Environmental Assessment DOI-BLM-WY-070-EA13-183

Lease Renewal

Smith #02297 and South Trabing #02296
H & H Livestock
Lease # 4907508

Preparer: Dustin Kavitz, Rangeland Management Specialist

Bureau of Land Management
Buffalo Field Office
1425 Fort Street
Buffalo, WY 82834

Wyoming High Plains District - Buffalo Field Office

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The BLM's multiple-use mission is to sustain the health and productivity of the public lands for the use and enjoyment of present and future generations. The Bureau accomplishes this by managing such activities as outdoor recreation, livestock grazing, mineral development, and energy production, and by conserving natural, historical, cultural, and other resources on public lands.

1.0 INTRODUCTION

1.1 Background

The Bureau of Land Management (BLM), Buffalo Field Office proposes to renew 10 year grazing leases for the Smith (#02297) and South Trabing (#02296). Pursuant to the Federal Land Policy and Management Act (FLPMA), Sec. 402 (c) (3) the holder of the expiring lease shall be given first priority for receipt of the new lease where lands are allocated as available for livestock grazing through land use plans and the lessee is in compliance with the rules and regulations and the terms and conditions of their current lease.

The allotments are in close proximity of one another in Central Johnson County, Wyoming, and 20 miles south of the town of Buffalo, Wyoming. Elevations range from 4,376 to 4,776 feet. The allotments encompass about 12,170 acres of which approximately 9.19% are federal land, 5.25% is state land, and 85.57 % is private land. The grazing lease includes a total of 1,118.84 federal acres and 119 animal unit months (AUMs) of forage. The term of grazing is from 10/31 to 2/28 for the Smith allotment. The term of grazing is from 11/24 to 1/31 for the South Trabing allotment. The allotments only authorize cattle for grazing use. The lands are shown on the map in Attachment 1. The federal lands (BLM) associated with each lease are as follows:

- **Smith Allotment (#02297):** T47N R80W Sec. 8 N½NW¼

- **South Trabing Allotment (#02296):** T47N R80W Sec. 5 Lots 1,2,3,4, S½N½, S½ and Sec. 6 Lots 1,2,3,4,5, S½NE¼, N½SE¼, SE¼SE¼

This environmental assessment (EA), WY-070-EA13-183, documents the environmental analysis conducted to determine what impacts the proposed action would have on the environment. The current grazing lessee leases the base property associated with the respective allotments. The grazing lessee leases the base property from the Trail Land, LLC. Lease #4907508 was transferred under authority of Section 416, Public Law 111-88 (Appropriations Act) on February 1st, 2012 and expired on January 31, 2013. H&H Livestock the grazing lessee applied for renewal of the grazing leases authorizing grazing on their respective allotments. Per 43 CFR 4110, the grazing lessee has preference in retaining the grazing privileges attached to each property. Because the lease was last renewed under the Appropriations Act, to adequately complete processing these leases required a new analysis. Upon affirmative final decision of this EA's proposed action a new 10 year term grazing lease may issue to the lessee.

A Buffalo Resource Management Plan (RMP) amendment to adopted the *Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the State of Wyoming* (1997) (S&Gs). A formal assessment of the S&Gs has not yet been conducted for the Smith allotment. Although no assessments are completed, monitoring data and field visits on the allotment would likely support that the allotments are meeting the S&Gs for healthy rangelands in Wyoming. In 1998 the BFO developed a schedule for evaluating S&Gs. The allotments on this list are in the "I" and "M" categories, which are highest priority for management and evaluation as described in the WY S&Gs Implementation Plan. Active management of category "C" isolated public lands is at a public cost and management effort largely beyond the scope of generating public benefit; see generally, Ted Lapis v. U.S., 178 IBLA 62 (2009).

A formal assessment of the S&Gs is complete on the South Trabing allotment. The assessment found that the allotment is meeting all the applicable S&Gs. BLM distributed the report to all interested persons, and it is available from the Buffalo Field Office.

1.2 Purpose and Need for the Proposed Action

The Buffalo RMP allocated lands as available for domestic livestock grazing during the land use planning process. The purpose of the proposed action is to promote healthy sustainable rangeland ecosystems as well as the efficient and effective administration of grazing on public rangelands specifically within the following allotments: Smith (#02297), and South Trabing (#02296).

The need for the proposal is to respond to the grazing lease renewal applications under the BLM mandate under the Taylor Grazing Act, as amended (43 U.S.C. 315 through 315r) and FLPMA (43 U.S.C. § 1701 et seq.) to provide grazing opportunities for domestic livestock grazing on public lands managed by the BLM, where consistent through land use planning efforts.

Decision to be Made: The BLM would decide whether or not to issue a 10 year term grazing lease with or without changes in terms and conditions for lease #4907508, and how to balance the proposed action with multiple public uses.

1.3 Scoping and Issues

The BLM conducts its decision-making in accordance with the requirements of the Council on Environmental Quality (CEQ) regulations implementing the NEPA, the Department of Interior (DOI), and BLM policies implementing NEPA. NEPA and the associated regulatory and policy framework require federal agencies use the scoping process in their decision-making.

This EA received internal scoping, from various resources specialist of an interdisciplinary (ID) in the BLM Buffalo Field Office. The identified issues are and were incorporated in Sections 3 and 4 of this EA:

- How would the proposed action affect current livestock grazing management?
- How would the proposed action impact riparian areas/drainages?
- How would the proposed action impact invasive species?
- How would the proposed action impact sensitive soils?
- Would and how would the proposed action affect any special status species, particularly Greater Sage-Grouse (candidate species)?
- How would the proposal impact cultural resources or lands with wilderness characteristics?
- How can grazing impact native vegetation?
- Rangeland health hasn't been completed
- There is a need for the lessee to have this grazing lease renewed

This EA was sent to interested parties of record and is posted on the Buffalo Field Office (BFO) website to solicit public and cooperating agency comments over a 30-day period. The BFO uses received comments to assess whether the EA covers the issues raised and adequately addresses their significance. The BFO's response consists of either addressing public comments in the decision record or results in the preparation of a new EA.

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 Alternative I – Proposed Action– Renewal of Lease with Modification

The BLM proposes to maintain and improve land health and enhance habitat conditions on public lands in the BFO stewardship area by maintaining and/or enhancing upland grassland health and sagebrush habitats (species composition and structure) and maintaining riparian, wetland, and aquatic habitats through existing livestock grazing management.

The proposed action is to offer a new 10 year term grazing lease for public lands within the Smith and/or South Trabing allotments. For ease in administration of the public lands located within the allotments the BLM would combine the Smith allotment with the South Trabing allotment. This combination would result in one allotment and would have the same base property attached to the BLM lands. The allotment will be placed in the "Maintain" category. The BLM lands are contiguous of each other and the base property for both allotments is owned by the same entity. Active permitted use for the BLM lands would remain unchanged at 119 animal unit months (AUMs) for cattle. Table 1 describes the current lease mandatory terms and conditions in which changes are being proposed. Changes proposed are the season of use for the BLM parcel of land that was originally in the Smith allotment to year round grazing (T47N R80W Sec. 8 N½NW¼). The BLM lands that were in the original South Trabing allotment would have no changes to the existing management. The BLM parcels in T47N R80W Sec. 5 Lots 1,2,3,4, S½N½, S½ and Sec. 6 Lots 1,2,3,4,5, S½NE¼, N½SE¼, SE¼SE¼ are completely fenced from private lands and are used as a stock rest for trailing livestock in the area. The grazing lessee would be authorized to graze the stock rest from October 15 to April 1, following trailing season.

Table 1. Description of Current and Proposed Lease Mandatory Terms and Conditions (See below for additional Terms and Conditions)

	Current Lease		Proposed Lease
Allotment	Smith (02297)	South Trabing (02296)	South Trabing (02296)
Public Acres/AUMs	80/8	1,038.84/111	1,118.84/119
% Federal Range	100	100	100
Dates for Grazing	10/31 to 2/28	10/15 to 4/1	3/1 to 2/28
Number of Livestock	2 Cattle	50 Cattle	10

The following terms will be lease, "Terms and Conditions". These make the lease conform to the goals, objectives and decisions of the Buffalo RMP Records of Decision (RODs).

- The Stock Rest pasture which includes lands in T47N R80W Sec. 5 and 6 would only be authorized for livestock use from 10/15 to 4/1.
- The terms and conditions of your lease may be modified if additional information indicates that revision is necessary to conform to 43 CFR 4180
- Lessee agrees to allow authorized officers of the USDI-BLM to enter the leased lands at any time for the purpose of inspection
- Please notify BLM if number/kind of livestock or dates of use change

For ease in administration of allotment, under this Alternative the lease would be approved for 10 years no matter the term of the base lease. If the base lease is canceled, the lease would be

transferred back to the base property owner or the new base lessee for the remaining term of the BLM lease. The following would be placed as a "Other Term and Conditions" on the lease:

- This lease would be canceled when notification of cancelation of the base property lease occurs or the BLM is notified that the base lease is not renewed. Once canceled the BLM lease would be transferred back to the base property owner or a new base property lessee for the reaming time of the 10 year term BLM grazing lease.

The proposed action would issue a new 10-year term grazing lease to the grazing lease applicant. The applicant is currently in good standing with the BLM and meets all mandatory qualifications for obtaining a grazing lease per 43 CFR 4110.1 and 4110.2. In accordance with Title 43 CFR 4130.2(a), "Grazing permits or leases shall be issued to qualified applicants to authorize use on the public lands and other lands under the administration of the [BLM] that are designated as available for livestock grazing through land use plans." During the 10 years or following the end of the lease, the lease may be modified if information indicates changes in management are needed to ensure the allotments are meeting or making significant progress towards achieving the S&Gs for healthy rangelands.

The applicants are not proposing any projects or other surface disturbing activities in connection to these lease issuances. The BLM would analyze any future range improvement projects associated with these allotments under separate, site-specific NEPA.

2.2 Alternative II – No Action Alternative-Renewal of grazing lease without modification

The No Action alternative would be to renew the grazing lease under the existing terms and conditions for the Smith (02297) and South Trabing (02296) allotments. Table 1 shows the current leases "Mandatory Terms and Conditions". No changes would be implemented under this alternative. The "Other Terms and Conditions" described in the proposed action would be placed on the renewed grazing lease.

The no action alternative would issue a new 10-year term grazing lease to the grazing lease applicant. The applicant is currently in good standing with the BLM and meets all mandatory qualifications for obtaining a grazing lease per 43 CFR 4110.1 and 4110.2. In accordance with Title 43 CFR 4130.2(a), "Grazing permits or leases shall be issued to qualified applicants to authorize use on the public lands and other lands under the administration of the [BLM] that are designated as available for livestock grazing through land use plans." During the 10 years or following the end of the lease, the lease may be modified if information indicates changes in management are needed to ensure the allotments are meeting or making significant progress towards achieving the S&Gs for healthy rangelands.

