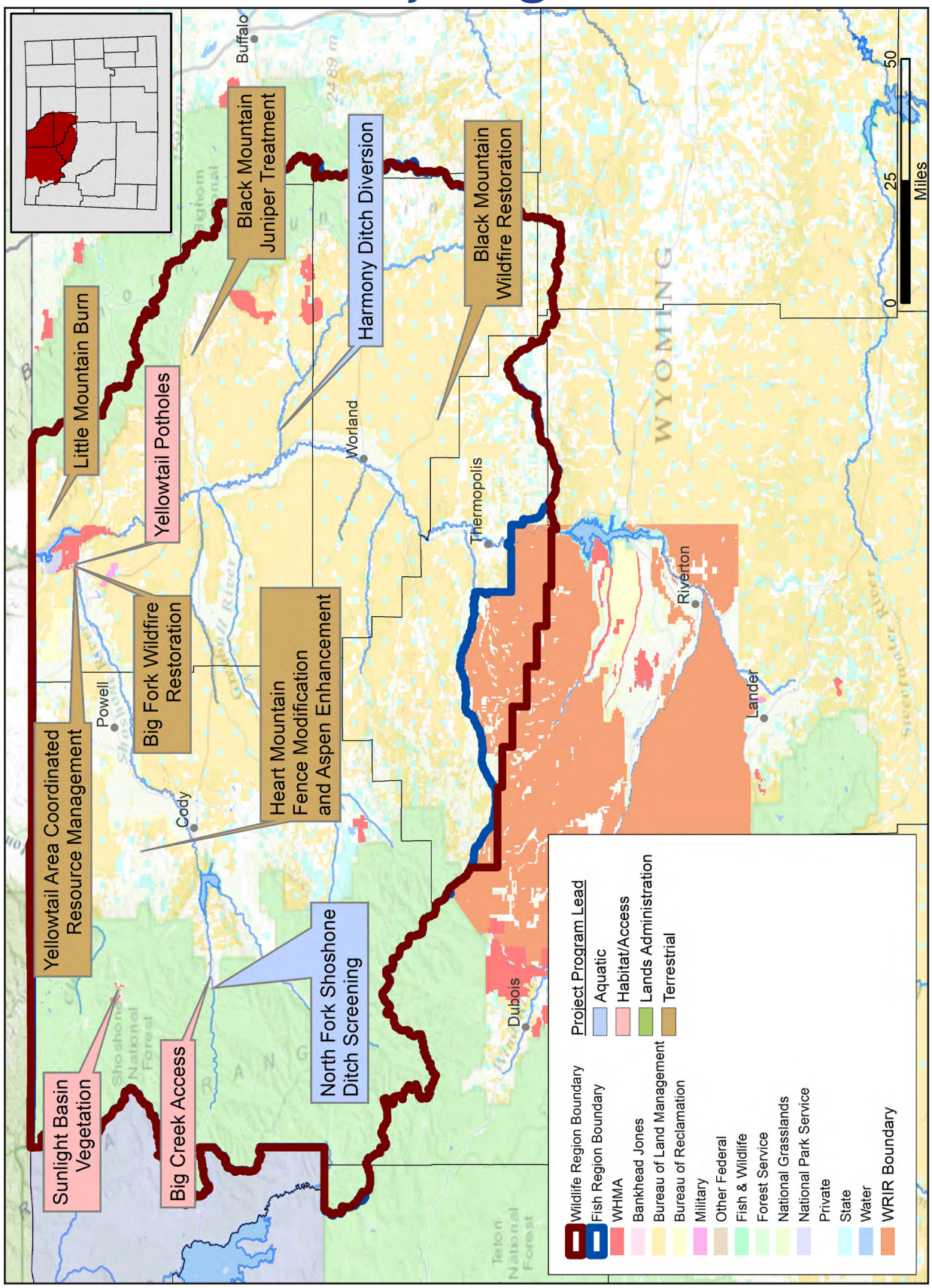
Cody Region


Black Mountain Juniper Treatment
Harmony Ditch Diversion
Black Mountain Wildfire Restoration
Little Mountain Burn
Yellowtail Potholes
Big Fork Wildfire Restoration
Heart Mountain Fence Modification and Aspen Enhancement
Yellowtail Area Coordinated Resource Management
Sunlight Basin Vegetation
Big Creek Access
North Fork Shoshone Ditch Screening
Buffalo
Powell
Cody
Worland
Thermopolis
Riverton
Lander
Dubois
WYOMING
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Project Program Lead
Aquatic
Habitat/Access
Lands Administration
Terrestrial
Wildlife Region Boundary
Fish Region Boundary
WHMA
Bankhead Jones
Bureau of Land Management
Bureau of Reclamation
Military
Other Federal
Fish & Wildlife
Forest Service
National Grasslands
National Park Service
Private
State
Water
WRIR Boundary

Cody Region

