

# GREEN RIVER REGION

## HABITAT PROJECTS

### Elk Mountain Red Canyon Burn

The Elk Mountain/Red Canyon Prescribed Burn was a 20,000 acre burn block, which was completed in September of 2007 in the BLM Kemmerer Field Office area. The burn targeted 10,000 black acres and included aspen, sagebrush/grass, and mixed mountain shrub vegetation types. In the absence of fire, many of these plant communities were in a decadent and dying state with little vigor or age class diversity. This project was originally two separate burn units adjacent to each other, but was implemented as one project to save time and money. The prescribed burn was also planned adjacent to a Wild Land Urban Interface (WUI) area. (Twin Creek Subdivision, oil and gas infrastructure, and Lewis Ranches). The objectives of these treatments were: 1) to reduce hazardous fuel accumulations in the WUI; and 2) to create a mosaic of burned and unburned areas to improve the vegetative communities by improving the health, vigor, composition, and age class diversity within these plant communities (Figure 1). By improving plant communities in this area, the burn will improve watershed health, crucial big game winter and transitional range for mule deer, elk, moose, and antelope, brood rearing habitat for sage grouse, and habitat for other sagebrush obligate species. These improvements will assist in achieving the objectives of the Kemmerer RMP and the Cumberland and Twin Creek Allotment Management Plans. The project also supports the WGFD's big game herd unit objectives for the area. Additionally, the burn will improve brood rearing and nesting habitat for sage grouse.



Figure 1. Post burn from September 2007 RX burn.

- Installed 9 fish habitat improvement structures in the lower Green River on Seedskafee NWR.
- Rock weirs constructed to control stream grade and current creek restore riparian habitat.
- 20,000 acre RX burn on Elk Mountain/Red Canyon.
- 1,381 acres burned on Shingle Mill Creek from lightning strike.
- Teton Science School awarded contract for Wyoming Range Mule Deer Habitat Assessment.

Multiple agencies, organizations and individuals supported and/or provided funding in this prescribed burn. They included BLM, WGFD, Southwest Wyoming Sage Grouse Working Group, Wyoming State Forestry Division, 39 livestock permittees, four private land owners, RMEF, WGFD Trust Fund, JIO, WLCI and WBGGLC. This project has received \$337,000 from the above mentioned groups to implement this large landscape treatment. As a result of obtaining this contribution, the Kemmerer Field Office was able to give another field office in the zone their additional dollars to implement another project. Although objectives differed between agencies and individuals, the group was able to negotiate and work together throughout the process to successfully define objectives and to complete the project. This cooperative effort took place

throughout the entire process from pre-burn vegetation data collection, interagency field trips to set the objectives of the project, writing the burn plan, implementation involving all agency personnel, and post treatment monitoring.

During this reporting period a number of vegetation monitoring sites were identified to assess the treated area. The vegetation treatments in this area are being done in conjunction with an elk collaring study with USGS, BLM, NPS and WGFD. Elk were collared in an effort to determine the effect treatments (prescribed burns, herbicide treatments, un-grazed NPS lands/grazed BLM lands) had on areas the elk use at different times of the year, and the effect of grazing on these treatments. A final report will be issued during the next reporting period.

## Wyoming Range Mule Deer Habitat Assessment

**W** During this reporting period, a \$74,000 contract was awarded to Teton Science School. The purpose of this project will be to develop a habitat needs assessment for enhancing important mule deer habitat in a portion of the Wyoming Range. The study area is classified as crucial winter range for not only Wyoming Range mule deer, but West Green River elk, Lincoln moose and Sublette antelope (Figure 2).

The study area for this season is an area between Labarge Creek and Muddy Creek in hunt area 135. A draft report is currently under review. Additional fieldwork will be conducted in 2009 north of Labarge Creek in hunt area 143 to complete the review and finalize recommendations.

