BLM

Environmental Assessment
Red Desert Livestock Conversion

June 2007

MISSION STATEMENT

It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

BLM/WY/PL-07/025+1020

WY-040-06-EA-067

ENVIRONMENTAL ASSESSMENT

WY-040-06-067

RED DESERT LIVESTOCK CONVERSION

FOR: HELLYER LIMITED PARTNERSHIP

United States Department of the Interior
Bureau of Land Management
Rock Springs Field Office

June 2007

INTRODUCTION

Need for the Proposed Action

On July 21, 1998, Magagna Brothers submitted a request for a transfer and conversion of AUMs in the Continental Peak and Red Desert Allotments. They requested that the AUMs be transferred to Robert and Martha Hellyer (now Hellyer Limited Partnership) and that the AUMs be converted from sheep to cattle. On March 3, 1999, a decision was issued denying the requested livestock conversion because the Continental Peak and Red Desert Allotments fall within the area being analyzed in the Jack Morrow Hills Coordinated Activity Plan (JMH CAP). Such actions were on hold until the JMH CAP was completed (40 CFR 1506.1). The transfer, however, was completed on June 15, 1999. On May 12, 2004, Hellyer Limited Partnership and Magana Brothers jointly sent a letter to the Rock Spring Field Office to again request a livestock conversion in the Continental Peak and Red Desert Allotments. Now that the Record of Decision for the JMH CAP is signed (USDI 2006), the Rock Springs Field Office can proceed with the analysis of the requested livestock conversion. After discussions, BLM and Hellyer Limited Partnership have decided to consider both allotments separately, in terms of a livestock conversion. Therefore this proposal is for the Red Desert Allotment only. The request is to convert existing sheep use under permit to the Hellyer Limited partnership to cattle use.

Conformance with Land Use Plans

The Proposed Action is in conformance with the Record of Decision Green River Resource Management Plan approved August 8, 1997, the Jack Morrow Hills Coordinated Activity Plan Record of Decision dated July 19, 2006, the land use plan terms and conditions as required by 43 CFR 1610.5-3(a), and the Red Desert Allotment Management Plan (AMP) and revisions, dated March 7, 1984. The Green River RMP EIS and JMH CAP EIS analyzed the impacts of grazing.

The JMH CAP EIS presented an extensive cumulative impact analysis for past, present, and foreseeable future actions based on individual resource values. The cumulative impact analysis is found on the internet at http://www.wy.blm.gov/jmhcap/2004final/index.htm. This analysis tiers to the JMH CAP and incorporates by reference those sections of the JMH CAP EIS affected by the proposal.

Relationship to Statutes, Regulations, or Other Plans

This EA fulfills the National Environmental Policy Act (NEPA) requirement for site-specific analysis. The Proposed Action is in accordance with 43 CFR 1610.5-3(a); Federal Land Policy and Management Act (FLPMA) of 1976, as amended; Sandy Grazing Environmental Statement Record of Decision (1979); Taylor Grazing Act of 1934; and National Environmental Policy Act (NEPA) of 1969. The Wyoming Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management were developed and approved by the Secretary of the Interior on August 12, 1997.

The regulations at 43 CFR 4180.1 detail four fundamentals of rangeland health. They are:

1. Watersheds are in or are making progress toward properly functioning physical condition, including their upland, riparian-wetland, and aquatic components; soil and plant conditions support infiltration, soil moisture storage, and the release of water that are in balance with climate and landform and maintain or improve water quality, water quantity, and timing and duration of flow.

2. Ecological processes including the hydrologic cycle, nutrient cycle, and energy flow are maintained, or there is significant progress toward their attainment, in order to support healthy biotic populations and communities.

3. Water quality complies with State water quality standards and achieves, or is making significant progress toward achieving established BLM management objectives such as meeting wildlife needs.

4. Habitats are, or are making significant progress toward, being restored or maintained for Federal threatened and endangered species, Federal Proposed, Federal candidate, BLM Sensitive Species, and other special status species.

The BLM developed "Wyoming Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management" (S&Gs) to achieve the four fundamentals of rangeland health. These Standards relate the minimal acceptable conditions for BLM-administered public rangelands, including the health, productivity, and sustainability of the land. The achievement of a Standard is determined by observation, measuring, and monitoring conditions in the field and is measured on a watershed scale. If livestock grazing practices are found to be among factors contributing to a failure to meet a Standard, corrective action must be developed and implemented before the next grazing season in accordance with the grazing regulations. Guidelines provide reasonable, responsible, and cost-effective management practices at the grazing allotment and watershed levels to attain and maintain rangeland Standards. These management practices either maintain existing desirable conditions or move rangelands toward statewide Standards within reasonable time frames.

The six Standards for Healthy Rangelands are:

> Standard 1: Within the potential of the ecological site (soil type, landform, climate, and geology), soils are stable and allow for water infiltration to provide for optimal plant growth and minimal surface runoff.
>
> Standard 2: Riparian and wetland vegetation have structural, age, and species diversity characteristic of the state of channel success and is resilient and capable of recovering from natural and human disturbance in order to provide forage and cover, capture sediment, dissipate energy, and provide for ground water recharge.

Standard 3: Upland vegetation on each ecological site consists of plant communities appropriate to the site which are resilient, diverse, and able to recover from natural and human disturbance.

Standard 4: Rangelands are capable of sustaining viable populations and a diversity of native plant and animal species appropriate to the habitat. Habitats that support or could support threatened species, endangered species, species of special concern, or sensitive species will be maintained or enhanced.

Standard 5: Water Quality meets state standards.

Standard 6: Air Quality meets state standards.

An assessment of the Standards for Rangeland Health was conducted in 1999 for the Red Desert Allotment and is available for review at the Rock Springs Field Office. The allotment met all the Standards. The Interdisciplinary (ID) team that evaluated the Red Desert allotment for conformance with the Standards for Healthy rangelands recognized that Standards 1-4 were being met under "Current grazing practices." For the five grazing years immediately preceding the Standards evaluation (1994 -1998), average licensed use in the allotment was 826 AUMs or 8% of total active use. This level of use was considered to be "current grazing practices" and was instrumental to the allotment meeting the Standards for Rangeland Health.

There are 8.4 miles of stream in Proper Functioning Condition (PFC) in the Red Desert Allotment.

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Proposed Action

The proposed action is to convert Hellyer Limited Partnership's permitted sheep use to cattle use on the Red Desert Allotment. Hellyer Limited Partnership's current permitted use is shown in Table 1. The trailing use shown in Table 1 was acquired from the Erramouspe Family and is necessary to accommodate movement of livestock from winter range in the Rock Springs Allotment (south of the Red Desert Allotment) through the Red Desert Allotment to the Continental Peak Allotment.

Table 1. Hellyer Existing Permitted Use

ALLOTMENT	LIVESTOCK NUMBER & KIND	GRAZING PERIOD	PERCENT FEDERAL	AUMs
Red Desert	3,660 Sheep	5/1-5/6 (trailing use)	100	144
	2,300 Sheep	5/1-12/15	91	3,152

The proposed conversion rate is 6.3:1 (6.3 sheep for every cow) for the Red Desert Allotment, as stated in the Red Desert Allotment Management Plan (AMP). Therefore, Hellyer Limited Partnership's proposed conversion of permitted use is shown in Table 2.

Table 2. Proposed Conversion Use

ALLOTMENT	LIVESTOCK NUMBER & KIND	GRAZING PERIOD	PERCENT FEDERAL	AUMs
Red Desert	581 Cattle	5/1-5/6 (trailing use)	100	107
	365 Cattle	5/1-12/15	91	2,501

The Pinnacles Pasture of the Red Desert Allotment has low forage productivity, lacks livestock watering points, and contains elk crucial winter range. To reduce impacts to elk from the increase in cattle grazing on this sensitive area, Hellyer Limited Partnership has agreed to conduct joint utilization monitoring with the BLM. Key areas for monitoring will be identified west of the road that forms the border between the Alkali Draw and South Pinnacles Wilderness Study Areas. The cattle will be removed when the utilization levels reach 35% of current year's growth on key upland grass species and riparian herbaceous species, 30% of stems bitten on riparian willows throughout the allotment, and 30% of stems bitten on mountain shrub species in the Pinnacles pasture.

Hellyer Limited Partnership proposes to use only the Bear Creek, Buffalo Hump, and Pinnacles pastures in the Red Desert Allotment. They are required to follow the grazing treatments designed for these pastures as defined in the Red Desert Allotment Management Plan (AMP), as stated on their grazing permit. Average actual use in the Red Desert Allotment annually has been around 20%. The Hellyers do not propose to use the Dunes, Red Lake, or Boundary Pastures in the allotment. However, even though not proposed, it is physically impossible for livestock to be moved to/from the Pinnacles and Buffalo Hump pastures without crossing through the Dunes pasture. Therefore some trailing use of the Dunes pasture in the far northwestern corner is also a part of the proposed action.

Alternatives

No Action Alternative

Under the no action alternative the request for conversion of sheep use to cattle use in the Red Desert Allotment would be denied. Hellyer Limited Partnership would continue to run sheep as their current permit states. Use would be consistent with the parameters stipulated within the Red Desert Allotment Management Plan (AMP). As written, the AMP stipulates that when active use within the Red Desert Allotment reaches 50%, the AMP will be evaluated and possibly modified.

Alternative A

Alternative A is to convert 50% of Hellyer Limited Partnership's sheep AUMs to cattle AUMs. The rest of the actions listed under the Proposed Action would remain the same under this alternative. Hellyer Limited Partnership's permitted use would change as shown in Table 3.

Table 3. Permitted Use under Alternative A

ALLOTMENT	LIVESTOCK NUMBER & KIND	GRAZING PERIOD	PERCENT FEDERAL	AUMs
Red Desert	3,660 Sheep	5/1-5/6	100	144
	1,150 Sheep	5/1-12/15	91	1,576
	182 Cattle	5/1-12/15	91	1,247

Affected Environment

The following critical elements (Table 4) and other resource elements (Table 5) of the human environment have been considered. Those items indicated with a "no" are not potentially affected or impacted by the proposed action or alternatives and will not be addressed further in this document.

Table 4. Critical Elements

Critical Element	Yes	No	Critical Element	Yes	No	Critical Element	Yes	No
ACEC	X		Floodplains		X	Water Quality		X
Air Quality		X	Invasive Species		X	Wetlands/Riparian Areas	X	
Cultural/Historic	X		Native American Religious Concerns	X		Wild & Scenic Rivers		X
Environmental Justice		X	T/E Species	X		Wilderness	X	
Farmland, Prime/Unique		X	Wastes, Hazardous, Solid		X			

Table 5. Other Resource Elements

Resource Element	Yes	No	Resource Element	Yes	No	Resource Element	Yes	No
Fluid or Solid Minerals		X	Paleontology		X	Special Status Species - Vegetation	X	
Forested Area/Products		X	Rangelands	X		Vegetation	X	
Geology		X	Recreation		X	Visual Resource Management		X
Land Resources		X	Socio/Economics		X	Wild Horses	X	
Livestock Grazing	X		Soils		X	Wildlife	X	
Off-Road Vehicles		X	Special Status Species - Animal	X				

General Setting

The Red Desert Allotment consists of 243,676 acres of public land, 12,839 acres of state land, and 999 acres of private land, for a total of 257,514 acres and is located in the northeast corner of the Rock Springs Field Office area, spanning Townships 22-26 and Ranges 97-101.

