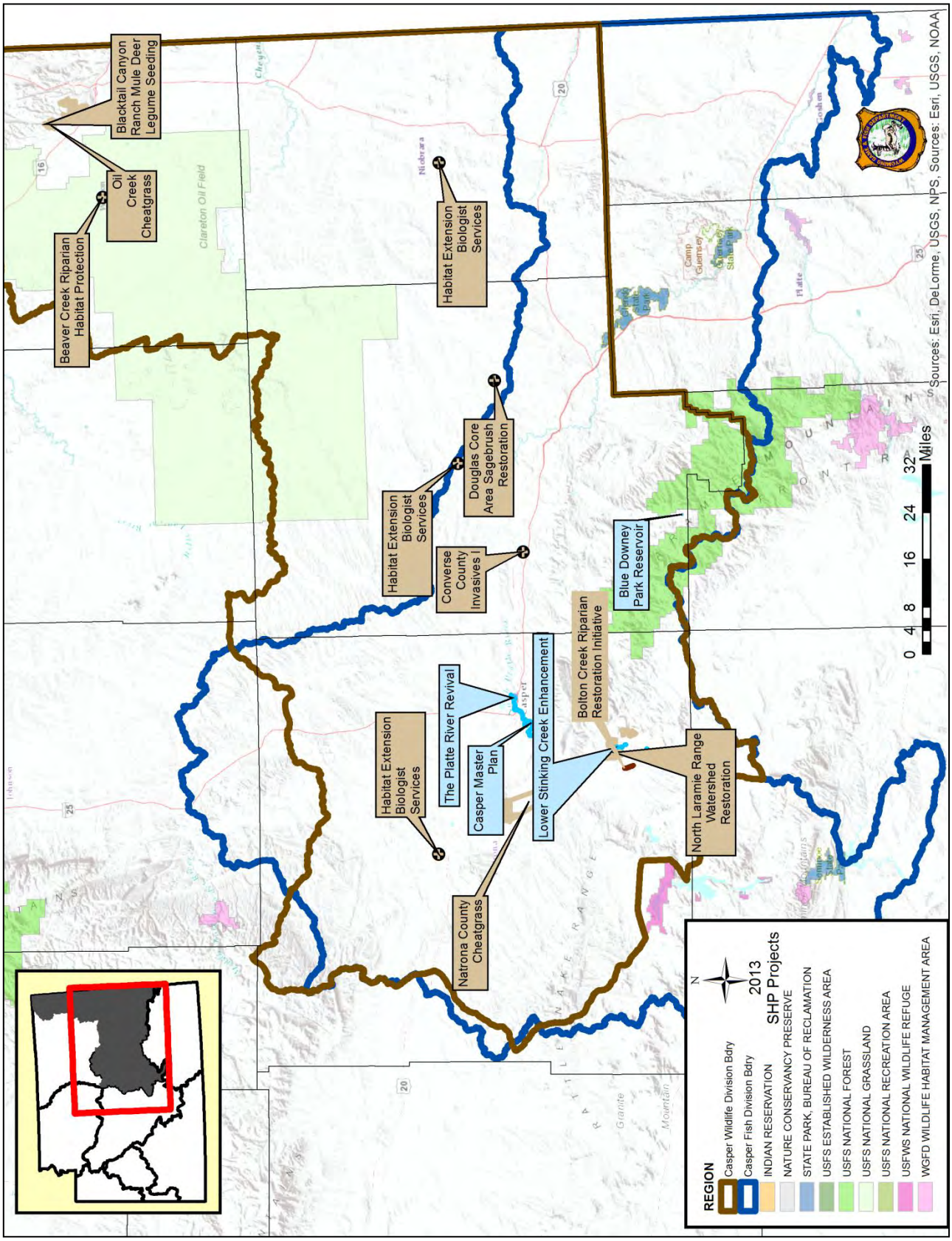
CASPER REGION



Bolton Creek Riparian Restoration Initiative (Goal 2) – Keith Schoup

Bolton Creek Riparian Restoration started in January 2013 with hauling Christmas trees from collection points in Casper. The 885 Christmas trees were placed into highly erosive tributaries in order to reduce sedimentation into Bolton Creek (Figure 10 and 11).