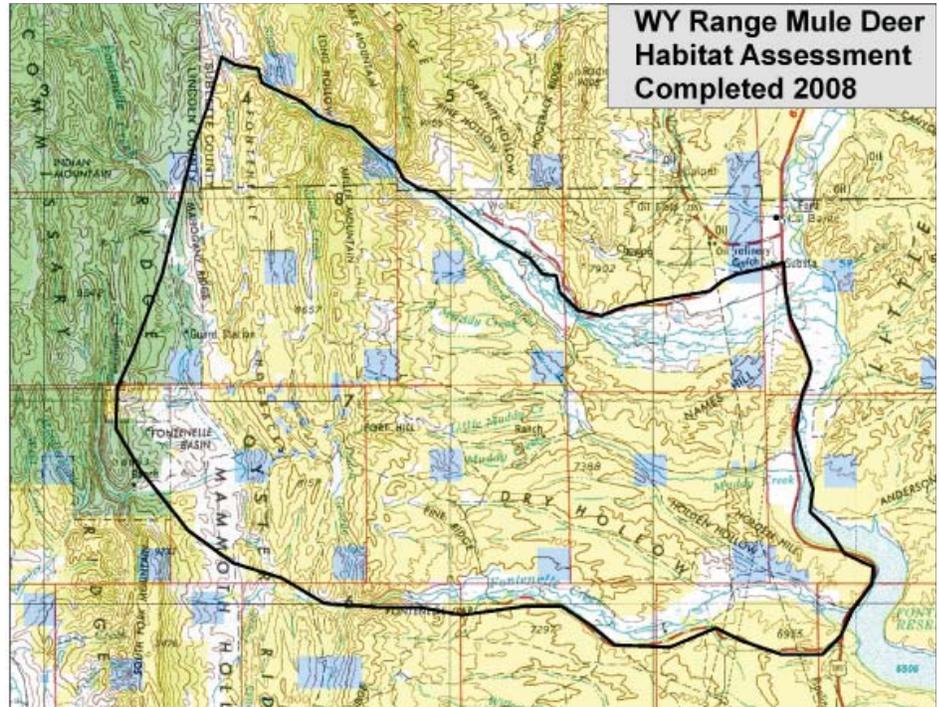


Figure 2. Wyoming Range Mule Deer Habitat Assessment map of completed study area in 2008.

## Green River Fish Habitat Improvement - Seedskadee NWR

**G** Several years ago, USFWS personnel at the Seedskadee NWR placed rock riprap to protect river bank on a 1000 ft outside meander near the refuge headquarters to prevent further erosion and protect a man-made wetland complex on the adjacent floodplain. The riprap protected the riverbank and wetlands, but shifted the river creating a long, swift, deep run that was under utilized by fish due to high velocity flow. During 2008, the Department partnered with Seedsakdee NWR to construct 9 rock barb jetty structures strategically located along the bank to slow water velocities and create pool stilling areas immediately downstream of each jetty structure to improve habitat for fish and other wildlife (Figure 3).



Figure 3. Seedskadee NWR personnel constructing a rock barb jetty structure in a reach of the lower Green River to improve fish habitat.

The combination of reduced thalweg velocities, rock structure, and deeper pool habitat is expected to add needed river habitat complexity to attract and benefit both juvenile and adult trout, as well as other fish species (Figure 4).

### **Shingle Mill Creek Wild Fire Use**

**S**On September 15, 2008 a lightning strike fire was started on Shingle Mill Creek a tributary of the Ham's Fork north of Kemmerer. The Kemmerer Ranger District contacted local WGFD personnel to ask if from a wildlife perspective. If the fire should be suppressed or allowed to burn. The Shingle Mill area is dominated by conifer encroached aspen and sagebrush and is located within the Pole Creek watershed habitat restoration project area. With support from Administration and the Green River region, the Department requested that the fire be allowed to burn under a USFS Wildland Fire Use Agreement. Local Department personnel were asked to publicly support this decision because it was hunting season and to allow for public safety, a large portion of USFS lands in the area surrounding the fire area would be closed to camping and motorized vehicles. The Kemmerer Ranger District should be commended for putting long term habitat needs above short term impacts.

The fire was considered to be out in November. In all, a total of 1,381 acres were burned. The USFS permittee has also agreed to rest the area for two grazing seasons. This should allow for significant aspen regeneration in the area.



Figure 4. Completed rock barb jetty structure slowing river thalweg velocities, providing rock structure with niche habitat, and scouring attractive pool habitat for fish.



