

ENVIRONMENTAL ASSESSMENT for Grazing Permit Renewal

**Coyote Hollow, Fourty, France, Johnson, Nipple,
Thunderbolt, Tipperary, Upper Ranch, and Wall
Grazing Allotments**



Wyoming High Desert District – Kemmerer Field Office



June 2010

The BLM manages more land – 253 million acres – than any other Federal agency. This land, known as the National System of Public Lands, is primarily located in 12 Western States, including Alaska. The Bureau, with a budget of about \$1 billion, also administers 700 million acres of sub-surface mineral estate throughout the nation. 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.

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WY-090-EA10-33

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1.0 INTRODUCTION

Grazing Lease/Permit Number: 4900148, 4904113, 4904114, 4904052, 4904089, 4904167, 4904252, and 4912630		EA Number: WY-090-EA10-33
Proposed Action Title/Type: Grazing permit renewal on the following grazing allotments: #01419 Coyote Hollow #01429 Thunderbolt #01448 Fourty #11411 Tipperary #01565 France Allotment #11316 Upper Ranch #01420 Johnson #01432 Wall #11313 Nipple		
T. 13, 14, 16 N.	R. 114, 115, 116 W.	SEC(S): (various)
Prepared by: Marion Mahaffey, NRS		Date: June 1, 2010

1.1 Background

In order to graze livestock on public land, livestock operators must hold a valid grazing permit. Eight grazing permits (numbers 4900148, 4904113, 4904114, 4904052, 4904089, 4904167, 4904252, and 4912630) expired and were renewed under Section 402 of the Federal Land Policy and Management Act (FLPMA) of 1976 and in accordance with Sec. 325, Title III, of H.R. 2691, Department of the Interior and Related Agencies Appropriations Act, 2004 (P.L. 108-108), until such time as the permits could be processed in compliance with all laws and regulations. These permits are subject to renewal in accordance with the provisions of the Taylor Grazing Act of 1934, Public Rangelands Improvement Act of 1978, FLPMA of 1976, the Kemmerer Resource Management Plan/Environmental Impact Statement approved in 2010, and the Federal Grazing Regulations 43 CFR Subpart 4100.

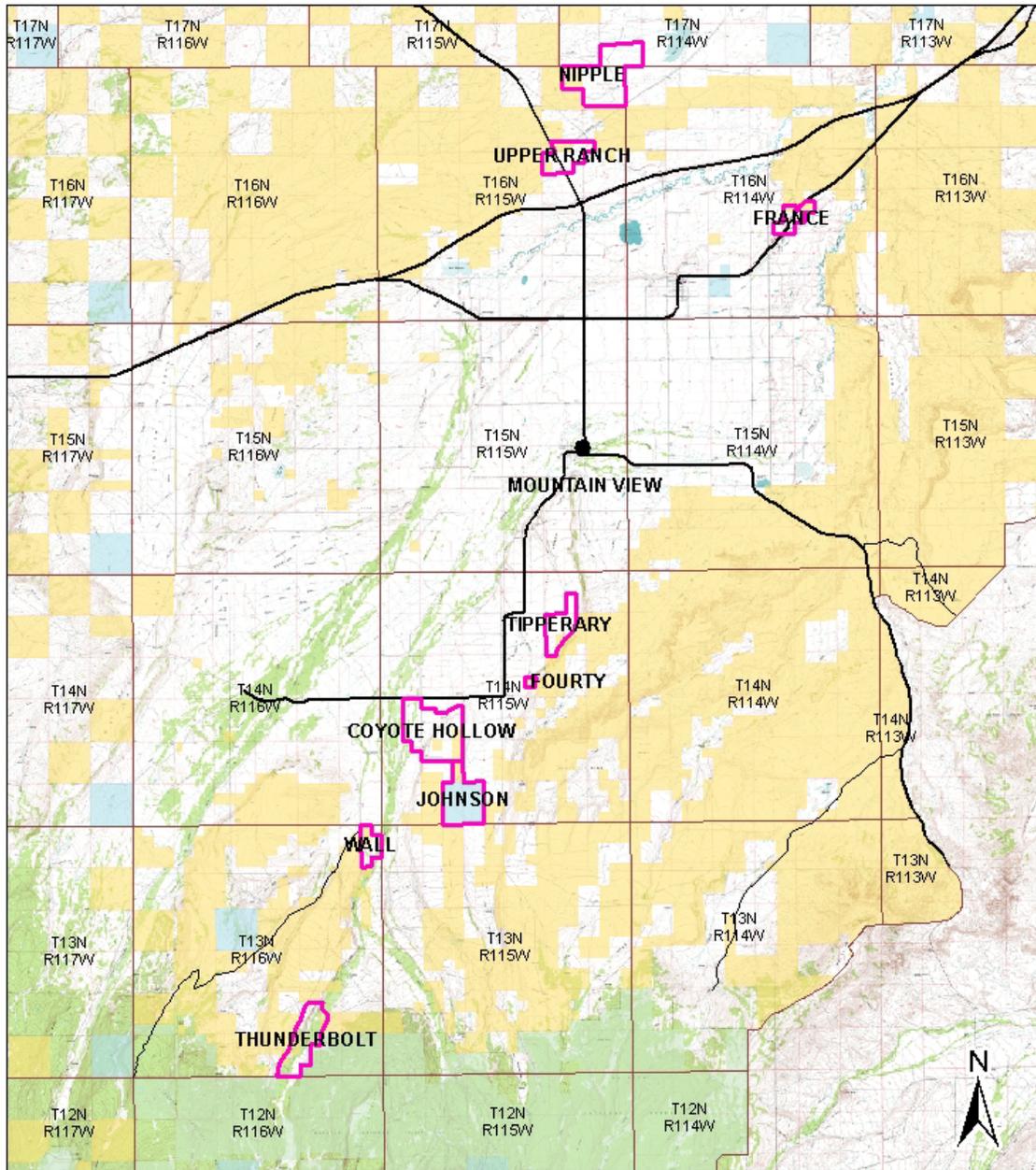
These grazing permits, which authorize grazing on nine allotments (Coyote Hollow, Fourty, France, Johnson, Nipple, Thunderbolt, Tipperary, Upper Ranch, and Wall), are combined under one Environmental Assessment (EA) because they share a common landscape near the town of Mountain View, Uinta County, Wyoming. These nine allotments are each no more than 160 federal acres, are either “C” (custodial) or “M” (maintain) management category allotments.

1.2 Project Location

These grazing allotments are located within a 15 mile radius around the town of Mountain View, Wyoming, in Uinta County, Wyoming (Map 1). You may also view these allotments on the Bureau of Land Management (BLM) Kemmerer Field Office (KFO) website:

http://www.blm.gov/style/medialib/blm/wy/field-offices/kemmerer/docs.Par.9420.File.dat/KFO_allotments06.pdf.

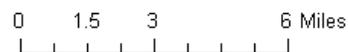
Map 1: Project Location



- ALLOTMENTS selection
- Main Road
- Major Road
- Township-Range
- Bureau of Land Management
- Bureau of Reclamation
- Fish and Wildlife Service
- Forest Service
- National Park Service
- Private
- State

Coyote Hollow, Fourty, France, Johnson, Nipple, Thunderbolt, Tipperary, Upper Ranch, and Wall Grazing Allotments.

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1.3 Purpose and Need for the Proposed Action

This action is needed to renew and/or transfer eight grazing permits and to address grazing management terms and conditions on these nine allotments. The purpose of this action is to continue grazing management to promote healthy, sustainable rangeland ecosystems and to meet or continue to meet rangeland health standards. This action is also needed to ensure that all grazing authorizations implement provisions of and are in conformance with the existing KFO Resource Management Plan (RMP).

In order for livestock grazing to occur on public land, the livestock permittees must hold a valid grazing permit. The Code of Federal Regulations, 43 CFR 4130.2(a) states that “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 Bureau of Land Management that are designated as available for livestock grazing through land use plans.” These permittees control base property associated with a grazing preference on these allotments and have been determined to be qualified applicants.