Habitat efforts within the Cody region focused on improving and managing wildlife habitats throughout the Bighorn Basin that have been degraded by fire, invasive weed species or encroachment of conifers.

On the Yellowtail Wildlife Management Area near Lovell, removal of Russian olive trees continues and efforts are underway to address the effects of a 2013 wildfire. WGFD personnel are also working hard to reduce invasive weed species on Black Mountain southeast of Worland and in the Grass Creek area north of Thermopolis. To benefit elk, mule deer and/or sage grouse, conifer encroachment projects have been undertaken on Heart Mountain north of Cody and Black Mountain north of Schell. Work continues at four other wildlife habitat management areas within the Cody region to enhance crucial elk winter range.

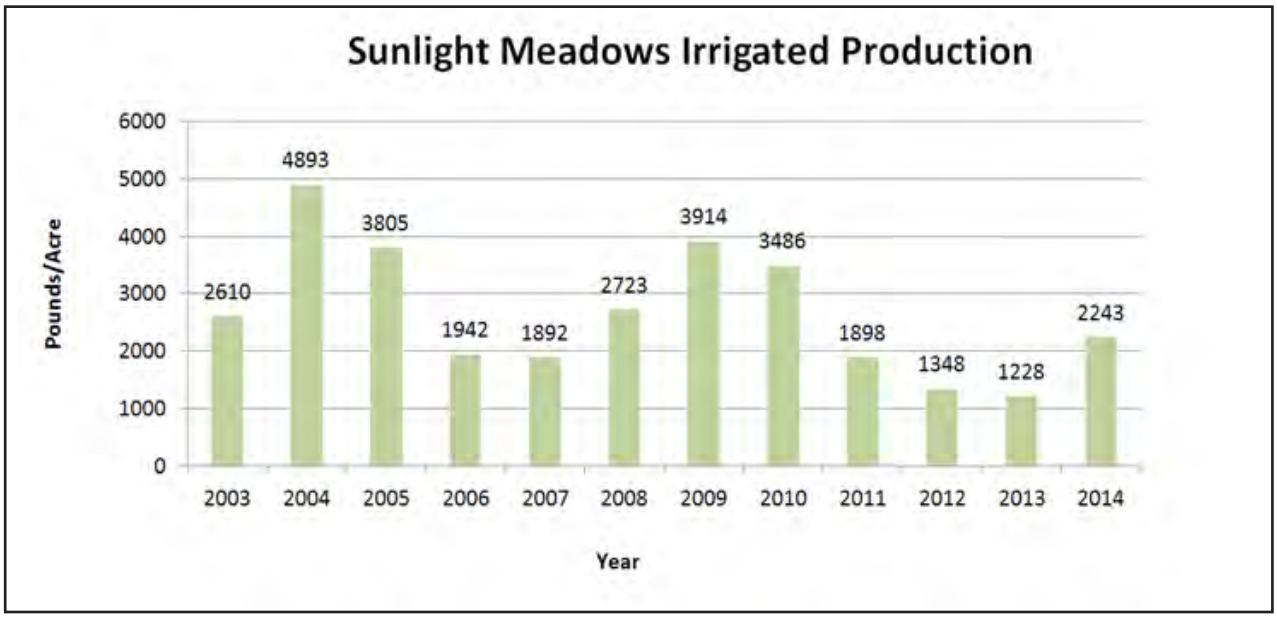
BLM/WGFD Cooperative Prescribed Fire and Habitat Enhancement (Goal 2) - Eric Shorma