The general climate of the area is semi-arid cold desert. Elevations range from 6,600 to 8,500 feet. Temperatures can range from winter lows of -46 degrees Fahrenheit, to summer highs of 98 degrees Fahrenheit. Average annual temperatures are around 38 degrees. Average annual precipitation of this area is 6 to 8 inches, which is highly variable in timing, location and form.

Affected Resources

Rangelands/Livestock Grazing/Vegetation

The assessment area for rangelands/livestock grazing is JMH CAP planning area. The affected environment for this area was analyzed in the JMH Final Environmental Impact Statement (FEIS) and is incorporated by reference (p. 3-7 – 3-9).

The affected environment for the project area is the Red Desert Allotment. For analysis purposes, the dominant cover types in the Red Desert Allotment have been broken down into the ten categories found throughout the area (Table 6, Figure 1).

Table 6. Vegetation Within the Red Desert Allotment

Type	% of Allotment*
Wyoming big sagebrush	59.40
Desert shrub	16.01
Saltbush fans and flats	8.30
Sand dune complex	6.48
Greasewood fans and flats	4.27
Unvegetated playa	1.79
Active sand dunes	1.68
Exposed rock/soil	1.32
Open water	0.46
Shrub-dominated riparian	0.13

*Note: Percentages may not add up to 100 due to rounding technicalities.

Cattle mainly consume grasses for forage; therefore, many of these habitat types would not support use by cattle in the allotment. Wyoming big sagebrush communities are dominated by shrubs, which cattle do not utilize, but can contain a productive understory of various grass species. The density and fecundity of these grasses depend on the soils within which they occur and how heavily the plants are utilized. Desert shrub communities are a mix of shrubs, including sagebrushes, shadscale, greasewood, and winterfat. They also can have a diverse understory of grass species. Shrub-dominated riparian communities generally contain dense understories of graminoids; however, these plants can be hard to access due to a woody canopy layer. Cattle would use these three types of habitat the most (Wyoming big sagebrush, desert shrub communities, and shrub-dominated riparian communities). Much of the sage and desert shrub types in the allotment are far enough from permanent water to render them unusable even though forage preferred by cattle is available. Sheep prefer saltbush fans and flats as well as desert shrub communities, but could use all the community types except the active sand dunes, exposed rock/soil, and open water. Sheep are also more likely to successfully forage on slopes that cattle will not use and sheep can graze much farther from water than can cattle.

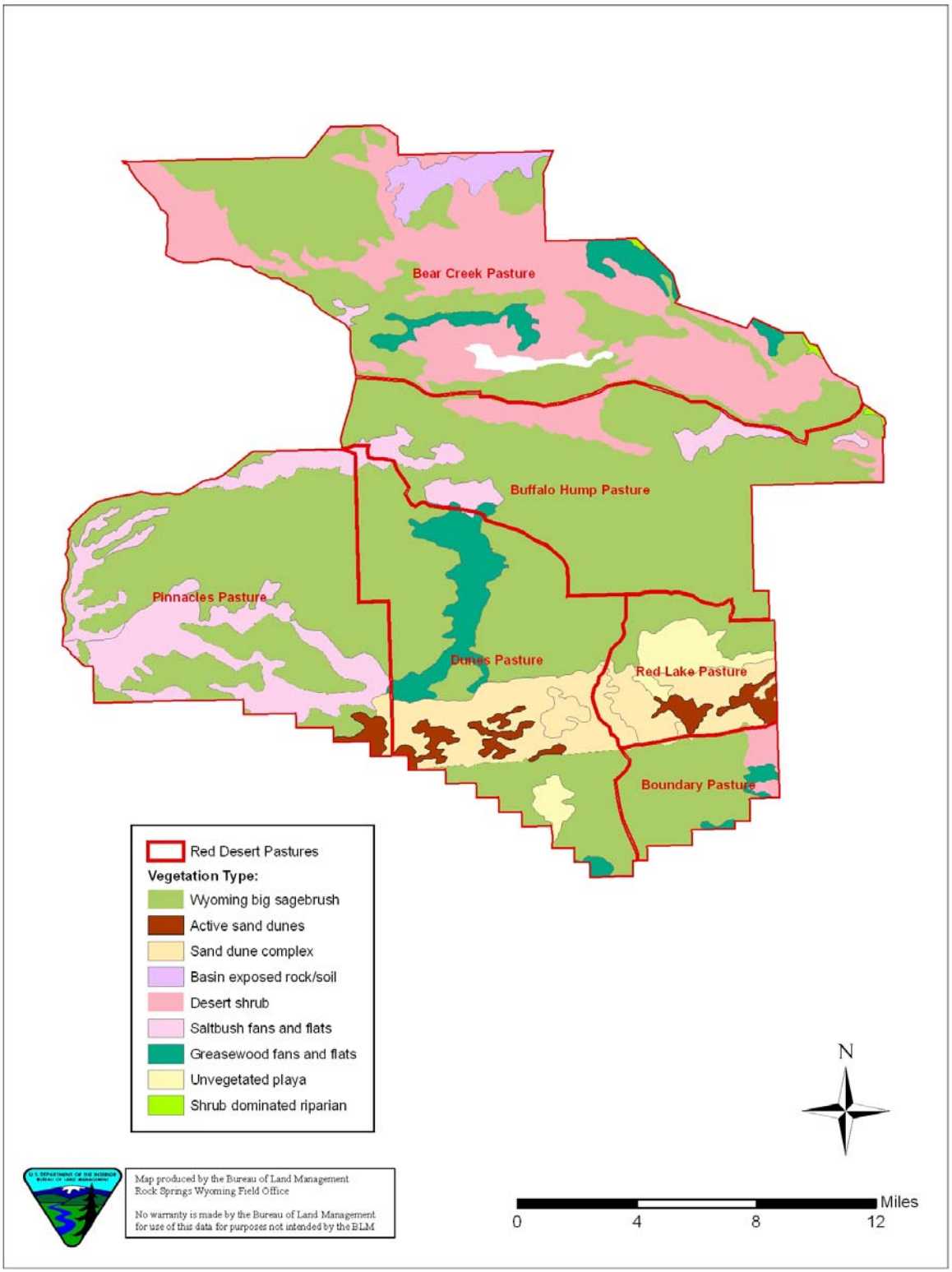

Figure 1. Red Desert Allotment Vegetation.

There are 14 range projects existing in the allotment. These include eight water wells and six pit reservoirs (see Figure 2).

Current information on the licensed livestock use on the grazing permits is found in Table 1 and the proposed use is found in Table 2. Information on total licensed livestock use in the Red Desert Allotment can be found in Table 7.

Table 7. Current Licensed Livestock Use

ALLOTMENT	OPERATOR	LIVESTOCK		GRAZING PERIOD		% PL	TYPE USE	AUMs
		NUMBER	KIND	BEGIN	END			
Red Desert	Bar X Sheep Company	517	Cattle	05/15	10/14	88	Active	2,289
	Blair & Hay Land & Livestock Company	602	Cattle	05/01	12/15	92	Active	4,171
	Hellyer Limited Partnership	3,660	Sheep	05/01	05/06	100	Trailing	144
		2,300	Sheep	05/01	12/15	91	Active	3,152
							TOTAL:	*9,758*

Wild Horses

The assessment area for wild horses is the Divide Basin Herd Management Area (HMA). The affected environment for this area was analyzed in the JMH CAP FEIS and is incorporated by reference.

Wildlife

The high-elevation, cold-desert vegetation of the allotment is composed of Wyoming big sagebrush/grass, Gardner saltbush, shadscale, greasewood, with some mountain shrub in the uplands, and scattered juniper adjoining the sagebrush habitats. These habitats support many species common to the Intermountain West such as: elk (*Cervus elaphus*), mule deer (*Odocoileus hemionus*), pronghorn antelope (*Antilocapra americana*), greater sage-grouse (*Centrocercus urophasianus*) and many species of neotropical birds and small mammals. Both eastern short-horned lizards (*Phrynosoma douglasi*) and Great Basin spade-foot toads (*Spea intermontanus*) have been documented in the allotment.

Big Game

Assessment areas for big game are discussed below under individual species. Table 8 provides details for the big game species within their respective herd units. Figure 3 shows big game sensitive habitats. Wyoming Game and Fish (WGFD) Herd Units size and population objective levels are set by WGFD for each herd. The herd units do not correspond with the assessment areas, but are shown to give the reader a better understanding of population and habitat parameters.