Figure 10 – Christmas tree placement to reduce sedimentation into Bolton Creek.

Figure 11 – Christmas tree sediment traps collect approximately 18 inches of sediment following one runoff event.

Following early season heavy snow in early October 2013, WGFD hauled 282,000 pounds of tree branches and limbs from the Casper landfill to a staging area where 126,000 pounds were airlifted via helicopter into Bolton Creek beaver dam complexes (Figure 12). The remaining 156,000 pounds will be hauled into tributaries of Bolton Creek to further reduce sedimentation; this will be accomplished in 2014. As soon as the remaining tree limbs and branches have been hauled into tributaries, shredded tree material from the Casper city landfill will be hauled and added to the tributaries accessible by truck and trailer and/or dump truck. These efforts are intended to slow head cut movement and reduce sedimentation into Bolton Creek.

Figure 12 – Helicopters airlifting tree branches

Habitat Extension Services (Goal 2) and Information and Education (Goal 4) – Todd Caltrider

In 2013, habitat extension services were provided to NRCS and private landowners. Direct technical services provided to private landowners included land management advice on improving mule deer habitat and advice on seed mixtures for wildlife. Extension services provided to NRCS included conducting timber inventory for Environmental Quality Incentive Program (EQIP) contracts and checking program compliance on two Wetland Reserve Program (WRP) contracts. Assistance was provided to NRCS on various grazing contracts by collecting range inventory, writing grazing plans, assessing wildlife habitat, and training landowners on how to conduct rangeland monitoring on properties enrolled in EQIP, Sage Grouse Initiative (SGI), and Conservation Stewardship Program (CSP). A range inventory and grazing plan was completed on a 10,000-acre ranch enrolled in the SGI program (Figure 13). Another range inventory and grazing plan was completed on 901 acres enrolled in the EQIP Wildfire Deferment Plan. Review and comments were made on 100 different EQIP, Continuous Conservation Reserve Program (CCRP), and CSP projects.

