Forty-Five Years of Public–Private Partnership in the Rawlins Field Office

By Andy Warren and Amanda Jones

Public–Private Partnerships are an integral part of successful public land management. The Sulphur Springs allotment, which is administered by the Bureau of Land Management (BLM) Rawlins Field Office, Rawlins, Wyoming, USA, contains a largely checkerboard land-ownership pattern that is 56% public. The significance of this allotment is its location at the confluence of the perennial headwaters of Muddy Creek. Other than the southeast corner and western edge, most of the stream miles are on private land. Within the Rawlins Field Office boundary, only 10% of all riparian habitats are located on public land. It is essential that BLM work with partners to manage riparian habitat on a landscape scale. Sulphur Springs allotment is one example of this approach.

The history of the ranch dates back to fur trapper and explorer, Jim Bridger, who was part of an army expedition that explored the Sulphur Springs area in 1850. Sulphur Springs was later developed as a stage stop along the Overland Trail, and, after the completion of the transcontinental railroad, it became a stop along the Rawlins, Wyoming, USA, to Meeker, Colorado, USA, freight line. Shortly thereafter, in the 1880s, stockmen homesteaded and began ranching in the area. The allotment boundary was fenced in the late 1950s to mid 1960s. This boundary included two small utility pastures along with two large pastures (east and west of the canyon with topographic control) grazed with two separate cattle herds from May through September. Figure 1 shows the Sulphur Springs allotment, land ownership, and both historic and current management pastures (red lines).

History of the Sulphur Springs Allotment

The Sulphur Springs allotment was selected as one of the early Allotment Management Plans (AMPs) to be developed in 1967–1968 with an emphasis on upland vegetation. Early steps taken included the establishment of proper livestock stocking rates, development of upland water sources to improve distribution of cattle use, and application of 2,4-D to remove dense stands of mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*). Figure 2 shows three photographs of a 3 × 3 foot plot location taken in 1968, 1988, and 2010. In 1968, the initial monitoring photos were established as part of the AMP with upland-habitat management focus. Management strategy changed in mid-1980s from viewing riparian habitat as sacrifice areas to high-priority management areas. In contrast, from 1968 to 2010, not much has visibly changed in upland vegetation, reinforcing that the emphasis should always have been on riparian habitat management. Pace-frequency transects, established by the BLM in 1979 and reread in 2010, show similar species dominance of bluegrasses (*Poa* spp.), thickspike wheatgrass (*Elymus lanceolatus*), and needle and thread grass (*Hesperostipa comata*). However, species diversity has improved, with increasing perennial plants and decreasing erosion concerns because of more ground cover of litter and live plants. In addition, bare ground across the allotment has been reduced from an average (for 12 sites) of 35% to 11%.

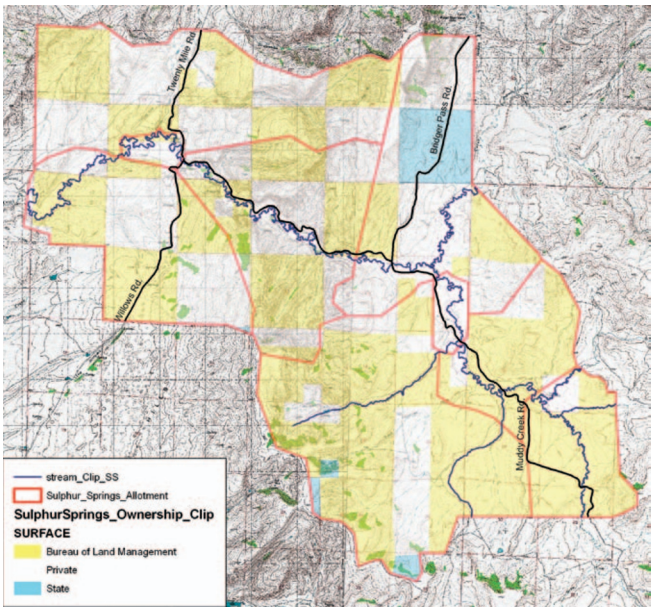

Figure 1. Sulphur Springs allotment, land ownership, and both historic and current management pastures.