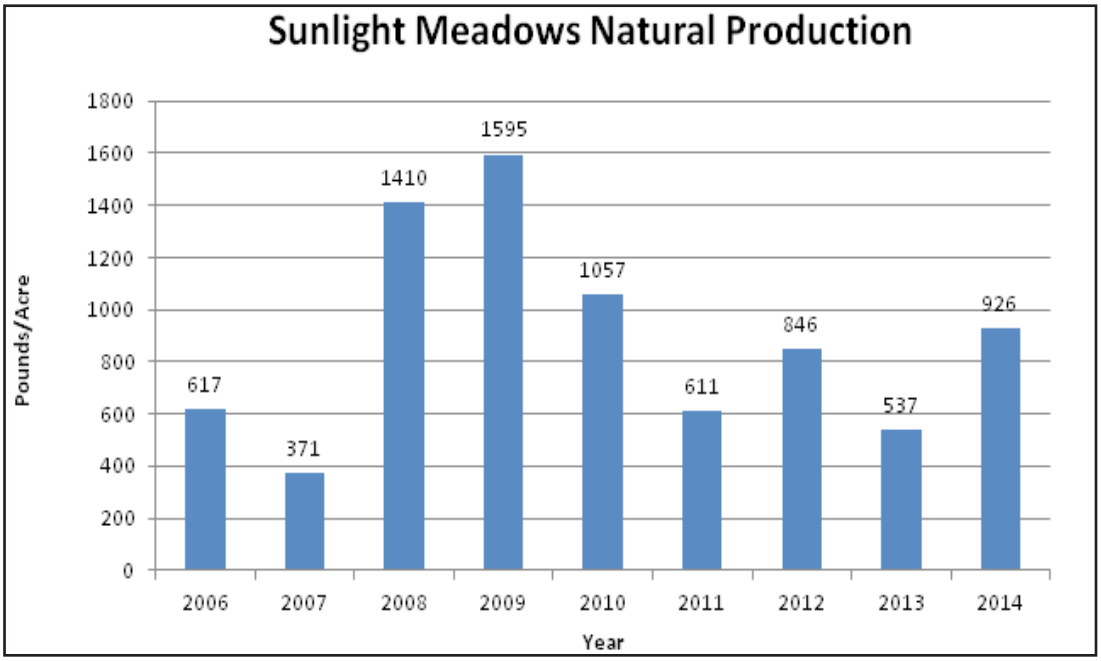
Approximately 600 acres of juniper were treated with prescribed fire in the Little Mountain area near Lovell. The objectives were to remove encroaching junipers from sagebrush communities to improve elk and deer habitat. The burns were conducted by the BLM Cody Field Office with assistance from WGFD and partial funding by the RMEF. The treatments are part of a larger prescribed fire project in the Little Mountain area that began in 1997 and has treated 11,500 acres in total.

Figure 33. *Prescribed fire in the Little Mountain area near Lovell,Wyoming.*

Sunlight WHMA (Goals 2) - Steve Ronne, Craig Swanson, Eric Shorma

Five different test plots were implemented on Sunlight WHMA. Plot sizes ranged from one-half-acre to one acre. The plot sites were mowed and chemically treated three times with Glyfos aquatic to eliminate/reduce smooth brome (*Bromus inermis*). Sainfoin (*Onobrychis viciaefolia*) was planted in a one acre plot, slender wheatgrass (*Agropyron trachycaulum*) and mountain brome were planted in three-fourths acre plots, American vetch (*Vicia americana*) mixed with mountain brome (*Bromus marginatus*) was planted in a one-half acre plot, and alpine fescue (*Festuca brachyphylla*) was planted in a one-half acre plot. This all occurred in 2013 and 2014 as part of a long-term evaluation of the species for viability and establishment to replace areas of smooth brome. Aditionally, 240 acres of meadows were irrigated to provide crucial elk winter range, 15 miles of boundary fence were maintained to prevent cattle trespass, and approximately 8 acres of noxious weeds were treated.