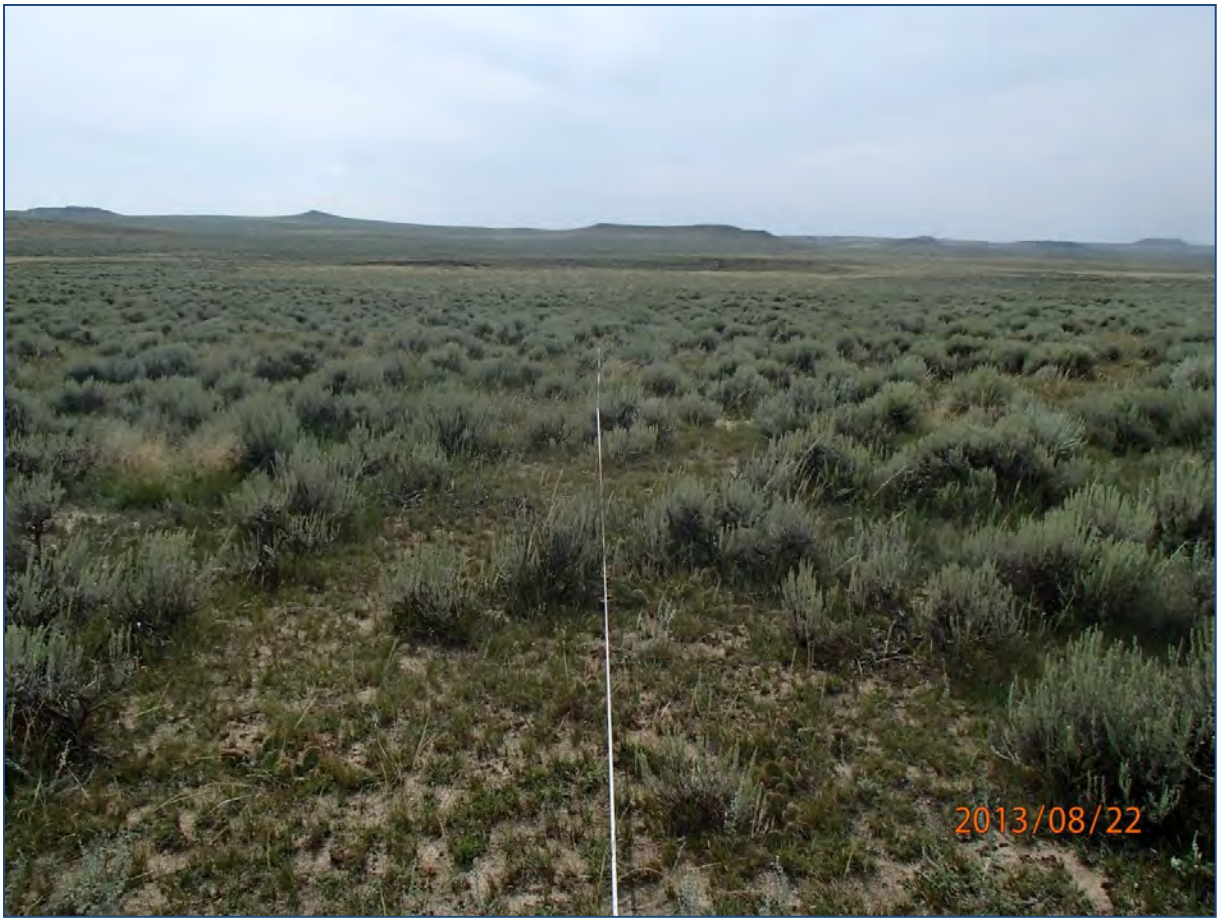


Figure 13 – Range inventory on SGI near Mush Creek, Weston County.

Information and education habitat articles were written and distributed to local newspapers and conservation district newsletters covering a wide variety of wildlife habitat issues and improvement techniques. Forestry related wildlife habitat improvement information was provided to the public at the Wyoming State Forestry Day held at Moskee Land Corporation.

Lower Stinking Creek Enhancement (Goal 2) – Colin Tierney

In Fall 2013, WGFD implemented the second stage of the ~seven (7) mile-long, Stinking Creek Watershed Enhancement Project aiming to enhance riparian habitat and reduce the sediment load coming from Stinking Creek, a tributary to Bates Creek. The Aquatic Habitat Project Biologist worked with the Habitat and Access Crew in September and October to install eight sheet-pile grade control structures at four locations on State of Wyoming and Garrett Ranch Co. lands (Figure 14). The structures act as sediment and water catchments, thereby encouraging the development of the native riparian plant communities. The riparian plants will stabilize the channel and limit sediment transport. Additionally, several of the structures installed were intended to stabilize damaged reaches of the creek.

Figure 14 – A near-completed sheet pile structure.

Three to seven individuals spent more than 900 man-hours placing approximately 1,100 yds^3 of riprap and 5,600 ft^2 of vinyl sheet-piling to complete the eight structures (Figure 15). The areas surrounding these structures were lined with geotextile fabric and covered with granite riprap. These splash aprons dissipate the flowing water's energy, reducing scour. Riparian woody plants including buffaloberry, cottonwood, and willow will be planted this spring on these sites. If necessary, some or all of these plantings will be fenced. Vegetative and elevation data were collected prior to installation and photographic monitoring is also being utilized.

Figure 15 – Constructing the upstream "V" for the sheet piling structures. Vibratory compactors were used to install these structures.

