

LANDER REGION

HABITAT PROJECTS

Lander Front Mule Deer Habitat Improvement Project

Planning for implementation of the mule deer habitat improvement project continued. A contractor completed digitizing the habitat units mapped over the last two years by Jack Welch. Mr. Welch identified over 200 individual areas that needed improvement and those areas were digitized as well (Figure 1). After discussions with the BLM, 17 areas plus one additional water development were chosen for completion in 2007 and 2008. If funding is approved, approximately 300 acres of sagebrush will be mowed, 1,600 will be treated with the herbicide Spike and 970 acres of juniper will be cleared. Funding applications were completed for numerous organizations with \$230,000 being requested from the WWNRT. Because the request from the Trust Fund was over \$200,000, legislative approval is required during the next session in January and February 2007. Total funds requested were \$479,700.

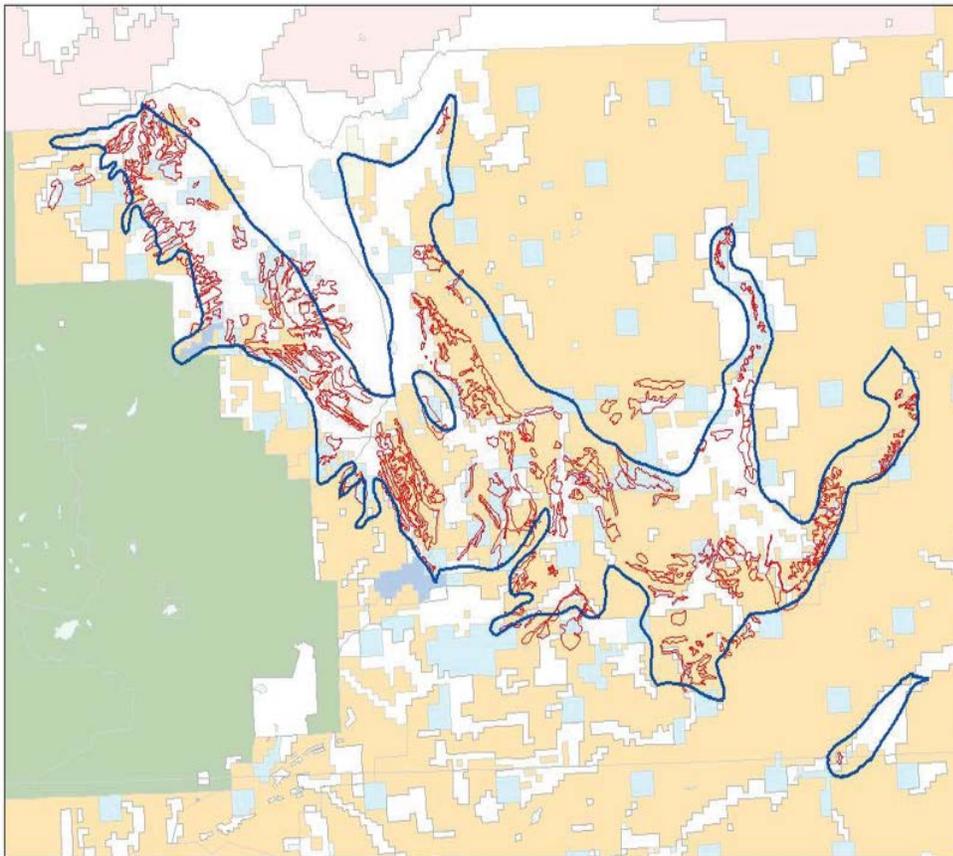


Figure 1. Selected areas (red polygons) for habitat improvement on the Lander Front Mule Deer Habitat Project.

- 450 acres of sagebrush mowed.
- Forage production across region was down about 65% from 2005.
- Mule deer projects were digitized and funding requested.
- Hansen Conservation Easement is still underway.
- 75 acres of sagebrush with the Lawson aerator and 390 acres with 20-foot rotary cutter.
- Range-pitted and seeded approximately 250 acres.
- Sunken trees in Boysen Reservoir and Ocean Lake enhance fish habitat.
- Fish entrainment in irrigation systems on WHMA's were investigated.
- Mapped the distribution of all native fish for Wyoming by 10 digit Hydrological Unit Codes for Western Native Fish Distribution Project.

Government Draw Mowing

In February, 390 acres of Wyoming big sage were mowed. NS 75 acres were treated with the Lawson aerator in Government Draw, south of Hudson, WY to improve sage grouse habitat (Figure 2). Even with the drought, regrowth was exceptional with remaining live branches having 3-4 inches of leader growth (Figure 3). Plants outside the treatment area averaged 1/4-1/2 inch growth. Grass and forb regeneration was also good. An additional mowing will be completed in February 2007.



Figure 2. Mowing sagebrush in Government Draw.



Figure 3. Three to four inch leader growth on surviving stems of Wyoming big sage after mowing treatment.