Heart Mountain Fence Modification and Aspen Enhancement (Goal 2) - Jerry Altermatt

Approximately 40 acres of conifer-encroached aspen were treated on The Nature Conservancy's Heart Mountain Ranch north of Cody. The treatment consisted of chainsaw-felling conifers inside and within 80 feet of aspen stands (Figure 34). In addition, herbicide treatments to control houndstongue and other noxious weeds were conducted adjacent to the aspen treatments. The treatments were part of a larger multi-phase project that included over 11 miles of woven-wire and 6-wire fence modification to more wildlife-friendly electric and 3-wire fence on the Heart Mountain Ranch and adjacent E&B Landmark Ranch.

Figure 34. *Before (left) and after (right) aspen treatments on the Heart Mountain Ranch.*

Medicine Lodge WHMA (Goal 2) - Steve Ronne, Craig Swanson, Eric Shorma

Approximately three miles of boundary fence were maintained to eliminate trespass livestock on Medicine Lodge WHMA. The contract farmer replanted 21 acres of alfalfa that was harvested in order to promote regrowth for wildlife. The farmer also irrigated 30 acres from May 1 to October 25th. High intensity/short duration grazing was conducted on 640 acres for 14 days to stimulate plant re- growth.

Yellowtail Area Coordinated Resource Management (Goal 2) - Jerry Altermatt

The Yellowtail Area Coordinated Resource Management (CRM) team continued to manage invasive plants on agency and private lands in the lower Shoshone and Bighorn River bottom lands near Lovell, Wyoming. The CRM consists of the four landowners on the Yellowtail WHMA (National Park Service, WGFD, Bureau of Land Management, and Bureau of Reclamation), neighboring private landowners, the Bighorn County Weed and Pest, NRCS, Shoshone Conservation District and other interested parties. The terrestrial habitat biologist serves as chairman of the CRM and has been responsible for project planning and implementation as well as writing and submitting grant applications. With over 2,000 acres of riparian area mechanically and chemically treated to remove Russian olive and salt cedar, the

project is now entering a maintenance phase. This phase consists of herbicide treatments to eliminate re-sprouts or new seedlings of Russian olive and salt cedar in previously treated areas on the Shoshone River. In 2014, 250 acres of Russian olive re-sprouts and seedlings were treated with herbicide using backpack and ATV sprayers. Monitoring of treated areas, predominantly using photopoints, was conducted to determine herbicide effectiveness and vegetation response after treatments (Figure 35).

Figure 35. *Russian olive treatment area prior to treatment (left) and two years after treatment (right).*

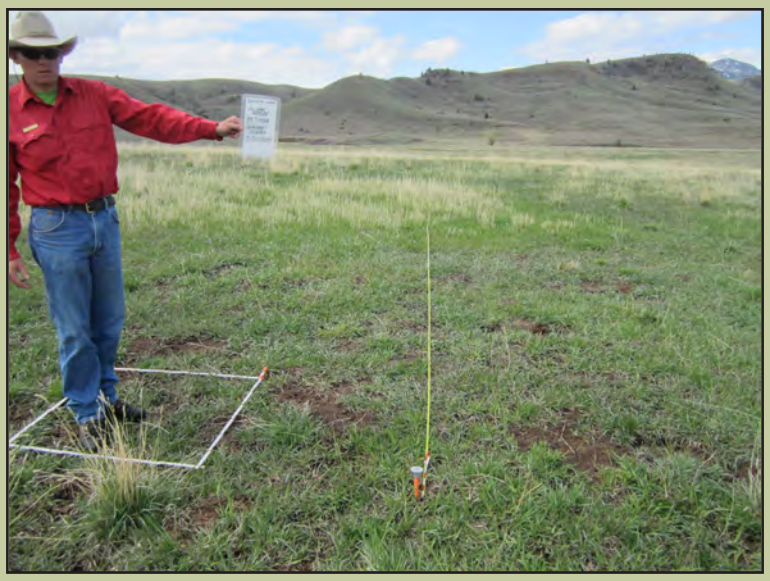


Figure 36. *Grazing monitoring site on Sunshine WHMA.*

Sunshine WHMA (Goal 1)
Steve Ronne, Craig Swanson, Eric Shorma

Grazing monitoring sites were established on Sunshine WHMA to facilitate future data collection (Figure 36). Around 931 AUMs of livestock grazing occurred on the WHMA to stimulate plant re-growth and provide high-quality forage for wildlife. Approximately 15 acres of noxious weeds were sprayed.