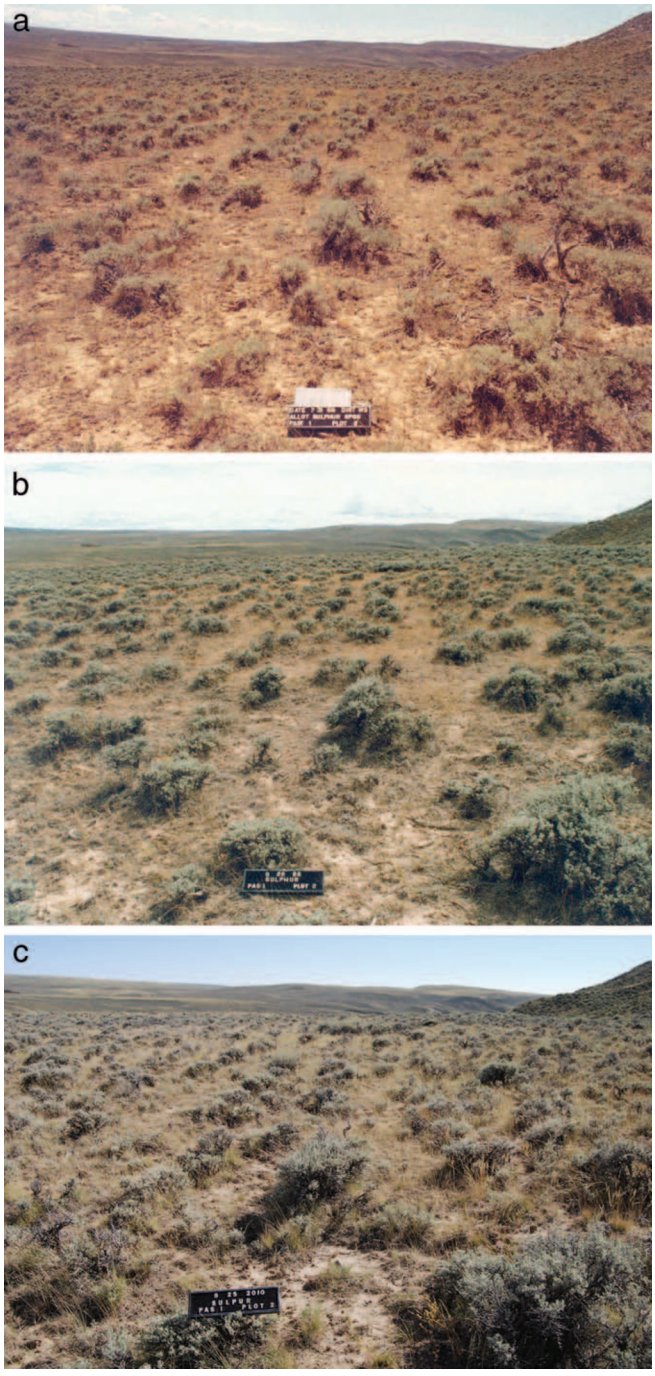

Figure 2. Photographs of a 3 × 3 plot location taken in (**a**) 1968, (**b**) 1988, and (**c**) 2010, which appear to show minor change in the sagebrush/grass plant community.

Because of the increased attention on riparian areas beginning in the 1980s, a revision was made to the AMP, which focused more on riparian management. During a stream-site evaluation in 1989, the riparian habitat had been degraded to a nonfunctional condition. This determination was based on wide, shallow channels; warm, sediment-laden water; and only remnant, obligate plant species, those that indicate proper root masses for channel stability, to protect shore line

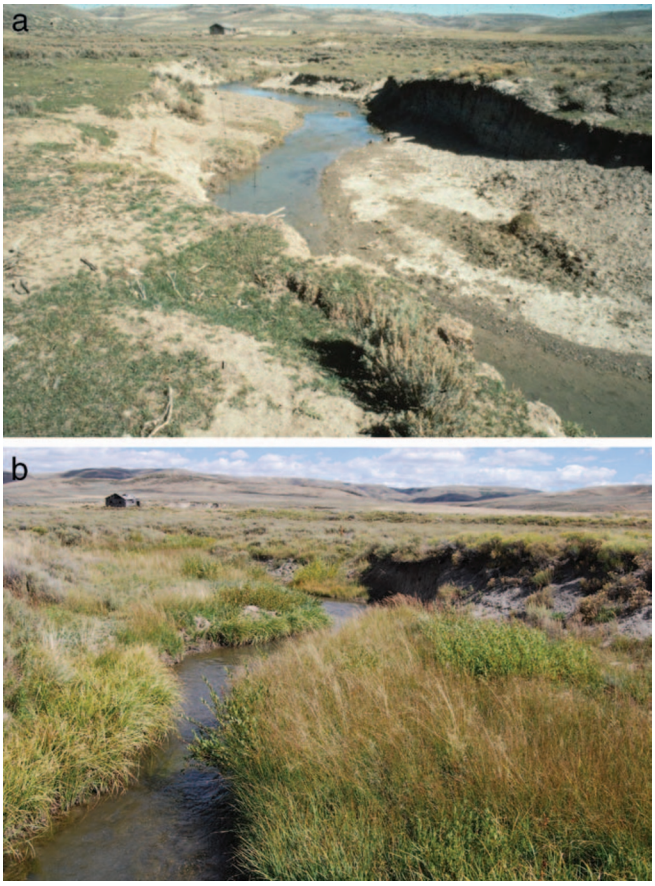

Figure 3. Photographs demonstrating improvement from (**a**) the nonfunctional condition of Muddy Creek in 1989, to (**b**) its current functioning condition in 2011.