Casper Master Plan (Goal 5) – Colin Tierney

Several decades of efforts by property owners to stabilize banks of the North Platte River have resulted in a channelized river with little to no in-stream surface topography and increased erosion and sedimentation. Russian olive trees dominate much of the terrestrial vegetation and out-compete native cottonwoods for water and other nutrients (Figure 16). The North Platte River Environmental Restoration Master Plan was developed by a coalition including the City of Casper and numerous stakeholders. The plan is based on an assessment conducted by Stantec, Inc. of the 13.5 miles of river within the city limits. Completed in 2012, it includes an evaluation of riparian and upland habitats, as well as opportunities for channel improvements throughout the river.

Figure 16 – An incised channel with steep banks and Russian olive is typical of the North Platte River through Casper.

Figure 17- Sampling Russian olive densities, North Platte River, Casper.

Multiple sites are slated to receive in-river habitat treatments, while others will receive bank habitat restoration only. These sites were selected based on balancing ecological, aesthetic and political values and parameters. The restoration of the North Platte River will improve physical, chemical and biological components of the river and downstream waters (Figure 17). The restoration will provide numerous ecological and water quality benefits, as well as economic and social benefits. Construction on the first two in-stream sites is slated to begin in October 2014.

Blue Downey Park Reservoir (Goal 2) – Colin Tierney

Blue Downey Park Reservoir (Figure 18) is a one-acre impoundment on North Fork LaBonte Creek with healthy brook trout populations. These fish have persisted for decades despite regular angler use and the absence of Department stocking. Many anglers from Douglas use these ponds and the surrounding creeks for fishing with their families. An incision dropping six feet or more threatens to drain the reservoir and completely blocks upstream fish movement (Figure 19). Unchecked, this incision could eliminate the water storage capabilities and drain the wetland above the reservoir. The proposed approach is to create a rock chute to stabilize the incision. This chute would consist of rock and fill dirt, covered with a layer of geotextile fabric to stabilize the base. This would be compacted and covered with a layer of graded rock. Sheet-piling will be used to bolster the structure. This combination of rock and sheet-piling will naturally create riffle-pools, allowing upstream migration for aquatic organisms.

Figure 18 – Blue Downey Park Reservoir.

Figure 19 – Channel incision downstream of Blue Downey Park Reservoir.

Converse County Invasives I (Goal 3) – Willow Hibbs

Efforts to significantly reduce Russian olive abundance and seed source on the North Platte River began in 2011 as a collaborative effort between the Converse County Conservation District, the Converse County Weed & Pest, and the WGFD (Figure 20). The area surrounding the Dave Johnston Powerplant was identified as the largest seed source in the county as well as an excellent opportunity to increase public awareness, improve habitat conditions and recreation opportunities on the Walk-In Access Area, and to gain momentum for the overall North Platte project. Over the past two years, WGFD worked closely with the Powerplant to develop a plan and conduct inventories. In 2013, full funding for the project was obtained from Pacificorp Energy, Wyoming Wildlife Natural Resources Trust Fund, WGFD Trust Fund, Converse County Conservation District, Converse County Weed & Pest, and the National Wild Turkey Federation. Three hundred eighty acres of Russian olives will be masticated along 4.5 miles of river. Mastification will occur during the winter of 2014-2015. Re-planting with native trees and shrubs will begin in April of 2016.

Figure 20 – Russian olives along the North Platte River at the Dave Johnston Powerplant with a small, healthy cottonwood stand in the background.

North Laramie Range Watershed Restoration – 2013 (Goal 2) – Keith Schoup

During 2013, 2,806 acres of cheatgrass infested big sagebrush communities were aerially treated. Of the 2,806 acres treated, 1,547 acres were re-treated as a result of cheatgrass invasion on the periphery of the original treatment polygons and some observed cheatgrass within the original polygon. Despite the fact that the goal of 95% control three years post treatment was met and

Figure 21 – Frontier Helicopters applying Plateau® herbicide.

the total cheatgrass coverage was considerably less than observed in 2010, WGFD believes by re-treating now, future invasion can be prevented and the substantial investment made in 2010 can be protected (Figure 21).