1.4 Conformance with Land Use Plan

The Proposed Action is in conformance with the Kemmerer Resource Management Plan/Final Environmental Impact Statement approved on May 24, 2010, section 3.6.4 (pages 3-121 through 3-126). The Proposed Action would occur in an area identified as available for livestock grazing and on BLM owned lands where grazing is authorized. Livestock grazing is also consistent with the RMP decision and resource management goals and objectives. The general key goals of the RMP include:

- The improvement of the ecological condition of public lands by preventing destructive uses and by providing orderly use and improvement.
- Special consideration and authority for the protection and management of areas with special environmental concern.
- Stabilizing the social and economic environment of the local community with special consideration for the family owned and operated ranch business and lifestyle.
- Improve range conditions on “I” (improve) category allotments and maintain range conditions on other allotments.

As a result of an allotment categorization process conducted during the preparation of the Kemmerer RMP, these allotments were determined to be either “C” (custodial) or “M” (maintain) category allotments. In the past, allotments in the “I” (improve) category generally received top priority; however, with the current emphasis on evaluating rangeland health on a watershed basis, some management actions may be implemented on “M” or “C” category allotments to resolve problems within a watershed. The allotment categories and acres are listed in Table 1.

Table 1: Allotment Categories and Acres

Allotment Name and Number	Management Category	Federal Acres	State Acres	Private Acres
Coyote Hollow #01419	C	160	0	1055
Fourty #01448	M	40	0	0
France #01565	M	90	0	160
Johnson #01420	M	80	640	80
Wall #01432	M	80	0	140
Nipple #11313	M	160	0	960
Thunderbolt #01429	M	152	0	717
Tipperary #11411	C	42	0	392
Upper Ranch #11316	C	80	0	360

1.5 Relationship to Statutes, Regulations, Policies, Plans, or other Environmental Analyses

In conformance with the Secretary of Interior’s Policy, alternatives would be in compliance with 43 CFR § 4100 which states, in part, “The authorized officer shall manage livestock grazing on public lands under the principal of multiple use and sustained yield.” The alternatives addressed in this analysis also consider 43 CFR § 4130.2(a) which states, in part, “Grazing permits or leases shall be issued to qualified applicants to authorize use on public lands and other lands under the administration of the BLM that are designated as available for livestock grazing through land use plans.”

The alternatives are consistent with the Fundamentals of Rangeland Health (43 CFR § 4180) and Wyoming’s Standards and Guidelines for Rangeland Health, which address watersheds, ecological condition, water quality and habitat for special status species. In addition, the identified alternatives would comply with the following laws and/or regulations, other plans, and are consistent with Federal, State, and local laws, regulations:

- Taylor Grazing Act (TGA) of June 30, 1934, as amended
- Federal Land Policy and Management Act (FLPMA) of 1976 (43 U.S.C. 1701 et seq.)
- Public Rangelands Improvement Act (PRIA) of 1978
- Endangered Species Act (ESA) of 1973 as amended
- 43 CFR § 4100 Grazing Administration-Exclusive of Alaska
- Clean Water Act Section 303d
- Section 106 of the National Historic Preservation Act (NHPA) of 1966 as amended
- National Environmental Policy Act (NEPA) of 1969
- Sikes Act of 1969, as amended (Habitat Improvement on Public Land)
- Fish and Wildlife Improvement Act of 1978
- Executive Order 13186 – Responsibilities of Federal Agencies to Protect Migratory Birds
- Kemmerer Resource Management Plan/Final Environmental Impact Statement approved on May 24, 2010
- Grazing Regulations as codified in 43 CFR § 4100 as amended in 2005
- State of Wyoming Executive Order 2008-2, Greater Sage Grouse Core Area Protection

1.6 Scoping

The BLM decision making process is conducted in accordance with the requirements of the Council on Environmental Quality (CEQ) regulation implementing NEPA, and the U.S. Department of Interior and BLM policies and procedures implementing NEPA. Interested publics, state agencies, other federal agencies and individual permit holders are involved, by NEPA and the associated regulatory and policy framework, in the selection of reasonable alternatives to proposed actions and the preparation of environmental documents that disclose the potential impacts of the proposed actions and the alternatives.

BLM accomplished public involvement, consultation, and coordination with a written scoping notice to permittees and interested public on May 29, 2007. The scoping notice advised those on the mailing list of BLM’s intent to consider renewal of the 10-year grazing permits on the allotments addressed in this EA. A response to scoping was received from the Wyoming Game and Fish Department in a letter dated July 10, 2007, which states, “We have no terrestrial wildlife or aquatic concerns pertaining to these allotments.” No other comments were received.

2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 Alternative 1 – No Action (or “No Change”)

The No Action alternative would authorize livestock grazing for a new 10 year period, with the same terms and conditions as the existing authorizations (Table 2).

Table 2: Mandatory Terms and Conditions for Livestock Use

Authorization Number	Allotment Name and Number	Kind/ Livestock	Season of Use	Percent Public Land	AUMs
4904089	Coyote Hollow #01419	3 Cattle	05/16 to 10/15	100	15
4904113	Fourty #01448	4 Cattle	05/01 to 09/30	100	23
4904252	France #01565	8 Cattle	03/01 to 02/28	32	31
		20 Sheep	05/01 to 09/30	100	20
		30 Cattle	05/01 to 09/30	32	49
4904114	Johnson #01420	4 Cattle	07/01 to 08/30	100	8
	Wall #01432	4 Cattle	06/16 to 09/15	100	12
4912630	Nipple #11313	6 Cattle	05/16 to 10/15	100	30
4900148	Thunderbolt #01429	5 Cattle	06/01 to 09/30	100	20
		37 Sheep	06/01 to 09/30		30
4904167	Tipperary #11411	1 Cattle	05/16 to 09/15	100	4
4904052	Upper Ranch #11316	6 Cattle	03/01 to 02/28	9	6

The following mandatory terms and conditions would continue on all eight permits:

- (a) The terms and conditions of the permit or lease may be modified if additional information indicates that revision is necessary to conform with 43 Code of Federal Regulations (CFR) 4180;*
- (b) The permittee must maintain all assigned range improvements in good working order and in an aesthetic state. We encourage the permittee to participate in rangeland monitoring activities.*
- (c) Grazing use within these allotments will be in accordance with 43 CFR part 4000 to end.*

The following allotment specific terms and conditions would continue on:

Coyote Hollow and Thunderbolt allotments:

This license allows grazing use in AUMs on public lands with the numbers and season of use not restrictive as long as abuse to these lands does not occur and according to the range adjudication agreement dated 04/04/68.

Upper Ranch allotment:

This license allows grazing use in AUMs on federal range. It does not reflect period of use or number or class of stock provided the use does not exceed indicated AUMs and is not detrimental to the range.

Nipple allotment:

This license allows grazing use in AUMs on public lands with the numbers and season of use not restrictive as long as abuse to these lands does not occur.

2.2 Alternative 2 – Proposed Action

The Proposed Action alternative would authorize livestock grazing for a new 10 year period, including the same terms and conditions as the No Action alternative (number and kind of livestock, season of use, Animal Unit Months (AUMs), mandatory and allotment specific terms and conditions as listed above), with the addition of the following stipulation:

Generally locate livestock salt or mineral supplements a minimum of ¼ mile away from water troughs, riparian areas, aspen stands, sensitive plant species, and historic trails and monuments.

The addition of this stipulation conforms with the Kemmerer Resource Management Plan (Alt. D, pg. 2-32 and pg. 2-72), and the Wyoming Standards for Healthy Rangelands.

2.3 Alternative 3 – No Grazing

Under the No Grazing alternative, the existing grazing permits would be allowed to expire and BLM would require the permittees to remove livestock from the allotments. Under this alternative, livestock grazing would not be authorized by the BLM for these allotments and none of the available forage on BLM lands would be allocated to livestock.