and soil surface from wave action, and to dissipate stream energy. Primary management actions prescribed in the AMP revision included pasture fencing to control duration and season of use by livestock, along with protection of spring and seep sources. Grazing in riparian habitat changed from 4 to 5 months in the summer and fall to 2 to 5 weeks in the fall, when cooler temperatures help promote more time spent by livestock on uplands. In 2011, during a follow-up proper functioning condition (PFC) site evaluation, the riparian area was reclassified as functioning properly because of adequate vegetation of obligate species, including sedges, rushes, and willows; stabilized stream banks from root masses; and improved fisheries habitat with year-round deeper and cooler waters. Figure 3 demonstrates improvement from the nonfunctional condition of Muddy Creek in 1989 to the current functioning condition in 2011. Bare ground or the sparse amounts of more grazing-resistant species, i.e., Kentucky bluegrass (*Poa pratensis*), spike sedge (*Carex nardina*), and early seral species, have been replaced with a Booth (*Salix boothii*) and yellow willow (*Salix lutea*) community, with Nebraska sedge (*Carex nebrascensis*) and beaked sedge (*Carex rostrata*) bank cover. Stream channels have changed from wide and shallow to narrow and deep, reducing stream widths by 50% to 75%.

Reintroduction of Cutthroat Trout

In US army journals written by Stansbury in 1850 the presence of speckled trout is mentioned, what we now call Colorado River cutthroat trout (*Oncorhynchus clarkii pleuriticus*, CRCT). Fisheries management requires a higher level of scrutiny than just riparian management to improve waterway functions, and along with state water quality issues, expands the scope of management outside traditional allotment borders. Reestablishment of CRCT, a state-sensitive species and a candidate for threatened and endangered listing, was an early goal for the Cooperative Resource Management group. Initiated in 1992, by the Little Snake River Conservation District (LSRCD), this Cooperative Resource Management group was the early emphasis for managing at the watershed scale. A species conservation plan with Fish and Wildlife Service identified upper Muddy Creek as one of three enclaves for reintroduction of CRCT. In addition to grazing management, soil erosion from roads and headcuts was addressed, and riparian shrubs were planted to improve bank stabilization and stream shading. Barriers were built to isolate stream segments to remove competing, nonnative fish, including brook trout (*Salvelinus fontinalis*), creek chub (*Semotilus atromaculatus*), and white sucker (*Catostomus commersonii*) and replace with native species consisting of CRCT, mountain sucker (*Catostomus platyrhynchus*), and speckled dace (*Rhinichthys osculus*). After 9 years of hard work from everyone involved, CRCT were returned to Littlefield Creek in 2001 and to Muddy Creek a few years later.

In the process of CRCT habitat rehabilitation, fisheries biologists also discovered populations of native, nongame species that are common lower in the Colorado River but uncommon in southwest Wyoming. They require an entirely different approach than CRCT, and BLM is adapting management for them. The Wyoming Game and Fish Department (WGFD), which controlled much of the land surrounding the headwaters containing CRCT, do not have the same ability further downstream where the warm-water fish habitat occurs. Barriers that CRCT could pass now needed modification for the warm-water fish to migrate on a seasonal basis. A recent example of this evolving management involved removal of a large culvert that had formed an 8-foot gradient drop, which was mitigated by lengthening a steam channel across a half mile of floodplain to reestablish fish movement in upper Muddy Creek. This was a group effort by WGFD, LSRCD, Encampment-Saratoga-Rawlins Conservation District, Trout Unlimited, and the BLM.

Extending the Results

The BLM, WGFD, Conservation Districts, and permittees are now looking at ways to use WGFD-controlled lands to improve livestock management across the watershed and not in just one allotment. The large-landscape view of the watershed promotes the perspective to look at all resource values and helps the management team address problems and implement techniques that will benefit the watershed as a whole. This method has benefited resource management in six allotments during the past 5 years. Figure 4 shows changes in Littlefield Creek from initial conditions in 1989 to current conditions in 2011, which have benefited from the rest–rotation management involving shared use within the WGFD Grizzly allotment. Historic, summerlong cattle grazing along Littlefield Creek had reduced vegetative cover and promoted grazing-resistant species, such as Kentucky bluegrass, spike sedge, little bluegrass, and thickspike wheatgrass. Riparian improvement along Littlefield Creek is a result of 2-week duration of use in the fall, from 1992 until 2009. The pasture was rested in 2009 and 2010. Sedges and willows now dominate, providing bank stability and stream shading for improved fisheries habitat. The Upper Muddy Creek Watershed was designated as a Special Management Area in the BLM's recently completed Rawlins Resource Management Plan. The Sulphur Springs allotment continues to occupy an important location in the middle of this watershed planning area (Figure 5), but the larger landscape-management scale will help BLM and its partners to address management issues that transcend allotment boundaries.