Figure 5. Lightning strike fire started on Shingle Mill Creek September 15, 2008.

### **Diamond H Conservation Easement**

**D**uring 2008, discussions continued with a landowner in the Wyoming Range. In all, a total of 3,100 acres will be involved in the easement. These lands are classified as crucial winter range and yearlong range for elk, deer, moose, sage grouse and pronghorn. Additionally, documented movement of pronghorn through this area to summer ranges to the north have identified this as an important migration corridor. Also, numerous non-game birds and mammals including Species Of Greatest Conservation Need identified in the WGFD's "Comprehensive Wildlife Conservation Strategy For Wyoming 2005" will benefit from protecting these habitats. Labarge Creek and Fontenelle Creek also have populations of Colorado River Cutthroat trout and are excellent fisheries. Currently, lands directly adjacent to these properties are being sub-divided so the potential for sub-division of these lands is high. This easement will secure long-term protection of these habitats from sub-division and will ensure a viable livestock operation and wildlife habitat in the future.

## Fontenelle Creek Willow Burn

This project is on Forest Service lands and private lands owned by Hunts Land Livestock in the North Fork of Fontenelle Creek (Figure 6). The area is classified as crucial winter range for Lincoln moose, and transitional winter/spring range for West Green River elk and Wyoming Range mule deer. The NEPA work has been completed in an EA.

The proposed project will result in the treatment of 165 acres of decadent willows the first year with an additional 600 acres over the next five-year period. Geyer's and Booth's willow dominate the treatment site. Similar sites in this area have responded favorably to past treatments so expectations are high. Additionally, the treatment area will receive two growing seasons rest from livestock. A WGFD Trust Fund has committed \$8,000 to this project and the USFS will provide in kind equipment and labor. Additionally, funds will be requested from WWNRT and RMEF. The first stage of the project will begin in the spring of 2009.

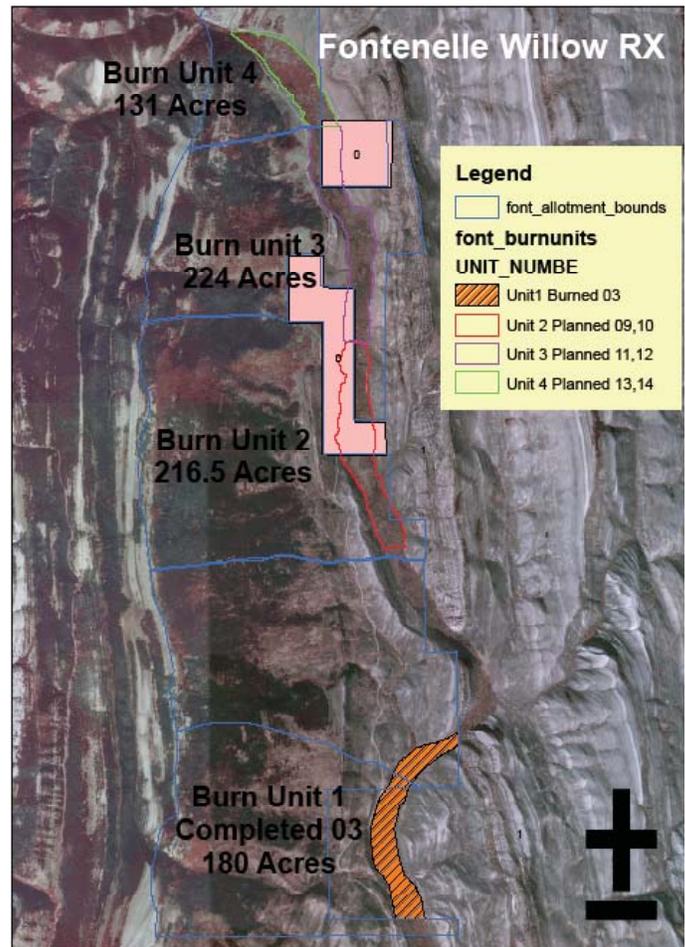


Figure 6. Fontenelle Willow prescribed burn map.