3.0 AFFECTED ENVIRONMENT

BLM determined the following issues are not relevant to renewal of these grazing permits and were excluded from further analysis in this document: air quality, mineral resources, fire and fuel management, areas of critical environmental concern, recreation, wild and scenic rivers, wilderness and wilderness study areas, and environmental justice. The following issues are analyzed in detail due to their relevance to renewal of grazing authorizations on BLM lands.

3.1 Livestock Grazing Management

In 1985, BLM established three categories for allotments to identify areas where management was potentially needed, as well as to prioritize workloads and the use of range improvement funds. Allotments were classified as Improve Existing Resource Conditions (I), Maintain Existing Resource Conditions (M), or Custodial Management (C). Of the nine allotments analyzed in this EA, six are rated in the M category and three are rated in the C category (Table 1).

M category allotments are defined as:

- Present range condition is satisfactory
- Allotments have moderate or high resource production potential and are producing near their potential (or trend is moving in that direction)
- Present management is considered satisfactory
- Riparian areas are under satisfactory management and are not in declining trend.
- No serious conflicts exist with regard to current use of resource
- Potential may exist for positive economic returns on public investments

C category allotments are defined as:

- Present range condition is variable
- Allotments have relatively low resource production potential and are presently producing at or near their potential
- Present management appears satisfactory or is the only logical practice under existing resource conditions

BLM strives to manage livestock grazing according to provisions of the grazing regulations and the Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management for the Public Lands Administered by the BLM in the State of Wyoming. BLM completed the Wyoming Rangeland Standards Conformance Review Summaries on the Coyote Hollow and Tipperary allotments in 2009. The BLM is in the process of completing the Draft Conformance Review for the Upper Ranch Allotment. The Conformance Reviews have not been completed for the Fourty, France, Johnson, Nipple, Thunderbolt, and Wall allotments.

Field observations conducted by BLM range management specialists identified two significant grazing management challenges in these smaller allotments. First is the preponderance of private land in and adjacent to the allotments. Table 3 summarizes land ownership within the nine allotments analyzed in this EA. Private lands are critical not only to maintaining the region's ranching community, culture, or tradition but also provide connectivity between private and public lands and between rural and urban communities. In many cases private lands are

disproportionately important to the maintenance of a region’s natural heritage because they are disproportionately more productive (Knight, R.L. 2007).

Table 3: Land Ownership by Allotment

Allotment Name and Number	Public Acres	Percent	Private Acres	Percent	State Acres	Percent
Coyote Hollow #01419	160	13	1055	87	0	0
Fourty #01448	40	100	0	0	0	0
France #01565	90	36	160	64	0	0
Johnson #01420	80	10	80	10	640	80
Wall #01432	80	36	140	64	0	0
Nipple #11313	160	14	960	86	0	0
Thunderbolt #01429	152	17	717	83	0	0
Tipperary #11411	42	10	392	90	0	0
Upper Ranch #11316	80	18	360	82	0	0

The second management challenge identified by BLM range management specialists is livestock distribution. Much of the available water in these allotments is located on private land, and as a result, livestock tend to congregate in these privately owned riparian areas and in the publicly owned uplands close to the water. Large grazers in particular focus their foraging strategies around free-standing water and are considered “central place foragers,” with the central or home place centered on water (Stuth 1991). These factors prevent uniform livestock distribution throughout the allotments and have demonstrated extensive forage utilization around the private water developments and riparian areas in these allotments.

3.2 Soils

The general soil types within the nine allotments analyzed in this EA are sedimentary uplands of the Green River Basin. Low relief bedrock-controlled ridges, erosional sideslopes, and alluvial fans dominate the landscape. Included within this group are badlands, such as those found along Cottonwood Creek. Many soils in this group formed from shales producing clayey textures with poor surface water infiltration, high runoff potential, and high carbonate levels that create a high potential for water erosion due to a high proportion of fine sands or silts with little binding material or silt-sized carbonates. Many soils in this group are susceptible to excessive wind erosion due to sandy surface textures, low organic matter, and high carbonate content. This soil group has a high proportion of saline soils, especially in low topographic areas, such as drainages and areas below marine shale outcrops. (BLM RMP 2010, Section 3.1.2 Soil, Soil Group 2: Green River Basin Uplands, p. 3-12).

According to data contained in the BLM Geographic Information System (GIS) database, of the twelve Soil Orders in soil taxonomy, three Soil Orders occur on these nine allotments: Entisols, Aridisols and Alfisols, with six known soil subgroups (Table 4).

Table 4: Soil Orders and Soil Subgroups

Allotment	Soil Order	Soil Subgroup
Coyote Hollow	Entisol	Rock Outcrop; Typic Torriorthents
	Entisol	Typic Torrifluvents; fine-loamy over sandy or sandy-skeletal
Fourty	Entisol	Rock Outcrop; Typic Torriorthents
	Aridisol	Ustic Haplargids; fine-loamy
	Aridisol	Ustic Haplocambids; coarse-loamy
France	Aridisol	Ustic Haplargids; fine-loamy
	Aridisol	Ustic Haplocambids; coarse-loamy
Johnson	Entisol	Rock Outcrop; Typic Torriorthents
	Entisol	Typic Torrifluvents; fine-loamy over sandy or sandy-skeletal
Nipple	Entisol	Rock Outcrop; Typic Torriorthents
	Aridisol	Ustic Haplocambids; coarse-loamy
Thunderbolt	Entisol	Typic Cryofluvents; sandy-skeletal
	Alfisols	Typic Haplocryalfs; loamy-skeletal
Tipperary	Entisol	Rock Outcrop; Typic Torriorthents
	Aridisol	Ustic Haplargids; fine-loamy
	Aridisol	Ustic Haplocambids; coarse-loamy
Upper Ranch	Entisol	Rock Outcrop; Typic Torriorthents
	Aridisol	Ustic Haplocambids; coarse-loamy
Wall	Entisol	Rock Outcrop; Typic Torriorthents
	Entisol	Typic Torrifluvents; fine-loamy over sandy or sandy-skeletal

Entisols are soils of recent origin with usually no genetic horizons except an A horizon. An Entisol has no diagnostic horizons, and most are basically unaltered from their parent material, which can be unconsolidated sediment or rock. All soils that do not fit into one of the other 11 orders are Entisols. They are characterized by great diversity, both in environmental setting and land use. Many Entisols are found in steep, rocky settings.

Aridisols (or desert soils) form in arid or semi-arid climates, exhibiting at least some subsurface horizon development. They are characterized by being dry most of the year and have limited leaching. Aridisols have a very low concentration of organic matter, reflecting the paucity of vegetative production on these dry soils. Water deficiency is the major defining characteristic of Aridisols. Limited leaching in Aridisols often results in one or more subsurface soil horizons in which suspended or dissolved minerals have been deposited: silicate clays, sodium, calcium carbonate, gypsum or soluble salts. These subsoil horizons can also be cemented by carbonates, gypsum or silica. Accumulation of salts on the surface can result in salinization.

Alfisols form in semiarid to humid areas, typically under a hardwood forest cover. They have a clay-enriched subsoil and relatively high native fertility. "Alf" refers to Aluminum (Al) and Iron (Fe). Because of their productivity and abundance, the Alfisols represent one of the more important soil orders for food and fiber production. They are widely used both in agriculture and forestry and are generally easier to keep fertile than other humid-climate soils.

3.3 Biological Resources

3.3a Riparian and Wetland Vegetation

The Wyoming Standards for Healthy Rangelands Standard Number 2 addresses the issue of riparian and wetland vegetation and establishes goals for those areas. However, none of these allotments have measurable riparian areas on public lands. The Thunderbolt allotment has the West Fork of the Smiths Fork River running through the length of the allotment almost entirely on private land. The Wall allotment has the Smiths Fork River running through the southeast portion of the allotment on private land only. All nine allotments have water available, however. The remaining seven allotments have the following irrigation ditches (Table 5).

Table 5: Irrigation Ditches

Allotment Name	Irrigation Ditch
Coyote Hollow	Davis and Co. Ditch
Fourty	Milich Ditch
France	Lyman Draw
Johnson	Botero Ditch
Nipple	Austin Canal
Tipperary	Milich Ditch
Upper Ranch	Austin Canal

Irrigation ditches are not considered wetland or riparian areas, and therefore are not analyzed in this Environmental Assessment. They do, however, provide the benefit of a controlled water source for the surrounding vegetation as well as provide drinking water to wildlife and livestock.

