine upgrades and engine repowers. The State of Wyoming DEQ administered and provided the DERA funds to the various recipients in order for them to install the emissions control solutions to the equipment.

A total of 59 vouchers worth \$2,500 have been given to owners of eligible non-road equipment (heavy machinery) for the purchase and installation of diesel oxidation catalysts to reduce emissions. Participating companies include TEPPCO, Noble Construction, M&N Equipment, Anticline Disposal, KSI, Randy R. Pitt Construction, FCC, Teletractors and WYDOT.

JIO Funded: \$135,595

Status: Completed

Partners/Cooperators: EPA, WDEQ, BLM

American Recovery and Reinvestment Act (ARRA) Diesel Emissions Reduction Act (DERA) (2010)

This project reduced emissions through retrofits, repowers, preventive maintenance programs, employee training, and idle reduction practices to reduce diesel particulates, hydrocarbons, and carbon monoxide emission.

JIO Funded: \$225,000

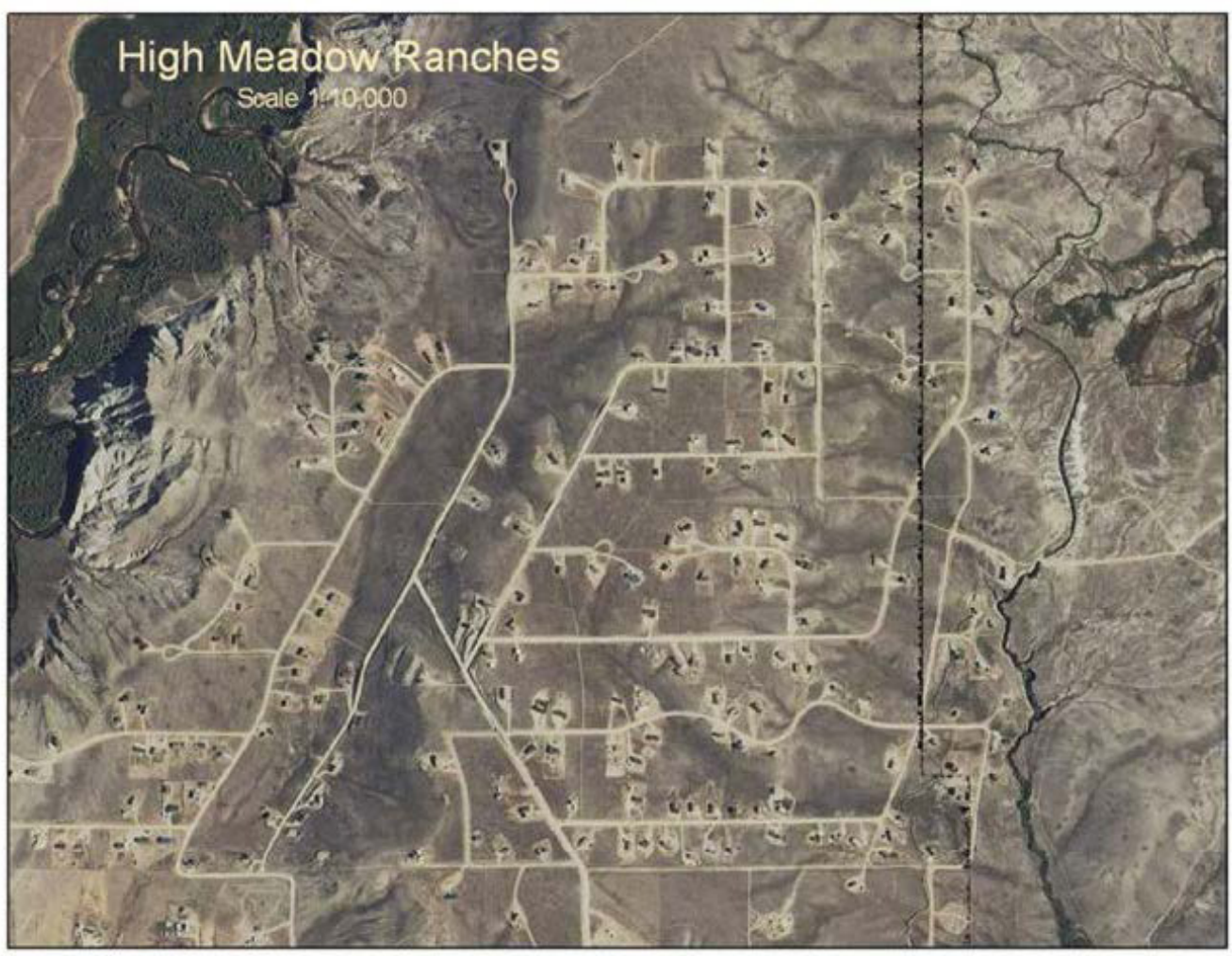
Status: Completed

High Meadow Ranch Dust Suppression (2010)

There are 382 homes and 807 lots in the High Meadow Ranch Subdivision. A Wyoming Department of Transportation (WYDOT) road count measured 1000 cars on the roads/day in 2009. This project involved applying road base and magnesium chloride to 7.2 miles of highly traveled roads in Sublette County's most densely populated subdivision. Dust contributes to impaired visibility and dust suppression is identified as an operator best management practice in the Jonah Record of Decision (ROD). Dust suppression directly supports an air quality off-site mitigation goal to lessen adverse impact from emission.