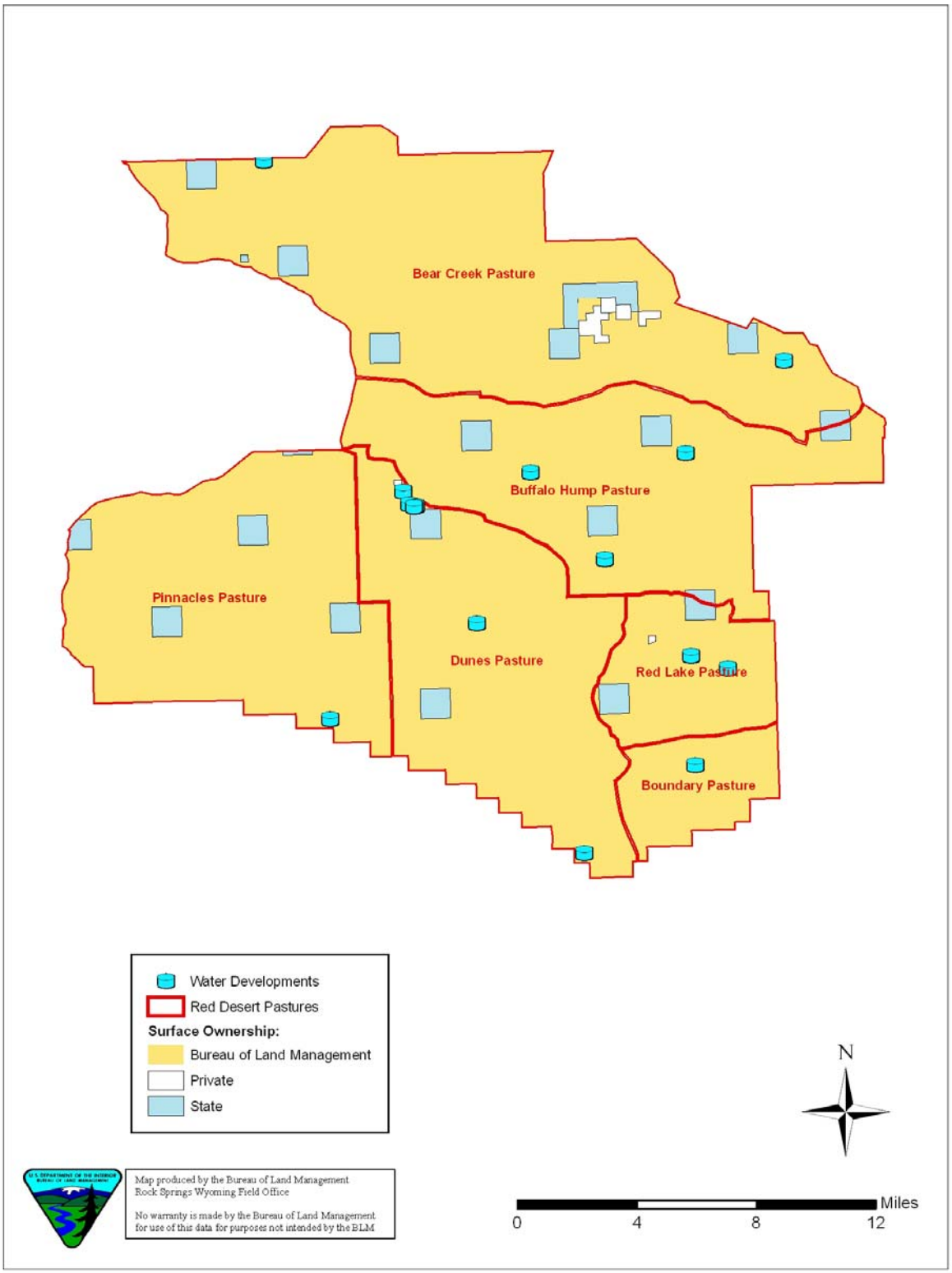

Figure 2. Range Projects and Pastures

Table 8. Big Game Habitat Use and Size

Common and Scientific Name	Habitat Use in the Allotment	WGFD Herd Unit	WGFD Herd Unit Size (million acres)	WGFD Population Objective	WGFD Population Est. 2004
Mule Deer (*Odocoileus hemionus*)	General	Steamboat	2.6	4,000	4,400
Elk (*Cervus elaphus*)	Crucial Winter and General	Steamboat	2.6	1,200	1,300
Pronghorn Antelope (*Antilocapra americana*)	General	Red Desert	2.2	15,000	14,670
Pronghorn Antelope (*Antilocapra americana*)	General	Sublette	6.7	48,000	44,700

An area of big game habitat, called the "connectivity area" was established for the original Jack Morrow Hills Coordinated Activity Plan and Draft Environmental Impact Statement effort in 2000 to maintain habitat connectivity between important habitats within the area. The connectivity area is a key wildlife habitat area that connects and includes important big game habitats. The allotment contains a small portion of the connectivity area within its western boundary in the Pinnacles pasture.

Elk

The assessment area for elk is the Steamboat Herd Unit Area west of the Rock Springs Field Office (RSFO) boundary which encompasses 1,853,937 acres. The allotment contains crucial winter range, winter/yearlong range and winter range for elk. The Steamboat elk herd is a unique component of the wildlife resources of southwestern Wyoming. This elk herd exists in the sagebrush desert ecosystem, which contains very little conifer or aspen cover. Current estimated population counts show that the herd is at approximately 1,300 elk (pers. com WGFD 2007). Elk habitat selection patterns are strongly influenced by security and thermal needs (Thomas, et al. 1979) and therefore any disturbance or pressure may be a larger issue in an open environment than in a forested environment (Sawyer, et al. 2007). In forested habitats, cover is provided by timber stands with vegetation types such as aspen and conifer species. This type of vegetation is severely limited for this herd. The elk population is currently just above objective.

At this time the grazing pressure from livestock is also low. One point of note for the Red Desert Allotment is that a study concluded in 2004 (Sawyer, et al. 2005 and 2007) showed that the Pinnacles Pasture contains the highest densities of elk within the 2 million acre herd area. These densities reach approximately 212 head of elk per square mile in the winter. That equates to 102 AUMs per month outside of the growing season. These densities occur in the allotment in the designated crucial winter range. The elk appear to be primarily utilizing the mixed shrubs within the canyons in the Pinnacles Pasture.

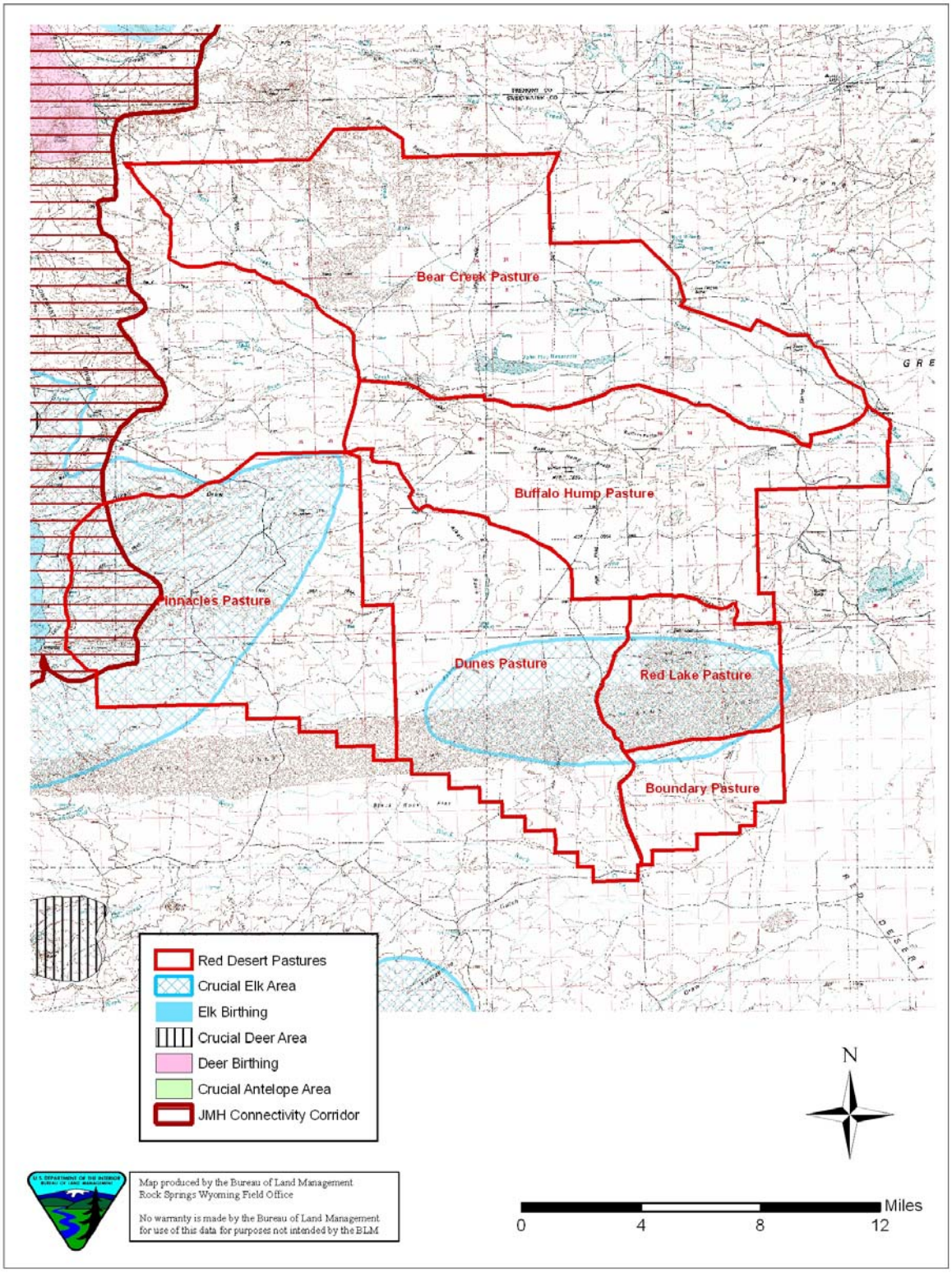

Figure 3. Big Game Sensitive Habitats.

Figure 4 depicts elk use during winter months for the years 2003 and 2004 from the Steamboat Elk Study (Sawyer, et al. 2007)

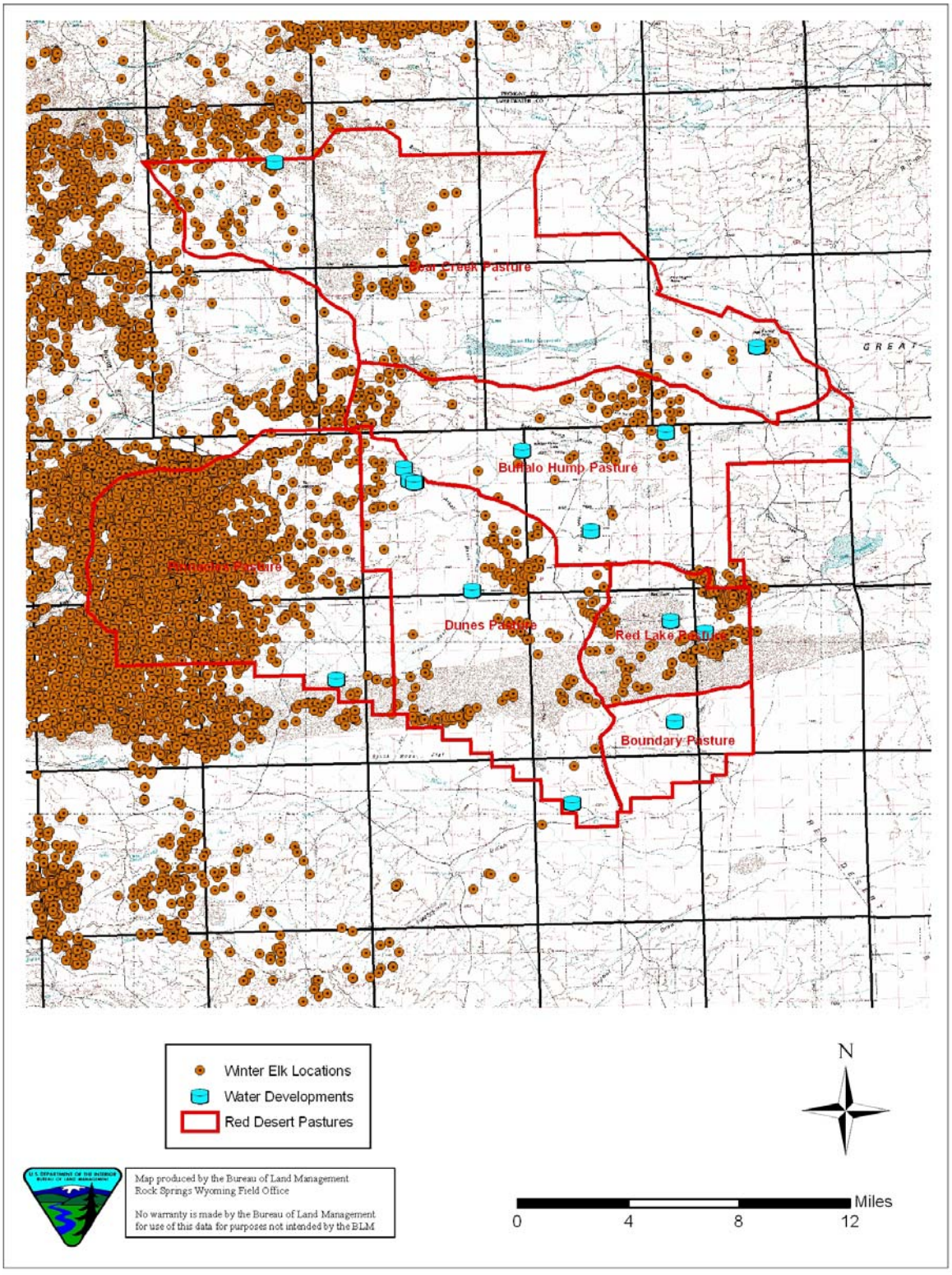

Figure 4. Winter Elk Use in the Red Desert Allotment (2003 & 2004)