2.3 Alternative III – No Grazing Alternative

Under this alternative the BLM would not permit livestock grazing on the Smith (02297) and South Trabing (02296) allotments. The existing grazing leases would be cancelled in accordance with 43 CFR parts 4100 and 1600 to eliminate grazing on the allotments.

2.4 Alternatives Considered but not Analyzed in Detail

2.4.1 Greater Sage-Grouse (GSG) Alternative.

BLM IM WY-2012-019 (2012) requires the BLM to address a reasonable range of alternatives in livestock grazing EAs in order to assess the impacts of livestock grazing on GSG habitat and land health. The IM stipulates that a deferred grazing system alternative should be considered if the size of the allotment warrants it. Although the Smith and South Trabing allotments are in GSG Core area, the size and management opportunity does not warrant a deferred grazing system.

2.5 Relationship to Statutes, Regulations, Plans, or Other Environmental Analyses

This EA fulfills the 1969 National Environmental Policy Act (NEPA) requirement for site-specific analysis. The proposal and its alternatives are in accordance with the following laws and/or regulations, other plans, and are consistent with federal, state, and local laws, regulations:

- National Environmental Policy Act (NEPA) of 1969 (Pub. L 91-190; 42 U.S.C. 4321 et seq.)
- Taylor Grazing Act of June 28, 1934, as amended (43 U.S.C. 315 through 315r)
- The Public Rangelands Improvement Act of 1978 (43 U.S.C. 1901, et seq.)
- FLPMA of 1976, as amended (Pub. L. 940579); 90 Stat.2743; 43 U.S.C. 1701 et seq.)
- 43 CFR § 4100 Grazing Administration-Exclusive of Alaska
- Grazing Regulations as codified in 43 CFR § 4100 as amended in 2005
- Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.)
- Clean Water Act Section 303d
- National Historic Preservation Act of 1966 Section 106
- Sikes Act of 1969 (Habitat Improvement on Public Land)
- Fish and Wildlife Improvement Act of 1978
- Executive Order 13186 – Responsibilities of Federal Agencies to Protect Migratory Birds
- Interagency Cooperation Regulations (50 CFR 402)
- BLM Instruction Memorandum No. WY-2010-012, Greater Sage-Grouse Habitat Management Policy on Wyoming BLM Administered Public Lands including the Federal Mineral Estate (Maintained into the Buffalo RMP)
- DOI Secretarial Order No.3310—Protecting Wilderness Characteristics on Lands Managed by the BLM, Dec. 2010
- Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management for the Public Lands Administered by the BLM in the State of Wyoming, December 2004

The proposed action and its alternatives conform to the Records of Decision for the Buffalo RMP, 1985, the 2001 amendment, and the Powder River Basin Oil & Gas Project Final Environmental Impact Statement and Resource Management Plan Amendment (PRB FEIS), 2003. The action is also consistent with the land use plan terms and conditions as required by 43 CFR 1610.5-3(a). The Buffalo RMP EIS analyzed the impacts of grazing.

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

General access to the allotments is provided by Trabing and Irigary Roads. All BLM parcels have public access. The allotments are in the "Powder River Basin" Level IV eco region which consists of unglaciated, irregular and dissected plains. Perennial steams in the area are generally of montane origin with sand, gravel, and cobble substrates. Ephemeral or intermittent streams in the area typically have sandy or silty substrates with many impoundments. The precipitation zone of the area is 10-14" Northern Plains (NP). Mean temperatures in January are 0ºF (low) and 36ºF (high) and in July they are 52ºF (low) and 88ºF (high). (Chapman, et al., 2004).

In addition to the grazing leases, BLM authorizes other uses on the public lands in the allotments; Section 4.2 discusses this further. Table 2 shows the additional authorized rangeland improvement projects on public lands within the allotments pertaining to this EA. Maintenance of these projects are of the grazing lessee's responsibility.

Table 2-Other Authorized uses on public lands

Allotment Name	Allotment Number	Project Name	Project Number
Smith	02297	None	None
South Trabing	02296	Trabing SR Fence	965123
South Trabing	02296	Smith Bros Pipeline	964530
South Trabing	02296	Smith Fence	964128
South Trabing	02296	Crazy Women Fence	960577
South Trabing	02296	Smith Brothers SDW Fence	960267

Livestock grazing, wildlife use, and oil and gas production are common area land uses. Recreational use, primarily big game hunting may also occur on the allotments. The public lands in these allotments are clearly lacking in wilderness characteristics due to their small size (less than 5,000 acres).

The following critical elements are not present and would not be further analyzed:

Air Quality	Hazardous or Solid Wastes	Human Health and Safety
Prime or Unique Farmlands	Wild and Scenic Rivers	Visual Resource Management
Flood Plains	Environmental Justice	Wilderness Characteristics
Native American Religious Concerns	Mineral Resources	
Areas of Critical Environmental Concern	Water Quality / Drinking Water	

3.2 Livestock Grazing

In 1985, BLM established three categories for allotments to identify areas where management was potentially needed, to prioritize workloads and the use of range improvement funds. The categories classify allotments as Improve Existing Resource Conditions (I), Maintain Existing Resource Conditions (M), or Custodial Management (C) (USDI 2008). The Smith Allotment is a category "C" allotment, meaning the management is minimal in nature, due to the small amount of public land within the allotment. The BLM's rationale for this classification is that there are no identified resource problems, and the size and continuity of the public land is not conducive to more intensive management by the BLM. The allotment has low potential for yielding a

positive return on public investment in management or rangeland project development. The South Trabing Allotment is an M category allotment. The management is to maintain existing conditions and management within the allotment. M category allotments have a higher level of management opportunity for the BLM than C allotments.

The allotments were grazed for numerous years. The current livestock grazing season in all allotments is shown in Table 1. The total amount of AUMs available for grazing on public lands in the allotments is 119 AUMs. The allotments consist primarily of private lands. Authorized range improvements include those shown in Table 2, above. Table 3, below, describes the current breakdown of ownership and AUMs. The total would depict what the acres and AUMs would likely be if the proposed decision would be chosen.

Table 3. Ownership and AUMs

Allotment Number	Allotment Name	Surface Ownership	Acres	Percent	AUMs	Percent
02297	Smith	BLM	80	3%	8	3%
		Private	2249	97%	225	97%
		State	0	0%	0	0%
		Total	**2,329**		**233**	
02296	South Trabing	BLM	1038.84	11%	111	11%
		Private	8164	83%	873	83%
		State	639	6%	68	6%
		Total	**9,841.84**		**1052**	
		Total(all allotments)	**12,170.84**		**1285**	
		BLM(all allotments)	**1,118**	**9.19%**	**119**	**9.19%**
		Private(all allotments)	**10,413**	**85.57%**	**1,098**	**85.57%**
		State(all allotments)	**639**	**5.25%**	**68**	**5.25%**

*Note: This data was compiled using ARCGIS data and may not represent exact acres owned by the grazing lessees.

3.3 Soils

Ardisols and Entisols are the most common soils in the allotments. Ardisols are mixed alluvium derived from andesite, limestone, and quartzite. Ardisols are typically well drained with a low runoff classification and an Ardic moisture regime. Entisols are derived from sandy eloian material and have an excessively drained drainage class. They have a slight hazard of erosion and common land uses are for Rangelands.

The principal soils (Top 5) found on public lands consist of the following soil map units:
609- Ulm-Bidman complex, 0 to 6 percent slopes
622- Cambria-Kishona loams, 0 to 6 percent slopes
709-Theedle-Shingle loams, 3 to 30 percent slopes
708-Theedle-Kishona-Shingle loams, 3 to 30 percent slopes
727- Haverdad, occasionally flooded -Kishona clay loams, 0 to 6 percent slopes

A complete description of these soils can be found in the (Soil Survey Geographic (SSURGO) database for Johnson County Area, Wyoming, Northern Part, 2011), published by the US Department of Agriculture Natural Resources Conservation Service (NRCS).

3.4 Vegetation

The plant communities found on public lands within the allotments are considered to be in the 10- to 14-inch precipitation zone Northern Plains (NP) Major Land Resource Area (MLRA). The principle range site or ecological site present is Loamy. Other range sites or ecological sites that can be found within the allotment include; Clayey, Sandy, and Lowland. The primary vegetative type in the allotments is Wyoming big sagebrush type. Vegetation found on these sites include Wyoming big sagebrush, silver sagebrush, winterfat, rabbitbrush, green needle grass, needle-and-threadgrass, western wheatgrass, bluebunch wheatgrass, prairie Junegrass, Sandberg bluegrass, bluegrama, little bluestem, asters, paintbrushes, clovers, biscuitroot, western yarrow, fringed sagewort, Hoods phlox, buckwheat's, and numerous other grasses and forbs. Most of these sites' growth occurs between May and June. According to the ecological site description (2011), as this site deteriorates species such as blue grama and big sagebrush increase and cool-season grasses such as needlegrass, needle-and-threadgrass, and rhizomatous wheatgrasses would decrease in frequency and production. Annuals bromes would commonly increase with improper management as well. A more complete description of each ecological site can be found on the NRCS's Ecological Site Description webpage.

Currently 119 AUMs are authorized within the various allotments. The AUMs were calculated using the Land Planning and Classification Report of the Public Domain Lands in the Powder and Missouri River Basin (U.S. Department Interior- Bureau of Land Management, 1956). These AUMs were calculated using light to moderate stocking rates.

3.5 Noxious Weeds and Invasive Non Native Plant Species

Invasive species and noxious weeds exist in the affected environment. The primary species in the area is leafy spurge (*Euphorbia esula*), downy brome *(Bromus tectorum*) and to a lesser extent, Japanese brome (*Bromus Japonicus)*. Downy brome, (cheatgrass), is present in the area but primarily exists along two-track trails and areas of disturbance. Downy brome is an invasive nonnative annual grass that degrades native plant communities. At this point in time downy brome is not a major component of the native plant communities in the allotments. If discovered in the future, noxious weeds in the allotments that pose a risk to the native vegetation on public lands would be aggressively treated using an integrated pest management (IPM) approach.

3.6 Water Resources

There are 2 principle drainages in the area. Trabing Dry Creek which runs through the South Trabing Stock Rest pasture on public lands flows into nearby Crazy Woman Creek. All other drainages on public land within the allotments are ephemeral. The area is part of the upper Crazy Woman Creek drainage system. The only other water sources on public lands is the water pipeline which services a stock tank in the South Trabing Stock Rest pasture.