Figure 37. *Spraying Canada thistle (left) and planting buffaloberry shrubs (right) in the Big Fork Fire Area.*

Big Fork Wildfire Restoration (Goal 2) - Jerry Altermatt

On April 27, 2013, the Big Fork Fire burned over 1,500 acres on the Yellowtail Area Coordinated Resource Management Area (CRM), including the Yellowtail Wildlife Habitat Management Area and adjacent private lands. Included in the burn area were 752 acres that had been treated between 2009 and 2013 to remove Russian olive. These areas, because of heavy biomass in the form of Russian olive slash, burned with high intensity and prolonged heat, causing severe fire effects. This resulted in high herbaceous plant mortality and extensive areas of bare ground. Noxious weeds including white-top, Russian knapweed, and Canada thistle have proliferated throughout the burn area but especially in areas of highest fire severity. The CRM conducted herbicide treatments on approximately 275 acres to target infestations of Canada thistle and Russian knapweed. The treatments were conducted using backpack and ATV sprayers (Figure 37). Over 800 buffaloberry and redosier dogwood seedlings were planted within the burned area to re-establish shrubs lost in the fire (Figure 37). Buffaloberry seed was collected on the Yellowtail WHMA to provide a local seed source for the contract growing of seedlings in 2015.

Figure 38. *A typical "miss" area that was retreated with a ground application of herbicide.*

Black Mountain Wildfire Restoration (Goal 2) - Jerry Altermatt

A total of 9,535 acres of cheatgrass were aerially sprayed with imazapic herbicide in 2011 and 2012 in response to the 1996 Black Mountain and 2012 Zimmerman Butte wildfires southeast of Worland. In 2014, an evaluation was made to assess the treatments and identify areas where re-treatment was necessary. In late August, a ground herbicide application using ATVs was conducted on 300 acres where control was poor or in areas that were missed in the previous aerial treatments (Figure 38). The advantage of ground application is the ability to use larger volumes of water per acre than is practical with aerial application.

Renner WHMA (Goal 2) - Steve Ronne, Craig Swanson, Eric Shorma

Grazing monitoring sites were established (Figure 38) and nine acres of noxious weeds were treated. The contract farmer fertilized and irrigated 120 acres of grass/alfalfa meadows from May 10 to September 18. There was spot spraying of White top, Canada thistle, and Russian olive around the meadows and in Ziesman Canyon. The Renner Meadows were grazed from May 15 to June 9 and again from October 29 to November 27, with a total of 467 AUMs utilized to stimulate plant re-growth.

Figure 39. *Grazing monitoring site on Renner WHMA.*

Black Mountain Juniper Treatment (Goal 2) - Jerry Altermatt

Figure 40. *Mulching juniper in the Black Mountain area.*

Conifers were removed on 637 acres in the Black Mountain area to enhance habitat for elk, mule deer and sage-grouse. Conservation Seeding and Restoration of Kimberly, Idaho, using two skidsteers with mastication heads, accomplished the treatment between July 12 to September 10, 2014 (Figure 40). The project objectives were to 1) remove encroaching juniper (and some Douglas fir) from the project area, 2) restore a natural fire regime, and 3) maintain healthy sagebrush grassland habitat. All conifers, including juniper and Douglas fir, over one foot in height were mulched where accessible by machine. Conifers were hand-sawn and scattered on approximately 30 acres where machine access was difficult because of steep, rocky slopes. Financial contributors included BLM, Wyoming Sage-grouse Conservation Fund and Rocky Mountain Elk Foundation.

Public Access Areas (Goal 3) - Steve Ronne, Craig Swanson, Eric Shorma

Russian olive trees were treated above and below the Willwood dam encompassing approximately 10 acres. A wide swath of willows were treated to allow future boat ramp development.