Mule Deer
The Steamboat mule deer herd assessment area consists of the Steamboat Mule Deer Herd Unit Area within the RSFO boundary which encompasses 2,060,143 acres. Most mule deer activity within the allotment is dependent on the availability of water and therefore may be dependent upon springs and other sources of water in the allotment. Studies have shown that in arid regions during the driest months, mule deer seldom move more than 1 to 1.5 miles from water. The allotment contains spring, summer, and fall habitat and crucial winter range for mule deer in the Pinnacles and Dunes Pastures. The Wyoming Game and Fish Department estimates the Steamboat mule deer population at 4,400 animals as of 2004 (latest available data). Their current population objective is 4,000 animals.

Pronghorn Antelope
The Sublette pronghorn antelope herd overall population is currently below objective. During the early 1990s, harvest of does and fawns was increased to regulate the increasing population, but the severe winter of 1992–1993 and associated mortalities led to a significant reduction of doe and fawn harvest from 1994 to the present. WGFD estimates for the 2004 population for the Sublette herd is approximately 42,500, which is 9 percent below the objective of 48,000. For the past few years, drought conditions have led to lower reproduction and somewhat higher winter mortality. Weather and availability of crucial winter range can be an important factor affecting population levels. Severe winters with deep, crusted snow and below-zero temperatures, cause high antelope mortalities, and fences affect antelope movement with direct and indirect effects to mortality. Antelope habitat is generally represented by water and low-growth (2 to 3 feet) sagebrush in combination with rabbitbrush and bitterbrush. The allotment contains spring, summer, and fall habitat and no crucial winter range for pronghorn. The Wyoming Game and Fish Department does not identify parturition habitat for pronghorn antelope.

The Red Desert pronghorn antelope herd is currently believed to be below herd objective numbers due to low fawn production for at least 10 years. WGFD herd models indicate the herd was still below objective size in 2006 (pers. com. Ryder, WGFD 2006). The allotment contains spring, summer, and fall habitat and no crucial winter range for pronghorn occurs near or within the allotment. The herd objective for the Red Desert pronghorn antelope is 15,000, and as of 2006 the herd population estimate was 14,670 animals.

Other Mammals
The assessment area for these mammals is the allotment boundary. Mammals in the allotment include, coyote (*Canis latrans*), white-tailed jackrabbit (*Lepus townsendi*), mountain cottontail rabbit (*Sylvilagus nuttalli*), porcupine (*Erethizon dorsatum*), red fox (*Vulpes fulva*), striped skunk (*Mephitis mephitis*), and various species of rodents, and bats. There are no anticipated effects to other mammals from this proposed conversion and these species will not be discussed further.

Raptors
The assessment area for raptors is the allotment boundary. There are 22 known raptor nests within the allotment boundary. Table 9 lists the raptors that are found in this area.

Table 9. Raptor Species

Common Name	Scientific Name	Habitat
Prairie falcon	*Falco mexicanus*	Low rock outcroppings to tall vertical cliffs
American kestrel	*Falco sparverius*	Dead snags, clay stream banks, rim rock
Red-tailed hawk	*Buteo jamaicensis*	Riparian zones and timbered areas
Swainson's hawk	*Buteo swainsoni*	Dry plains, open foothills, open forest, sparse trees, river bottoms
Northern harrier	*Circus cyaneus*	Wetlands and open fields
Burrowing owl	*Athene cunicularia*	Grasslands and mountain parks near prairie dog towns and steppes, deserts, and prairies
Golden eagle	*Aquila chrysaetos*	Cliffs, ledges, pinnacles
Great-horned owl	*Bubo virginianus*	Cliff holes, rock crevices, trees

There are no anticipated effects to raptors from this proposed conversion and these species will not be discussed further.

Reptiles and Amphibians

The assessment area for reptiles and amphibians is the allotment boundary. The only species of reptile known to occur in the project area are the eastern short-horned lizard (*Phrynosoma douglasi*) and Great Basin spade-foot toad (*Spea intermontanus*). There are no anticipated effects to reptiles from this proposed conversion and these species will not be discussed further.

Special Status Species—Animal

Special status wildlife species include species federally listed as threatened or endangered, proposed for listing, or candidates for listing under the Endangered Species Act. They also include species designated by each BLM State Director as "Sensitive" and those listed, or proposed for listing by a state in a category implying potential endangerment or extinction. BLM is mandated to protect and manage threatened, endangered, candidate, proposed, and sensitive wildlife species and their habitat.

Federal Threatened, Endangered, and Candidate Species

The assessment area for Threatened, Endangered and Candidate species is the allotment boundary. Table 10 provides a list of Threatened, Endangered and Candidate Species considered for this allotment.

Table 10. Threatened, Endangered, and Candidate Wildlife Species that May Occur in the Allotment

Common Name	Scientific Name	Federal Status	Occurrence in Assessment Area
Black-footed Ferret	*Mustela nigripes*	Endangered	No known potential habitat
Gray wolf	*Canis lupus*	Nonessential Experimental Population	Historical occupancy and two recent confirmed sightings near the allotment (Moody, WGFD 2003)

Black-footed Ferret

There are three white-tailed prairie dog (*Cynomys leucurus*) towns in, or near the allotment boundary. However, all of these prairie dog towns/complexes were determined as being

incapable of supporting black-footed ferrets (*Mustela nigripes*) by the WGFD in 2003. That assessment was accepted by the U.S. Fish and Wildlife Service (FWS) in 2003. Therefore, there is no potential habitat for the black-footed ferret and a "no effects" determination for this species. This species will not be given further consideration.

Gray Wolf

The gray wolf (*Canis lupus*) historically occupied nearly all habitat types in North America including the allotment affected by this proposal. Under current federal management as an experimental population by the FWS, any wolves occurring in the allotment would be removed if they cause conflicts with other land management activities (primarily grazing). Sightings of wolves near this area are thought to be dispersing wolves looking for a territory. There currently are no known resident wolves in the allotment. BLM has made a "no jeopardy" determination for gray wolves and they will not be discussed further.

Wyoming BLM Sensitive Wildlife Species

The assessment area for sensitive wildlife species is the allotment boundary. Instruction Memorandum WY-2001-040 lists the Wyoming BLM sensitive species and management policy. The policy emphasizes planning, management, and monitoring of sensitive species and directs management of these species to avoid or minimize adverse impacts. It is not the intent of the policy to create severe restrictions on activities such that other multiple use activities cannot occur. The policy goals of this instruction memorandum are to:

- Maintain vulnerable species and habitat components in functional BLM ecosystems
- Ensure sensitive species are considered in land management decisions
- Prevent the need for species listing under the Endangered Species Act 1973
- Prioritize needed conservation work with an emphasis on habitat.

Table 11 lists the BLM Sensitive Species that are, or may be found, in the allotment and Figure 5 shows known locations.

Table 11. Rock Springs, Wyoming BLM Sensitive Wildlife Species

Common Name	Scientific Name	Habitat	Affected
Mammals			
Fringed myotis	*Myotis thysanodes*	Elevations less than 7,500 feet in forests and shrublands	No
Spotted bat	*Euderma maculatum*	Desert and coniferous habitats	No
Townsend's big-eared bat	*Corynorhinus townsendii*	Coniferous forest; desert shrubland	No
Pygmy rabbit	*Brachylagus idahoensis*	Dense sagebrush	No
White-tailed prairie dog	*Cynomys leucurus*	Plains	No
Wyoming pocket gopher	*Thomomys clusius*	Dry ridge tops; gravelly, loose soil; greasewood	No
Idaho pocket gopher	*Thomomys idahoensis*	Stony, shallow soil	No
Swift fox	*Vulpes velox*	Shortgrass prairie	No
Avian			
Ferruginous hawk	*Buteo regalis*	Basin-prairie shrub, grassland, rock outcrops	No

Common Name	Scientific Name	Habitat	Affected
Greater sage-grouse	*Centrocercus urophasianus*	Basin-prairie shrub, mountain-foothill shrub	Yes
Long-billed curlew	*Numenius americanus*	Grasslands, plains, foothills, wet meadows	No
Burrowing owl	*Athene cunicularia*	Grasslands, basin-prairie shrub	No
Sage thrasher	*Oreoscoptes montanus*	Basin-prairie shrub, mountain-foothill shrub	Yes
Loggerhead shrike	*Lanius ludovicianus*	Basin-prairie shrub, mountain-foothill shrub	Yes
Brewer's sparrow	*Spizella breweri*	Basin-prairie shrub	Yes
Sage sparrow	*Amphispiza billineata*	Basin-prairie shrub, mountain-foothill shrub	Yes
Mountain Plover	*Chadrius montanus*	Areas of low vegetation	Yes
Amphibians			
Great Basin spadefoot toad	*Spea intermontana*	Springs; seeps; permanent and, temporary waters	No
Spotted frog	*Ranus pretiosa*	Ponds, sloughs, small streams	No

Source: Wyoming BLM Sensitive Species Policy and List, IB No. WY-2003-001, September 20, 2002.

Greater Sage-Grouse

The assessment area for greater sage-grouse (*Centrocercus urophasianus*) (sage-grouse) is the designated breeding habitat identified in the JMH and a two mile radius around leks identified outside of the Jack Morrow Hills planning boundary. There are 9 leks (strutting grounds) and associated nesting habitat in the Red Desert Allotment. The allotment also contains designated breeding (leks, nesting and early brood-rearing) habitat for sage-grouse (as identified in the JMH CAP). Data collected in 2003 by the WGFD compared to data collected by Patterson (1952) from sage-grouse leks surveys in the general area have shown a 70 percent decline in the numbers of males attending leks since 1952. Although no single or combination of causes have been proven, the decline in greater sage-grouse populations is thought to be attributed to a multitude of factors which include but are not limited to: drought; oil and gas wells and their associated infrastructure; powerlines; mammalian and avian predators; and a decline in the quantity and quality of sagebrush habitat resulting from livestock grazing, range management treatments, and development activities (Connelly, et al. 2000).