3.3b Upland Vegetation

According to data contained in the BLM GIS database, there are six known vegetation types in these nine allotments (Table 6). Vegetation monitoring and forage utilization data has not been collected on these allotments, but field observations suggest heavier forage utilization around water sources and lighter utilization in upland areas.

Table 6: Vegetation Types

Vegetation Type	Coyote Hollow	Fourty	France	Johnson	Nipple	Thunderbolt	Tipperary	Upper Ranch	Wall
Aspen Forest						X			
Basin exposed rock/soil			X						
Forest-dominated riparian									X
Irrigated Crop	X	X		X	X		X	X	
Mountain big sage						X			X
Wyoming big sage	X			X	X			X	

The BLM GIS database classifies the France allotment as basin exposed rock/soil. Riparian areas on the allotment are created by the method of irrigation. The permittee has extended the irrigation ditches to dump excess water on the parcel, creating riparian areas and additional forage.

3.3c Wildlife and Wildlife Habitat

The following table (Table 7) contains data from the BLM GIS database and field observations by BLM Wildlife Biologists, regarding the presence of wildlife and/or suitable habitat for certain wildlife species.

Table 7. Wildlife and/or Suitable Habitat Present

Wildlife and/or Suitable Habitat Present	Coyote Hollow	Fourty	France	Johnson	Nipple	Thunderbolt	Tipperary	Upper Ranch	Wall
Mule deer		X					X		X
Antelope			X				X		
Elk						X			
Moose						X	X		X
Sage grouse	X			X	X	X	X		X
Sage obligate birds	X				X	X			
Pygmy rabbit					X				
White-faced ibis					X				
Long-billed Curlew					X				
White tailed prairie dog								X	

U.S. Fish and Wildlife Service (USFWS), Threatened and Endangered (T&E) or Candidate Species

Based on data contained in the BLM GIS database, there are currently no federally listed T&E species known to inhabit the nine allotments analyzed in this EA. There is one T&E candidate species for listing, sage-grouse, in six of these allotments.

On March 4, 2010, the USFWS announced in the Federal Register that listing the sage-grouse as T&E is warranted, but precluded by higher priority listing actions, making the sage-grouse a T&E candidate species. Six allotments contain the candidate species sage grouse (*Centrocercus urophasianus*) and/or suitable habitat. In all six allotments, sage grouse are present and are within two miles of an occupied sage grouse lek or in suitable habitat outside of two miles. No leks were identified within these allotment boundaries. The Nipple allotment is also suitable sage grouse winter habitat.

In addition, five of these allotments are in sage-grouse “Core Population Areas” as identified in the State of Wyoming, Governor’s Executive Order 2008-2. These allotments include: Coyote Hollow, Fourty, Johnson, Thunderbolt, and Wall. The guiding principle in the Governor’s Order in core areas is “to maintain and enhance Greater Sage-Grouse habitats and populations”. The Nipple allotment is not included in a sage grouse core area.

Listed T&E species possibly occurring in the KFO include: black-footed ferret, four Colorado River fishes, Canada lynx, Ute ladies-tresses, blowout penstamon, gray wolf, and grizzly bear. Though several of the allotments analyzed in this EA may have prairie dog habitat, which is possible habitat for black-footed ferrets (*Mustela nigripes*), this area has been block-cleared by the U.S. Fish & Wildlife Service (FWS) for the presence of black-footed ferrets. None of the other listed species and/or suitable habitat has been identified in these nine allotments.

BLM Sensitive Species

BLM sensitive species and/or suitable habitat occur in seven allotments. These species include: sage obligate birds, pygmy rabbits, two wetland birds (white-faced ibis and long-billed curlew), and white-tailed prairie dogs.

Sage obligate birds and/or suitable habitat occur in three allotments: Coyote Hollow, Nipple, and Thunderbolt. These smaller birds include: sage thrasher, sage sparrow, Brewer's sparrow, and loggerhead shrike. Sage obligate birds inhabit open, shrub-steppe country. They appear to prefer areas dominated by sagebrush or bitterbrush, with native grasses intermixed.

Pygmy rabbits and wetland birds and/or suitable habitat occur in the Nipple allotment. Pygmy rabbits are typically found in dense stands of big sagebrush growing in deep, sandy, loose sediment. The long-billed curlews' traditional breeding habitats are found in dry grasslands and shrub savannahs. They also nest in grain fields and pastures. The white-faced ibis frequents marshes, swamps, ponds and rivers.

White-tailed prairie dogs and/or suitable habitat occur in the Upper Ranch allotment. White-tailed prairie dogs are typically found in short and medium grass prairies and plateaus of these allotments. The BLM defines prairie dog habitat as large prairie dog complexes, a group of burrows that exceeds 8 per acre. Smaller complexes may occur in the other eight allotments.

Species Not At Risk/Big Game

Native animal species that are not at risk within these allotments include big game: mule deer, antelope, elk, and moose. Crucial big game winter range and winter yearlong habitat occurs in Coyote Hollow, Fourty, France, Thunderbolt, Tipperary, and Wall allotments. This winter range is characterized by the sagebrush steppe ecotone. Big game animals migrate to winter range when seasonal changes reduce food availability, making it hard to move around (due to snow pack, for example), and when conditions are unsuitable for bearing young. Migration corridors provide wildlife with reliable passage between seasonal ranges and also serve as important transition range that provides food for migrating animals. Because the land surface of Wyoming is a complex mix of private land and land under federal or state management, most big game herds in the state encounter a diversity of land-management regimes during their migrations.

Although the BLM has determined that big game are not at risk in these allotments, an increasing number of houses as well as energy industry development, fences, and roads threaten their migration corridors. When major roads cut across migration corridors, the effects can be dangerous for animals and humans. For example, hundreds of mule deer are killed in vehicle collisions every spring and fall as they attempt to migrate across U.S. Highway 30 between the

towns of Kemmerer and Cokeville, Wyoming, and studies are underway to try to reduce this mortality (Gordon et al. 2004).

Migratory Birds

The Bear River Divide, Rock Creek Ridge, and Sublette Range form a major ridgeline that runs north and south along the west side of the KFO. Commissary Ridge, Oyster Ridge, and the Hogsback form a ridgeline running north and south through the central portion of the KFO. These two major ridgelines are very important migratory pathways for migratory raptors and neotropical migrant birds. The nine allotments analyzed in this EA are just southeast of the central ridgeline.

Raptors and neotropical migrants (both game and nongame) are afforded protection under the Migratory Bird Treaty Act. Raptors in these allotments include eagles, hawks, owls, falcons, and vultures. Raptors are attracted to the abundant prey, including upland game birds, small game, and numerous rodent species. More than 350 species of flora and fauna depend on the sage brush vegetative type for all or part of their existence. (BLM RMP 2010, Sec. 3.4.5 Fish and Wildlife Resources - Wildlife, p. 3-59 – 3-67). Neotropical migrants include birds that breed in the United States and Canada and winter in Latin America (Nicholoff 2003). Neotropical migrants or nongame bird species in these allotments include waterbirds, shorebirds, marshbirds, and a range of songbirds. The vast sagebrush component of these allotments provides important habitats for sage thrasher, Brewer's sparrow, and sage sparrow. Management challenges focus around maintaining or enhancing the presence of these species and the habitats upon which they depend. (BLM RMP 2010, Sec. 3.4.5 Fish and Wildlife Resources - Wildlife, p. 3-67, 68).