JIO Funded: \$323,856

Status: Completed





Cultural Resources

Wardell Buffalo Trap (2007)

The purpose of the project was to establish a drainage system that would protect the Wardell Buffalo Trap site, an important archaeological site. Erosion was causing significant impact to the site, compromising the stability of paleontological and anthropological artifacts. The project will stabilize the drainage system and provide additional protection for in situ artifacts, and also provide educational opportunities to the public.

JIO Funded: \$40,000

Status: Completed

Partners/Cooperators: University of Wyoming, National Park Service, BLM

Before



After





Museum of the Mountain Man Educational Prehistoric/Historic Rotating Artifact Display and Creation of Traveling Exhibit (2008)

This project was to educate the public about prehistoric and/or historic artifacts found in the Jonah Field, and to display discovered artifacts in a user friendly environment.

JIO Funded: \$50,000

Status: Completed

Partners/Cooperators: Museum of the Mountain Man, BLM



Trapper’s Point Overlook (2017) Public education project to replace and add interpretive signs highlighting three important cultural resources that are all individually listed on the National Register of Historic Places: Green River Rendezvous Grounds (mountain man era), Green River Drift (ranching heritage), and Trapper’s Point Archeological Site (pronghorn history).

JIO Funded: \$5,000

Total project cost: \$34,250

Status: Completed

Partners/Cooperators: Sublette County Historical Society, Underwood Family Foundation, Sublette County Historic Preservation Board, Pinedale Travel & Tourism, Pinedale Chamber of Commerce, Wyoming State Historic Preservation Office, Upper Green River Cattle Association, Wyoming Department of Transportation, Wyoming Archeological Society (Upper Green River Basin Chapter), BLM





Livestock

Sand Draw Water Wells (2006)

This project consisted of the installation of a water well that was outfitted with a solar pumping system to provide drinking water facilities for livestock and wildlife.

JIO Funded: \$8,331

Status: Completed

Stud Horse Butte Water Well (2007)

A generator was purchased for Stud Horse Butte Water Well in response to livestock mitigation for the Jonah Field.

JIO Funded: \$3,000

Status: Completed

Boundary/Sublette Allotment Project (2007)

This project provided wildlife and livestock water supply with the installation of two water wells, along with upgrading two existing water wells south of the Jonah Field. The project also repaired and extended wildlife friendly fencing between two allotments to reduce livestock drift from the Jonah Field. The project met the JIO wildlife mitigation goal by improving habitat outside of the Jonah Field, and the JIO livestock mitigation goal by relocating livestock away from the Jonah Field.

JIO Funded: \$253,603

Status: Completed

Partners/Cooperators: Grazing permittees, BLM





BOUNDARY-SUBLETTE ALLOTMENT PROJECT



Chalk Butte Habitat Improvement (2007)

This project consists of drilling a water well and installation of a solar powered pump. The system provides additional water for livestock and will assist in livestock distribution to improve overall range condition. In addition, an overflow area will provide a green zone which will benefit many species of wildlife.

JIO Funded: \$70,200
Status: Completed





Don Rogers Livestock Mitigation Project (2008-2012) Livestock was temporarily relocated from grazing lands within the Jonah Field to another location for a period of five years. This project requested livestock mitigation funding to pay for Animal Units Months (AUMs) in an alternative pasture. Temporary relocation eliminated livestock losses due to the intensive development of the field. Not only did this project alleviate conflicts between livestock grazing and gas development in the Jonah Field, it assisted with reclamation objectives by allowing sites an undisturbed two year growing season prior to livestock grazing.

JIO Funded: \$67,500

Status: Completed

Partners/Cooperators: Don Rogers - Grazing permittee



Rendezvous Ranches Livestock Mitigation Project (2008-2012) Rendezvous Ranches is a Sand Draw permittee directly affected by much of the development in the area. The permittee temporarily relocated livestock grazing from the Jonah Field to another location for a period of five years. This project requested livestock mitigation funding to pay for Animal Unit Months (AUMs) in an alternative pasture. Temporary relocation eliminated livestock losses due to the intensive development of the field. Not only did this project alleviate the conflicts between livestock grazing and gas development in the Jonah Field, it helped achieve reclamation objectives by allowing sites a two year undisturbed growing season prior to livestock grazing.

JIO Funded: \$335,747

Status: Completed

Partners/Cooperators: Rendezvous Ranch - Grazing permittee

Link Spring (2018) This Project will be to develop a spring in an aspen patch and gravity flow the water to a trough out in sagebrush flat. This will increase the dependability of water in the pasture to ensure proper livestock management, and provide protection to the spring source.

JIO Funded: \$10,957

Status: Completed

Partners/Cooperators: NRCS, Wyoming Water Development Commission, Sublette County Conservation District



Muddy Spring (2018) This Project will be to develop an existing spring and gravity flow the water through a pipeline to a 4 troughs. This will increase the dependability of water in the pasture to ensure proper livestock management in 3 separate pastures, and provide protection to the spring source.