Migratory Birds (Sagebrush Obligate)

The assessment area for migratory (sagebrush obligate) birds is the allotment boundary. The allotment contains habitat for the sage thrasher *(Oreoscoptes montanus)*, loggerhead shrike *(Lanius ludovicianus)*, Brewer's sparrow *(Spizella breweri)* and sage sparrow *(Amphispiza billineata).*

Mountain Plover

The mountain plover (*Chadrius montanus*) needs areas with flat terrain and low growing vegetation. This habitat type in the allotment is usually represented by prairie dog towns, Gardner's saltbush flats and cushion plant communities along wind-swept ridges. There have been many sitings of plover and plover reproduction documented in the Red Desert Allotment.

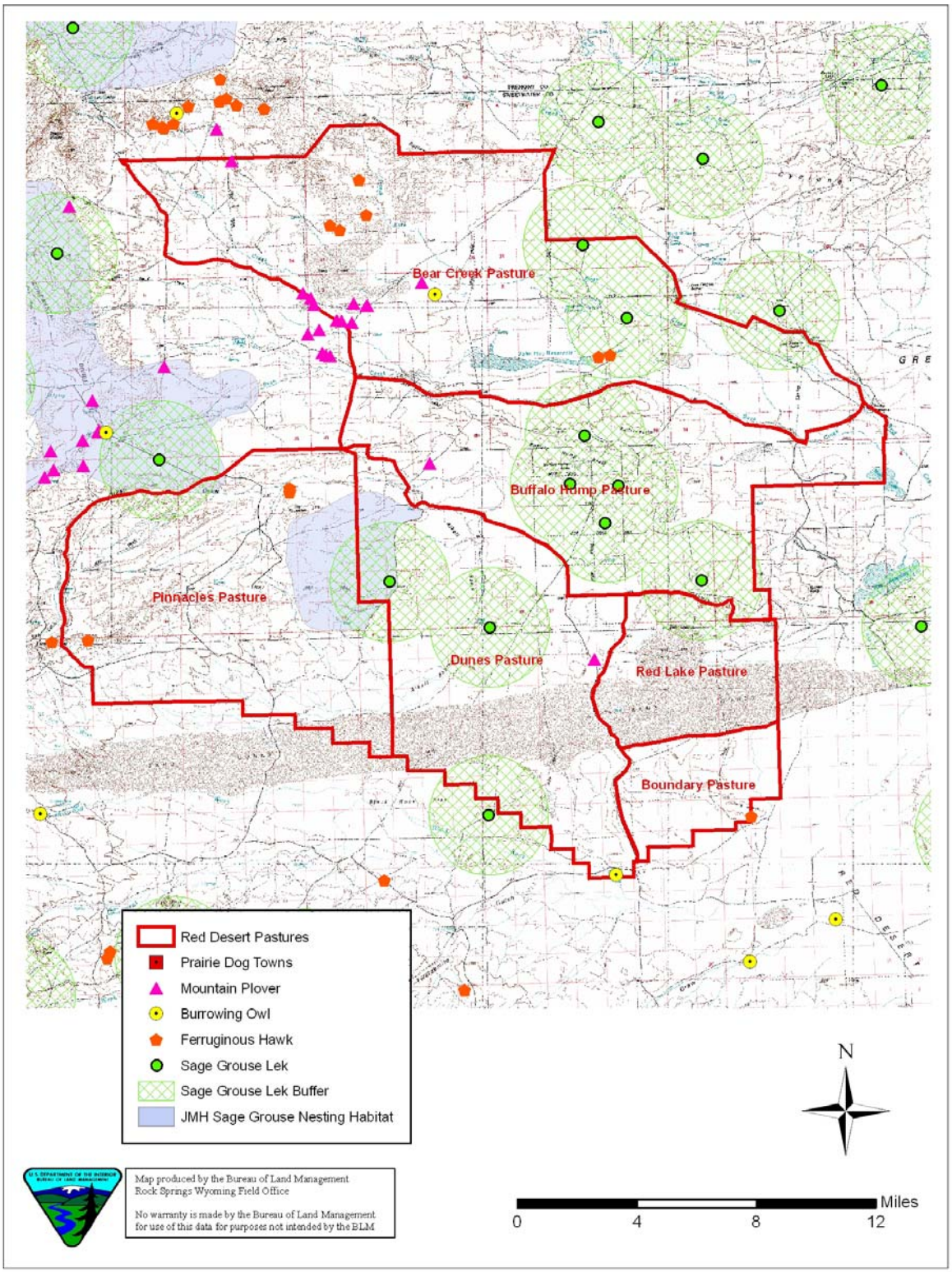

Figure 5. BLM Sensitive Wildlife Species.

Red Desert Watershed Management Area

The assessment area for the Red Desert Watershed Management Area is the boundary of the management area (Figure 6). The Red Desert Allotment falls within the Red Desert Watershed Management Area. The management objective of this management area is "to manage for all resource values in the Red Desert area with emphasis on protection of visual resources, watershed values, and wildlife resources and to provide large areas of unobstructed views for enjoyment of scenic qualities." Management actions regarding grazing within the management area include that grazing be consistent with the watershed management objectives and that "grazing systems will be designed to achieve desired plant communities and proper functioning condition of watersheds (upland and riparian)."

Cultural Resources/Native American Concerns

The Red Desert Allotment contains hundreds of cultural resources including a relatively high density of traditional cultural properties of importance to Native American tribes in the area.

The proposed action is administrative in nature and does not authorize specific on-the-ground activities. As such it is not subject to compliance with Section 106 of the National Historic Preservation Act of 1966, as amended. All activities which have the capability to affect cultural resources should be consulted upon with the Wyoming State Historic Preservation Officer prior to being approved.

Because the proposed action does not qualify as an undertaking under the Wyoming State Protocol and does not require Section 106 consultation, there is considered to be no effect on cultural and historic resources and they will be dropped from further discussion in this document.

Wilderness Study Areas

The South Pinnacles and Red Lake WSAs fall within the Red Desert Allotment, as well as part of the Alkali Draw/East Sand Dunes WSA (Figure 6). The management objective of all the WSAs is "to retain the wilderness quality and manage the Wilderness Study Areas in the RMP planning area in accordance with the 'Interim Management Policy and Guidelines for Lands Under Wilderness Review,' until Congress acts on designation." No vehicular travel is allowed within WSAs; however, livestock grazing is allowed. Because the proposed action is allowed within WSAs, and is not considered to impact their management, impacts to wilderness values will be dropped from further discussion in this document.

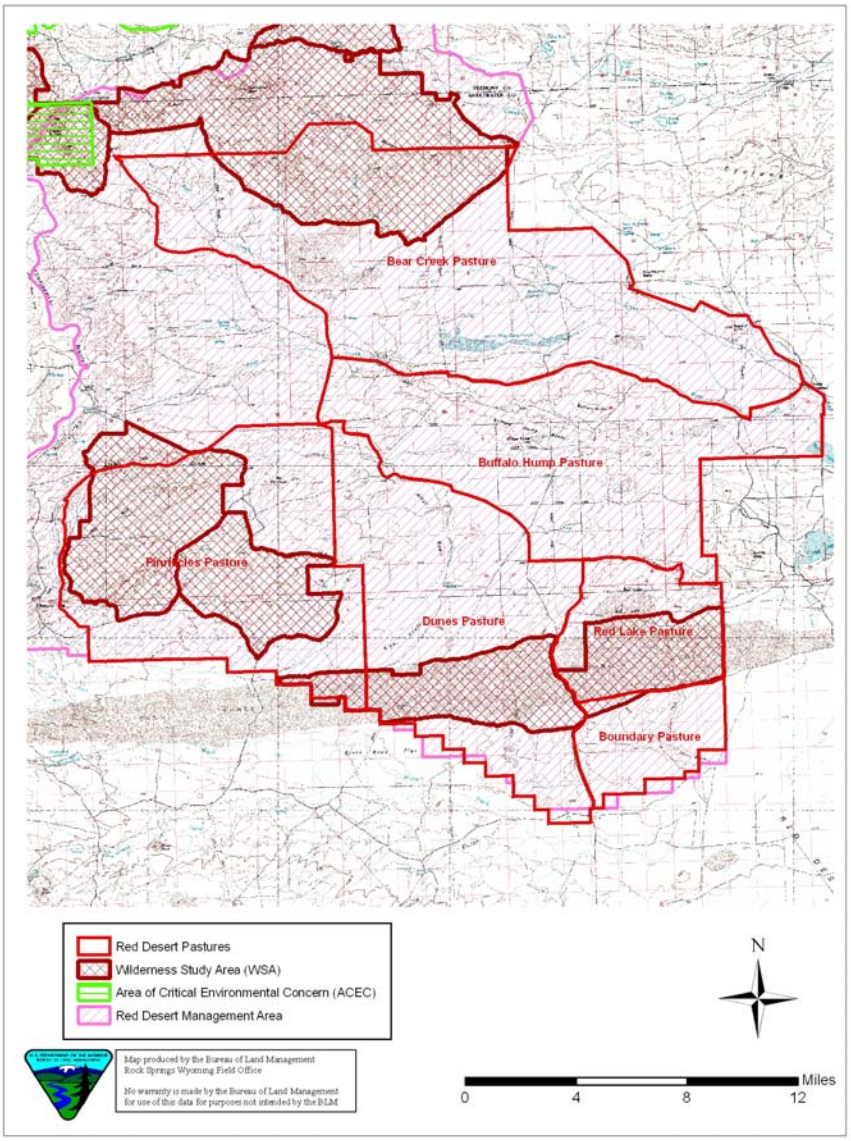

Figure 6. WSAs, ACECs and Other Management Areas

ENVIRONMENTAL CONSEQUENCES/IMPACTS

Proposed Action

Rangelands/Livestock Grazing/Vegetation

Converting livestock use from sheep to cattle would put more pressure on riparian areas and near water developments in the Red Desert Allotment. Cattle are not herded continually as sheep are and tend to look for water and relief from midday heat in the shade and cooler bottoms associated with riparian habitats particularly during late June, July, and August. The presence of cattle in an allotment can be damaging to riparian areas if they are not herded consistently. Although there is only one riparian area present (Bear Creek) in the Red Desert Allotment, other

water sources (such as wells and reservoirs) have been developed to serve as watering points for livestock, making Bear Creek avoidable.