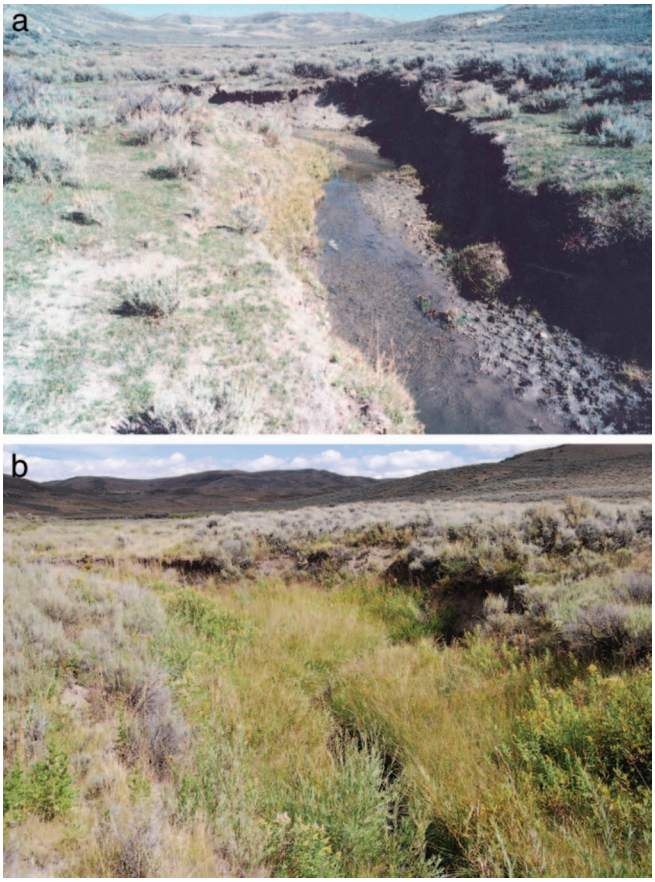

Figure 4. Changes in Littlefield Creek from (**a**) initial condition in 1989 to (**b**) its current condition in 2011.

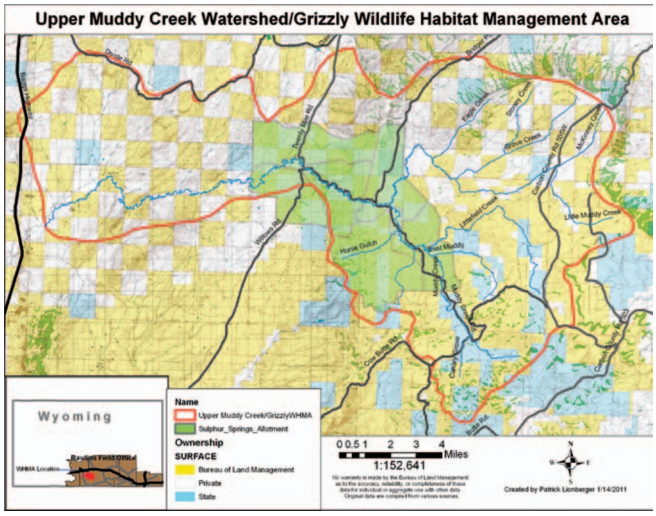

Figure 5. Sulphur Springs allotment occupies an important location in the middle of the Upper Muddy Creek watershed planning area.

Conclusion

Public–Private partnerships have led to the achievement of resource improvement that no single party could have accomplished on their own. These partnerships have included management, projects, planning, funding, and monitoring, with involvement by all partners at the local, state, and federal levels. The projects and studies on public, private, and state lands were completed by the BLM, Conservation Districts, WGFD, permittees, Natural Resources Conservation Service, and Trout Unlimited, with additional outside funding support.

The history of the Sulphur Springs allotment is not only about changes in livestock management on one allotment but also about the evolution in thinking and partnership to a landscape or watershed perspective. Through this broader approach, involving more partners, and expanding the scope beyond just livestock management to improving a multitude of resource values, the partners have learned there must be patience as well as perseverance, initiative to try new ideas, and a willingness to learn and grow while working together to accomplish mutual goals.

Authors are Supervisory Rangeland Management Specialist, a75warre@blm.gov (Warren), and Rangeland Management Specialist (Jones), Wyoming Bureau of Land Management, Rawlins Field Office, Rawlins, WY 82301, USA. *Projects were funded by the Bureau of Land Management, Natural Resource Conservation Service, Wyoming Game and Fish, Little Snake River Conservation District, Encampment-Saratoga-Rawlins Conservation District, Trout Unlimited, and private land owners.*