

U.S. Department of the Interior
Bureau of Land Management
Glenwood Springs Field Office
2300 River Frontage Road
Silt, CO 81652

ENVIRONMENTAL ASSESSMENT

NUMBER: DOI-BLM-CO-N040-2010-0016-EA

CASEFILE NUMBER: 0507529

PROJECT NAME: Grazing Permit Renewal on the Riley Gulch and Crawford & Kerlee Allotments

LOCATION: T6S R96W, Sec 19, 29, 30 and T7S R96W, Sec 4, 5, 8, 9. Refer to attached allotment map.

APPLICANT: Grazing Permittee

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Proposed Action: The Proposed Action is to renew a term grazing permit. The permit will be changed from the previous permit to show trailing use in the fall on the Crawford & Kerlee allotment. This change results in no addition grazing preference as these AUMs were not previously scheduled. This change is administrative in nature and results in no changes to previous use acknowledged by the BLM. This grazing use would be authorized for a 10-year period. If the base property is leased for less, for purposes of this analysis, we are assuming 10 years of grazing by this applicant. This permit is based on a 2 year base property lease; therefore we expect this permit to be re-issued up to four times in the ten year period. Further analysis may be needed if this permit were to be transferred in this ten year period. The proposed action is in accordance with 43 CFR 4130.2. The tables below summarize the scheduled grazing use authorized by this permit, the previously scheduled grazing use, and the grazing preference.

Mandatory Terms and Conditions

Scheduled Grazing Use:

Allotment Name & No.	Livestock No. & Kind	Period of use	Percent Public Land	AUMs
Riley Gulch #08920	26 Cattle	5/13 – 6/15	100	29
Crawford & Kerlee #08916	20 Cattle	5/1 – 6/15	25	8
Crawford & Kerlee #08916	30 Cattle	10/29 – 10/30	100	2

Previously Scheduled Grazing Use:

Allotment Name & No.	Livestock No. & Kind	Period of use	Percent Public Land	AUMs
Riley Gulch #08920	26 Cattle	5/12 – 6/15	100	30
Crawford & Kerlee #08916	20 Cattle	5/1 – 6/15	25	8

Grazing Preference AUMs:

Allotment Name & No.	Active	Suspended	Total
Riley Gulch #08920	29	0	29
Crawford & Kerlee #08916	10	0	10

The following Other Terms and Conditions were included on the previous (expiring) permits and will be carried forward on the renewed permit:

- Maintenance of range improvements is required and shall be in accordance with all approved cooperative agreements and range improvement permits. Maintenance shall be completed prior to turnout.
- Salt, mineral block and supplemental feed will be placed a minimum of 0.25 miles and preferably 0.5 miles from riparian areas and other water sources, including springs. The permittee should note the possible presence of cultural and historic resources and locate salt, mineral blocks, or supplemental feed to avoid such locations.
- The permittee and all persons associated with grazing operations must be informed that any objects or sites of cultural, paleontological, or scientific value such as historic or prehistoric resources, graves or grave markers, human remains, ruins, cabins, rock art, fossils, or artifacts shall not be damaged, destroyed, removed, moved, or disturbed. If in connection with allotment operations under this authorization any of the above resources are encountered, the proponent shall immediately suspend all activities in the immediate vicinity of the discovery that might further disturb such materials and notify the BLM authorized officer of the findings. The discovery must be protected until further notified in writing to proceed by the authorized officer (36CFR 800.110 & 112, 43CFR 0.4).

Additional Background Information: Another grazing permit exists on the Riley Gulch Allotment that is not scheduled for renewal at this time. The table below summarizes the scheduled grazing use for that permit.

Operator No.	Allotment Name & No.	Livestock No. & Kind	Period of use	Percent Public Land	AUMs
0507653	Riley Gulch #08920	76 Cattle	5/1 – 6/15	100	115

ALTERNATIVES CONSIDERED BUT ELIMINATED:

The No Grazing alternative has been eliminated from further consideration. No unresolved conflicts involving alternative use of available resources have been identified. For this reason, discontinuance of grazing use (No Grazing) will not be considered or assessed.

The No Action alternative has also been eliminated from further consideration. The No Action alternative would involve reissuing the permit/lease with current terms and conditions and no additional stipulations would be added to the permit/lease. Reissuing the permit/lease without the new stipulations would be unrealistic due to current Washington Office and Colorado State Office policies.