Cattle generally do not move more than a mile away from water sources (Figure 7). With only one natural perennial water source and 14 artificial water sources available throughout the 257,000-acre allotment, approximately 31,000 acres (or 12%) of the allotment is available to cattle for use, while approximately 230,567 acres (or 94%) of public land within the Red Desert Allotment is available for use by sheep. With the current licensed livestock use described in Table 7, most of the 6,460 permitted cattle AUMs are already being taken out of those 31,000 acres. If another 3,296 AUMs are converted to cattle use, more pressure will be placed on those 31,000 acres, bringing the stocking rate up to 0.3 AUMs per acre. This means that approximately 3.33 acres should be able to support one animal unit (cow/calf pair, in the case of cattle) for a month. While 3.33 acres per AUM is a sustainable stocking rate for some western rangelands, this stocking rate would be very high for rangelands in the Red Desert Allotment. Typical stocking rates for range sites in the allotment when in good condition vary from 6 to 13 AUMs per acre. Therefore the stocking rate in the proposed action would be nearly 2 to 4 times that which would be sustainable over time. This impact is magnified when this use will be restricted to only 3 of 6 pastures and becomes even more pronounced when the only water source in the Pinnacles pasture is in the southeast corner (see Figure 2 and Figure 7). In addition, the Dunes pasture has several water projects which will be attractive to cattle, drawing them into the Dunes pasture which the proponent has said they do not intend to use. This impact will occur when cattle are in either the Pinnacle or Buffalo Hump pastures.

Vegetation in the allotment is also used as forage and cover for a wide variety of wildlife species, is critical for soil protection from erosion by wind and water, and is necessary for long-term soil development and fertility. These uses would be negatively impacted by the proposed action..

The Red Desert Allotment is used by more than one grazing permittee (Table 7). The two other grazing permittees are permitted to run only cattle (1,119 cows). One permittee voluntarily permanently reduced their permitted use by 800 AUMs in the Red Desert Allotment because they felt the allotment could be overstocked. Any additional impacts due to the proposed action would be additive to those that may exist due to currently permitted cattle use. The proposed action would increase permitted cattle numbers to 1,476 (25% increase).

Because of reduced active use levels (520 AUMs per year for the period of 1994-2006), it has not been possible to adequately assess the function of the current Allotment Management Plan (AMP). In addition, the current AMP did not anticipate nor address grazing use as described in the proposed action.

A suitability study conducted in the 1980's, as well as current analysis, shows that the Pinnacles Pasture of the allotment lacks water and vegetative productivity. The BLM and Hellyer Limited Partnership have agreed that the western half of the Pinnacles pasture is not particularly suitable for livestock grazing. The permittee has agreed that this would not be their primary use pasture, and when use levels of 30-35% are met (see Proposed Action section above) they would remove their livestock from the western half of this pasture. The Red Desert AMP provides for this action, stating: "[b]ecause less than 30% of the active preference is being used within the Red

Desert Allotment, the permittees will have the flexibility to select pastures their livestock use, as long as use is in accordance with the details shown in Table 8 [of the AMP]. When 50% of the total active preference is used in the allotment, the AMP will be evaluated and possibly revised" (see Appendix 1). As mentioned in the Affected Environment section, average livestock use has been around 20%.

Cumulative impacts to the assessment area include the 230 range projects existing within the JMH planning area. Of these 230, 18 are water wells, 14 are stock watering troughs, 2 are spring developments, 2 are sheep shearing corrals, and 194 are pit reservoirs. The estimated disturbance associated with these projects is 446 acres or 0.07% of the total area, making their cumulative impacts to the area minor. These projects within the cumulative assessment area are intended to protect rangeland resources by supporting livestock management. The riparian protection these projects are intended to provide would assist the allotments in meeting the Wyoming Standards for Healthy Rangelands (Standard #2).

At the time this analysis was written, known/foreseeable future actions affecting the JMH planning area consist of range improvement proposals falling within the Continental Peak Allotment, which is directly north of the Red Desert Allotment. This known proposal includes: drilling 2 water wells and attaching stock troughs to them, developing 2 existing water wells, fencing off 4 riparian areas with 3-wire electric fence to protect them from grazing impacts, and installing 5 pasture boundary fences (also 3-wire electric). If approved, these projects would add approximately 47 miles of fence to a virtually unfenced area. It should be noted, this proposal will be fully analyzed in a different environmental document.

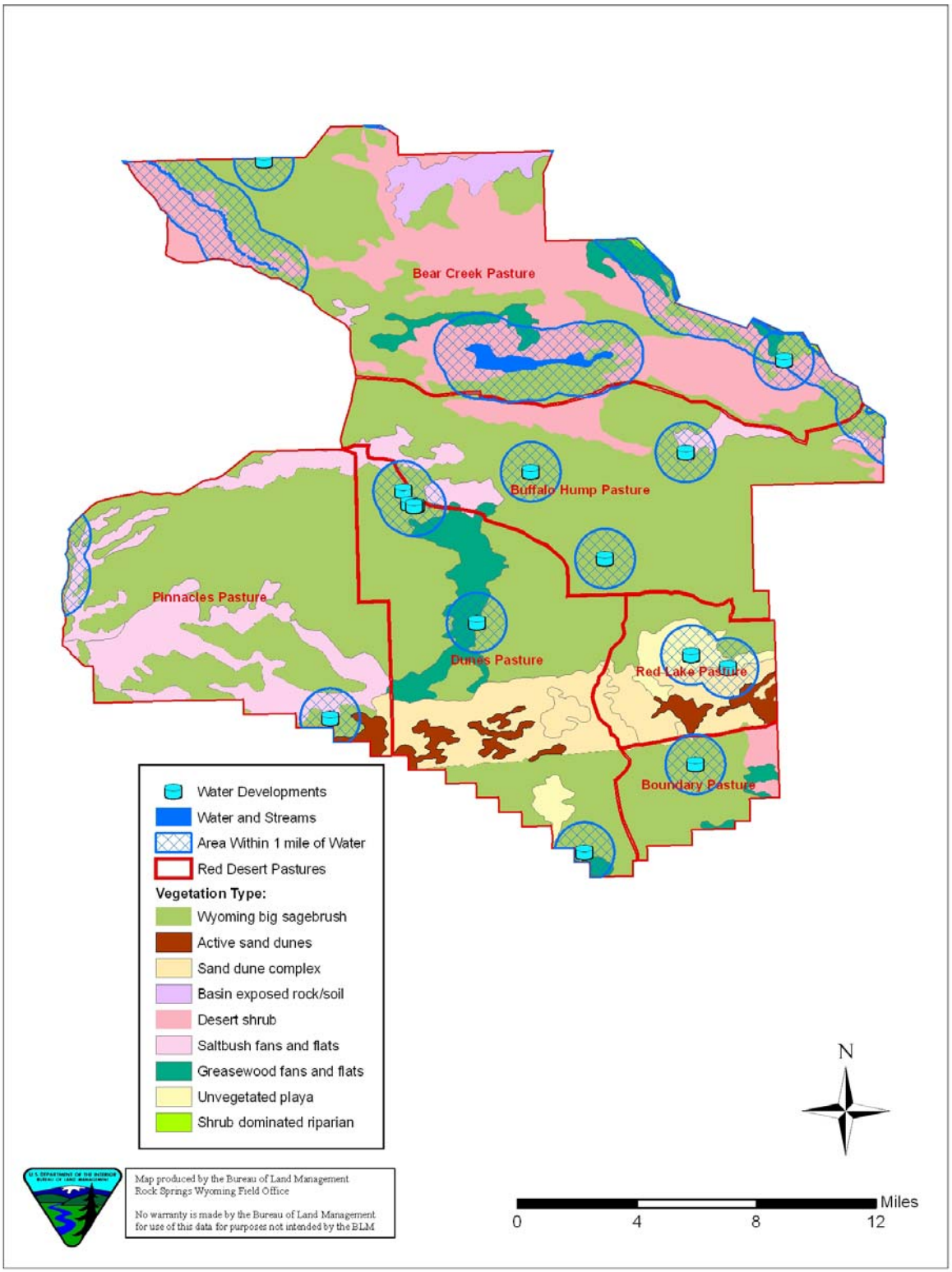

Figure 7. Water Availability and Associated Vegetation

Wild Horses

The proposed sheep to cattle conversion would impact wild horses due to competition for forage. Cattle and horses both consume grasses and forbs for forage. Sheep primarily utilize a combination of browse, forbs, and grasses for forage. Cattle and horse dietary preferences are more similar than those for horses and sheep. Since water is scarce in the Red Desert Allotment, competition for forage would be most apparent in close proximity to water facilities as neither species wants to travel further from water than necessary to graze. An increase in cattle use by an additional 2,501 AUMs in the allotment due to a conversion would force wild horse forage utilization and socialization patterns to change, possibly pushing horses to different parts of the HMA, or causing them to form larger herds. The additional cattle in the Red Desert Allotment would compete directly with wild horses for available forage in the acreage near water sources which would be stocked at 3 acres per AUM. This stocking rate is only calculated for livestock use and does not include utilization by wild horses. Horse use would put additional pressure on these 31,000 acres. Wild horse populations would be maintained within the AML established for the Divide Basin Herd Management Area at 415-600 horses.

Increasing livestock numbers and activity within the Red Desert Allotment could disturb and displace horses throughout the HMA. However, wild horses are highly adaptable. Impacts to them would be mostly limited to the amount of vegetation actually removed by an increase in cattle numbers, oil and gas development, or other surface disturbing activities.

Cumulative impacts from foreseeable future actions could have impacts on the movement, distribution, and population of wild horses. There could be a decreased ability for reduced forage resources to support wild horse AML. In this case, AML may have to be reduced.

Wetlands/Riparian Areas

The soils and vegetation in the area make the Bear Creek stream system sensitive to mechanical disturbance such as hoof action and bank trample, as well as vegetation removal. If the proposed change in the type of livestock creates a change in the grazing pattern around the naturally occurring water sources, the health of the wetland and riparian areas will be adversely affected. Even with proper herd management techniques, the functional condition of the Bear Creek riparian area would need to be closely monitored to avoid degradation of the stream system functions (see Proposed Action section above).

Cumulative impacts to this area were analyzed in the JMH CAP FEIS and are incorporated by reference (p. 4-154). In summary, existing developments have been mitigated to reduce impacts, but activities associated with them would add up cumulatively. These activities could result in increased overland flow, as well as accelerated soil erosion and runoff, which increase sediment and nutrient loads to local channels and lead to channel destabilization.

The proposed action could add to these cumulative impacts. Disturbance associated with trampling would increase soil erosion and its associated effects.

Special Status Plant Species

Nelson's milkvetch is found in isolated populations of a few individuals within the Red Desert Allotment. Large-fruited bladderpod is found in populations of hundreds to thousands along the

Bush Rim area and in scattered populations of fewer numbers further to the west. They are found on fine clays to gravel slopes and would not be affected by a change in livestock type but could be affected by an increase in numbers due to increased grazing pressure and trampling. However, cattle tend to avoid the clay to gravel slopes where these species are found so impacts to this species are not anticipated due to the proposed action.

Cumulative impacts to this area were analyzed in the JMH CAP FEIS and are incorporated by reference (p. 4-156). In summary, the implementation of the Wyoming Standards for Healthy Rangelands and monitoring efforts provide protection to vegetative resources and help reduce overall effects of surface disturbing activities. Under the Endangered Species Act, special status plant species are protected by avoidance or exclusion.

Wildlife

The majority of impacts to wildlife would be from forage competition and negative behavioral interactions between cattle and wild ungulates.