JIO Funded: \$15,960

Status: Completed

Partners/Cooperators: NRCS, Wyoming Sater Development Commission, Sublette County Conservation District





Recreation

Boulder Lake North Campground Improvement (2011)

This project expanded a wildlife-friendly fence around the North Boulder Lake Campground to include the Boulder Lake shoreline from the campground to the adjacent allotment boundary. Motorized access to the shoreline has been blocked with boulder placement to protect sensitive riparian habitat. An interpretive kiosk at the campground was installed to provide information on the cultural and historic significance of the site. In addition, a water well was drilled and installed in the north portion of the Boulder Lake Common Allotment to provide an alternative water source to livestock, thus replacing access to the lake and preventing shoreline degradation.

JIO Funded: \$100,636

Status: Completed

Partners/Cooperators: BLM, Grazing permittees



New Fork, East Fork Rivers Confluence Boat Ramp and River Access (2011)

This project modified and upgraded the existing boat ramp access area. The project included improving the access road, boat ramp and parking area, and installing a restroom, additional signage and an interpretive kiosk.

JIO Funded: \$30,953

Status: Completed

Partners/Cooperators: Sublette County, Wyoming Game & Fish Department, BLM



New Fork River Restoration (2011)

The intent of this project was to enhance recreation opportunities in the JIO mitigation area by actively restoring and stabilizing 1.75 miles of degraded stream reaches of the New Fork River on private and state lands.

JIO Funded: \$60,000

Project Status: Completed

Partners/Cooperators: Private landowners, Intermountain Aquatics, Wyoming Game and Fish Department, and Trout Unlimited





New Fork River Fisheries Habitat & Gas Wells Boat Ramp (2015)

This project consisted of survey of streambank damage caused by erosion and a design for streambank repair. The streambank restoration along the New Fork River will benefit fisheries and general recreation.

JIO Funded: \$5,000

Status: Completed

Partners/Cooperators: Private landowners, Wyoming Game and Fish Department, and Trout Unlimited





Wildlife Projects

Arambel (Juel) Reservoir Habitat Improvement (2006)

This project consisted of treatment of 5-acre test plots using a Lawson Aerator. Also snow fence was constructed to add moisture for increased reclamation success. Other activities included testing of weed control methods, and repair of the dam on Juel Reservoir. Two water wells were developed, and a protective enclosure was built around Sublette Springs to improve the adjacent riparian area.

JIO Funded: \$498,842

Status: Completed



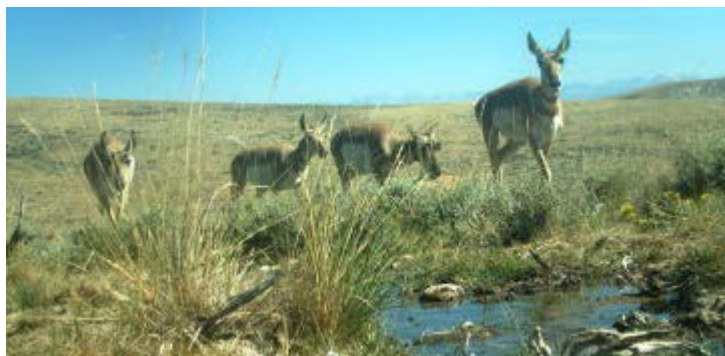
Square Top Water Wells (2006)

This project included improving three existing watering facilities in the Square Top Allotment. An overflow at each location created a pond or green-up zone that was fenced with wildlife friendly fencing. The watering facilities provide an essential supply to wildlife and livestock and help to improve livestock grazing distribution across the allotment. Project met JIO goals by improving or enhancing wildlife habitat.

JIO Funded: \$73,945

Status: Completed

Partners/Cooperators: Square Top Grazing Association, BLM





Cottonwood Ranches Bench Corral Project I (2007)

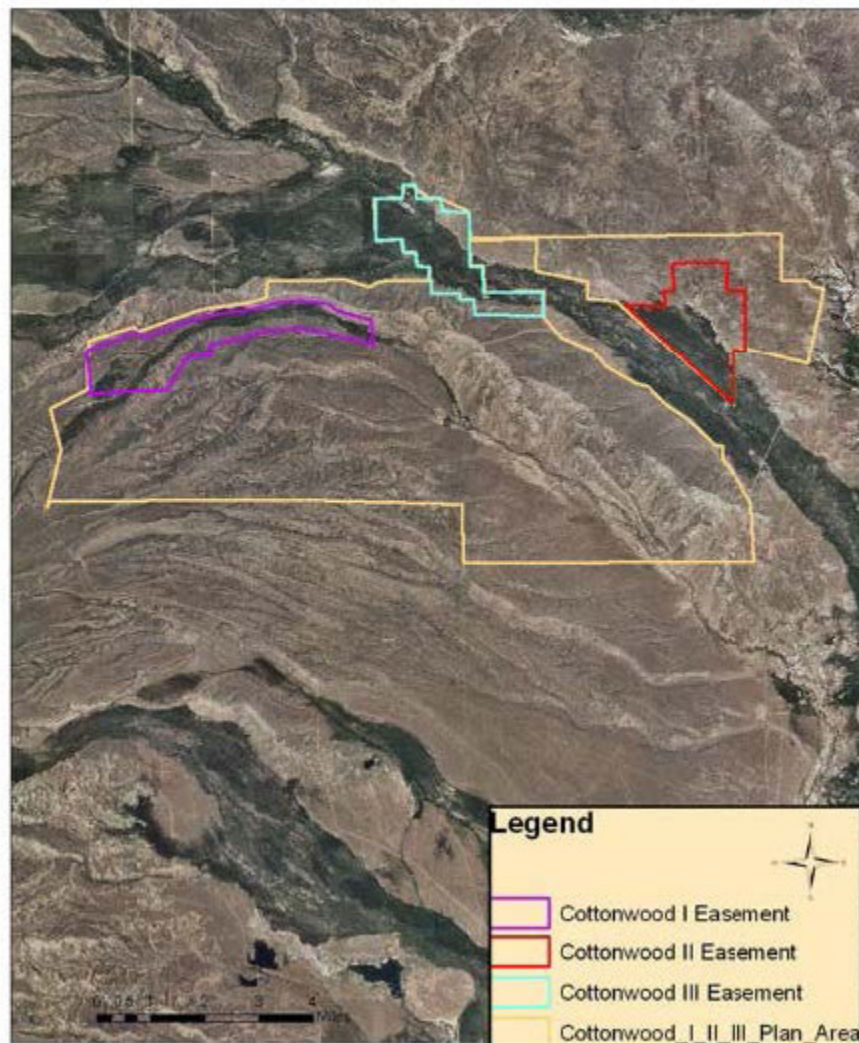
This three-part project included: 1) Conservation easement and conservation plan to preserve and/or enhance pristine wildlife habitat; 2) water efficiency project to allow improved irrigation; 3) funding for intensive grazing management on a large scale (25,000 acres) addressing best management practices for sagebrush obligates.