PURPOSE AND NEED FOR THE ACTION: These permits/leases are subject to renewal or transfer at the discretion of the Secretary of the Interior for a period of up to ten years. The U.S. Bureau of Land Management has the authority to renew the livestock grazing permits/leases consistent with the provisions of the Taylor Grazing Act, Public Rangelands Improvement Act, Federal Land Policy and Management Act, and Glenwood Springs Field Office 's Resource Management Plan/Environmental Impact Statement. This Plan/EIS has been amended by Standards for Public Land Health in Colorado.

The renewal of the grazing permit is needed for the following reasons: (1) to meet the livestock grazing management objective of the Resource Management Plan of providing 56,885 animal unit months of livestock forage commensurate with meeting public land health standards, (2) to continue to allow livestock grazing on the specified allotment, (3) to meet the forage demands of local livestock operations, (4) to provide stability to these operations and help preserve their rural agricultural lands for open space and wildlife habitat, and (5) to allow use of native rangeland resource for conversion into protein suitable for human consumption.

PLAN CONFORMANCE REVIEW: The proposed action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: Glenwood Springs Resource Management Plan.

Date Approved: Jan. 1984, revised 1988, amended in November 1991 - Oil and Gas Leasing and Development - Final Supplemental Environmental Impact Statement; amended Nov. 1996 - Colorado Standards and Guidelines; amended in August 1997 - Castle Peak Travel Management Plan; amended in March 1999 - Oil and Gas Leasing & Development Final Supplemental Environmental Impact Statement; amended in November 1999 - Red Hill Plan Amendment; amended in September 2002 – Fire Management Plan for Wildland Fire Management and Prescriptive Vegetation Treatment Guidance; amended in June 2007 – Record of Decision for the Approval of Portions of the Roan Plateau Resource Management Plan Amendment; and amended in March 2009 - Record of Decision for the Designation of Areas of Critical Environmental Concern for the Roan Plateau Resource Management Plan.

Decision Number/Page: The action is in conformance with Administrative Actions (pg. 5) and Livestock Grazing Management (pg. 20).

Decision Language: Administrative actions states, “Various types of actions will require special attention beyond the scope of this plan. Administrative actions are the day-to-day transactions required to serve the public and to provide optimal use of the resources. These actions are in conformance with the plan”. The livestock grazing management objective as amended states,

“To provide 56,885 animal unit months of livestock forage commensurate with meeting public land health standards.”

STANDARDS FOR PUBLIC LAND HEALTH:

The Colorado Standards for Public Land Health consist of 5 standards: upland soils, riparian systems, plant and animal communities, special status species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands.

The two allotments included in this grazing permit renewal were assessed as part of the Rifle-West Watershed Land Health Assessment in 2004. The Crawford & Kerlee Allotment was meeting all the Standards except Standard 3 for animal communities. The Riley Gulch Allotment was not meeting Standard 2 for riparian systems, Standard 3 for animal communities or Standard 5 for water quality. Existing livestock grazing was not determined to be a causal factor.

The impact analysis must address whether the proposed action would result in impacts which would improve, maintain or deteriorate land health conditions for each of the parameters found in the Standards for Public Land Health.

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section provides a description of the human and natural environmental resources that could be affected by the proposed action and no action alternative. In addition, the section presents comparative analyses of the direct and indirect consequences on the affected environment stemming from the implementation of the various actions.

A variety of laws, regulations, and policy directives mandate the evaluation of the effects of a proposed action and alternative(s) on certain critical environmental elements. Not all of the critical elements that require inclusion in this EA are present, or if they are present, may not be affected by the proposed action and alternative (Table 1). Only those mandatory critical elements that are present and affected are described in the following narrative.

In addition to the mandatory critical elements, there are additional resources that would be impacted by the proposed action and alternative. These are presented under **Other Affected Resources**.