Big Game

Direct impacts to big game (elk, mule deer, and pronghorn antelope) would result from forage competition and negative behavioral interactions. Cumulative impacts from foreseeable future actions could have impacts on the movement of big game.

Elk

The proposed action would increase use of vegetation in elk crucial winter range located in the Pinnacles pasture. Limiting forage use to a maximum of 35% utilization of current year's growth on key upland grass species and riparian herbaceous species and 30% of stems bitten on mountain shrub species and riparian willows should reduce the chance for forage competition and protect the corresponding vegetation resource.

The greatest possibility for adverse effects from this conversion would be to the elk from cattle in the Pinnacles pasture. This area has the highest densities of wintering elk within the 2-million-acre Steamboat Herd Area. These densities reach approximately 212 head of elk per square mile in the winter. That equates to 102 AUMs per month per square mile during a time period when nothing is growing. Olsen and Hansen (1977) found significant (P=0.002) overlap (55% ± 30%) between elk and cattle in the Red Desert of Wyoming, while Stewart et al. found strong resource partitioning between elk and cattle during much of the year. The primary elk use in this area is during the winter and spring. This proposal states that the cattle will be removed when the utilization levels reach 35% of current year's growth on key upland grass species and riparian herbaceous species and 30% of stems bitten on mountain shrub species in the Pinnacles pasture and riparian willows throughout the allotment. The majority of crucial elk habitat occurs within the Pinnacles pasture and is within the boundary of the Jack Morrow Hills planning area. Under the JMH CAP, water developments will not be allowed in crucial big game winter range unless it would benefit the wildlife and range conditions. This combination of the "move on use" and monitoring combined with the lack of water in the Pinnacles pasture should reduce impacts to elk from this conversion.

Cumulative impacts to elk in this area were analyzed in the JMH CAP FEIS and are incorporated by reference (p. 4-158). Elk are very susceptible to disturbance, and displacement occurs with direct habitat loss and persistent disturbance. Mineral development causes the greatest adverse effects to the animals, and there is a high potential for existing leases in the JMH CAP planning area to block migration corridors and reduce alternative habitats. The proposed action could cause competition between elk and cattle in elk crucial winter range, particularly in the Pinnacles pasture of the allotment. The Jack Morrow Hills planning effort identified the core area as having the highest potential for oil and gas development (JMH FEIS Map 69). This area occurs within the crucial winter range and calving area for the Steamboat elk herd. This small but important area supports the vast majority of the elk wintering (75%) and calving (50%) for the Steamboat elk herd. Should development of this "core" area occur, it is expected to force the elk to utilize other parts of their range more intensively. Based on the two radio collar studies conducted on this herd, there is a high probability the elk would shift their crucial winter range and parturition range use into the Red Desert Allotment creating greater potential for competition between elk and cattle in the allotment.

Also, there is potential for future oil and gas development within the Red Desert Allotment. As of May 2007, there were 10 producing gas wells, two water injection wells, and 13 wells in other forms of completion on federal lands. There are currently 22 Approved Permits to Drill or Applications for Permit to Drill, and 30 Notices of Staking in the Red Desert Allotment. There are 21 active wells on state lands.

A portion of the Red Desert Allotment falls within the area analyzed in the Jack Morrow Hills Coordinated Activity Plan. This document anticipated the reasonably foreseeable development (RFD) to total 255 wells in the entire analysis area.

Mule Deer

The proposed conversion may result in some minor impacts, both negative and positive to mule deer. While there is some dietary overlap between deer and cattle, it is a relatively minor amount. There could be some displacement of the deer by the cattle since both generally stay within 1 to 1½ miles of water sources. There is a greater dietary overlap between sheep and deer, so impacts from competition for food are expected to decrease under the proposed conversion. Impacts to mule deer from the proposed action would be limited to competition for space, water, and possibly vegetation.

Cumulative impacts to this area were analyzed in the JMH CAP FEIS and are incorporated by reference (p. 4-159 – 4-160). There are few published studies on mule deer reactions to disruptive activities; however, mule deer tend to avoid areas of disruptive activity. Mineral development would have the greatest adverse impacts on mule deer through direct loss of habitat and animal displacement. The proposed JMH CAP has a high potential for existing leases to block migration corridors.

Pronghorn Antelope

The proposed conversion should have little to no negative impacts to pronghorn antelope. Olsen et al. found that pronghorn in the Red Desert had only an 8% dietary overlap with cattle versus a 21% overlap with sheep. There is some potential for positive impacts to pronghorn antelope from

the reduced competition for preferred forage types between pronghorn and sheep. Impacts to pronghorn from the proposed action would be limited to competition for space, water and possibly vegetation.

Cumulative impacts to this area were analyzed in the JMH CAP FEIS and are incorporated by reference (p. 4-159). Currently there are no known studies on pronghorn reaction to disruptive human activities. The biggest impediment to antelope is habitat fragmentation. Mineral development would have the greatest adverse effects on these pronghorn antelope herds through habitat fragmentation.

Special Status Species—Animal

Greater Sage-Grouse

Grazing has the potential to degrade greater sage-grouse nesting habitat, or improve it under some circumstances (late brood-rearing and fall) by changing the composition, quantity, or quality of vegetation and litter in the habitats used by greater sage-grouse. The difference lies in how the grazing is managed. If the habitat is degraded in any way, especially in the breeding (nesting and early brood-rearing habitats), the impacts will be detrimental to the greater sage-grouse. The level of detriment will depend on the amount of impact to the habitat. If cattle are stocked in this allotment at 100%, the impacts would be severely detrimental to the greater sage-grouse. There is also potential for benefit to the greater sage-grouse in late brood-rearing and fall habitats if cattle are allowed to remove rank vegetation from riparian areas and are then removed before damage to the delicate riparian areas occurs. This would require close monitoring and short grazing periods to accomplish.

Cumulative impacts to this area were analyzed in the JMH CAP FEIS and are incorporated by reference (p. 4-160). Surface disturbing and disruptive activities such as mineral development and associated infrastructure, as well as construction of rangeland improvements would constitute the majority of cumulative impacts on greater sage-grouse habitat. These activities could result in direct loss of habitat, habitat fragmentation, habitat degradation, and animal displacement.

Migratory (Sagebrush Obligate) Birds

These birds, like the greater sage-grouse, are dependent on sagebrush for a significant portion of the year. These birds (sage thrasher, loggerhead shrike, Brewer's sparrow, and sage sparrow) utilize the sagebrush habitats for nesting, foraging, and cover. Once again, impacts to these species (direct, indirect, and cumulative) will be dependent on the grazing management. Brewer's sparrow prefers a closed canopy stand of sagebrush with little to no understory for nesting, while the loggerhead shrike needs very tall sagebrush to utilize as a hunting perch. Very tall sagebrush is a limited resource in the allotment. This proposed conversion could negatively impact loggerhead shrike indirectly if the cattle are allowed to stay in the tall sagebrush for cover. The Brewer's sparrow is not expected to be impacted from the conversion since both cattle and sheep tend to avoid the Brewer's sparrow nesting habitat. The sage sparrow and sage thrasher should not be impacted directly, indirectly, or cumulatively from this conversion because there are no sagebrush treatments or insect controls associated with this action.

Mountain Plover
Because mountain plover evolved with grazing, any impacts to mountain plover would be expected to be positive.

Red Desert Watershed Management Area
There is an emphasis placed on protecting visual resources, watershed values, and wildlife resources in the Red Desert Watershed Management Area. The proposed action would have no foreseeable impact to visual resources. Watershed values are managed through rangeland and vegetation management and have been addressed in previous sections of this document. Wildlife are also addressed under their section above.

Cumulative impacts to this area were analyzed in the JMH CAP FEIS and are incorporated by reference (p. 4-165). No potential cumulative impacts from existing or reasonably foreseeable development would affect the designation of this management area. Cumulative impacts could occur due to oil and gas development and associated infrastructure in the form of degradation of visual resources, soils, watershed resources, and vegetation caused by development activities.

Mitigation/Monitoring Requirements
No mitigation has been identified and monitoring would continue as part of the grazing permit approval.

No Action Alternative

Rangelands/Livestock Grazing/Vegetation
Under the no action alternative, grazing would remain as currently permitted which allows a mixture of cattle and sheep among several permittees. A benefit of multi-species grazing is full utilization of the available range resources since the different types of livestock eat different types of forage. Sheep prefer to consume forbs, so they will eat vegetation that cattle do not, and use community types that cattle will avoid such as saltbush flats and desert shrub communities as well as steep topography. If a mixture of sheep and cattle are grazed on the range, the forb and grass species will be utilized more evenly, instead of putting more pressure on the grass species if only cattle are grazed. Also, sheep can be herded away from the water sources once they are finished drinking, moving use away from the areas that are already heavily utilized by cattle, horses, and wildlife.

Competition for available forage would continue in the western half of the Pinnacles pasture; however, historical grazing patterns show that sheep do not use this pasture much, due to its lack of water. They trail through the east half of the pasture where there is a water well but scarcely use the west half of the pasture.

A No Action Alternative would keep the grazing situation the same as it is currently. Denial of the proposed action limits flexibility by Hellyer Limited Partnership (HLP) in their herd management, and ability to adapt to the changing markets and varying environmental conditions. This limitation was known by HLP at the time of purchase of the permit. Except for the Proposed Action, impacts due to known/foreseeable actions would be the same as those described for the Proposed Action because those impacts would be common to all alternatives.

Wild Horses
A no action alternative would allow wild horses in the Divide Basin HMA to utilize the Red Desert Allotment as they are currently without any changes. There would be no additional impacts to wild horses. Competition for forage and water would not increase or decrease. The wild horse population in the Divide Basin HMA would continue to be managed within an Appropriate Management Level (AML) of 415-600 horses. Impacts due to known foreseeable actions would be the same as described under the Proposed Action.

Wetlands/Riparian Areas
It is anticipated that the riparian area around Bear Creek would remain in its present condition of PFC (proper functioning condition). Impacts due to known foreseeable actions would be the same as described under the Proposed Action.

Special Status Species—Plant
The BLM special status plants present in the area should remain at their present condition. Impacts due to known foreseeable actions would be the same as described under the Proposed Action.

Wildlife
Under the No Action Alternative there would be no additional impacts to elk. The pronghorn would still have some competition with the sheep. The mule deer would not be impacted due to limited utilization of sheep AUMs. Other mammals and reptiles are expected to remain at their current status. Impacts due to known foreseeable actions would be the same as described under the Proposed Action.

Special Status Species—Animal
Greater sage-grouse would not receive the additional grazing pressure and there would be little opportunity to benefit greater sage-grouse by removing rank vegetation resulting from the conversion. At the current time, the majority of the permitted AUMs in the allotment are not being utilized. Impacts due to known foreseeable actions would be the same as described under the Proposed Action.

Red Desert Watershed Management Area
The visual, watershed, and wildlife resources associated with the Red Desert Watershed Management Area would not change under the No Action alternative. Current livestock grazing conditions would persist, continuing the existing condition of the watershed, both upland and riparian. Impacts due to known foreseeable actions would be the same as described under the Proposed Action.