3.7 Wildlife

3.7.1 Migratory Birds, Special Status Species, Threatened and Endangered Species, and Small Mammals

The BLM conducted wildlife evaluations to assess the occurrence of selected wildlife species and their habitats, as well as to evaluate the anticipated effects associated with issuing these grazing leases on the South Trabing and Smith allotment. The evaluations included selected individual species or species groupings that are ecologically, economically, or socially important. Evaluation methods included comparison of aerial imagery (1994 to 2009) and review of wildlife

geospatial datasets (available at BFO). Datasets included occurrence information for big game, raptors, bald eagles, GSG, sharp-tailed grouse, mountain plover, black-tailed prairie dogs, and sagebrush in the project area.

Wildlife habitats on the allotments are results of a complex history of natural and man-caused influences. Important natural influences included short- and long-term climate variation, infrequent wildfire, and ungulate grazing, especially by bison; (Baker, 2006), (Mack & Thompson, 1982). From about 1880 to 1910, the removal of native bison, and their subsequent replacement with "vast numbers" of cattle and excessive numbers of sheep, greatly influenced the PRB, including these 2 allotments; (Cassity, 2007); (Patterson, 1952). The combined impacts of cattle and sheep overstocking and climate may have initiated the ongoing epicycle of gully erosion that is evident in the PRB (Leopold & Miller, 1954). The Taylor Grazing Act of 1934 repaired early range degradation and aided the recoveries of reduced wildlife populations (Patterson 1952). Tables A.1 and A.2 summarize the affected environment for selected wildlife.

3.7.2 Candidate Species

This EA discusses GSG in detail because they are classified as a candidate species, currently warranted for listing under the Endangered Species Act (U.S. Fish and Wildlife Service(USFWS), 2010) and are thus of heightened management concern in the BFO. GSG are also a Wyoming BLM sensitive species and a Wyoming Game & Fish Department (WGFD) Species of Greatest Conservation Need (SGCN).

GSG habitat is present on BLM lands within the South Trabing and Smith allotment. Habitat models indicate that BLM lands within the allotment contain a small amount of high quality winter habitat. There are no known leks within the allotment, but the Walker Pipeline, Walker Draw, and Four Corners leks are within four miles of the South Trabing allotment boundary.

As noted in BLM WY-IM-2010-012 (2009), domestic livestock grazing has occurred in and around these allotments and "within the range of [GSG] for over 150 years and is the most common and widespread use of rangelands in the western United States. Livestock grazing practices may affect herbaceous composition, cover, and height and has a potential to impact sagebrush habitats. WY BLM has standards and guidelines to ensure proper livestock grazing management on public lands which can help maintain healthy rangeland conditions and provide functional habitat for [GSG]. However, poor livestock grazing practices can have long-term negative impacts on [GSG] habitat by degrading sagebrush, meadow, and riparian communities (Bohne, Rinkes, & Kilpatirck, 2007)."

3.7.3 Big Game

Big game species occurring in the EA area include pronghorn, whitetail, and mule deer Table 4 summarizes WGFD big game seasonal range data for the allotments.

Table 4. Big Game Seasonal habitat provided in each Allotment

Species	South Trabing	Smith
Whitetail deer	None	None
Mule deer	Yearlong/Winter-Yearlong	Yearlong/Winter-Yearlong
Pronghorn	Yearlong	Yearlong

Yearlong use is when a population makes general use of suitable documented habitat sites within the range on a year-round basis, but animals may leave the area under severe conditions. Winter-yearlong use is when a population or a portion of a population of animals makes general use of the documented suitable habitat sites within this range on a year-round basis, but during the winter months there is a significant influx of additional animals into the area from other seasonal ranges.

As of the most recent available report, populations of whitetail deer within their respective hunt areas are above WGFD objectives (Wyoming Game and Fish Department(WGFD), 2011b). Populations of mule deer and pronghorns are below their WGFD objectives.

3.7.4 Raptors

Raptors use the Smith and South Trabing for breeding, foraging, wintering, or migration. Common raptor species frequenting the allotment include: golden eagle, northern harrier, red-tailed, Swainson's hawks, American kestrel, short-earedl, and great-horned owls. Less common species that may use habitats in the area include: bald eagle, rough-legged hawk, and merlin. Bald eagles occasionally roost in cottonwood galleries in nearby riparian areas in the winter and forage throughout the area. Raptors generally prey upon small mammals, reptiles, and fish. Their survival and reproductive success depends, in part, on the availability and abundance of these food sources.

3.8 Cultural, Historic Values, and National Register of Historic Places (NRHP)

Smith:

Only 2 Class III cultural resource inventories exist in the Smith Allotment in association with a material sale and fence project. These inventories identified 1 prehistoric lithic scatter that is not NRHP-eligible and one historical telegraph line with potential NRHP-eligible segments. There may be additional unrecorded cultural sites, some of which may be NRHP-eligible, in the allotment.

South Trabing:

The majority of the South Trabing allotment has not been subject to class III cultural resource inventory, although the Wyoming Cultural Records Office database revealed that 10 cultural resource assessments related to a grazing lease renewal, CBM POD, seismic lines, a road, a fence, a reservoir, the Powder River Basin Class II survey project and a Bozeman Trail project yielded a total of 15 archaeological sites including 10 prehistoric sites and 5 historical sites. Five (48JO93, 48JO134_37, 48JO1680, 48JO3059 and 48JO4372) of these resources are NRHP-eligible and consist of: the Crazy Woman Battlefield (48JO93); the Bozeman Trail (48JO134_37); a prehistoric open camp with hearth features and lithic scatter (48JO3059); the Fort Fetterman to Fort McKinney Telegraph Line (48JO3059); and a buried, prehistoric bison procurement and processing locality (48JO4372). Of the remaining resources, three sites are not NRHP-eligible and 7 remain unevaluated. There may be additional unrecorded cultural sites, some of which may be NRHP-eligible, within the allotment.

3.9 Socioeconomics

Ranching is a strong component of local society and has a historical value, as grazing has occurred in the area since the late 1800s. According to the (U.S. Department of Agriculture,

2010) Agricultural Census Publication the value of sale of cattle and calves, Wyoming ranked 24th in the country and 4th for sheep and lambs. The market value of cattle and calves sold, ranked the state number 1, and 5th for sheep and goats. These statistics show that the ranching industry is a key component in Wyoming agriculture as well as the nation's agriculture, and the sales from the livestock are linked to the commodity value of public rangelands. Public lands are an intricate part of the ranch operation, as it is intermingled with private and state land making it difficult to use one parcel without using the other. The grazing lease helps maintain integrity of the ranch operation and lends to supporting the cultural lifestyle of the lessee.

Public lands contribute to the receipts of the state in which they are located through "Payment In Lieu of Taxes" by the federal government. The allotments analyzed in this EA were established according to provision of Section 15 of the Taylor Grazing Act. Receipts from grazing on Section 15 lands are distributed two ways: 50% goes to the federal government for range betterment projects, and 50% is returned to the State government. The grazing fee is $1.35 per AUM on public land, $5.13/AUM on Wyoming State Lands, and an average of $17.60/AUM on private lands. The grazing leases described in this EA generate approximately $160 annually.

4.0 ENVIRONMENTAL EFFECTS

4.1 Direct and Indirect Effects

No Action Alternative statement(Alternative 2)

Under the No Action alternative impacts to each effected resource would continue. The impacts would be similar to those described in the proposed action. The primary difference is that the grazing lessee would not have as much flexibility in his management of his allotment. Under this alternative the grazing lessee would only be able to use the pasture in the winter between November 30 and February 28. Winter grazing use is known to have less of an impact on the soil and vegetative resource than use during the spring, summer, and fall. The plants are actively grazed during these seasons and the soil is more susceptible to compaction and erosion.

4.1.1 Livestock Grazing

Alternative I-Proposed Action

The impacts associated with livestock grazing are expected to continue upon issuing a new lease. These impacts include nutrient cycling, physical damage to vegetation, trailing along fences, trampling, and heavier grazing use around salted areas. This alternative would allow for the grazing lessees to continue to grazing on their respective allotments. Livestock would continue to utilize up to 119 public AUMs annually as described in table 1 of the proposed action alternative.

Rangeland vegetation inventory (U.S. Department Interior- Bureau of Land Management, 1956) data indicates an adequate amount of forage is available to support the proposed number of livestock and for wildlife use and the effects of that use within these allotments. The new grazing lease authorizes the same numbers and kind of livestock and but will adjust the season of use to year round on the 80 acre parcel in T47N R80W Section 8 N½NW¼, which would provide for more flexibility in the management of the allotment for the grazing lessee.

Alternative III-No Grazing Alternative

FLPMA requires the BLM to manage public lands and resources by the principles of multiple use and sustained yield and recognizes the Nation's need for domestic sources of minerals, food,

timber, and fiber. FLPMA also requires the BLM—except in cases of emergency—to give two years' notification when an authorization for domestic livestock grazing is cancelled, in whole or in part, to devote the associated lands to another public purpose, including disposal.

The Buffalo RMP states as a resource management decision that *livestock grazing is allowed on all public lands in the resource area except on about 6,000 acres where it has been determined to be incompatible with other resource uses or values.*

There are no fences or natural barriers separating BLM and non-BLM lands. At this time, fencing out the public lands is not practical or cost effective. If extraordinary circumstances arise, such as the identification of an endangered plant or damageable cultural resource on the site, fencing may be a greater priority, and the BLM would address that in a separate analysis. If the public lands are not leased, and subsequently not fenced, any livestock use occurring thereon is unauthorized. Selecting this alternative would affect how the adjacent private and state lands are grazed because the operator must keep livestock off public lands through herding or fencing, or else be in violation of federal grazing regulations. The mixed ownership pattern in the BFO resource area makes herding difficult, in addition to the fact that herding does not ensure that public lands are not grazed. A rider needs to remain with livestock at all times. Because it is not economically feasible for the BLM to fence all federal land parcels, fences would likely be constructed on private land, fragmenting the area, and making BLM unable to stipulate wire spacing to facilitate wildlife movement. Most four-strand fences on private land have a top wire of 46-48 inches with 10-12 inch wire spacing and all wires are barbed. In the absence of fences, the BLM must constantly supervise the public lands to assure they are not being grazed.

No adverse resource impacts resulting from livestock grazing have been identified which would warrant cancellation of all grazing on the allotments. The Buffalo RMP allows for adjustment of forage allocation based on an evaluation of monitoring, field observations, or other data as needed. Additionally, changes in grazing practices can be effective in mitigating impacts without a corresponding reduction in forage allocation.

4.1.2 Soils

Alternative I-Proposed Action Alternative

Grazing can exert both beneficial and detrimental effects on a soil resource. The main effects that livestock grazing has on the soil resource is removal of aboveground vegetation and hoof action, potentially leading to increased erosion, increased runoff, reduce infiltration rates and increased bulk density (compaction) (Holechek, Pieper, & Herbel, 2004, p. 379). Most of the compaction and erosion would occur where cattle tend to congregate which may include areas along trails, fence and near watering locations. This compaction leads to lowered rates of water infiltration thus leading to high rates of surface runoff and greater soil erosion.