Habitat Extension Biologist Services (Goal 2) – Willow Hibbs

A 250 acre, 12.5 mile Continuous Conservation Reserve Program (CCRP) project on Walker Creek and its tributary was inventoried and planned during 2013 for 2015 installation (Figure 22). Over 15,000 native trees and shrubs will be planted in the riparian area which will be protected from livestock grazing. The target species to benefit from improvement is mule deer.

A 500 acre, four-mile riparian area NRCS EQIP habitat improvement project was also planned in Converse County at the confluence of LaPrele Creek and the North Platte River in 2013. An oxbow will be restored, Russian olives will be removed, and over 2,500 native trees and shrubs will be planted to benefit waterfowl, deer, and turkey beginning in 2014 (Figure 23).

Figure 22 – Target location for riparian exclosure and native woody re-planting on Walker Creek.

Native shrub plantings were planned and funding was obtained in 2013 for a private land planting in Northern Converse County and a planting on the Hat Creek Breaks state land in Niobrara County. The target species to benefit from the improvement is mule deer.

Assistance was provided for a project led by the BLM on an area known as 50 Mile Flats in the Natrona Sage Grouse Core Area. WGFD Trust Fund dollars were awarded to the BLM in 2013 to purchase grass, forb and sagebrush seed for a 250 acre drill seeding project in early 2014.

Planning, inventory, and application assistance was provided to the Converse County Sportsmen for Fish and Wildlife (SFW) chapter in 2013 to install a wildlife guzzler for mule deer on state land in Northern Converse County. The guzzler will be installed in the summer of 2014.

Figure 23 – Target location on the North Platte River for Russian olive removal and native woody re-planting.

Assistance was provided to NRCS for grazing plans, project implementation, landowner coordination, and wildlife habitat plans and recommendations on over 90,000 acres of Sage-Grouse Initiative, Working Lands for Wildlife, Conservation Stewardship Program, and Environmental Quality Improvement Projects contracts. More than 60 NRCS projects were reviewed for wildlife concerns and recommendations in 2013.

The Platte River Revival (Goal 5) – Colin Tierney

The Platte River Revival was initiated in 2006 to foster a healthy and sustainable river system that is a catalyst for economic development and improved quality of life in the Casper area. Casper area citizens were engaged through a volunteer day where they performed hands-on restoration work (Figure 24). Each year, the Platte River Revival Volunteer Day, a National Public Lands Day Event (the largest in the country) draws over 300 volunteers. During its seven year span, these volunteers have removed thousands of Russian olives, completely removing three mature stands. They have planted 300 trees and removed over 1 million pounds of debris including cars, trucks, tires, and concrete (Figure 25).

Figure 24 – Volunteers remove debris from North Platte River banks and channel.

Strong partnerships and community support are crucial (Figure 25). To date, over 2,600 citizens have volunteered. Businesses, government agencies, and foundations have contributed funding and in-kind services totaling well over $500,000, thus far. The Volunteer Day/National Public Lands Day Event has strengthened the public-private partnership and attracted private and in-kind contributions making the completion of the North Platte River Environmental Restoration Master Plan possible. The Aquatic Habitat Project Biologist has been an active member of the planning committee and lead for the implementation team since 2011.

Figure 25 – Materials removed from the riverbed every year.

Shirley Basin Area Sage-Grouse Habitat Management (Goal 2) – WLCI, Jim Wasseen

The goal of this project is to improve sagebrush habitats through range improvements including construction of approximately 20 miles of fencing to convert four existing large pastures into 11 smaller pastures. This will support a rest-rotation grazing strategy and provide more flexibility in grazing management. This year, three miles of suspension cross-fence were built in the Bates Benchmark Allotment which was connected to fencing built earlier, dividing a single pasture into two pastures. The remaining seven miles of the proposed 20 miles of fencing will be completed during 2014. Approximately 7,300 feet of pipeline was constructed to seven tire tanks to provide water to newly created pastures.