Management direction for migratory birds for the BLM is identified in the *BLM Fish and Wildlife 2000 Raptor Habitat Management Plan*. Management procedures and activities for raptors have been identified by the USFWS management guidelines and Avian Protection Plan guidelines. Golden eagles also are protected under the Bald and Golden Eagle Protection Act. (BLM RMP 2010, Sec. 3.4.5 Fish and Wildlife Resources - Wildlife, p. 3-68). In addition, there are 836 bird species that are protected under the Migratory Bird Treaty Act which makes it illegal for people to "take" migratory birds, their eggs, feathers or their nests. Take is defined as any attempt at hunting, pursuing, wounding, killing, possessing or transporting birds, nests, eggs or parts thereof and includes incidental take as a result of human activities. Cattle grazing may impact migratory birds by altering habitat structure and community composition, reducing cover, reducing food quality, trampling and destroying nests.

Conclusion

Data obtained from the BLM GIS database and from wildlife surveys suggest that plant communities within the nine allotments analyzed in this EA are capable of sustaining viable populations and diversity of native plant and animal species appropriate to the area.

BLM biologists have concluded that renewal of the eight grazing permits analyzed in this EA will not contribute to the listing of any BLM Sensitive Species. The BLM does not apply timing stipulations to grazing permits, because adhering to the Standards and Guidelines should maintain the range for multiple uses. Additionally, the Wyoming Game and Fish Department did not identify any terrestrial or aquatic wildlife concerns associated with the renewal of these

grazing permits on the nine allotments analyzed in this EA.

3.4 Water Quality

The water quality of the rivers located on private lands within two of these allotments, the Smiths Fork River (in the Wall allotment) and the West Fork of the Smiths Fork River (in the Thunderbolt allotment) in the Green River Basin, are listed in the State of Wyoming, Department of Environmental Quality, impaired waterbody list, *Water Quality Assessment and Impaired Waters List* (2010 Integrated 305(b) and 303(d) Report, Document #10-0230, Page 103). The cause of the listing is “fecal coliform” and the source of the contamination is “unknown.” These rivers were placed on the list because fecal coliform levels exceed State and EPA standards.

The presence of fecal coliform in aquatic environments may indicate that the water has been contaminated with the fecal material of humans or other animals:

Fecal coliform bacteria can enter rivers through direct discharge of waste from mammals and birds, from agricultural and storm runoff, and from human sewage. Agricultural practices such as allowing livestock to graze near water bodies, spreading manure as fertilizer on fields during dry periods, using sewage sludge biosolids and allowing livestock watering in streams can all contribute to fecal coliform contamination. Untreated organic matter that contains fecal coliform can be harmful to the environment.
(http://en.wikipedia.org/wiki/Fecal_coliform)

However, scientific evidence linking livestock grazing on rangelands to impaired water quality is lacking (Nader et al. 1998). The main water quality concerns are from cattle feces and urine deposited directly into the water. When significant nutrient contaminations do occur, especially phosphorus, they are more likely explained by erosion and sediment processes.

3.5 Cultural Resources

Domestic livestock grazing has occurred for over 100 years in southwestern Wyoming. No impact to significant cultural resources has been reported in the area as a result of authorized, dispersed livestock grazing within the allotment boundaries. As has been documented in the past, the greatest potential for range and livestock grazing practices to impact historic properties in this area comes from unauthorized construction associated with range improvement and/or range management projects (e.g. bladed fence line routes, waterlines, spring & reservoir construction projects, redirecting natural drainage channels, etc.) Any such unauthorized development on federal land within this allotment is a violation of applicable federal regulations and will be dealt with accordingly.

No effects on any historic properties are documented as attributable to authorized grazing use. These grazing permits are issued subject to the regulations contained in the Federal Land Policy and Management Act (FLPMA), which contains language under FLPMA 303(a) and FLPMA 303(c)(2)(g) that can be used to protect cultural resources and prosecute the permit holder if violations of cultural resources statutes occur, related to permit use. Additionally, FLPMA 318(a) allows for suspension or revocation of the grazing permit if permit conditions are not met. If future grazing activity within the allotment boundaries should expose previously undetected cultural resources or if BLM determines that significant historic properties are being damaged by grazing activities within the allotment boundaries, the terms and conditions of the permit will be

amended to protect any such historic properties until such time as protective barriers and/or mitigation of these adverse impacts can be conducted.

BLM Archaeologists conducted literature reviews on all nine allotments and completed the National Historic Preservation Act (NHPA) compliance reviews required under Section 106 as follows:

Table 8: Cultural Resources Review

Allotment	NHPA Completed	Period Covered
Coyote Hollow	03/17/2010	03/01/2010 - 02/28/2020
Fourty	03/12/2010	03/01/2010 - 02/28/2020
France	03/11/2010	03/01/2010 - 02/28/2020
Johnson	03/10/2010	03/01/2010 - 02/28/2020
Nipple	03/17/2010	03/01/2010 - 02/28/2020
Thunderbolt	03/11/2010	03/01/2010 - 02/28/2020
Tipperary	03/10/2010	03/01/2010 - 02/28/2020
Upper Ranch	03/17/2010	03/01/2010 - 02/28/2020
Wall	03/12/2010	03/01/2010 - 02/28/2020

The compliance reviews concluded that pursuant to the Wyoming State Protocol IV A.1, Appendices B.2 & B.27, renewal of these grazing permits for the same use previously authorized and which does not authorize or promote surface disturbance, has no potential to affect historic properties and are exempt from further review. The undertaking may proceed as planned without further consideration of cultural resources other than the inclusion of the standard stipulation regarding the discovery of unanticipated cultural resources on the authorization.

The compliance reviews contained the following stipulations for continued grazing on the nine allotments analyzed in this EA:

- 1) Authorization is for standard livestock grazing only. Any related projects (e.g. fence lines, water pipelines and troughs, spring developments, reservoirs, etc.) within the allotment boundaries require separate authorizations.
- 2) Rangeland Management Specialists will keep the Cultural Resource staff informed concerning areas of livestock congregation and all areas subject to impacts. This information will be disclosed to the Cultural Resource staff members as these areas become known.
- 3) If future grazing activity within the allotment boundaries should expose previously undetected cultural resources or if BLM determines that significant historic properties are being damaged by grazing activities within the allotment boundaries, the terms and conditions of the permit will be amended to protect any such historic properties until such time as protective barriers and/or mitigation of these adverse impacts can be conducted.

3.6 Lands and Realty

Uinta County adopted a Comprehensive Plan in 2002-2003, which establishes guidelines for

industrial, commercial, and residential developments. This plan emphasizes the value and need to conserve natural resources such as open space, wildlife, natural vegetation, soil, water, and cultural resources. The plan also establishes County Policy for balancing the preservation of natural resources with developments and establishes goals for encouraging conservation of natural resources. According to information provided in an e-mail dated March 22, 2010, the Uinta County Planner indicated there are no industrial, commercial, or residential developments planned in or adjacent to the nine allotments analyzed in this EA (Uinta County Planning Dept., personal communication, 2010).

3.7 Social and Economic Conditions

According to statistics published by the USDA National Agricultural Statistics Service in the 2007 Census of Agriculture, Uinta County had 344 active farms and ranches with a total acreage of 742,809. Ranches contained approximately 44,000 cattle and 41,000 sheep valued at approximately \$50 million. These data clearly show the economy of Uinta County benefits from livestock grazing operations, the related capital spent to establish and maintain ranching operations, and contributions to the labor force. Tourism is an important industry, attracting visitors who enjoy the rural and historic nature of the area. Livestock grazing, for some people, compliments the frontier setting they seek in their visits to this area.

The BLM, in conjunction with the permittees using the nine allotments analyzed in this EA, established a balance of livestock numbers and season of use such that any substantial change in grazing would negatively affect the overall ranching operation. A 1991 study by economists at the University of Wyoming revealed that agriculture is an important source of export income for the state's economy. The study also showed that the great majority of inputs to agricultural production come from within the state, and that profits and other income from agricultural production tend to stay within the state. Taken together, these findings indicate that agricultural production is an important contributor to the state's economy (Moline *et al* 1991). In a 2000 study, economists at the University of Wyoming compared the income provided to county governments and public schools to the financial demands on community services by agricultural and residential developments. The study shows that on average in Wyoming, ranching activity generates nearly twice as much income for the community services as it requires in expenditures on community services, whereas residential development generates about half as much income as it requires in expenditures (Taylor and Coupal 2000). These findings underscore the importance of agricultural production in terms of contributions to local economies. Ranching in the nine allotments analyzed in this EA contributes to this local and statewide trend.