JIO Funded: \$551,900

Status: Completed

Partners/Cooperators: Freddie Botur - Landowner/Grazing permittee, Doris Duke Charitable Foundation, The Conservation Fund, Wyoming Wildlife & Natural Resources Trust, Wyoming Stock Growers Agricultural Land Trust, BLM

COTTONWOOD RANCHES PROJECT





Elk Mountain/Red Canyon Prescribed Burn (2007)

This project aimed to improve upland plant communities for various wildlife species by prescribed burning of 20,000 acres in a mosaic pattern in the Elk Mountain/Red Canyon area of Lincoln County (T20 and 21N, R118 and 119W). The goal of the treatment was to stimulate regeneration of desired plant communities (aspen, mountain shrubs and grasses) providing enhanced habitat for wildlife. The burn was completed in September, 2007, and achieved the objective of burning 30 to 60 percent of burnable vegetation within the mosaic patterned area. By improving this transitional range, it is anticipated that deer will be held to these areas, saving the crucial areas for more critical winter range for big game, as well as usage by other small mammals and variety of birds including Greater Sage-grouse.

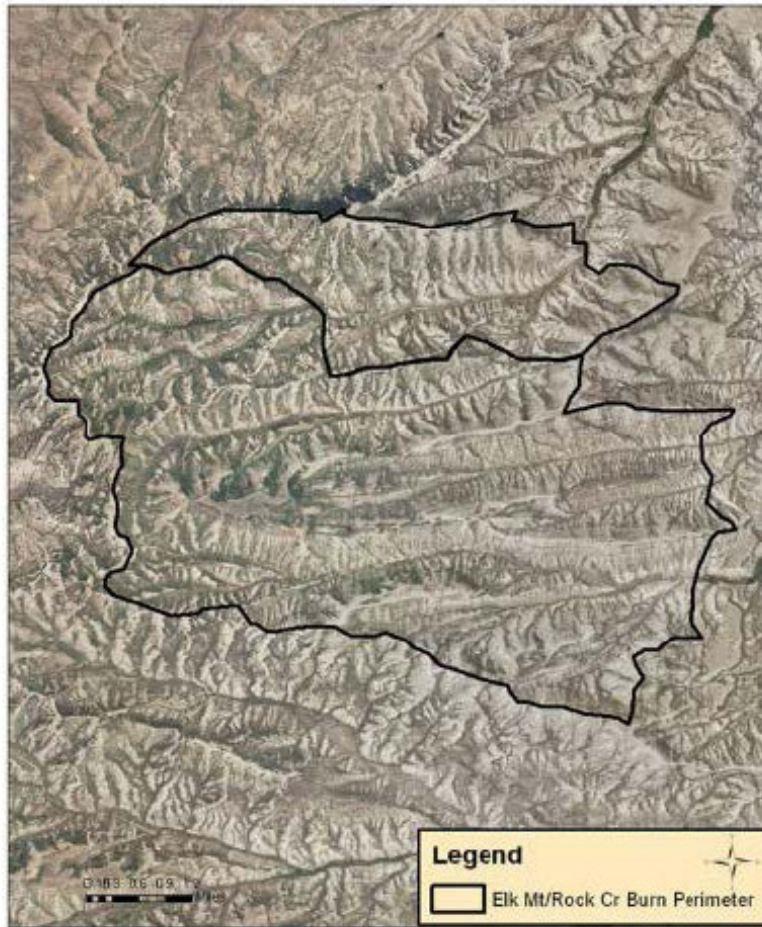
JIO Funded: \$72,000

Status: Completed

Partners/Cooperators: Numerous Landowners & Grazing permittees, Bear River Cooperative Resource Management, Rocky Mountain Elk Foundation, Wyoming Sage-grouse Working Group, Wyoming Landscape Conservation Initiative, Wyoming Wildlife & Natural Resources Trust, State of Wyoming, Wyoming Game & Fish Department, BLM



ELK MOUNTAIN RX BURN





Tibbles Reservoir (2007)

This project consisted of repairing a water reservoir and adjacent riparian enhancement. However, a water seismograph indicated the geology was not conducive to drilling a well to provide water for the proposed project.