On a positive standpoint, large quantities of dung and urine are deposited throughout the allotments adding nutrients and organic matter to the soil (McNaughton, 1979). Hoof action can benefit the soil resource by improving nutrient cycling by incorporating mulch into soil surface where it can be broken down more quickly by soil organisms (Holechek, Pieper, & Herbel, 2004, p. 379). Livestock grazing can loosen the soil surface during drying periods, remove excess vegetation that may negatively affect net carbohydrate fixation and increase water transpiration rates, and speed up the development of humus in the soil (Holechek, 1981). With respect to the

change to year round season of use on the 80 acre parcel in T47N R80W Section 8 N½NW¼ impacts to the soil resource may increase. The livestock may graze on the parcel during wet months and cause increase compaction, more hoof action, and increased soil erosion. Because the parcel is such a small portion of the allotment is it likely that the impacts would be minimal.

Because no other changes in the current management are being implemented under the proposed action/no action alternative, impacts to the soil resource would remain the same and no changes from the current state of the resource are expected.

Alternative III-No Grazing Alternative

With the removal of grazing from the allotments, forage would not be removed by livestock. Standing vegetation and litter would increase. The increase in cover may reduce runoff and erosion. With the removal of livestock from the allotment a decrease in compaction and increase infiltration would be anticipated (Pluhar, Knight, & Heitschmidt, 1987).

Nutrient cycle in the allotments would likely change. Cattle can increase soil nutrients by depositing excrement on the soil surface. But with improper management, they may decrease nutrients by consuming and permanently removing plants that put nutrients into the soil system.

4.1.3 Vegetation

Alternative I-Proposed Action Alternative

The effects grazing has on vegetation varies greatly depending on many factors including but not limited to: resistance to grazing, genetic potential, growth promoting features, grazing intensity, plant life stage, and environmental constraints (Holechek, Pieper, & Herbel, 2004, pp. 123-142)). Livestock grazing can have beneficial and detrimental effects on vegetation depending on the factors described by Holechek. Beneficial impacts may include but not limited to: grow stimulation from grazing ruminants saliva (McNaughton, 1979), trampling of seed into the ground (Holechek, 1981), reducing excess accumulation of standing dead vegetation and mulch that may chemically and physically inhibit new plant growth (Holechek, 1981), and reducing transpiration losses (Holechek, Baker, Boren, & Galt, 2006). Some detrimental impacts livestock grazing may have on vegetation include but are not limited to: changes in species composition in upland areas (Brock & Green, 2003), tillering may be reduced (Belsky, 1986), modifying the growth form of plants by consuming terminal buds thereby promoting lateral branching (Fleischner, 1994), and disruption of ecological succession (Fleischner, 1994).

Under the proposed action alternative, approximately 119 AUMs would be removed by livestock annually. Most studies showed that with light to moderate stocking rates, rangelands would not be compromised. The AUMs authorized are based on a light to moderate stock rate. Therefore, as long as the total number of permitted AUM's consumed don't exceed the authorized use for the allotments; the impacts associated with renewing the grazing leases should not have an undesirable effect on vegetation.

With respect to the change to year round season of use on the 80 acre parcel in T47N R80W Section 8 N½NW¼ impacts to the vegetative resource may increase. Livestock may graze the plants while they are actively growing thus not allowing them to produce seed. This may decrease the ability for plants to replenish the seed bank.

Alternative III-No Grazing Alternative

The no grazing alternative would eliminate the beneficial and detrimental impacts of grazing. It is likely with the removal of grazing that litter would increase, thus increasing fire potential in the allotments. More vegetation would be available for wildlife and ecosystem function. However, Patton, et. al. (2007), found that production does not increase with the removal of livestock grazing. Other studies have also found that removal of grazing can lead to an increase in shrub cover, and a decrease in species and plant diversity (Manier & Hobbs, 2007).

4.1.4 Noxious Weeds and Invasive Non Native Plant Species

Alternative I-Proposed Action Alternative

Livestock can potentially transport noxious weeds and invasive non-native plant species through their coat and feet as well as in their digestive tract. Livestock may carry these undesirable plants that may already exist on the allotment or from other pastures they may encounter throughout their life. Livestock grazing can increase the presence of noxious weeds by over grazing; (DiTomaso, 2000); this is the primary cause of unwanted species invasion; (Holechek, Pieper, & Herbel, 2004, p. 508). Since many roads and trails occur throughout the allotments, and recreational opportunities exist in the area, new weed introductions are likely to occur on a regular basis. These infestations are monitored annually by the BLM, county weed and pest agents, and grazing lessee to determine if management changes are needed to control the infestations. Because current and proposed management does not exceed recommended grazing levels and no management concerns occur at this time, it is anticipated that under the proposed action no increases in Noxious Weeds or Invasive Non Native Plant Species would occur.

Alternative III-No Grazing Alternative

Removing livestock grazing from the public land can promote growth—and potential overgrowth—of perennial grasses and forbs, thus crowding out or reducing the potential for invasion of noxious and/or invasive species. However, the overgrowth of vegetation increases the availability of fire fuels, increasing the risk of wildfire and its intensity, allowing opportunistic noxious and invasive species to colonize the public lands. Cooperative weed control efforts could discourage overgrowth of vegetation and decrease the fire return interval.

4.1.5 Water Resources

Alternative I-Proposed Action Alternative

Livestock area attracted to riparian areas by environmental and nutritional factors and may utilize riparian vegetation disproportionately more than adjacent uplands; (Gillen, Krueger, & Miller, 1985), (Howery, Provenza, Banner, & Scott, 1996) This attraction can lead to higher use to the riparian and riparian like areas thus, leading to a decline in streambank stability, a decline in the cover/streambank class with concomitant increase in the uncovered/unstable class, increase in soil erosion; (McInnis & McLver, 2001), removal of wood vegetation, soil compaction, and reduced water quality; (Parsons, Momont, Delcurto, McInnis , & Porath, 2003). Although uncontrolled livestock grazing can result in watershed destruction in certain areas, controlled grazing is no detrimental to water quality and may increase water quantity; (Holechek, 1981). No major degradation problems have been identified under the past and current management of livestock. Therefore, impacts to water resources should remain unchanged with respect to the proposed action alternative. Because no water sources are within the 80 acre parcel in T47N R80W Section 8 N½NW¼ impacts to the water resource would not change.

Alternative III-No Grazing Alternative
The removal of grazing would improve/maintain riparian health. Less utilization would occur on riparian plants, thus reducing trampling and hoof shearing along the green line of riparian areas. Total vascular vegetation, shrub, and graminoid canopy cover would increase with the exclusion of livestock; (Schulz & Leininger, 1990).

4.1.6 Wildlife

4.1.6.1 Migratory Birds, Special Status Species, Threatened and Endangered Species, and Small Mammals

Alternative I-Proposed Action Alternative
(See Tables A.1 and A.2 in Appendix A)
The USFWS issued a block clearance for the PRB for the endangered black-footed ferret. Alternative B would have "***no effect***" on black-footed-ferrets. The proposed action would have "***no effect***" on Ute ladies'-tresses orchid because suitable habitat for this species is not present in the allotments.

Alternative III-No Grazing Alternative
The U.S. Fish and Wildlife Service issued a block clearance for the PRB for the endangered black-footed ferret. Alternative A would have "***no effect***" on black-footed-ferrets.

If grazing is removed from the allotments, there would be "***no effect***" on Ute ladies'-tresses orchid, because there is no suitable habitat for this species in the allotments. Cancelling grazing may have a negative impact burrowing owls and black-tailed prairie dogs by reducing the number of grazed areas, which provide preferred habitat for these species.

4.1.6.2 Candidate Species

Alternative I-Proposed Action Alternative
The proposed action "would impact" GSG habitat. Livestock grazing can benefit or degrade GSG habitat on the allotment, depending on the timing, stocking rate, and habitat affected. Fall grazing may favor upland forb production, and spring grazing may be used to remove herbaceous cover and make forbs more accessible; (Smith, Malechek, & Fulgham, 1979), (Fulgham, Smith, & Malechek, 1982). Spring and early summer grazing may help control invasive weeds and remove woody plants, thereby decreasing the risk of wildfire that could remove large areas of habitat; (Mosley, 1996), (Olson & Wallander, 2001), (Merritt, Prosser, Sedivec, & Bangsund, 2001), (Riggs & Urness, 1989).

Excessive or poorly managed grazing causes degradation of sagebrush ecosystems and thus GSG habitat; (Bureau of Land Management, 2002). Inappropriate grazing management in uplands can reduce perennial grasses and forbs while favoring annual grasses and increasing sagebrush cover; ((Branson, 1985), (Tisdale, 1994), (Beck & Mitchell, 2000), (Bork, West, & Walker, 1998). This may impact GSG, because they rely on perennial grasses for escape cover and residual herbaceous cover for screening cover in nesting habitat. Forbs are positively associated with survival and recruitment of GSG chicks. Inappropriate grazing that damages meadows and riparian areas can harm GSG, because these areas are critical for GSG in late summer. Livestock may trample GSG nests or cause GSG to abandon their nests; (Call, 1979), (Patterson, 1952).

Livestock grazing has occurred historically on these allotments and the BLM expects no additional impacts, other than those that have already taken place as a result of long-term use, from implementation of the proposed action. Continuing to manage for the Wyoming Standards for Rangeland Health would promote GSG habitat viability.

A formal assessment of the S&Gs has not yet been conducted for the Smith allotment. Although no assessments are completed, monitoring data and field visits on the allotment would likely support that the allotments are meeting the S&Gs for healthy rangelands in Wyoming. Continuing to manage for the Wyoming standards for rangeland health would promote GSG habitat viability.

Alternative III-No Grazing Alternative

Under the no grazing alternative, no benefits to GSG habitat as a result of grazing management would occur. Excluding livestock does not necessarily cause an area to return to its pre-grazing ecological condition or guarantee improvements in species richness, diversity, or vegetative production; (Manier & Hobbs, 2007). Some habitats reach a threshold where livestock exclusion does not have an effect on the current trend; (Wambolt & Payne, 1986), (Sanders & Both, 1983). Other research shows that rest from livestock grazing in big sagebrush habitats may improve understory production while decreasing sagebrush cover; (Wambolt & Payne, 1986). On Wyoming sites with dense big sagebrush and annual grass understory, eliminating grazing can increase fire risk which results in habitat degradation; (Peters & Bunting, 1994), (West , 1999).

4.1.6.3 Big Game

Alternative I-Proposed Action Alternative

By managing land to meet rangeland health standards and improving overall rangeland condition, forage for elk, deer, and pronghorn would improve.