Public lands in these nine allotments are integral to small family ranching businesses. The grazing permit allows access to public lands thereby consolidating the livestock operation and contributing to livestock production, which is the main source of income for these ranching families. The grazing permit also contributes the rancher's lifestyle and the cultural image of Wyoming as the "Cowboy State."

Public Lands contribute to the receipts of the county in which they are located through "Payment In Lieu of Taxes" by the federal government. All nine of the allotments analyzed in this EA were established according to provision of Section 3 of the Taylor Grazing Act. Receipts from grazing on Section 3 lands are distributed three ways: 50% goes to range betterment projects,

37½% remains in the U.S. Treasury, and 12½% is returned to the State.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 Livestock Grazing Management

The scarcity and sporadic distribution of water developments on BLM lands results in livestock congregations in private riparian areas. These livestock congregations and the resulting extensive utilization of riparian areas and adjoining upland areas present the greatest challenge to livestock grazing management in the KFO. The checkerboard land use pattern in these nine allotments produces a high percentage of privately owned lands and coupled with the State of Wyoming's "fence out" law, places inherent limitations on the BLM's ability to manage livestock grazing.

Impacts of the No Action Alternative

Under the No Action (or the "no change") alternative, existing grazing management practices would continue as currently authorized. Renewal of the existing grazing permits with the same terms and conditions would likely allow the continuation of livestock congregation in areas with available water, primarily on private lands. Extensive forage utilization around water developments and in riparian areas would likely continue. Under the No Action alternative, livestock grazing would continue under existing terms and conditions and according to provisions of the KFO Resource Management Plan.

Impacts of the Proposed Action Alternative

Under the Proposed Action alternative, existing grazing management would continue with the addition of the following stipulation:

Generally locate livestock salt or mineral supplements a minimum of ¼ mile away from water troughs, riparian areas, aspen stands, sensitive plant species, and historic trails and monuments.

The proposed action could produce positive benefits to the environment compared to the No Action alternative, but could be an inconvenience to permit holders. Implementation of the proposed action could help facilitate uniform livestock grazing distribution. The addition of this stipulation conforms with the Kemmerer Resource Management Plan (Alt. D, pg. 2-32 and pg. 2-72), and the Wyoming Standards for Healthy Rangelands.

Impacts of the No Grazing Alternative

Removal of livestock from BLM owned lands in the nine allotments analyzed in this EA would contribute to reducing livestock congregations. However, livestock grazing on private and state owned lands would continue to produce direct effects equivalent to those observed under the No Action Alternative. With the lack of boundary fences in some allotments in the checkerboard areas, BLM lands could be utilized at the same levels as private lands. Range management practices would focus on large ungulates such as deer and elk. As an indirect affect resulting from livestock removal, BLM would not collect grazing fees thereby reducing the agency's ability to build range improvements that are also used by wildlife.

Ranching operations and lifestyle could be curtailed dramatically for the permittees on these allotments. Loss of the grazing permits may force permittees to sell private lands associated with these allotments resulting in landscape level fragmentation produced by development.

BLM would have limited regulatory and land management authority on allotments if the grazing permits were not renewed. Implementation of this alternative would not allow BLM to meet its legislative mandates under the following federal laws.

- 1) The TGA of 1934 provides the basic legislative authority for livestock grazing on public lands, with provisions for protection of the lands from degradation and for orderly use and improvement of public rangelands. The TGA established a system for the allotment of grazing privileges to livestock operators based on grazing capacity and use priority, and for the delineation of allotment boundaries. It also established standards for rangeland improvements and implemented grazing fees.
- 2) FLPMA and PRIA mandate the management of public land for multiple use and sustained yield. Specifically, the regulations implementing these acts call for rangeland management strategies that provide forage for economic use as well as for the maintenance or restoration of watershed function, nutrient cycling, water quality, and habitat quality.
- 3) The Kemmerer Resource Management Plan can be reviewed on the BLM web site <http://www.blm.gov/rmp/kemmerer/armp-rod.htm>. BLM's analysis in the Final EIS supports livestock grazing as an appropriate use on identified lands in the KFO.

4.2 Soils

Impacts of the No Action Alternative

Grazing under the No Action Alternative would be expected to maintain and continue the current level of soil compaction and erosion conditions. Renewal of the existing grazing permits with the same terms and conditions would allow continuation of the livestock congregation in riparian areas. Observations by BLM range management specialists indicate livestock congregations result in extensive hoof action, bank trampling, and forage utilization which produce less standing biomass and litter, both of which are needed for surface cover to protect soils from wind and water erosion.

Direct impacts to soils could result from livestock's inherent tendency to develop trails to and from water, mineral supplements, and along fences. Field observations indicate impacts from stock trails could include erosion which can be visible from a distance. Soil along some portions of fences, waterways and trails can be compacted due to concentrated livestock use. Soil compaction can result in greater exposure to wind and water erosion, could reduce soil crusts and lower forage production. Overgrazing on privately owned riparian areas resulting from livestock congregations can impair the integrity of the soils and add to sediment load in waterways.

The uneven livestock grazing distribution occurring under the No Action Alternative indirectly impacts soil conditions in the watershed. Naturally occurring sediment normally gets trapped by vegetation near streams as it is carried downstream from the uplands by rain or snow melt.

However in heavily grazed riparian areas, resulting from livestock congregations, heavy forage utilization allows some of the sediment to get past the vegetation trap.

Impacts of Proposed Action

The proposed action could produce positive benefits to the environment compared to the No Action Alternative because movement of mineral supplements would facilitate redistribution of livestock (Bailey and Welling 1999). Utilization of forage and bank trampling in riparian areas could be reduced. The reduction of livestock congregations and dispersion of forage utilization could produce less intensive forage utilization levels which could lead to increases in plant biomass production resulting in adequate soil protection. Implementation of the proposed action could produce incremental beneficial improvements to soil conditions by facilitating uniform livestock grazing distribution. Management and uniform distribution of livestock grazing could produce appropriate use of vegetation and avoid excessive amounts of downstream sediment runoff.

Impacts of the No Grazing Alternative

Removal of livestock from BLM owned lands in these allotments may reduce livestock congregation on riparian areas leading to an improvement in soil conditions and reduced utilization of riparian areas. Removal of livestock from public lands should lead to decreased hoof compaction, especially in riparian areas where livestock tend to congregate. Over time, the lack of renewed compaction, combined with the annual freeze-thaw cycle, may lead to a decrease in surface soil density and improved soil condition.

If livestock were removed from these allotments, the resulting increase in available plant biomass would produce an increase in ground cover providing more protection from wind and water erosion. Livestock trails and the resulting erosion would heal over time.

If grazing were to continue on privately-owned lands in these allotments, fences would have to be built by the landowner(s) to prevent trespass onto federally owned lands. Given the natural tendency of cattle to congregate and trail along fence lines, it is likely that paths and forage depletion would occur along the fences. The resultant decrease in canopy cover would fail to decrease the impact of raindrops on the soil surface, while the expected increase in compaction would increase runoff from both rain and snowmelt. These factors would combine to increase the likelihood of both wind and water erosion in the areas adjacent to fences. This may result in blowouts and gullies which could impact the federal lands in these allotments through deposition or by the eroded area actually spreading into the federal lands.

4.3 Biological Resources

4.3a Riparian and Wetland Vegetation

Impacts of the No Action Alternative

Renewal of the existing grazing permit with the same terms and conditions would allow continuation of the livestock grazing and congregation in riparian areas. Field observations by BLM range specialists have found livestock generally congregate in riparian areas, resulting in over-utilization of riparian forage. Negative impacts on riparian forage could contribute to soil compaction, bank trampling, and increased sediment filtering into waterways.