JIO Funded: \$4,680

Status: Completed

Carney Ranch Conservation (CRC) Project (2008)

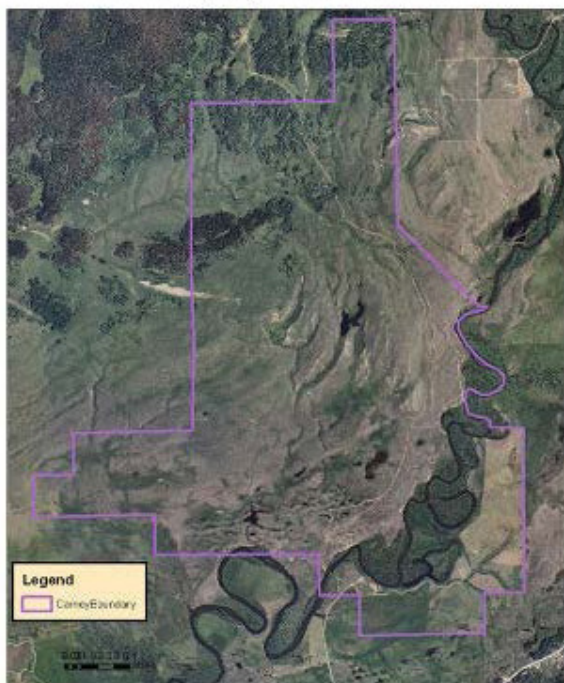
This project created a conservation easement on 2,571 acres of high functioning wildlife habitat in the upper Green River Valley that was at risk for development. This property included portions of the pronghorn antelope migratory bottleneck (the Funnel Bottleneck) at the head of the Upper Green River, Greater Sage-grouse nesting and brood rearing habitat, approximately one-mile of Green River riparian frontage, elk and moose crucial winter range, and other numerous wildlife habitat values.

JIO Funded: \$2,043,149

Status: Completed

Partners/Cooperators: Carney Family – Landowner, Doris Duke Charitable Foundation, The Conservation Fund, Wyoming Wildlife & Natural Resources Trust, Wyoming Stock Growers Agricultural Land Trust, Wyoming Landscape Conservation Initiative, National Fish & Wildlife Foundation

CARNEY (CRC) RANCH PROJECT





Diamond H Ranch Conservation Project (2008)

This conservation easement and conservation plan addressed approximately 3,000 acres of high quality wildlife habitat which is undergoing significant development of small-tract home construction. Habitat fragmentation resulting from development is considered to be among the state’s greatest threat to wildlife habitat and traditional agricultural operations.

JIO Funded: \$479,430

Status: Completed

Partners/Cooperators: Miles & Corby McGinnis – Landowners, Doris Duke Charitable Foundation, Wyoming Wildlife & Natural Resources Trust, Wyoming Game & Fish Trust Fund, Natural Resources Conservation Service



DIAMOND H PROJECT





Cottonwood Ranches Conservation Easement Project II (2008)

This conservation easement and conservation plan on approximately 1,600 acres of private land included implementing improved grazing management on adjacent BLM allotments, state leases, and private lands, as well as a water efficiency project designed to enhance grazing management, increase forage production for wildlife and livestock, and improve stream and riparian health over a two-mile stretch of Cottonwood Creek.

JIO Funded: \$910,417

Status: Completed

Partners/Cooperators: Freddie Botur - Landowner/Grazing permittee, Doris Duke Charitable Foundation, The Conservation Fund, Wyoming Wildlife & Natural Resources Trust, Wyoming Stock Growers Agricultural Land Trust, BLM



McNeel Conservation Easement & Conservation Plan (2008)

This project consisted of the purchase of a conservation easement on 640 acres of McNeel Ranch lands and the implementation of a conservation plan that encompasses 11,079 acres (640 acres of private lands and 10,439 acres of BLM lands). The McNeel Conservation Easement and Conservation Plan met the JIO wildlife mitigation goals for preserving and enhancing wildlife habitats.

JIO Funded: \$320,000

Status: Completed

Partners/Cooperators: Lee & Eva Kelly, The Conservation Fund, Doris Duke Charitable Foundation, Tom Thorn Sage-grouse Foundation, BLM



MCNEEL PROJECT





MJ Ranch Conservation Easement (2008)

This project consisted of conservation easement acquisition and conservation plan implementation on sagebrush habitat used by Greater Sage-Grouse, mule deer, pronghorn antelope, and elk, along with stream habitat used for spawning by brown trout. Project meets JIO wildlife mitigation goals for preserving and enhancing wildlife habitat.

JIO Funded: \$536,821.00

Status: Complete



MJ RANCH PROJECT





Noble-Cora Peak Wildlife Project (2008)

This project consisted of the drilling and installation of two water wells for livestock with overflow areas for wildlife and installation of a wildlife friendly fence around an existing spring. These watering areas will provide drinking water for pronghorn and mule deer during migration periods, and late brood rearing habitat for Greater Sage-Grouse.