## Cokeville Meadows Grass Bank

Work began on forming a grass bank on Cokeville Meadows National Wildlife Refuge (CMNWR). A WLCI grant was approved for \$587,000. Creation of this forage reserve will provide local livestock management flexibility, allow for desperately needed habitat treatments in the local area, and yield adequate rest periods for vegetation recovery following treatments in the southern Wyoming Range.

Conceptually, 1,200 acres of the CMNWR would be available for this forage reserve. This site is currently in a fallow state, and is vegetated with undesirable forb species. Seven wells are on site for irrigation, but need to be refurbished. In conjunction with WGFD and WLCI, CMNWR has contracted with an engineer to provide estimates to rehabilitate wells and develop an irrigation system. The following goals have been identified:

- Maintain refuge values, while providing a forage reserve, to provide habitat for native game and non-game species;
- Improve long-term vegetation community health in crucial winter-yearlong range for Wyoming Range mule deer, West Green River elk, Lincoln moose, Carter Lease antelope and yearlong sage grouse habitat;
- Reduce co-mingling of livestock and elk in the Cokeville area;
- Provide livestock rest so off site habitat treatments can be conducted on adjacent federal, state and private lands; and
- Allow for better weed control and management.

## **C**urrant Creek Gradient Control Habitat Structures

This project is one phase of an ongoing multiple phased effort that began in 1990 to restore the health and function of the Currant Creek Watershed. Upper Currant Creek supports a viable population of Colorado River cutthroat trout (CRC), and previous project phases have enhanced upland watershed segments and stream reaches for these trout and other wildlife. The Statewide Habitat and Access Maintenance Crew along with Aquatic Habitat personnel constructed 3 low profile rock weir gradient control structures to protect a ¼ mile of Currant Creek located on a private land meadow from a head-cut migrating upstream through the stream reach (Figure 7). The structures were placed at the downstream end of the meadow in a series, and function to gradually stair-step the stream between the elevation of the meadow and head-cut area. Using the rock weirs to stop the head-cut will stabilize the downstream portion of the meadow. This will maintain the elevated water table and potential for proper stream bank function in the meadow. These rock structure features will be an integral component for restoring riparian habitat in the meadow, and provide immediate scoured pool habitat for fish (Figure 8). Restoration efforts are expected to provide an additional ¼ mile of quality riparian habitat for CRC, mountain suckers and other wildlife.



Figure 7. Statewide Habitat and Access Maintenance personnel constructing a rock weir gradient control structure in Currant Creek.

## **O**wen Peterson Fence And Spring Development Project

The Current property perimeter fence on this property is in need of replacement. The landowner would like to replace four miles of existing woven wire fence with wildlife friendly fence (4 wire, 42 inches total height, smooth bottom wire 16” above ground). In total, 320 acres of private land will be enhanced. This project received an \$8,000 from the WGFD Trust Fund and \$3,000 from the South West Wyoming Sage Grouse Working Group.

This property also has valuable water resources that provide livestock and wildlife water. During this reporting period, the landowner fenced off these springs and provided off-site water with a \$10,000 grant from The Southwest Wyoming Sage Grouse Working Group.

## **H**ickey Mountain Spring Restoration Project.

The vast majority of the lands on Hickey Mountain and Cedar Mountain are BLM lands however, the majority of the water is located on private lands. This project will fence off a number of springs on private land and provide off- site water. This would help to protect the integrity of these springs and provide water for livestock and wildlife. This project has been awarded \$20,000 from the WGFD Trust Fund.



Figure 8. Completed rock weir structure in Currant Creek serving to control grade for restoring riparian meadow habitat and provide a pool for trout.

## West Green River Elk Habitat Use Study

This five-year project was continued because of significant monetary support from the USGS, BLM, NPS, and USFS. The WGFD has provided in-kind support. Over the past five years, a total of 63 elk have been fitted with radio collars to determine habitat use and selection. During this time, more than 170,000 elk locations have been documented (Figure 9). This project has been used to support the need for improved management of the Rock Creek grazing allotment, helped to support oil and gas lease restrictions in Dempsey Basin and is one of the major reasons that the USFWS is considering a grass bank on Cokeville Meadows. Elk locations have also supported past habitat treatments on the Lost Creek Unit and the Thoman private land lease in Nugget Canyon and will help to determine the effectiveness of highway underpasses on Highway 30.