Impacts of Proposed Action

The Proposed Action could produce positive benefits to the environment compared to the No Action Alternative because movement of mineral supplements would facilitate redistribution of livestock. By facilitating uniform livestock distribution, utilization of forage and soil compaction in riparian areas could be reduced. Uniform livestock distribution and the resulting uniform vegetation utilization could reduce over-grazing on privately owned riparian areas and could be considered a beneficial indirect effect.

Impacts of the No Grazing Alternative

Removal of livestock from BLM owned lands in these allotments would reduce utilization of riparian areas. However, livestock grazing on adjacent private and state owned lands would continue to produce direct effects in riparian areas equivalent to those observed under the No Action Alternative.

4.3b Upland Vegetation

Impacts of the No Action Alternative

The No Action alternative will likely benefit upland vegetation, while impacting riparian vegetation. Because this alternative does not promote livestock distribution away from water sources, it will lessen the utilization levels on uplands. Continued grazing on riparian areas may also create a shift towards species less palatable to livestock or more resistant to grazing pressure. The livestock grazing congregations produced by the No Action Alternative can produce a downward trend in ecological conditions, where cool season bunch grasses and native riparian species decrease, while sagebrush and short-grasses increase on the uplands, and non-native mesic species increase near the riparian areas.

Impacts of the Proposed Action

The Proposed Action alternative could produce positive benefits to the environment compared to the No Action Alternative because movement of mineral supplements would facilitate redistribution of livestock contributing to uniform utilization of forage.

Impacts of the No Grazing Alternative

Removal of livestock from BLM owned lands in these allotments would contribute to reducing livestock congregations leading to reduced utilization of upland areas adjacent to riparian areas. However, livestock grazing on private and state owned lands in the checkerboard areas of these allotments would continue to produce direct effects on upland vegetation equivalent to those observed under the No Action Alternative.

4.3c Wildlife and Wildlife Habitat

Impacts of the No Action Alternative

Livestock grazing congregations which currently exist would continue under the No Action Alternative. Ongoing congregations can produce a downward trend in ecological conditions, where cool season bunch grasses and native riparian species decrease, while sagebrush and short-grasses increase on the uplands, and non-native mesic species increase near the riparian areas. Continued grazing on riparian areas may create a shift towards species less palatable to livestock and wildlife. A downward trend in ecological conditions may have negative impacts on sage grouse utilizing these allotments.

Impacts of Proposed Action

The proposed action could produce positive benefits to the environment compared to the No Action Alternative because movement of mineral supplements would facilitate redistribution of livestock, thereby reducing the extensive forage utilization observed in privately and publicly owned riparian areas. BLM would implement the stipulations contained in the BLM National Sage Grouse Conservation Strategy (USDI 2004) and the Wyoming Game and Fish Greater Sage Grouse Conservation Plan (WGFD 2003) when warranted. Potential negative affects to BLM sensitive species were addressed in the Kemmerer Resource Management Plan (2010) Section 3.4.8, to which this document is tiered. Grazing management under these revised terms and conditions would be in conformance with the KFO RMP.

Grazing has the potential to degrade sage grouse nesting habitat or to improve it under some circumstances by changing the composition, quantity, or quality of vegetation and litter. The Proposed Action will likely assist in uniform distribution of livestock thereby reducing the likelihood of livestock over-utilization of sage grouse brood rearing habitat. Uniform livestock distribution could also provide a potential benefit to sage grouse in late brood rearing and fall habitats if cattle are allowed to moderately graze and then be removed before damage to riparian areas occurs:

Livestock distribution patterns are directly linked with water availability. Therefore impacts to riparian habitats are the primary influences of livestock to sage-grouse late brood-rearing and summer habitats...sage-grouse select grazed meadows rather than ungrazed exclosures. Moderate utilization may increase the quality of the forb resource (by interrupting and delaying maturation) and increased accessibility to low-growing food forbs (by producing small openings) sought by sage-grouse during the summer. (Cagney 2010)

Impacts of the No Grazing Alternative

Removal of livestock from these allotments would improve wildlife habitat. All stipulations and mitigations listed in State and Federal sage grouse conservation strategies could be fully implemented on the federal lands. Removal of livestock from BLM owned lands could increase the amount of undisturbed habitat available to BLM sensitive species especially ground nesting birds.

If the No Grazing Alternative were implemented, ranchers may be inclined to fence private lands to prevent livestock trespass onto public lands. Considering the importance of these allotments as big game crucial winter range, fencing would likely create a serious impediment to seasonal migration of some big game animals, especially mule deer and moose (Spillett, J.J. *et al* 1967, Yoakum J.D. 1979, and JHWF 2001). Plus, if they are not wildlife friendly fences, they could impede some small mammals as well that cannot go under the fences. In that case, livestock grazing on private and state owned lands would continue to produce direct negative effects on wildlife habitat on BLM lands equivalent to those observed under the No Action Alternative.

4.4 Water Quality

Impacts of the No Action Alternative

Implementation of the No Action Alternative, with the same use previously authorized, would allow grazing to continue near water sources without changes in grazing management, and may continue to negatively impact water quality.

Impacts of the Proposed Action Alternative

Implementation of the Proposed Action may improve water quality because movement of mineral supplements ¼ mile away from water sources would facilitate redistribution of livestock. Redistributing livestock away from water sources would limit fecal matter and soil compaction and erosion near waterways, which would improve riparian areas and possibly water quality. Uniform livestock distribution and the resulting uniform vegetation utilization could reduce over-grazing on riparian areas and could be considered a beneficial indirect effect.

Impacts of the No Grazing Alternative

Removal of livestock from BLM owned lands only, may contribute to reducing livestock congregations on those lands. However, livestock grazing on private and state owned lands would continue to produce direct effects equivalent to those observed under the No Action Alternative. With the lack of boundary fences in some allotments in the checkerboard areas, BLM lands could be utilized at the same levels as private lands. BLM would have little to no regulatory authority over livestock grazing in these allotments thereby severely reducing the agency's management flexibility.

By removing livestock from these allotments, on both BLM and private lands, the No Grazing alternative would reduce the amount of fecal matter and soil erosion near waterways, improve riparian areas and possibly water quality. Vegetation near waterways would only be grazed by wildlife, leaving more biomass to filter the natural sediment carried into the waterways by precipitation.

4.5 Cultural Resources

In order to insure that historic properties are not being impacted by livestock grazing and that the permittees are complying with this no impact agreement, periodic inspections of known historic properties will be required. In addition, Rangeland Management Specialists will keep the Cultural Resource staff fully informed concerning areas of livestock congregation and all areas subject to impacts. This information will be disclosed to the Cultural Resource staff members as these areas become known.

Impacts of the No Action Alternative

Pursuant to the Revised Wyoming State Protocol IV A.1 and Appendices B.2 & B.27, renewal of these grazing permits for the same use previously authorized and which does not authorize or promote surface disturbance, has no potential to affect historic properties and is exempt from further review.

Impacts of the Proposed Action

Pursuant to the Revised Wyoming State Protocol IV A.1 and Appendices B.2 & B.27, renewal of these grazing permits under the Proposed Action, which does not authorize or promote surface disturbance, has no potential to affect historic properties and is exempt from further review. In addition, movement of mineral supplements ¼ mile away from known archaeological sites would produce incremental beneficial impacts to known sites by reducing ground disturbances caused by cattle using salt licks over an extended period of time.

Impacts of the No Grazing Alternative

Cultural resources would not be affected under the No Grazing Alternative.

4.6 Lands and Realty

Impacts of the No Action Alternative

Implementation of the No Action alternative, with the same use previously authorized, would not conflict with the goals and objectives of the Uinta County Comprehensive Plan.

Impacts of the Proposed Action

Implementation of the Proposed Action alternative would have the same impacts as the No Action Alternative.

Impacts of the No Grazing Alternative

Implementation of the No Grazing alternative would have the same impacts as the No Action Alternative.

4.7 Social and Economic Conditions

Impacts of the No Action Alternative

Implementation of the No Action alternative would allow livestock grazing under existing terms and conditions in accordance with the provisions of the KFO LUP. There would be no change in impacts to the ranching community, culture, or tradition.