Forage resources on winter ranges typically limit mule deer populations (Clements & Young, 1997). Livestock grazing tends to favor shrubs over grasses, and thus may provide more desirable winter browse conditions on the allotments; (Austin & Urness, 1998), (Austin, Urness, & Riggs, 1986), (Smith A. D., 1949).

Livestock grazing may enhance big game forage by reducing unpalatable standing dead material; (Short & Knight, 2003). Big game and cattle may compete for forage on a minor level. There is very little dietary overlap between cattle, pronghorn, and deer during spring and early summer, since cattle feed primarily on grasses while pronghorn and deer select mostly forbs and some grasses. Cattle begin to use more forbs in late summer and fall, potentially increasing competition. Pronghorn and deer increase the amount of shrubs in their diet in fall and winter, thus reducing competition during those seasons; (Anderson & McCuistion, 2008).

The fences on the allotment pose a hazard to deer and pronghorn. In the BFO resource area, fences have caught and trapped deer and antelope. Modifying fence in areas used by cattle to a more wildlife “safe” design with height under 48 inches and the bottom wire 16 inches from the ground may reduce this hazard. Fences in this allotment are located primarily on private land and are not subject to BLM management.

Proper grazing management can improve winter forage conditions for big game; (Anderson & Scherzinger, 1975). Livestock grazing has occurred historically on these allotments and the BLM expects no additional impacts from implementation of the proposed action.

Alternative III-No Grazing Alternative

Under the no grazing alternative, winter browse conditions for big game would not improve. Encroaching herbaceous species may ultimately out-compete shrub species, resulting in a reduction in quality of big game winter range; (Smith A. D., 1949). Additionally, livestock would not remove unpalatable standing dead material, resulting in unimproved forage.

4.1.6.4 Raptors

Alternative I-Proposed Action Alternative

Results from research and monitoring studies suggest that livestock grazing is likely to impact some species of raptors while favoring others; (Bock, Saab, Rich, & Dobkin, 1993). Livestock grazing may cause the direct impacts of nest and egg destruction of ground-nesting species due to trampling by livestock, or nest abandonment by birds intolerant of disturbance. Grazing management practices can change vegetation composition, leading to the indirect impacts of changing prey composition and availability. Continued livestock grazing would favor those species that benefit from the alterations in habitat that occur in response to grazing; (Bock, Saab, Rich, & Dobkin, 1993).

Table 5 has grassland and shrub-steppe dependent raptor species not discussed elsewhere in this EA that Bock, et al. (1993), reported impacted positively or negatively by livestock grazing.

Table 5. Grassland and Shrub-Steppe Raptor Species Impacted by Livestock Grazing

Response	Species	Habitat
Negative	Northern harrier	Grassland, Shrub-steppe
	Red-tailed hawk	Shrub-steppe
	Short-eared owl	Grassland, Shrub-steppe
	Swainson's hawk	Shrub-steppe
Positive	Golden eagle	Shrub-steppe

A recent study to assess the impacts of rotational cattle grazing on rodents and raptors suggests that raptor use and prey availability can be affected by livestock grazing. In comparisons between grazed and ungrazed areas, raptor use declined by 15% in the grazed area, but increased by 63% on the ungrazed area. Rodent abundance declined and remained lower in the grazed area for the duration of the study; (Johnson & Horn, 2008).

Livestock grazing has occurred historically on these allotments and the BLM expects no additional impacts, other than those that have already taken place as a result of long-term use, from implementation of the proposed action. Appropriate grazing management could maintain or improve nesting habitats for ground-nesting raptor species and improve prey abundance and availability by enhancing habitat conditions.

Alternative III-No Grazing Alternative

Under the no-grazing alternative, occasional trampling of nests by livestock would not occur. Livestock grazing would not alter habitats, thus benefitting some raptor species while negatively affecting others (Bock, Saab, Rich, & Dobkin, 1993).

4.1.7 Cultural and Historic Values

Alternative I-Proposed Action Alternative

Any activity that removes vegetation or leads to soil erosion can cause impacts to cultural resources. Livestock concentration areas (such as those that form near water sources, supplemental feeding areas, fence corners, etc.), and livestock trail formation may result in impacts to cultural resources. According to the State Protocol Agreement between the Wyoming BLM and the Wyoming State Historical Preservation Office (SHPO), grazing lease renewals that do not include seasonal grazing changes or changes in livestock types are exempt from case-by-case review. However, this grazing lease renewal would not be exempt due to the livestock grazing changes proposed for an 80-acre portion of the allotment. Specific direct, indirect or cumulative impacts to cultural resources from the issuance or non-issuance of this grazing lease were not analyzed. Following section VI (B)(1) of the Wyoming State Protocol, on July 18, 2013, the Bureau of Land Management notified SHPO of the determination that the grazing lease renewal will result in "No effect" to historic properties.

Alternative III-No Grazing Alternative

The absence of grazing would not result in impacts to cultural resources.

4.1.8 Socioeconomics

Alternative I-Proposed Action Alternative

The proposed action would allow the grazing lessees to continue their ranch operations. They would be able to continue to contribute to the Wyoming agriculture economy benefiting not only the state of Wyoming, but also Johnson County and various other local governments. The federal government would continue to collect grazing fees from the grazing lessees and this commodity use would continue to generate revenues for the federal government to provide money for range betterment projects and revenue for the Wyoming state government.

Alternative III-No Grazing Alternative

The removal of grazing would increase the financial stress on both the grazing lessee and the adjacent land owners as the federal land would have to be fenced from private land to ensure no grazing occurs on federal land. The landowners rely on the public lands for their operation and with the removal of grazing the landowner would have to find other means to manage their operation either through sale of their livestock or renting much more expensive private lands.

4.2 Cumulative Effects

The CEQ regulations define cumulative effects as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency(Federal or non-Federal) or person undertakes such actions" (40 CFR 1508.7). It is anticipated that implementation of any of the alternatives in combination with the past, present, and reasonably foreseeable actions would not result in any measurable cumulative impacts.

Past, Present, and Reasonably Foreseeable Actions

Past, present, and reasonably foreseeable actions in all cumulative effects affected areas (CEAA) that may contribute to cumulative effect to various resources present include livestock grazing, hunting, recreational activities, fire, and ROWs. It should be noted that result of the impacts of the past and present actions are described in Section 3, above. With respect past and present actions on GSG and habitat fragmentation; see Section 4.2.5 Candidate Species (GSG).

Livestock grazing occurred in the area for over 100 years. Approximately 119 AUMs are authorized annually for the BLM lands in the allotments. No changes to authorized AUMs, season of use, and kind/number of livestock are anticipated in the allotments. Livestock grazing would likely continue unless resources conditions or rangeland health warrants otherwise. Additional actions associate with livestock grazing include: off-high way vehicle (OHV) travel, feeding of mineral and protein supplements, and hauling and trailing livestock.

Hunting and recreational activities have occurred within the allotments for many years and still is a big part of the land uses within the area. These uses are expected to continue and no changes are expected in these land uses.

No recorded wildfires or prescribed burns occurred in the project area since 1990. There are no planned prescribed burns in the project area. Fire occurred in the area over many years. Fire regime is the role fire would play across the land scape. The project area is in a Fire Regime Class II, in which the fire frequency is high severity (stand replacement of greater than 75% of the dominant over story vegetation being replaced). Fire Regime Condition Class (FRCC) determines how similar a landscape is to its natural or historical regime. The project area is in the FRCC of 2 which defines the area as having similar key ecosystem components including vegetation and disturbances such as fire. Wildfires are likely to occur in future.

ROWs that have been approved within the allotments and likely would continue to be approved include the following: water pipelines, power lines, roads, and other federal ROWs. Maintenance and construction of these ROWs would create some surface disturbance that would contribute to the cumulative impacts to various resources.

4.2.1 Livestock Grazing

Geographic Scope and Timeframe

The cumulative effects affected area (CEAA) for grazing are the allotments' boundaries. The CEAA was selected because the scope of the proposed action and alternatives has been identified as the area in the allotments' boundaries. The direct impacts are anticipated to last for the life of the grazing lease (10 years). While the indirect and long term impacts may last longer.

Incremental Effect from the Proposed Action and No Action Alternative

With the addition of grazing to the past, present and reasonably foreseeable actions the incremental loss of forage available for livestock would occur. As long as mitigation and monitoring techniques are implemented to ensure new roads and trails from recreationalists and hunters are not made and fires are suppressed, the loss of vegetation available for livestock should be negligible. Additionally, oil/gas/ROWs would be permitted, thus decreasing the

amount of forage available for grazing. But with best management practices (BMPs) being implemented, this should be negligible.

Incremental Effect from the No Grazing Alternative
Less surface disturbance would occur with the removal of grazing. The incremental impacts when compared to the proposed action would be less.

4.2.2Soils

Geographic Scope and Timeframe
The cumulative effects affected area (CEAA) for soils are the grazing allotments' boundaries. BLM selected the CEAA because the scope of the proposal and alternatives has identified as the area in the allotmens't boundaries. The direct impacts are anticipated to last for the life of the grazing lease (10 years). While the indirect and long term impacts may last longer.

Incremental Effect from the Proposed Action and No Action Alternative
The proposed action when added to the reasonably foreseeable actions should be minimal as rangeland health objectives are used in livestock grazing management, hunters, and recreationalist would be monitored for land abuse, fire suppression would mitigate the severity of the impacts, and BMPs would be used for new ROW activities. The incremental effects may include soil erosion and soil compaction along new trials made from livestock, roads and trails used by hunting and recreationalist, new roads, and areas where fires occur. Severity of these impacts would be dependent on the amount of hunter and recreationalist use on the allotments, number of ROWs permitted, and the intensity/size of the wildfires.

Incremental Effect from the No Grazing Alternative
Less surface disturbance would occur with the removal of grazing. The incremental impacts when compared to the proposed action would be less.

4.2.3 Vegetation, Noxious Weeds and Invasive Plant Species

Geographic Scope and Timeframe
The cumulative effects affected area (CEAA) for vegetation, noxious weeds, and invasive plants are the grazing allotments' boundaries. The CEAA was selected because the scope of the proposed action and alternatives has been identified as the area in the allotments' boundaries. The direct impacts are anticipated to last for the life of the grazing lease (10 years). While the indirect and long term impacts may last longer.

Incremental Effect from the Proposed Action and No Action Alternative
The proposed action when added to the reasonably foreseeable actions should be minimal as rangeland health objectives are used in livestock grazing management, hunters, and recreationalist would be monitored for land abuse, fire suppression would mitigate the severity of the impacts, and BMPs would be used for ROW activities. The incremental effects may include forage loss and introduction of non-native species along new trials made from livestock, roads and trails used by hunting and recreationalist, new roads, and areas where fires occur. Severity of these impacts would be dependent on the amount of hunter and recreationalist use on the allotments, number of oil/gas/ROWs permitted, and the intensity/size of the wildfires.