Yellowtail WHMA (Goal 1) - Steve Ronne, Craig Swanson, Eric Shorma

On Yellowtail WHMA there are 100 acres of farm fields irrigated for permanent cover (Figure 41). Sainfoin, Millet, Basin Wild Rye, Slender Wheat Grass, Green Needle Grass and Small Burnet were planted for food plots to benefit pheasants and turkeys and to provide cover for hunting. A contractor rebuilt approximately 1,500 feet of fence and replaced 4 water control structures on Ponds 1 through 4 that were destroyed by the Big Fork Fire, which occurred in 2013.

Figure 41. *Farm fields on Yellowtail WHMA.*

Photo points were established to monitor the recovery of the areas burned by the fire. A second year of cottonwood tree monitoring was conducted by Rocky Mountain High School Biology students. With assistance from USFS, explosives were used to create two potholes for waterfowl nesting in an area that was dominated by cattails with no open water (Figure 42).

Figure 42. *Before blasting (left) and after blasting (right) a cattail wetland on Yellowtail WHMA.*

Cottonwood/Grass Creek Watershed Improvement (Goal 2) - Amy Anderson

A CRM/Watershed Improvement District has been in place on Cottonwood/Grass Creek since 2005 within the 270,000 acre watershed. In August of 2007, work began to control invading tamarisk and Russian olive on Cottonwood Creek. A Weed Management Area has been in effect on Grass Creek since 2005, and is highly effective at finding and treating infestations of all weed species on the Grass Creek portion of the watershed. Around 1,930 acres of Cottonwood Creek have been treated to remove tamarisk and Russian olive to date and 100% of these acres received follow-up chemical treatments in 2014 utilizing WWNRT and Weed and Pest funds.

Production/Utilization Surveys (Goal 2) - Jerry Altermatt

Regional wildlife personnel collected production/utilization data at ten sagebrush transects during 2014. Annual leader production was above the 11-year average, reflecting precipitation that was generally above average throughout the Bighorn Basin in 2014 (Figure 43). Utilization at transects in spring 2014 was generally below average and well below the 35% utilization level considered to be the threshold for over-use (Figure 44). Light utilization may indicate that populations are in balance with the amount of winter forage, but may also reflect the fact that the Cody Region has experienced relatively mild winters with big game distributed more widely over winter ranges rather than concentrating animals on crucial winter ranges where utilization studies are located.