Boysen Reservoir Fish Habitat Enhancement Project

To attract crappie for the purpose of enhancing fishing opportunities at Boysen Reservoir, fisheries biologists are sinking trees in the bays just north of Tough Creek (Figure 4). Black crappies prefer habitat that provides 50% to 90% cover. This year we'll be working approximately two weeks collecting trees and brush, forming concrete weights, and sinking trees. We sank 21 trees in 2005 and 26 trees in 2006. Members from the North Platte Walleyes Unlimited club (NPWU) from Casper, have provided support. The NPWU provided \$2,800 for materials required for this year's work.

Information for the NPWU is located on the web at <http://www.npwalleyes.com/>. We'll be evaluating the habitat structures in 2007 to determine if fish inhabit them.



Figure 4. Tree structures placed in Boysen Reservoir for fish habitat.

Ocean Lake Fish Habitat Enhancement Project

On February 11, 2006, assistance was provided to a group of sportsmen from Riverton for the placement of approximately 225 discarded Christmas trees on the ice at Ocean Lake (Figure 5). The goal of 500 trees was not met due to miscommunication among the Riverton Solid Waste personnel that resulted in the chipping of collected trees just prior to the project date. The trees are placed in groups on the ice and wired to 6-inch diameter by 12-inch long concrete cylinders. At ice-off, the trees sink to the bottom where they will hopefully enhance fish habitat and encourage stabilization of lake sediments. This annual activity started in 1990.



Figure 5. Picture of the “Crew” Installing Trees on Ocean Lake.

Native Fish Mapping

The Aquatic Habitat Biologist completed GIS map of the distribution of all native fish for Wyoming by 10 digit Hydrological Unit Codes for Western Native Fish Distribution Project.

WILDLIFE HABITAT MANAGEMENT AREAS

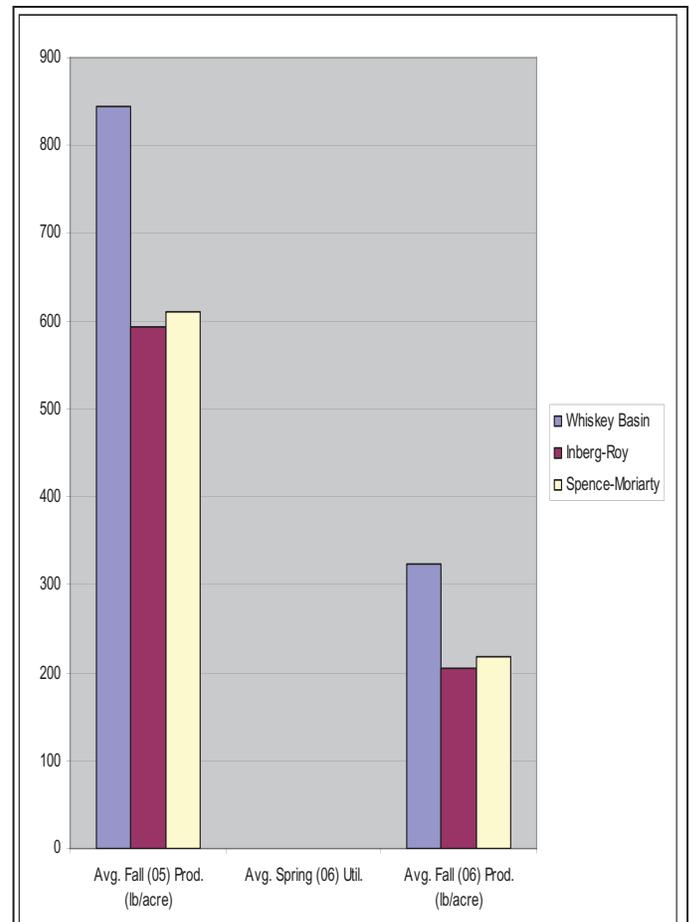
Whiskey Basin, Inberg/Roy, and Spence/Moriarty WHMAs Production Sampling

Forage production and utilization information was collected on the Whiskey Basin, Inberg-Roy and Spence-Moriarty WHMAs. Table 1 contains the results of the sampling. Production declined about 65% from 2005 across the region with similar results in these WHMAs.

Whiskey Basin Bighorn Sheep

Planning continued for the range pitting project on Whiskey Basin WHMA. Due to changes in personnel, pitting was delayed from 2006 and will occur in spring 2007. An archeologist was contracted to complete the required survey prior to pitting and found very little in the way of artifacts. Her conclusion was that there was no archeological reason to suspend the pitting. The State Historical Preservation Office has not given its final approval.

Table 1. 2005-2006 Forage production and utilization on Whiskey Basin, Inberg/Roy and Spence/Moriarty WHMAs.