Incremental Effect from the No Grazing Alternative
Less surface disturbance would occur with the removal of grazing. The incremental impacts when compared to the proposed action would be less.

4.2.4 Water Resources

Geographic Scope and Timeframe
The cumulative effects affected area (CEAA) for water resources are the grazing allotments' boundaries. The CEAA was selected because the scope of the proposed action and alternatives is identified as the area within the allotments' boundaries. The direct impacts are anticipated to last for the life of the grazing lease (10 years). Indirect and long term impacts may last longer.

Incremental Effect from the Proposed Action and No Action Alternative
The proposed action in combination with any past, present, and reasonably foreseeable actions may increase the possibility for decreased water quality and quantity. This can be from loss of soil into the riparian areas. The incremental impacts should be minimal as rangeland health objectives are used in livestock grazing management, hunters and recreationalist would be monitored for land abuse, fire suppression would mitigate the severity of the impacts, and BMPs would be used for new ROW activities

Incremental Effect from the No Grazing Alternative
Less surface disturbance would occur with the removal of grazing. The incremental impacts when compared to the proposed action would be less.

4.2.5 Wildlife (Migratory Birds, Special Status Species, Threatened and Endangered Species, Small Mammals, Big Game, Raptors)

Geographic Scope and Timeframe For Migratory Birds, Special Status Species, Threatened and Endangered Species, and Small Mammals
The cumulative effects affected area (CEAA) is the Crazy Woman Creek watershed boundary. Many of the species within the watershed are contained within the watershed. Migratory species may travel outside the boundary but most of the life cycle likely occurs within the CEAA. The direct impacts are anticipated to last for the life of the grazing lease (10 years). While the indirect and long term impacts may last longer.

Geographic Scope and Timeframe for Big Game and/or Raptors
The cumulative effects affected area (CEAA) for is the entire range the species may utilize in their life cycle within the vicinity of the allotments. The direct impacts are anticipated to last for the life of the grazing lease (10 years). While the indirect and long term impacts may last longer.

Incremental Effect from the Proposed Action and No Action Alternative on Wildlife (Migratory Birds, Special Status Species, Threatened and Endangered Species, Small Mammals, Big Game, Raptors)
Incremental impacts from the proposed action when added to the past, present and reasonably foreseeable actions may result in disruption of species habitat through the loss of vegetation and habitat fragmentation. Loss of vegetation would occur from livestock grazing, new roads (recreation/hunting/ROWs), and wild fire. Habitat fragmentation would result from vertical intrusions associated with development and new roads associated with ROWs, and recreation

activities. Additionally, the spread of noxious and invasive weeds from the actions may impact habitat quality by changing the native plant community, plant production, plant diversity, and ecological health. The incremental impacts should be minimal as Rangeland Health objectives are used in livestock grazing management, hunters and recreationalist would be monitored for land abuse, fire suppression would mitigate the severity of the impacts, and BMPs would be used for new oil, gas and ROW activities.

Incremental Effect from the No Grazing Alternative on Wildlife (Migratory Birds, Special Status Species, Threatened and Endangered Species, Small Mammals, Big Game, Raptors)
Less surface disturbance would occur with the removal of grazing. The incremental impacts when compared to the proposed action would be less.

4.2.5 Candidate Species (Greater Sage-Grouse) (GSG)

Geographic Scope and Timeframe
The cumulative effects affected area (CEAA) for Candidate Species GSG, is any area in the allotment that is within the Core Area. The direct impacts are anticipated to last for the life of the grazing lease (10 years). While the indirect and long term impacts may last longer.

Incremental Effect from the Proposed Action and No Action Alternative
Incremental impacts from the proposed action when added to the past, present, and reasonably foreseeable action may result in habitat alteration of Candidate Species, specifically GSG. These impacts include loss of forage, cover, and habitat. The actions may also disturb mating and brood rearing that is vital to any special status species known to occur in the area. Loss of vegetation would occur from livestock grazing, new roads (recreation/hunting/oil and gas/ROWs), and wild fire. Habitat fragmentation would result from vertical intrusions associated with development and new roads associated with ROWs and recreation activities.

The GSG population within northeast Wyoming is exhibiting a steady long term downward trend; (U.S. Fish and Wildlife Service(USFWS), 2010), (Wyoming Game and Fish Department (WGFD) , 2011a). Figure 1, below, illustrates a ten-year cycle of periodic highs and lows. Each subsequent population peak is lower than the previous peak. Long-term harvest trends are similar to that of leks attendance; (Wyoming Game and Fish Department(WGFD), 2011b). Habitat fragmentation (resulting from oil and gas development) and West Nile virus are the primary contributors to this decline; (Taylor, Naugle, & Mills, 2012), (U.S. Fish and Wildlife Service(USFWS), 2010).

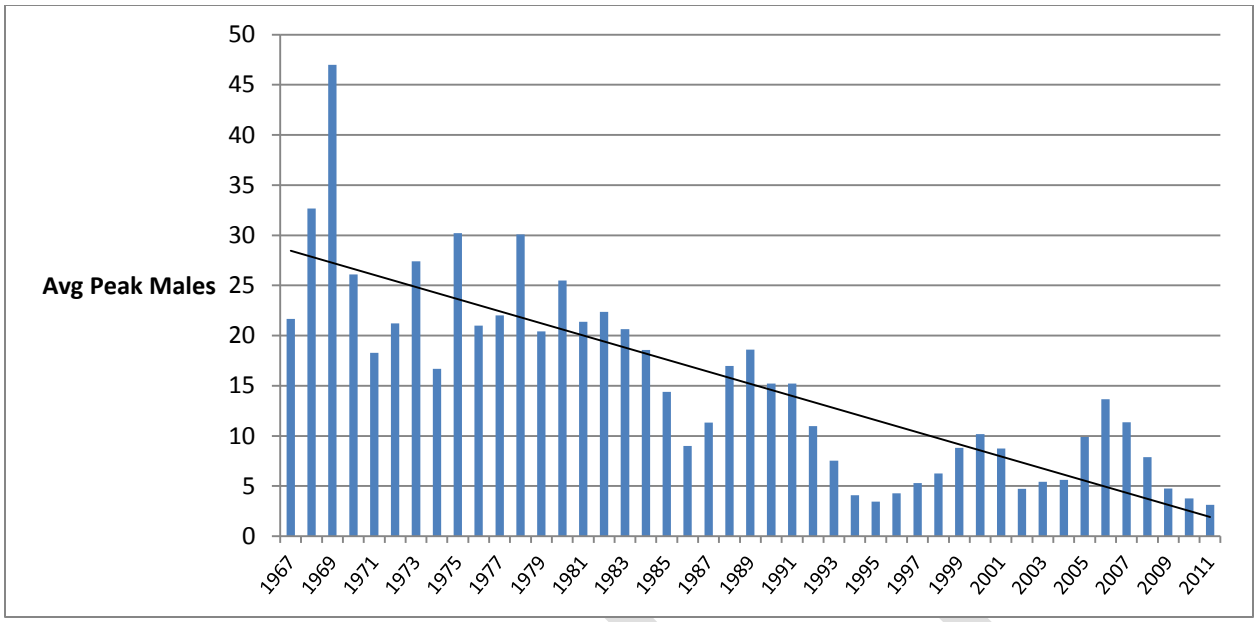

Figure 1. Average peak number of male sage-grouse per active leks and trend line within the BFO 1967-2011

Additionally, the spread of noxious and invasive weeds from the actions may impact habitat quality by changing the native plant community, plant production, plant diversity, and ecological health. The incremental impacts should be minimal as rangeland health objectives are used in livestock grazing management, hunters and recreationalist would be monitored for land abuse, fire suppression would mitigate the severity of the impacts, and BMPs would be used for new ROW activities.

Incremental Effect from the No Grazing Alternative

Less surface disturbance would occur with the removal of grazing. The incremental impacts when compared to the proposed action would be less.

4.2.7 Cultural and Historic Values/Paleontology

Geographic Scope and Timeframe

The cumulative effects affected area (CEAA) for cultural and historic values corresponds to the Area of Potential Effects (APE) as defined in Section 106 of the National Historic Preservation Act (NHPA) and is circumscribed by the grazing allotments' boundaries. The APE is influenced by the scale and nature of a proposed undertaking and represents the geographic area(s) within which the undertaking may directly, indirectly, or cumulatively cause alterations in the character and/or use of historic properties if they exist. The CEAA/APE was selected because the scope of the proposed action and alternatives has been identified as the area within the allotments' boundaries. The direct impacts are anticipated to last for the life of the grazing lease (10 years). While the indirect and long term impacts may last longer.

Incremental Effect from the Proposed Action and No Action Alternative

Potential incremental impacts as a result of the proposed action in combination with the past, present and reasonably foreseeable actions may include disturbance to undocumented and previously recorded cultural resources. The incremental impacts should be minimal as rangeland

health objectives are used in livestock grazing management, hunters and recreationalists are monitored for land abuse, fire suppression mitigates the severity of potential impacts, and BMPs are used for new oil, gas, and ROW activities.

Incremental Effect from the No Grazing Alternative
Less surface disturbance would occur with the removal of grazing. The incremental impacts when compared to the proposed action would be less.

4.2.8 Socioeconomics

Geographic Scope and Timeframe
The cumulative effects affected area (CEAA) for socioeconomics is the Wyoming economy, and the BLM revenue from multiple use actions. The direct impacts are anticipated to last for the life of the grazing lease (10 years). While the indirect and long term impacts may last longer.

Incremental Effect from the Proposed Action and No Action Alternative
The most common incremental impact to socioeconomics would be the continued revenue generated from grazing receipts and other permitted actions and positive impact is has on the Wyoming economy would occur.

Incremental Effect from the No Grazing Alternative
The loss of livestock grazing would reduce the money generated from permitted activities on BLM lands. This would impact the Wyoming economy in a negative way as livestock grazing and money generated from it is a large part of the Wyoming economy.