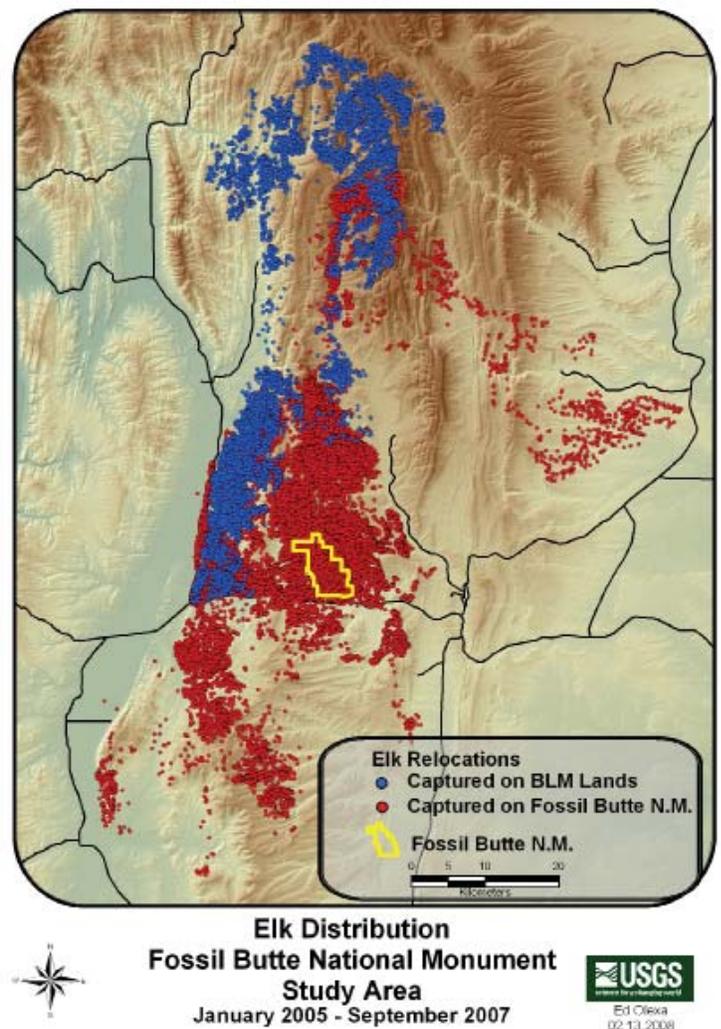


Figure 9. Extent of detected movements of 52 elk radio collared in Lincoln County, Wyoming, USA. 123,635 locations collected January 2005 – September 2007 are displayed.

## Owen Peterson Conservation Easement

Work continued on a conservation easement on 320 acres of deeded land that is surrounded by BLM lands. Other private lands in the vicinity have been sub-divided so the potential for sub-division is high. These lands support sage grouse, moose, antelope, elk and mule deer. The property also is within a major migration corridor for big game traveling from winter ranges to summer ranges in the Uinta Mountains. This project has been awarded WGFD Trust Fund dollars. Additional funds have been requested from the South West Sage Grouse Working group

## Pole Creek Watershed Aspen Restoration and Fence Rebuild

Meetings and field visits were held with the USFS, Kemmerer Ranger District, the Kemmerer Field office of the BLM and the Horse Shoe Spear Ranch to examine opportunities for aspen restoration in the Hams Fork watershed. The project area boundary is bounded by Beaver Creek on the south, the Ham's Fork on the west, the East Fork on the north and the east boundary will be Commissary Ridge. The project area is approximately 35,000 acres.

Within the project area 8,500 acres are proposed for treatment primarily using prescribed fire. However, mechanical treatment will also be considered. It is anticipated that project inventory, planning, and funding requests will be completed in 2009 and activities may begin as early as spring 2010. Additionally, this project proposes to replace five miles of woven wire fence with four-wire fence which will allow for better wildlife movement through the area. Currently, \$150,000 has been requested from WLCI.