Mitigation/Monitoring Requirements
No mitigation has been identified under the No Action alternative and monitoring would continue as part of the grazing permit approval.

Residual Impacts
No residual impacts related to the No Action Alternative have been identified.

Alternative A

Rangelands/Livestock Grazing/Vegetation

As discussed under impacts for the proposed action, cattle use in the Red Desert Allotment is centered on the available water, and therefore restricted to approximately 31,000 acres. If another 1,247 AUMs are converted to cattle use, this will put even more pressure on those 31,000 acres, bringing the stocking rate up to 4.02 acres per AUM. This stocking rate would be very high for rangelands in the Red Desert Allotment. Typical stocking rates for range sites in the allotment when in good condition vary from 6 to 13 AUMs per acre. Therefore the stocking rate in this alternative would be more than 3 times that which would be sustainable over time. Impacts from a high stocking rate are the same as those described in the Proposed Action.

Alternative A would allow for a mixture of cattle and sheep to graze in the Red Desert Allotment. A benefit of multi-species grazing is more even utilization of the available range resources since the different types of livestock eat different types of forage. Sheep prefer to consume forbs, so they will eat vegetation that cattle do not, and use community types that cattle will avoid such as saltbush flats and desert shrub communities, and those on steep topography. If a mixture of sheep and cattle is grazed on the range, the forb and grass species will be utilized more evenly, instead of putting more pressure on the grass species if only cattle are grazed. Also, sheep can be herded away from the water sources once they are finished drinking, moving use away from the areas that are already heavily utilized by cattle, horses, and wildlife.

Competition for available forage would continue in the western half of the Pinnacles pasture; however, historical grazing patterns show that sheep do not use this pasture much, due to its lack of water. They trail through the east half of the pasture where there is available water but scarcely use the west half of the pasture. This pasture will receive more use under this alternative and the proposed action than under the no action alternative.

Cumulative impacts would be similar to, but less than, those analyzed under the Proposed Action.

Wild Horses

The proposed conversion in Alternative A would impact wild horses due to direct competition for forage. Cattle and horses both consume grasses and forbs for forage. Sheep primarily utilize a combination of browse, forbs, and grasses for forage. Cattle and horses have more of a common dietary overlap than do sheep and horses. Since water is scarce in the Red Desert Allotment, competition for forage would be most apparent in close proximity to water facilities as neither species wants to travel further from water than necessary to graze, although horses can use areas much farther from water than cattle. An increase in cattle numbers by an additional 1,247 AUMs in the allotment due to a conversion would force wild horse forage utilization and socialization patterns to change, possibly pushing horses to different parts of the HMA, or causing them to form larger herds. The additional cattle in the Red Desert Allotment would compete directly with wild horses for available forage in the acreage near water sources which would be stocked at 4 acres per AUM. This stocking rate is only calculated for livestock use and does not include utilization by wild horses. Horse use would put addition pressure on these 31,000 acres. Wild horse populations would be maintained within the AML established for the Divide Basin Herd Management Area at 415-600 horses.

Increasing livestock numbers and activity within the Red Desert Allotment could disturb and displace horses throughout the HMA. However, wild horses are highly adaptable. Impacts to them would be mostly limited to the amount of vegetation actually removed by an increase in cattle numbers, oil and gas development, or other surface disturbing activities.

Cumulative impacts from foreseeable future actions could have impacts on the movement of wild horses. Displacement of horses to areas away from cattle use areas increases the potential for wild horse/elk impacts, especially in the Alkali pasture.

Wetlands/Riparian Areas

Given that this area has not been grazed by sheep for some time, the conversion of sheep to cattle AUMs would have a net result of increasing the number of cattle on the ground. A 50% conversion would result in a lower potential total number of cattle than the proposed action but it would still be an increase in cattle numbers and grazing pressure. Given the limited water availability, an increase in numbers would result in an increase in grazing pressures in the limited areas that already experience the highest grazing pressures.

Cumulative impacts would be similar to, but less than, those analyzed under the Proposed Action.

Special Status Species—Plant

Impacts would be the same as the Proposed Action.

Wildlife

Under Alternative A, cattle numbers would increase from the No Action alternative. This could cause increased competition for forage and space with elk. The pronghorn would still have some competition with the sheep. The mule deer would not be impacted due to limited utilization of sheep AUMs. Other mammals and reptiles are expected to remain at their current status. Cumulative impacts due to known foreseeable actions would be the same as described under the Proposed Action.

Special Status Species—Animal

Greater sage-grouse may see some degradation in nesting habitat depending on the stocking rates of the different classes of livestock. At the current time, the majority of the permitted AUMs in the allotment are not being utilized.

Cumulative impacts due to known foreseeable actions would be the same as described under the Proposed Action.

Red Desert Watershed Management Area

Direct, indirect, and cumulative impacts would be the same as those analyzed under the Proposed Action.

Mitigation/Monitoring Requirements

No mitigation has been identified and monitoring would continue as part of the grazing permit approval.

Residual Impacts

Residual impacts would be the same as those listed for the Proposed Action.

CONSULTATION AND COORDINATION

On June 22, 2005, a letter was sent out to interested parties concerning this livestock conversion. The interested publics listed below were provided the opportunity to review and comment on the proposed livestock conversion for Hellyer Limited Partnership. The Wyoming State Grazing Board responded, saying they fully support this conversion. The Wyoming Game & Fish Department responded with terrestrial and aquatic concerns. The interested public mailing list for rangeland management related actions on the Red Desert Allotment include:

Bar X Sheep Company
Blair & Hay Land & Livestock Company
Hellyer Limited Partnership
Office of State Lands and Investments-Forestry Division
Western Watersheds Project
Wyoming Department of Agriculture
Wyoming Game and Fish Department, Cheyenne
Wyoming Game and Fish Department, Green River
Wyoming State Grazing Board

The following BLM staff prepared this document:

Teri Deakins	NEPA Conformance
Jay D'Ewart	Wild Horses
Dennis Doncaster	Soil; Water; Air
Jo Foster	Visual Resources; Wilderness / Recreation
Jim Glennon	Botany; Plant T&E
John Henderson	Riparian; Fisheries
Lorraine Keith	Wildlife; Animal T&E
Colleen Sievers	Cultural Resources; Native American Religious Concerns
Thor Stephenson	Natural Resource Specialist
Juliane Zimmerman	Rangeland Resources

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APPENDIX 1

Excerpt from Red Desert Allotment Management Plan

III. Grazing Management

A. Grazing System

1. Narrative

The grazing system, consisting of deferral among six pastures, was designed to be practical and to recognize, as much as possible, historical use areas. The system along with other good grazing management practices will enhance achievement of the AMP objective of maintaining or improving rangeland conditions.

Pastures will be deferred from grazing at least every other year until grasses are seed ripe. Under the present livestock operation of the Magagna Brothers, the Pinnacles Pasture will be deferred until seed ripe every year. (Table 8).

Because less than 30% of the Active preference is being used within the Red Desert Allotment, the permittees will have the flexibility to select pastures their livestock use, as long as use is in accordance with details shown in Table 8. When 50% of the total active preference is used in the allotment, the AMP will be evaluated and possibly revised.

Permittees will be responsible for submitting Actual Use reports. These reports will include the numbers and kind of livestock making use, areas used in the allotment, problems, and practices used by the permittee to either maintain or improve rangeland conditions. Information should be shown on a topographical map when possible.

A meeting between the permittees and the range conservationist responsible for the management of the allotment will take place each winter to discuss the past years use and plans for the upcoming year.

2. Treatments

Treatment A: Rest until seed ripe then graze starting July 16.

Treatment B: Graze season long.

The treatments for each pasture starting in 1984 are specified in Table 8.

3. Pasture

Pastures are identified on Map A within the Allotment Management Plan file.

Red Lake and Boundary Pastures

These pastures have historically been used by Bar-X Sheep Co. and Leonard Hay. They are used in conjunction with the Bush Rim Allotment and the GL Black Allotment (Rawlins District). The pastures will be deferred from grazing every other year.

Pinnacles Pasture

This pasture has been historically used by Magagna Brothers. Under the present livestock operation the pasture will be deferred every year until seed ripe. Bar-X Sheep Co. and Leonard Hay will use the Alkali Drainage portion of the pasture while trailing to and from the Bush Rim Allotment.

Bear Creek, Buffalo Hump and Dunes Pastures

These pastures will be deferred from grazing every other year. (Table 8).

B. Normal Operation

1. Normal Operation

Table 9. Normal Operation Based on Active Grazing Preference

Permittee	Kind	Period From	Period To	Type Use	AUMs
Bar X Sheep Co.	Cattle	5/1	12/15	Active	2609
Leonard Hay	Cattle	5/1	12/15	Active	490
Blair & Hay L&L Company	Cattle	5/1	12/15	Active	8340
~~Magagna Brothers~~ HELLYER LTD. PARTNERSHIP	Sheep	10/15	12/15	Active	3152
White Acorn Sheep Company	Cattle	5/1	12/15	Active	56

Table 8. Livestock Use by Permittee, Period of Use and the Treatment Designated by Pasture.

Pasture	Permittee	Period of Use and Grazing Treatment					
		Even Year	Odd Year	Even Year	Odd Year	Even Year	Odd Year
Boundary	Bar-X Leonard Hay	B 5/1 to 12/15	A 7/16 to 12/15	B 5/1 to 12/15	A 7/16 to 12/15	B 5/1 to 12/15	A 7/16 to 12/15
Red Lake	Bar-X Leonard Hay	A 7/16 to 12/15	B 5/1 to 12/15	A 7/16 to 12/15	B 5/1 to 12/15	A 7/16 to 12/15	B 5/1 to 12/15
Pinnacles	~~Magagna Bros.~~ Hellyer	A 7/16 to 12/15	A 7/16 to 12/15	A 7/16 to 12/15	A 7/16 to 12/15	A 7/16 to 12/15	A 7/16 to 12/15
	Bar-X & Leonard Hay	Will be allowed to trail cattle through the Pinnacles Pasture along Alkali Creek from and to Bush Rim Allotment.					
Bear Creek	Blair & Hay	A 7/15 to 12/15	B 5/1 to 12/15	A 7/15 to 12/15	B 5/1 to 12/15	A 7/15 to 12/15	B 5/1 to 12/15
	Bar-X & Leonard Hay ~~Magagna Bros.~~ Hellyer White Acorn Sheep Company						
Buffalo Hump	Blair & Hay Bar-X Sheep Co. Leonard Hay ~~Magagna Bros.~~ Hellyer White Acorn Sheep Company	A 7/15 to 12/15	B 5/1 to 12/15	A 7/15 to 12/15	B 5/1 to 12/15	A 7/15 to 12/15	B 5/1 to 12/15
Dunes	Bar-X & Leonard Hay Blair & Hay White Acorn Sheep Company	B 5/1 to 12/15	A 7/15 to 12/15	B 5/1 to 12/15	A 7/15 to 12/15	B 5/1 to 12/15	A 7/15 to 12/15