Bear Creek and Wiggins Fish Entrainment on Inberg/Roy and Spence/Moriarity WHMA's

Evaluated techniques to investigate fish loss to irrigation system on Inberg/Roy and Spence/Moriarity WHMAs. (Figure 6). A trap, with wings constructed of block nets, checked daily, seemed to provide effective sampling on all the diversions from Bear Creek. Very few fish were entrained into the irrigation system during this study. The highest catch consisted of two Yellowstone cutthroat trout (YSC) in a twelve-hour period. This project was started in July after high water, so there may be more fish loss during the high, early-spring flows. Once the stream flows decrease and stream temperature becomes higher, the cutthroat appear to move less. During September, about half of the trapping effort was shifted from the irrigation canals to Bear Creek. No fish were caught, indicating little or no movement within the stream.

Since very few fish were being trapped in Bear Creek, the traps were set in the Wiggins Fork Ditch. More fish were caught, with 4 to 6 mountain whitefish (MWF) in 12-hour periods. At one point, the irrigation diversion was changed to divert more water down the ditch, which overwhelmed the trap system. During the next 12 hours, after the diversion was adjusted, over 40 MWF were caught before the trap failed.

The diversions in the East Fork Drainage were toured with the USFWS to monitor their condition and functionality. One landowner still needs to be contacted for permission before this project can be completed. This information will be used to prioritize cooperative efforts to modify the irrigation diversions to limit fish loss. The diversion on East Fork diverted the entire East Fork during the months of August and early September. The lack of water in the East Fork is diverted above the confluence with Bear Creek.

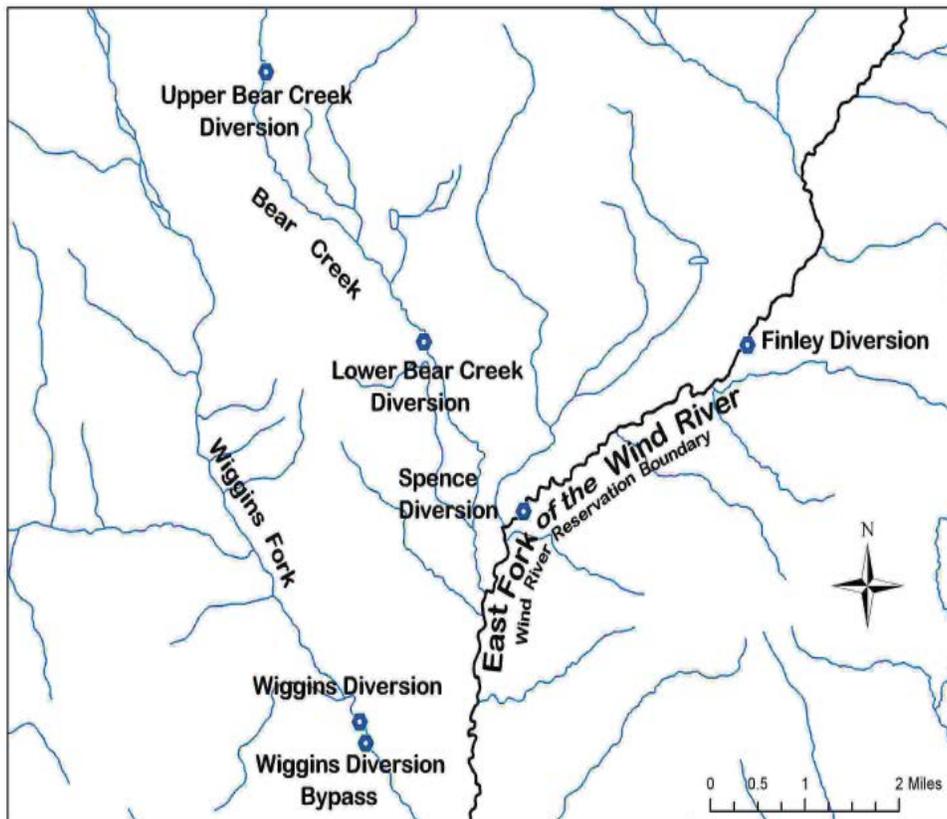


Figure 6. Locations of diversions investigated.

Spence/Moriarity WHMA

Habitat & Access Development Crew personnel range-pitted (Figure 7 and 8) and seeded approximately 250 acres of former meadows with an upland seed mix. Another 200 acres were pitted on adjacent meadows. Fremont County Weed & Pest provided the seed through grant monies. The seeding and pitting combined with herbicide applications was an effort to improve water retention, help grasses reestablish, and will help reduce noxious weed densities on the former meadow areas.



Figure 7. Range-pitting Spence/Moriarity WHMA.



Figure 8. Range-pitted meadows Spence/Moriarity WHMA.

Red Canyon WHMA

Lander Habitat & Access personnel replaced flood irrigation ditches with gated pipe on the Red Canyon meadows (Figures 9 and 10). This project was implemented to more evenly and efficiently distribute the limited quantity of water used to irrigate these meadows.



Figures 9. Flood irrigation ditches Red Canyon Meaows.



Figures 10. Gated pipe on Red Canyon Meaows.