Douglas Core Area Sagebrush Restoration (Goal 2) –Willow Hibbs

This project includes a sagebrush seedling out-planting, cheatgrass control, and installation of a vegetative firebreak in the northern portion of the Douglas Core Area within a 10,000 acre wildfire. Cheatgrass was sprayed on 1,200 acres with Plateau in the fall of 2013 to reduce fire potential and increase native forb and grass diversity and productivity. Two, ten-acre cheatgrass bio-control plots were also established to test the effectiveness of p.f.D7 (Figure 26).

Figure 26 – Arial application of p.f.D7, the bacterial cheatgrass bio-control, in the Douglas Core Area.

Figure 27 – Volunteer-based collection of sagebrush seed by multiple entities for 3 different sagebrush restoration projects in Northeast Wyoming.

In November of 2013, WGFD collaborated with the USFS, Wildland Restoration Volunteers, UW, private landowners, and the Douglas Core Area Restoration Team to collect local sources of sagebrush seed to be used for growing the sagebrush plants (Figure 27). More than 30 individuals participated. The vegetative firebreak will be installed in the spring of 2014 and the sagebrush plants will be planted in November of 2014.

Mule Deer Legume Seeding (Goal 2) – Todd Caltrider

Thirty acres of Falcata alfalfa was planted on the Blacktail Canyon Ranch during the spring of 2013. The planting will provide high quality forage for Mule deer. This project was paid for by the WGFD statewide legume seeding program.

Beaver Creek Riparian Habitat Protection (Goal 2) – Todd Caltrider

Figure 28 – Beaver Creek CCRP, Weston County.

A new CCRP contract was initiated for Beaver Creek southwest of Newcastle, WY. This contract will provide 81 acres of riparian habitat protection from cattle use and allow for riparian vegetation recovery (Figure 28). This CCRP compliments another CCRP initiated in 2004 that is located upstream.

Natrona County Cheatgrass 2013 (Goal 2) – Keith Schoup

In September 2013, WGFD chemically treated 3,000 acres of cheatgrass infested big sagebrush communities for three different private landowners (Figure 29). This project has expanded cheatgrass treatment efforts into the Poison Spider drainage northwest of Casper. Treatment occurred during September when air temperatures were cooler. With the cooler weather came precipitation which began to trigger cheatgrass germination. As a result, the remainder of the project was postponed until fall 2014 due to the cheatgrass germination and the ineffectiveness of the herbicide as a post-emergent.

Figure 29 – AV8ORR helicopters reloading chemical.

Oil Creek Cheatgrass Project (Goal 2) – Todd Caltrider

During the summer of 2012, a large wildfire burned in the Oil Creek drainage. Many natural resource agencies and private landowners were concerned about the potential of cheatgrass invasion, especially in the southern part of the burned area. In an effort to control potential infestation of cheatgrass, 2,896 acres were aerially treated via helicopter with imazipic herbicide in the Oil Creek drainage. Treatments occurred on five different ranches, state and BLM land. Following treatment, the landowners agreed to defer grazing for two growing seasons to allow perennial grass and forb recovery. Funding for this project came from participating private landowners, Weston County Weed and Pest, Rocky Mountain Elk Foundation (RMEF), Wyoming Wildlife and Natural Resource Trust (WWNRT), Mule Deer Foundation (MDF), Wyoming Governor's Big Game License Coalition (WGBGLC) and the WGFD Habitat Trust.

INFORMATION AND EDUCATION

January — Began work on plans to develop a new method to rank habitat projects;
February — Facilitated a discussion on a new method to rank habitat projects
March — Took TV & newspaper reporters to the field for a story on the flushing flow on the North Platte River to improve habitat conditions for trout.
April — TV interview on habitat conditions and drought
June — Taught a non-credit class on wetlands and riparian areas at Casper College
July — Media interview on fire and habitat and education program on wildlife habitat for about 30 middle school kids.