JIO Funded: \$145,968

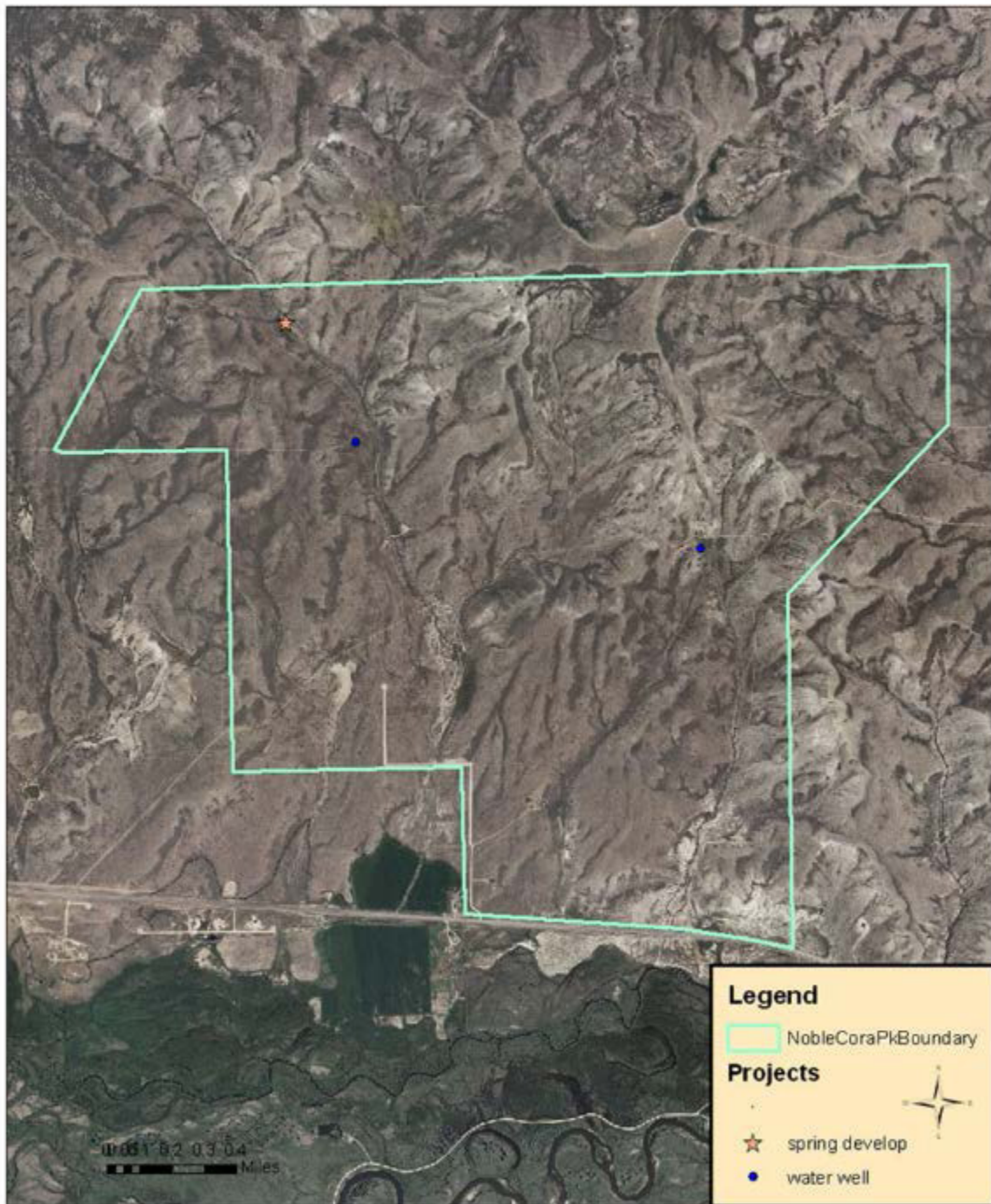
Status: Completed

Partners/Cooperators: Jim Noble - Grazing permittee, BLM





NOBLE-CORA PEAK ALLOTMENT PROJECT





Raptor Nest Platforms (2008)

This project consisted of construction and placement of nesting platforms for ferruginous hawks. The project met JIO wildlife mitigation goals for preserving and enhancing wildlife habitats.

JIO Funded: \$1,725

Status: Completed

Partners/Cooperators: BLM



Rock Creek Subdivision Antelope Migration Fence Modification (2008)

This project consisted of fence modification in the Upper Green subdivision and in an important migratory bottleneck for pronghorn antelope. The project met JIO wildlife mitigation goals by improving pronghorn antelope migration corridors at fence crossings.

JIO Funded: \$18,804.41

Status: Completed

Partners/Cooperators: Landowners, Wyoming Game & Fish Department



Ryegrass Mowing Project (2008)

This project consisted of mechanical treatments (mowing) of sagebrush on the Ryegrass Individual and James Ryegrass allotments. This project has a beneficial effect to Greater Sage-grouse and pronghorn antelope by increasing grass and forb diversity in the understory vegetation; thus increasing habitat function. The project met the JIO mitigation goals by maintaining and/or enhancing sagebrush-steppe habitat for Greater Sage-grouse



and pronghorn antelope.