4.4 Mitigation/Residual Impacts/Monitoring

Additional mitigation measures are not needed. All measures needed to mitigate the impacts of the proposed action are placed or incorporated as "design features" in the proposed action. The impacts of any mitigations measures are analyzed in Section 4, Environmental Effects. As per 40 CFR 1505.2(c), monitoring to ensure the proposed action and any design/mitigation features would occur. When time and priorities permit, this monitoring would follow BLM policy and management guidelines that may include supervisions and trend monitoring

5.0 TRIBES, INDIVIDUALS, or AGENCIES CONSULTED

H & H Livestock Company	BLM Grazing Lessee for the Smith and South Trabing Allotments
Trail Land, LLC.	Base Property Owner for the Smith and South Trabing Allotments
Dave Spencer	Wyoming Business Council - Northeast Regional Director
David Waterstreet	Wyoming DEQ Water Quality Division
Jerimiah Rieman	Wyoming Governor's Policy Office
Gwen Booth	Wyoming Game and Fish Department
Jim Logan	Wyoming Livestock Board
Judy Wolf	Wyoming State Historic Preservation Office
Lorraine Fresquez	Wyoming Office of State Land and Investments
Mark Conrad	Wyoming DEQ Water Quality Division
Michelle MacDonald	Wyoming Department of Agriculture
Mary Flanderka	Wyoming Game and Fish Department
Natalya Lenz	Wyoming State Historic Preservation Office
Renae Krakow	Wyoming Livestock Board

Richard Currit	Wyoming State Historic Preservation Office
Shawn Reese	Wyoming Governor's Policy Office
Susan Child	Wyoming Office of State Lands and Investments
Carol Bilbrough	Wyoming DEG Land Quality Division

6.0 LIST OF PREPARERS

Dustin Kavitz, Rangeland Management Specialist, Buffalo Field Office BLM

6.1 List of Reviewers

Name	Title	Duty	Name	Title	Duty
Kay Medders	Range Management	Range, Soils	Scott Jawors	Wildlife Biologist	Wildlife
Doug Tingwall	Archeologist	Cultural Resources	Charlotte Darling	Range Management	Vegetation, Soils
Chris Durham	Asst. Field Manager	Resources	John Kelley	Coordinator	NEPA Planning

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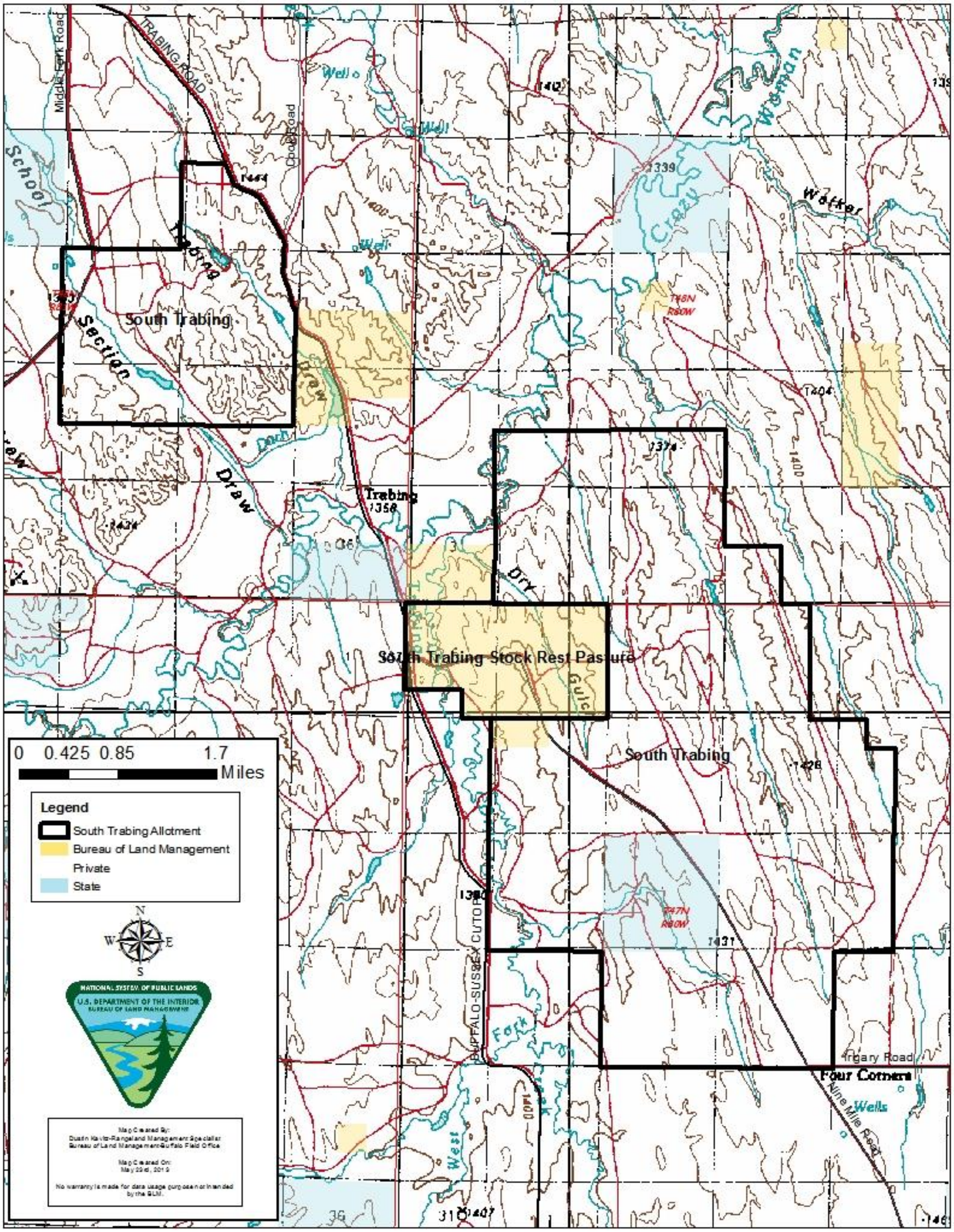
Attachment 1. Map of the 2 Allotments.



Appendix A. Tables

Table A.1. Summary of Species Habitat and Project Effects.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Amphibians				
Northern leopard frog (*Rana pipiens*)	Beaver ponds, permanent water in plains and foothills (SS Policy). Swampy, cattail marshes on the plains (WGFD CWCS).	NS	MIIH	Habitat may be present on private lands in the allotments. Individuals or eggs may be trampled.
Columbia Spotted frog (*Ranus pretiosa*)	Breeds in the shallows of lakes, ponds, marshes, and small streams (NatureServe).	NS	MIIH	Habitat may be present on private lands in the allotments. Individuals or eggs may be trampled.
Birds				
Baird's sparrow (*Ammodramus bairdii*)	Grasslands, weedy fields (SS Policy). Un- or lightly grazed mixed-grass prairie, wet meadows, tallgrass prairie. Prairie w/ scattered low bushes and matted vegetation (NatureServe). Grassy slough bottoms, alkali flats, and depressions in low lying grasslands.	NS	NI	No preferred nesting habitat present.
Bald eagle (*Haliaeetus leucocephalus*)	Mature forest cover often within one mile of large water body (SS Policy). Nests near large lakes and rivers in forested habitat where adequate prey and old, large-diameter cottonwood or conifer trees are available for nesting (WGFD CWCS). Migrating and wintering eagles congregate near open water areas where concentrations of prey are available, such as carcasses of ungulate species, and spawning areas for kokanee, trout, and other fish (WGFD CWCS).	S	NI	Bald eagles may use the area for foraging. Activities associated with ongoing livestock grazing operations are not likely to occur to such an extent that foraging behavior would be disrupted.
Brewer's sparrow (*Spizella breweri*)	Basin-prairie shrub (SS Policy). Closely associated with sagebrush shrublands that have abundant, scattered shrubs and short grass (WGFD CWCS).	S	MIIH	Trampling of nests may occur. Negligible impacts from livestock or humans disrupting breeding, dislodging nests, or causing nest or fledgling abandonment.
Burrowing owl (*Athene cunicularia*)	Grasslands, basin-prairie shrub (SS Policy). Prefers open prairie, grassland, desert, and shrub-steppe habitats, and may also inhabit agricultural areas. It depends on mammals that dig burrows, which it uses for nesting, roosting, and escape (WGFD CWCS).	S	MIIH	Black-tailed prairie dog colonies present. Grazing impacts to burrowing owls would be negligible.
Ferruginous hawk (*Buteo regalis*)	Basin-prairie shrub, grasslands, rock outcrops (SS Policy). Semi-arid open country, primarily grasslands, basin-prairie shrublands, and badlands (WGFD CWCS). Requires large tracts of relatively undisturbed rangeland and nests in rock outcrops, the ground, cutbanks, cliff ledges, or trees (WGFD CWCS).	S	MIIH	Ferruginous hawks may forage in this area. One nest has been documented in the allotments. There is a possibility of nest trampling and disturbance to nesting hawks from livestock herding or tending operations.
Loggerhead shrike (*Lanius ludovicianus*)	Basin-prairie shrub, mountain-foothill shrub (SS Policy). Grasslands interspersed with scattered trees and shrubs that provide nesting and perching sites.	S	MIIH	Ongoing livestock operations would not result in substantially reduced shrub cover or habitat fragmentation. Nests may be toppled by livestock.
Long-billed curlew (*Numenius americanus*)	Grasslands, plains, foothills, wet meadows (SS Policy). Inhabits a variety of grassland types ranging from moist meadow grasslands to agricultural areas to dry prairie upland, usually near water.	NS	MIIH	Marginally suitable habitat may be present. Nests may be trampled.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
	Prefers a complex of shortgrass prairies, agricultural fields, wet and dry meadows and prairies, and grazed mixed-grass and scrub communities. Nests on the ground in habitat that includes grass <12", bare ground, shade, abundant invertebrate prey, and a minimum on 40 acres of suitable habitat (WGFD CWCS).			
Northern goshawk (*Accipiter gentilis*)	Conifer and deciduous forests (SS Policy). Mixed coniferous habitat of a wide variety of ages, structural conditions, and successional stages. Nests in mature stands with multilayered canopies with open understory, small openings, and water within 0.25 miles. Nest often on slopes with northerly exposures or in drainages or canyon bottoms protected by such slopes. Post-fledging in forest types that provide hiding cover and abundant prey. Foraging area includes a variety of forest types and structures consisting of forests with a high density of large trees, high canopy closure, high basal area, and relatively open understories, interspersed w/ shrublands and openings with perching trees to observe prey. Winter habitat includes a variety of vegetation types, such as forests, woods, shrubs, and riparian strips (WGFD CWCS).	NS	NI	Forested habitat sparsely scattered.
Peregrine falcon (*Falco peregrinus*)	Cliffs (SS Policy). Forages in open woodlands and forests, shrub-steppe, grasslands, marshes, and riparian habitats. Nests in cliffs that are usually proximate to habitats with abundant prey (WGFD CWCS).	NP	NI	Nest substrate not present. No known breeding pairs in proximity.
Sage sparrow (*Amphispiza billneata*)	Basin-prairie shrub, mountain-foothill shrub (SS Policy). Sagebrush obligate. Inhabits prairie and foothills shrublands habitat where sagebrush is present. Prefers shrublands with tall shrubs and low grass cover, where sagebrush is clumped in a patchy landscape. Requires a large block of un-fragmented habitat to successfully breed and survive (WGFD CWCS).	S	MIIH	Nests may be trampled. Cover would be affected.
Sage thrasher (*Oreoscoptes montanus*)	Basin-prairie shrub, mountain-foothill shrub (SS Policy). Sagebrush obligate. Inhabits prairie and foothills shrub with sagebrush. Prefers shrublands with tall shrubs and low grasses, where sagebrush clumps in a patchy landscape (WGFD CWCS).	S	MIIH	Nests may be trampled. Uncommon cowbird host, which are associated with cattle. May be more susceptible to higher parasitism pressure.
Trumpeter swan (*Cygnus buccinator*)	Lakes, ponds, rivers (SS Policy). Inhabits shallow marshes, ponds, lakes, and river oxbows. Prefers stable, quiet, and shallow waters where small islands, muskrat houses, or dense emergent vegetation provide nesting and loafing sites. Nutrient-rich water, with dense aquatic plant and invertebrate growth, provide the suitable habitat.	NP	NI	Habitat not present.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
	Winter habitat must provide extensive beds of aquatic plants that remain ice-free. Cold temps and ice restrict trumpeters to sites where geothermal waters, springs, or outflow from dams maintain ice-free areas (WGFD CWCS).			
White-faced ibis (*Plegadis chihi*)	Marshes, wet meadows (SS Policy). Inhabits marshes, wet-moist meadows, lakes, and irrigated meadows. Nests on the ground in bulrushes, cattails, or reeds; on a floating mat; or in a low tree.	NS	NI	Habitat may be present on private lands in the allotments. Ongoing livestock operations should not affect use of the area by Ibis.
Yellow-billed cuckoo (*Coccyzus americanus*)	Open woodlands, streamside willow and alder groves (SS Policy). Nests in large stands of cottonwood-riparian habitat below 7000 feet, including urban habitats. Riparian obligate species preferring extensive dense thickets, mature deciduous forests near water, and requires low, dense, shrubby vegetation for nests.	NS	MIIH	Suitable habitat may be present. Ongoing livestock operations should not create significant additional impacts. Negligible impacts from livestock or humans disrupting breeding, dislodging nests, or causing adult to leave eggs or chicks unattended.
Migratory bird species (Various)	Multiple vegetation types are used for breeding, foraging and wintering, with habitat types ranging from grasslands, shrub-steppe to woods and riparian areas.	K	MIIH	Trampling of nests may occur. Negligible impacts from livestock or humans disrupting breeding, dislodging nests, or causing nest or fledgling abandonment..Grazing should not create significant impacts.
Plains Sharp-Tailed Grouse (*Tympanuchus phasianellus jamesi*)	Short and mixed-grass prairie, sagebrush shrublands, woody edges, and river canyons. Common where grasslands intermix with other shrublands, wooded draws, shrubby riparian area, and wet meadows. Diets include forbs, grasses and insects. Also feed on buds and catkins of deciduous trees or shrubs and berries. Also known to feed on the buds of aspen and willow.	S	MIIH	Properly managed grazing would maintain quality cover and habitat. Nests or chicks may occasionally be trampled. There are two known leks located within 2 miles of the South Rosie Draw and Spring Creek #2 allotments. Ongoing livestock operations are not likely to change use of this area by Sharp-tailed grouse.
Mountain plover (*Charadrius montanus*)	Short-grass prairie with slopes < 5% (SS Policy). Low, open habitats - arid shortgrass and mixed-grass prairies dominated by blue grama and buffalo grass with clumps of cacti and forbs, and saltbush habitats of the shrub-steppe. Nests in large, flat grassland expanses with sparse, short vegetation (<=4") and bare ground. Adapted to areas that disturbed by prairie dogs, heavy grazing, or fire (WGFD CWCS).	NS	NI	There is little to no suitable plover habitat present. If present, birds may prefer grazed areas.
Fish				
Yellowstone cutthroat trout (*Oncoryhynchus clarki bouvieri*)	Mountain streams and rivers in Tongue River drainage	NP	NI	Habitat not present.
Mammals				
Black-tailed prairie dog (*Cynomys ludovicianus*)	Prairie habitats with deep, firm soils and slopes less than 10 degrees (SS Policy). Inhabits dry, flat, open, shortgrass and mixed-grass grasslands with low, sparse vegetation, including areas overgrazed. Burrows in fine to medium soils (WGFD CWCS).	K	MIIH	Prairie dogs often prefer habitats grazed by livestock. Prairie dog colonies are scattered throughout the allotments