Impacts of the Proposed Action

Implementation of the Proposed Action alternative would have the same impacts as the No Action Alternative.

Impacts of the No Grazing Alternative

Implementation of the No Grazing alternative could have negative economic impacts on private ranchers. If the grazing permits for federal lands were cancelled, permittees would be forced to make changes in their current livestock operations, which would vary in degree and effect. Changes could include possible increase in inputs such as fencing or herding to assure that cattle remain on private or state land. This increase in inputs may make grazing on adjacent state and private lands untenable for ranchers. Ranchers would have to expend a considerable amount of funds to fence out livestock from publicly owned lands. In addition, private landowners could prevent BLM from accessing public lands thereby reducing the agencies management flexibility.

4.8 Cumulative Impacts

Current conditions in the project area result from a multitude of natural events and human actions that have taken place over many decades. Cumulative effects are defined 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” (40 CFR § 1508.7). According to the 1994 BLM Handbook “Guidelines for Assessing and Documenting Cumulative Impacts,” the analysis can be focused on those issues and resource values identified during scoping that are of major importance. No issues were identified during the scoping process on these nine allotments. However, cattle grazing over time, has contributed to an increase in cumulative effects to riparian vegetation, wildlife habitat, and water quality. Additional impacts to wildlife

habitat occur from land disturbing activities such as road building, OHV activity, wildland fires, residential and commercial development.

Grazing Management

Within the KFO, wildland fires and other natural events, and changing landscape conditions are expected to continue in the future. Grazing permits would be adjusted to maintain rangeland health standards when fire, drought, and other uncontrollable natural events occur. Future grazing authorizations with the revised terms and conditions should help maintain or improve vegetation phenological stages, composition, and vigor.

Season-long livestock use on some allotments could have a minor contribution to negative cumulative impacts by decreasing the abundance and vigor of riparian plant species. Season-long grazing combined with other past, present, and future land uses, such as fire and OHV traffic, could contribute to changes in vegetative composition toward more shallow rooted plants adapted to dryer sites. The combination of these land uses over time could leave stream banks without adequate vegetation protection from damage due to livestock trampling and high water events. The long-term affect on the landscape produced by a combination of these land uses over time could be decreased water storage capacity and forage production.

Uniform livestock grazing distribution resulting from implementation of the modified terms and conditions contained in the Proposed Action in conjunction with proper management of other past, present, and future land uses could be expected to improve wildlife habitat along with range and vegetation conditions. Both forage quality/quantity and plant physical structure for sage grouse, mule deer, antelope, moose, and elk could be expected to improve over the current situation.

Socio-Economics

Uinta County Planning Department and the BLM work to reduce and control private subdivision proliferation and trespass onto adjoining public lands. The communities that occupy the KFO have generally been stable and small, although the residential development trend is increasing. Obviously, these permanent alterations have irreversibly committed land to housing development, resulting in fragmentation of plant/animal habitat, altered scenic vistas, etc. Overall, the greatest potential development impact to habitat would occur from housing development on remaining scattered private land tracts throughout the KFO. Increased property values have created a strong real estate market prompting landowners to pursue subdivision development, reducing small acreages of habitat in several locations.

If the No Grazing Alternative were chosen, the loss of revenue produced by canceling these grazing permits could have negative economic impacts on private ranchers. If the grazing permits for federal lands were cancelled, permittees would be forced to make changes in their current livestock operations, which would vary in degree and effect. Changes could include possible increase in inputs such as fencing or herding to assure that cattle remain on private or state land. This increase in inputs may make grazing on adjacent state and private lands untenable for ranchers. Ranchers would have to expend a considerable amount of funds to fence out livestock from publicly owned lands. In addition, private landowners could prevent BLM from accessing public lands thereby reducing the agencies management flexibility.

The loss of federal grazing on BLM administered lands could negatively impact the economic viability of ranching in the area for the foreseeable future. As livestock ranches in the West become less economical, a trend towards subdivision and small rural home sites on the private land holdings has developed. The social impact is a change in lifestyle away from ranching and agriculture. Urban development throughout southwestern Wyoming could increase as a result of removing grazing from the public lands. However, a trend toward subdivision is already in place on private lands in Uinta County. This occurs on lands traditionally used for agriculture as well as on non-agricultural lands. Some grazing lessees and other landowners have already begun to subdivide private property, leaving less private land available for agricultural use and putting more pressure on surrounding public lands for livestock grazing.

A trend away from ranching would also impact those businesses and industries that supply goods and services to livestock operators. The high cost of hay and other feeds combined with the necessity to have pasture available for animals could force permittees to reduce livestock numbers beyond the simple adjustment needed to subtract public AUMs. This could mean the end of the major source of income for these permittees for the foreseeable future.

Wildlife

Minor landscape-level cumulative impacts negative to vegetation and wildlife could occur from the combined influences of grazing and other past, present, and future land uses in these nine allotments. However, uniform livestock grazing produced by implementation of the Proposed Action, in combination with other past, present, and future land uses, is expected to maintain or improve the physical structure and ecological function of plant communities. For example, if the allotment consists of a mixture of upland sage, grass-steppe, and mixed juniper, these plant communities provide habitat for a variety of small mammals. In addition, a variety of small bird species, both migratory and year-round residents, may also occur in the area. These species are, in turn, preyed upon by larger carnivores and by raptor species. Proper management of the multiple uses of BLM owned lands, including grazing, could improve the biodiversity of both plant and animal communities at the landscape level.

Loss of vegetation due to residential or commercial development could result in a reduction in available quantity and quality of habitat and could result in increasing forage competition among grazing animals. Habitats may be made unavailable to wildlife because of human disturbance factors such as traffic, noise, or increases in livestock during sensitive time periods such as winter, parturition, nesting, and early rearing of young. Impacts on wildlife could be significant if activities were concentrated in areas of sensitive wildlife habitat and/or if increased development and surface disturbance altered existing migration corridors to the extent that access to important habitat areas was greatly reduced.

Big Game are susceptible to displacement by human activities because of the lack of hiding and escape cover. Persistent disturbance can shift the areas of use and weakens the tendency to return to the disturbed area. Roads, fences, and development can fragment habitat and impede or block movement. The density at which these factors occur could have a significant effect on migration and use of habitat. Dispersed grazing with the limited numbers of livestock in these nine allotments would likely have a very minor and insignificant contribution to disturbance and

habitat fragmentation.

Greater sage grouse populations have been declining over the last half century due to habitat fragmentation, degradation, and loss. Greater sage-grouse nesting and wintering habitat requirements are quite specific. If this habitat were disturbed, it could require in excess of 20 years to restore affected habitat to predisturbance conditions. Dispersed grazing with moderate utilization of riparian areas may increase the quality of forbs sought by sage grouse during the summer months (Cagney 2010).

Water Quality

Cumulative impacts to soils and watersheds associated with livestock grazing congregations accrue over time and are additive on a landscape scale. The two rivers in the Thunderbolt and Wall allotments listed in the State of Wyoming Department of Environmental Quality impaired waterbody list suggests a change in livestock distribution may help improve riparian areas and limit stream degradation. However, the major causes of habitat modifications are soil disturbances from roads, OHV activity, and residential or commercial developments. Dispersed grazing with the limited numbers of livestock in these nine allotments would likely have a minor contribution to sedimentation or contamination compared to the major habitat modifications occurring in the area.

5.0 CONSULTATION AND COORDINATION

5.1 BLM Staff

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5.2 Persons and Agencies Consulted

A scoping notice was sent out on May 29, 2007, announcing that 29 grazing allotments were proposed for permit renewal, and that Standard and Guideline Assessments were to be conducted for them. The Coyote Hollow, Fourty, France, Johnson, Nipple, Thunderbolt, Tipperary, Upper Ranch, and Wall allotments were among those 29 allotments announced in the scoping notice. The scoping notice was sent out to the grazing permit holders and interested parties for review and comments. A response to scoping was received from the Wyoming Game and Fish Department in a letter dated July 10, 2007, which states, "We have no terrestrial wildlife or aquatic concerns pertaining to these allotments." No other comments were received.

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