JIO Funded: \$13,000

Status: Completed

Partners/Cooperators: Grazing permittees, BLM



RYEGRASS MOWING PROJECT





Water Trough Bird Ramps (2008)

This project consisted of installation of wildlife escape ramps in all BLM range water improvement tanks. Project meets JIO wildlife mitigation goals for preserving and enhancing wildlife habitats, especially birds.

JIO Funded: \$36,500

Status: Ongoing

Partners/Cooperators: Green River Valley Land Trust, Future Farmers of America, Pheasants Forever, Numerous volunteers, BLM



Wildlife Friendly Fencing Project, Path of the Pronghorn (2008)

This project consisted of inventorying fences within a portion of the pronghorn antelope migration route from the Forest Service boundary to Trapper's Point in Sublette County, Wyoming. The project modified, reconstructed and/or removed fences to facilitate pronghorn movement within the migration route. Project met JIO mitigation goal by improving pronghorn antelope migration corridors at fence crossings.

JIO Funded: \$1,000,000

Status: Completed



WILDLIFE FRIENDLY FENCING INITIATIVE





JIO Focus Area Inventory (2008-2011)

This project involved collecting baseline vegetation information across the JIO focus area to better identify problems and opportunities for future projects that address JIO mitigation objectives. Another aspect of this project included the use of inventory information to develop conservation plans associated with JIO projects, particularly those involving an easement and associated conservation plan.

JIO Funded: \$291,298

Status: Completed

Partners/Cooperators: Tom Thorn Sage-grouse Fund, Wildlife Heritage Foundation, North-Wind, Grazing permittees, Sublette County, NRCS, BLM



Cottonwood Ranches Easement III (2009)

The Cottonwood Ranches III Peterson Place Project continued on the successful program developed in the first two phases of the Cottonwood Ranches Initiative, and was based on conservation easement acquisition coupled with long-term land management planning and habitat improvement projects.

JIO Funded: \$988,350

Status: Completed

Partners/Cooperators: Freddie Botur - Landowner/Grazing permittee, BLM

Cross Lazy Two Ranch Conservation Project (2009)

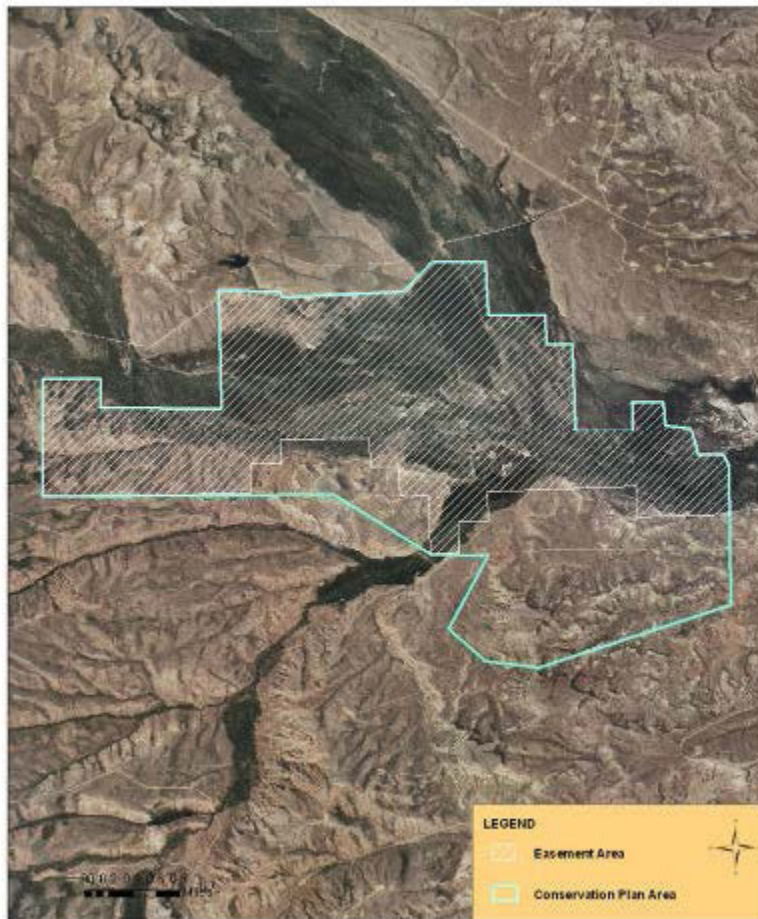
This two-fold project involved (1) purchasing a conservation easement on the 4,410 acre Cross Lazy Two Ranch; and (2) working with the landowners along with JIO staff and the local NRCS office to design, implement, monitor, and adapt a mutually-agreeable conservation/habitat management plan for private and public properties.

JIO Funded: \$2,000,000

Status: Completed



CROSS LAZY TWO PROJECT





MJ Ranch Conservation Practices (2009)

This endeavor was to implement the practices outlined in the MJ Ranch Conservation Plan. Practices include: fence removal, building of new cross fence, two new watering facilities to aid in livestock distribution, pipelines to transport water to the new watering facilities, overflow green zones, water gaps to prevent livestock access to riparian areas, range vegetation planting, and pasture seeding.

JIO Funded: \$85,494
Status: Completed



Jonah Interagency Office



Dynamic Message Signs (2011) JIO funds were used to purchase four dynamic message sign boards for placement along Sublette County highways to alert drivers of wildlife crossing concentration areas. These portable signs are most beneficial during migration seasons.