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Fringed myotis (*Myotis thysanodes*)	Conifer forests, woodland chaparral, caves and mines (SS Policy). Found in a wide range of habitats, including coniferous forests, woodlands, grasslands, and shrublands. Common in xeric woodlands, such as juniper, ponderosa pine, and Douglas-fir. Forages over water, forest edges, or in forests and woods. Uses a variety of roosts, including rock crevices, tree cavities, caves, abandoned mines, and buildings. Hibernates in caves, abandoned mines, and buildings (WGFD CWCS). Must remain within commuting distance of drinking water. Roosts in rock crevices that typically face southeast or southwest and are in low elevation forests or woods (WGFD Bat Conservation Plan).	NS	NI	Scattered conifer woodlands present. Livestock would have negligible impacts to bats.
Long-eared myotis (*Myotis evotis*)	Conifer and deciduous forest, caves and mines (SS Policy). Inhabits coniferous forest and woods, including juniper, ponderosa pine, and spruce-fir. Forages over rivers, streams, and ponds in the forest-woody environment. During summer, it roosts in a wide variety of structures, including cavities in snags, under bark, stumps, buildings, rock crevices, caves, and abandoned mines. Probably hibernates in caves and abandoned mines (WGFD CWCS). Found in cottonwood riparian areas, basins, and sagebrush grasslands where roost sites are available (WGFD Bat Conservation Plan). Found in areas close to water. Frequently in suitable habitat near rock outcroppings or cliffs. Primarily forages over rivers, streams, and ponds in the forest-woody environment. Forages over open areas such as campgrounds, forest openings, and edges, - likely to be close to a water source. Large-diameter conifer snags provide primary roosting habitat (WGFD Bat Conservation Plan).	NS	NI	Scattered conifer woodlands present. Livestock would have negligible impacts to bats
Spotted bat (*Euderma maculatum*)	Cliffs over perennial water (SS Policy). Wide variety of habitats, from desert scrub to coniferous forest. Observed in low deserts and basins and juniper woodlands. Roosts in high cliffs, canyons, buildings, caves, or abandoned mines, although cliffs are the only roosting habitat used by reproductive females (WGFD CWCS). Occurs in association with canyons, prominent rock features, and permanent water sources. In deserts, it forages in canyons, in the open, or over riparian vegetation. Spotted bats in WY were close to permanent waters (WGFD Bat Conservation Plan).	NP	NI	Cliffs not present.
Swift fox (*Vulpes velox*)	Grasslands (SS Policy). Inhabits shortgrass and mixed-grass prairies. Often uses highway and railroad ROWs, agricultural	NS	MIIH	Inappropriate grazing could reduce hiding cover and increase susceptibility to predation.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
	areas, and sagebrush-grasslands. Closely associated w/ prairie dog colonies and uses underground dens year-round. Selects habitat with low-growing vegetation, relatively flat terrain, friable soils, and high den availability (WGFD CWCS).			
Townsend's big-eared bat (*Corynorhinus townsendii*)	Caves and mines (SS Policy). Occupies xeric to mesic habitats, including coniferous forests, juniper woods, deciduous forests, basins, and desert shrublands, and is absent only from the most extreme deserts and highest elevations. Requires caves or abandoned mines for roosting during all seasons and stages of its life cycle - its distribution strongly correlates with the availability of these features (WGFD CWCS). Limited to areas with reliable, accessible sources of drinking water. Forages primarily along forest and woody edges, riparian corridors, and in open areas near wooded habitat. May avoid open, grazed pasture land.	S	NI	Availability of roost sites is unknown, but foraging habitat is present. Ongoing livestock grazing unlikely to affect prey abundance or availability of foraging habitat.
Plants				
Limber Pine (*Pinus flexilis*)	High-elevation pine, marking the tree line on its own, or with Whitebark Pine (*Pinus albicaulis*), either of the Bristlecone pines, or Lodgepole Pine (*Pinus contorta*). Steeply-sloping, rocky and windswept terrain.	NP	NI	Habitat not present
Porter's sagebrush (*Artemisia porteri*)	Sparsely vegetated badlands of ashy or tufaceous mudstone and clay slopes 5300-6500 ft.	NP	NI	Habitat not present
Wouldiam's wafer parsnip (*Cymopterus wouldiamsii*)	Open ridgetops and upper slopes with exposed limestone outcrops or rockslides, 6000-8300 ft.	NP	NI	Habitat not present

Presence
K - Known, documented observation within project area.
S - Habitat suitable and species suspected, to occur within the project area.
NS - Habitat suitable but species is not suspected to occur within the project area.
NP - Habitat not present and species unlikely to occur within the project area.

Project Effects
NI - No Impact.
MIIH - May Impact Individuals or Habitat, but would not likely contribute to a trend towards federal listing or a loss of viability to the population or species.
WIPV - Would Impact Individuals or Habitat - the action may contribute to a trend towards federal listing or cause a loss of viability to the population or species.
BI - Beneficial Impact

Table A.2. Summary of Threatened and Endangered Species Habitat and Project Effects

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Endangered				
Black-footed ferret (*Mustela nigripes*)	Black-tailed prairie dog colonies or complexes > 1,000 acres.	NP	NE	Black-footed ferrets have been "block-cleared" for Northeast Wyoming.
Threatened				
Ute ladies'-tresses orchid (*Spiranthes diluvialis*)	Riparian areas with permanent water	NP	NE	Habitat not present
Candidates for listing				
Greater Sage-Grouse (*Centrocercus urophasianus*)	Basin-prairie shrub, mountain-foothill shrub (SS Policy). Also includes wet-moist meadows, and alfalfa and irrigated meadows when adjacent to sagebrush (WGFD CWCS).	S	MIIH	There are 4 leks within 4 miles of BLM land in the EA area. Incubating female, eggs, and/or chicks may occasionally be trampled. Ongoing grazing is unlikely to change current use of this area by Greater Sage-Grouse.

Presence
K - Known, documented observation within project area.
S - Habitat suitable and species suspected, to occur within the project area.
NS - Habitat suitable but species is not suspected to occur in the project area.
NP - Habitat not present and species unlikely to occur within the project area.

Project Effects
LAA - Likely to adversely affect
NE - No Effect
NLAA - May Affect, not likely to adversely affect individuals or habitat.
NLJ – Not likely to jeopardize continued existence
MIIH – May impact individuals and habitat
NP—Habitat not present and species unlikely to occur within the project area.