### Pole Creek Prescribed Burn

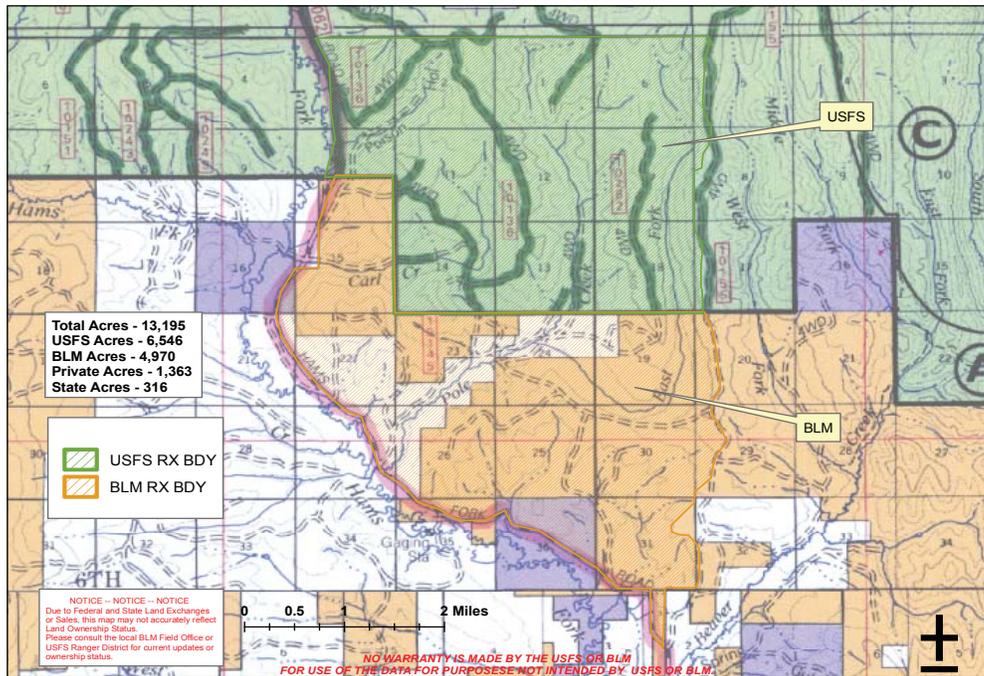


Figure 10. Pole Creek prescribed burn area map.

## OTHER SIGNIFICANT ACCOMPLISHMENTS

- Participated and presented aquatic habitat information at the WLCI comprehensive assessment workshop in Fort Collins, CO during March. Represented the WGFD on the WLCI field steering committee throughout the year. Attended local working group and executive committee meetings.
- Provided review and comments for energy leasing and exploration activities in the Little Mountain Ecosystem. Participated in tours and meetings throughout the year with the Governor's staff, conservation groups, and the public to promote awareness about long term habitat restoration efforts and the invaluable wildlife habitat found in this ecosystem.
- Assisted Lands Branch personnel in developing a conservation easement that would prevent subdivision and development of the private lands associated with Currant Creek Ranch.
- Completed aquatic habitat priority area revisions for the Strategic Habitat Plan.
- Completed annual willow community trend monitoring on the lower Big Sandy River with the Big Sandy Working Group.
- Completed riparian vegetation greenline trend surveys in upper Currant Creek.
- Conducted aspen live-dead index trend surveys on Little Mountain.
- Provided technical assistance to the Green River Greenbelt Task Force in developing project funding proposals for enhancing the Killdeer Wetlands.
- Collected annual stream temperature data from Savery Creek downstream of High Savery Reservoir.
- Facilitated, prepared, and participated in interagency coordination meetings with Kemmerer, Rock Springs, and Rawlins BLM Field Offices, Bridger-Teton National Forest's Kemmerer Ranger District, Uinta National Forest, Cokeville and Seedskadee National Wildlife Refuges.
- Worked with the aquatic habitat biologist to monitor and establish aspen monitoring in treatment areas near Miller Mountain and Little Mountain.
- Coordinated and met with BLM to discuss potential spring protection projects in the Sage Creek Mountain and Cedar Mountain allotments. Field reconnaissance and inventory of springs and seeps on Cedar Mountain.