JIO Funded: \$62,500

Status: Completed

Partners/Cooperators: Freddie Botur - Landowner/Grazing permittee, BLM



Dynamic Message Signs (2011) JIO funds were used to purchase four dynamic message sign boards for placement along Sublette County highways to alert drivers of wildlife crossing concentration areas. These portable signs are most beneficial during migration seasons.

JIO Funded: \$62,500

Status: Completed. Message signs are currently in use.

Partners/Cooperators: Wyoming Game & Fish Department



Espenscheid Ranches Conservation Easement (2011)

This project was designed to meet JIO wildlife and livestock mitigation goals through acquisition of a conservation easement on 10,000 acres of private land, as well as a grazing management plan for 10,700 acres of associated BLM allotments.

Jonah Interagency Office



JIO Funded: \$575,000

Status: Completed

Sommers-Grindstone Conservation Project (2011) This project consisted of three distinct conservation projects: 1) the Sommers/Todd Place project, 2) the Scott Place project, and 3) the Duke Place project. All three combined projects encompass approximately 19,000 deeded acres at two critical locations along the Green River in northern Sublette County and at an important corridor and buffer area between the Bridger Teton National Forest and the Green River. This project included conservation practices to maintain/enhance valuable wildlife habitat, to preserve a significant historical site, and to provide public fishing access.

JIO Funded: \$5,000,000 This project co-funded with PAPO funds.

Status: Completed

Partners/Cooperators: Albert Sommers & Maggie Miller – Landowners, Numerous other financial partners

SOMMERS-GRINDSTONE PROJECT





Flushing Bars for Hay Land Producers (2015)

This project consisted of fabrication and installation of flushing bars for hay land producers located in JIO mitigation focus areas. Hay meadows provide important brood rearing habitat for Greater Sage-grouse. Flushing bars are designed to flush grouse and other birds to reduce injuries and mortalities from haying equipment.

JIO Funded: \$15,000

Status: In progress



Muleshoe Bend Wildlife Mitigation (2015)

The purpose of the project is to promote high quality forage in pronghorn antelope migration corridors and crucial winter range. The project management plan included maintaining fences and the migration corridor, allowing pronghorn antelope and other big game to graze on pivot, modified hay harvesting routine, and keep in rotation a high quality, high protein forage that is desirable for pronghorn antelope and other big game species. To address Greater Sage-grouse concerns, the project management plan implemented friendly hayland harvesting strategies (NRCS guidance) and fence marking.

JIO Funded: \$50,000

Status: In progress

Greater Sage-Grouse Miscellaneous Mitigation Projects (2015 to present)

Anti-perch devices – Anti-perching devices were installed on solar panels at previously drilled JIO water wells to deter ravens and raptors from preying upon vulnerable Greater Sage-grouse.



Cheatgrass treatment – Approximately 500 acres of cheatgrass, located primarily in core areas and in Greater Sage-grouse brood-rearing habitat, was treated via aerial application of herbicide in cooperation with Sublette County Weed and Pest.

Fence Marking – Four miles of fence were marked, and 1-mile of fence was converted to pole top for increased visibility of Greater Sage-grouse.

Water well solar conversions – Two existing water wells in Greater Sage-grouse core area were converted to solar panel operation. The obsolete windmills were removed.

JIO Funded: \$100,000

Status: Ongoing

Partners/Cooperators: Upper Green River Sage-grouse Working Group; BLM permittees





Fence Modifications in Sage-grouse Habitat (2018) This project is intended to modify fences that are deadly to sage-grouse, and to monitor the effectiveness of the proposed modifications. Approximately 9 miles of allotment boundary fences are targeted. The fences have been marked with strike deterrents, but sage-grouse collisions are still occurring in high numbers, particularly during winter and the breeding season. Options for modification include but are not limited to conversion to drop fence, installation of wood top rail, supplementing current markers with black markers that would contrast with snow, or applying lengths of black and white PVC pipes to top wires to improve fence visibility.

JIO Funded: \$50,000

Status: Ongoing

Partners/Cooperators: Jackson Hole Wildlife Foundation, BLM, WGFD, Grazing Permittee, local 4-H and FFA groups



Jack Creek Springs (2018) This project entails the construction of a steel jack fence enclosure around Jack Creek Springs to preserve that valuable water resource, reduce browsing pressure on mesic vegetation, and promote increased growth and production of that vegetation. This particular spring has resulted in the development of a floating mat fen-type wetland, which can be easily damaged by trampling and is a rare wetland type in western Wyoming.

JIO Funded: \$15,000

Status: Ongoing

Partners/Cooperators: WGFD, Water for Wildlife Foundation, BLM





Roosevelt Fire Vegetation Restoration and Rehabilitation (2018) This Roosevelt Fire Vegetation Restoration and Rehabilitation (RFVRR) project is aiding in vegetative recovery following a large-scale wildfire, the Roosevelt Fire, which burned over 60,000 acres in fall 2018. Actions proposed include: mapping and control of noxious weeds within the burn perimeter across multiple land ownerships; securing alternative pasture so that burn areas can be rested; provide trucking costs; hire riders; or purchase hay in exchange for using private hay ground during the summer season.

JIO Funded: \$200,000

Status: Ongoing

Partners/Cooperators: Sublette County Weed and Pest, USFS, JIO, BLM, WGFD, Sublette County