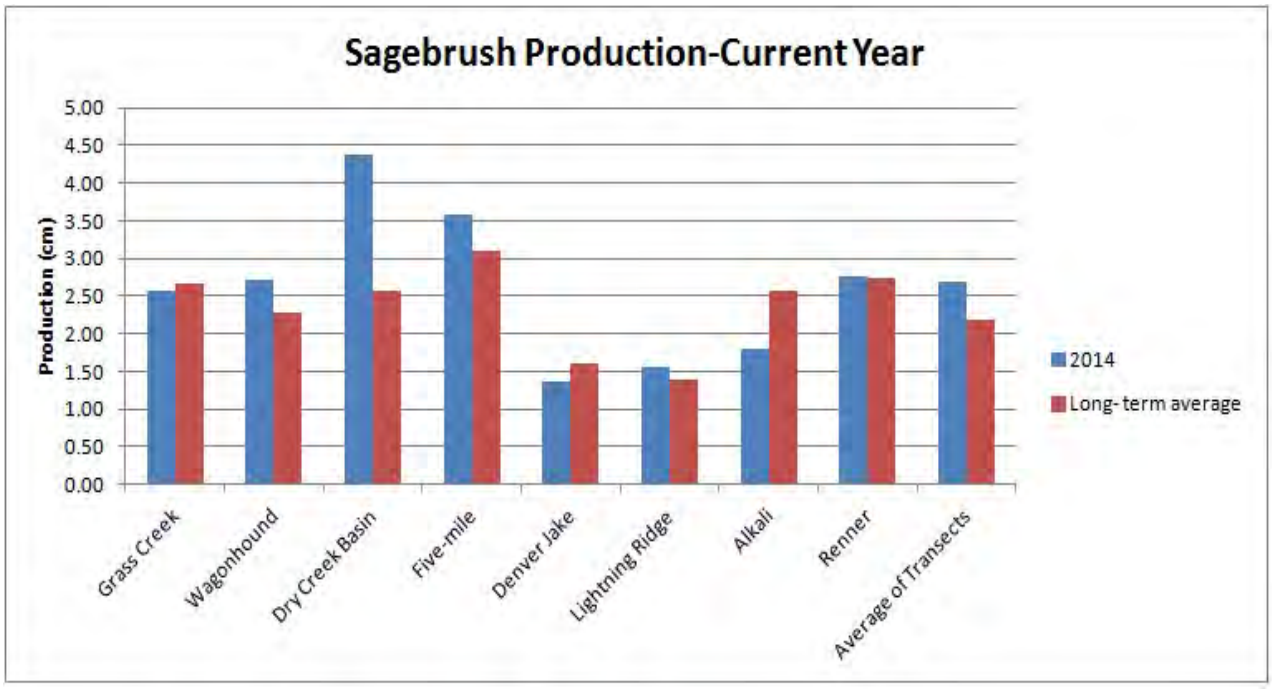


Figure 43. *Annual production of sagebrush at eight locations.*

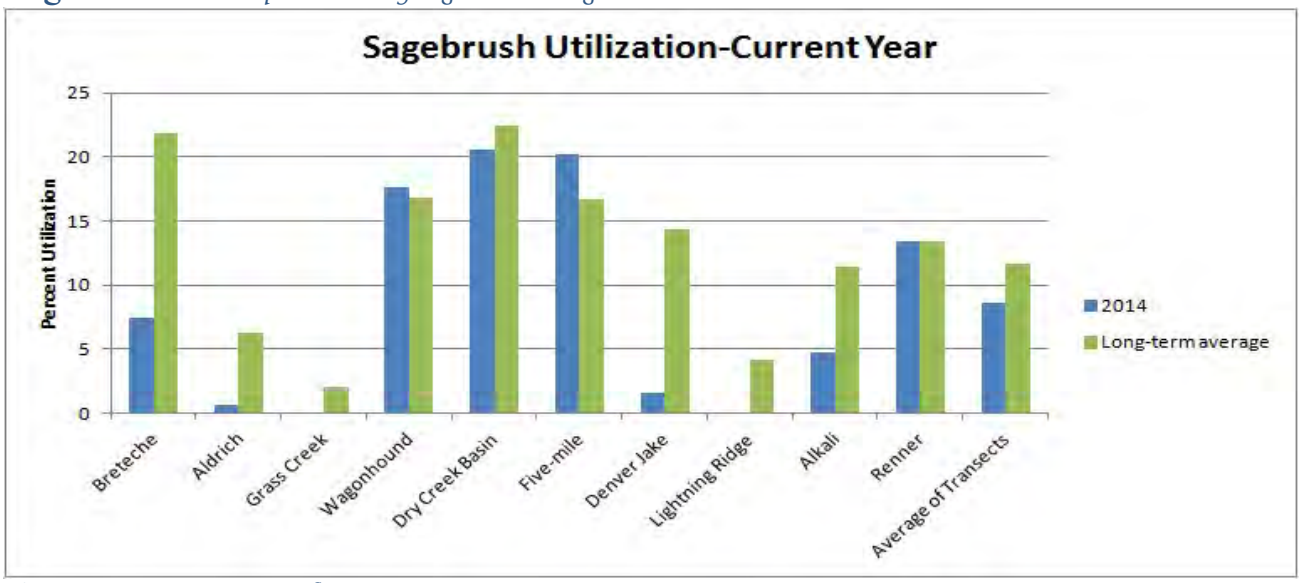


Figure 44. *Utilization of sagebrush expressed as percent annual leaders browsed at ten locations.*

Herbaceous production and utilization were measured at seven and four sites respectively on the Absaroka Front in areas where monitoring elk use is a priority. Production was above average, reflecting above average precipitation in these areas in 2014 (Figure 45). Utilization by elk on winter ranges continues to be high in Sunlight Basin, exceeding 70% at three sites (Figure 46).

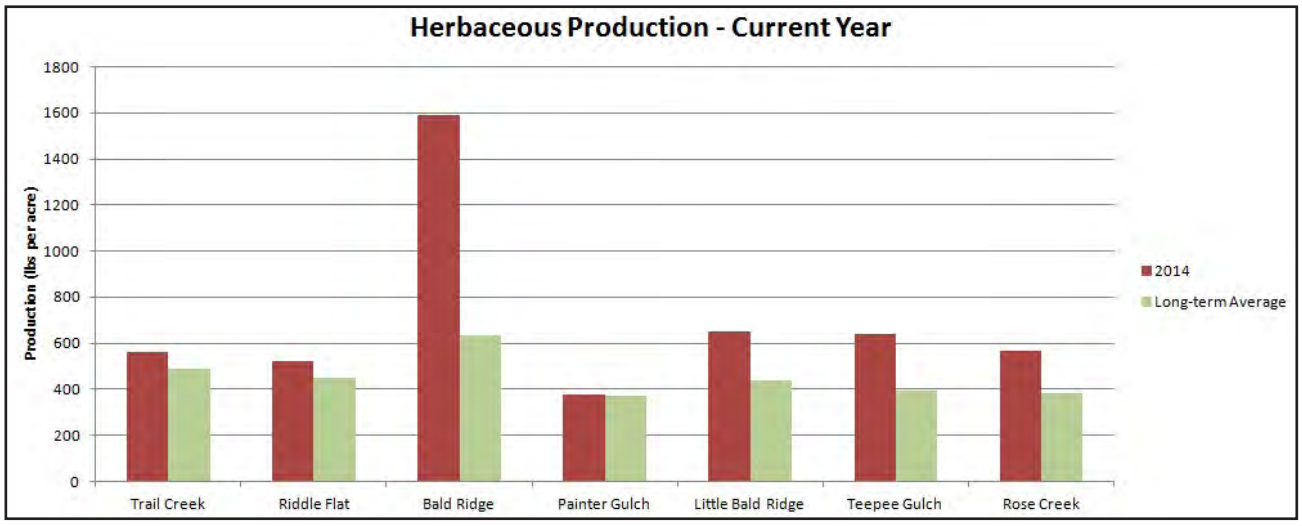


Figure 45. *Annual production of herbaceous vegetation at six locations.*

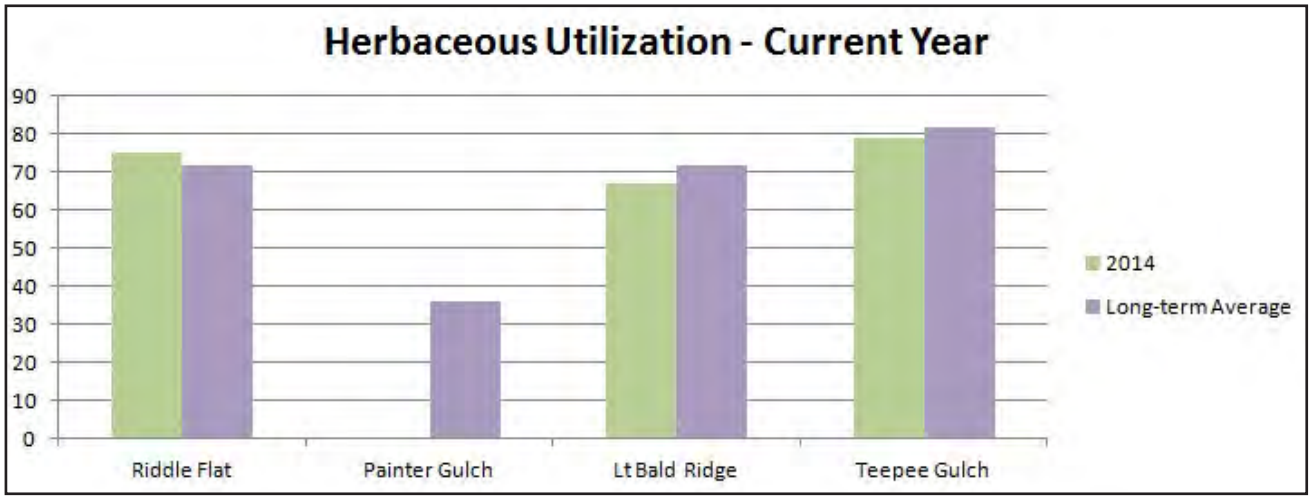


Figure 46. *Utilization of herbaceous vegetation at six locations.*