Critical Elements

Table 1. Critical Elements of the Human Environment									
<i>Critical Element</i>	<i>Present</i>		<i>Affected</i>		<i>Critical Element</i>	<i>Present</i>		<i>Affected</i>	
	Yes	No	Yes	No		Yes	No	Yes	No
Air Quality	X			X	Prime or Unique Farmlands		X		X
ACECs		X		X	Special Status Species*	X		X	
Cultural Resources	X			X	Wastes, Hazardous or Solid		X		X
Environmental Justice	X			X	Water Quality, Surface and Ground*	X		X	
Floodplains		X		X	Wetlands and Riparian Zones*	X		X	

Invasive, Non-native Species	X		X		Wild and Scenic Rivers		X		X
Migratory Birds	X		X		Wilderness/ WSAs		X		X
Native American Religious Concerns	X			X					

* Public Land Health Standard

Cultural Resources and Native American Religious Concerns

Affected Environment: Range permit renewals are undertakings under Section 106 of the National Historic Preservation Act. Additional range improvements (e.g., fences, spring improvements) are subject to compliance requirements under Section 106 and will undergo standard cultural resources inventory and evaluation procedures. During Section 106 review, a cultural resource assessment (GSFO #1010-2) was completed for the Riley and Crawford/Kerlee Allotments on November 25, 2009 following the procedures and guidance outlined in the 1980 National Programmatic Agreement Regarding the Livestock Grazing and Range Improvement Program, IM-WO-99-039, IM-CO-99-007, IM-CO-99-019, CO-2001-026, and CO-2002-029. The results of the assessment are summarized in the table below. A copy of the cultural resource assessment is available at the GSFO office.

Allotment Number	Acres Inventoried at a Class III level	Acres NOT Inventoried at a Class III Level	Percent (%) Allotment Inventory data Class III level	Number of Cultural Resources known in allotment	High Potential of Historic Properties (yes/no)	Management Recommendations (Additional inventory required and historic properties to be visited)
8920 Riley	576	783	42	3	NO	No additional acres need to be inventoried for the renewal. 70% of the allotment has 30%+ slopes.
8916 Crawford/Kerlee	775	617	20	0	No	No additional acres need to be inventoried for the renewal. 89% of the allotment has 30%+ slopes.
Total	1351	1400	62	3	Yes	

A combined total of seven Class III cultural resource inventories have been conducted. In the Riley Gulch allotment 42% of the allotment has been inventoried and if the 30% plus slopes are removed from the analysis the inventories amount to 139%. For the Crawford/Kerlee allotment 20% has been inventoried and if the 30% slopes are removed 183% of the allotment has been inventoried. No historic properties have been identified in either allotment. Historic properties are cultural resources that are considered eligible or potentially eligible for listing on the National Register of Historic Places. No areas of Native American concern were identified. Undiscovered historic era sites within this allotment could represent a time frame from the late 1800's through the 1950's; Native American sites could represent a time range from 200 to 10,000 years before present. Based on available data, there is a low potential for historic properties within these allotments.

Subsequent site field visits, inventory, and periodic monitoring may have to be done to identify if additional historic properties are present within the term of the permit and as funds are made available. If the BLM determines that grazing activities will adversely impact the properties, mitigation will be identified and implemented in consultation with the Colorado SHPO.

At present, there is one known area of Native American concern within this allotment. On October 26, 2009 the Glenwood Springs Field Office mailed an informational letter and maps to the Ute Tribe (Northern Ute Tribe), Southern Ute Tribe, and the Ute Mountain Ute Tribes, identifying the proposed 2010 grazing permit renewals. No response has been received. If new data is disclosed, new terms and conditions may have to be added to the permit to accommodate their concerns. The BLM will take no action that would adversely affect these areas or location without consultation with the appropriate Native Americans.

Environmental Consequences: The direct impacts that occur where livestock concentrate include trampling, chiseling, and churning of site soils, cultural features, and cultural artifacts, artifact breakage, and impacts from standing, leaning, and rubbing against historic structures, above-ground cultural features, and rock art. Indirect impacts include soil erosion, gulying, and increased potential for unlawful collection and vandalism. Continued grazing may cause substantial ground disturbance and cause cumulative, long term, irreversible adverse effects to historic properties.

No historic properties were identified during the inventories for this allotment and the addition of one day for trailing should not increase the potential for impacts to cultural resources. A determination of **No Adverse Affect** has been made for this renewal. The cultural resource specialist should be involved in discussions about improvements, maintenance, supplemental feeding areas, etc to ensure that the historic properties and areas of concern are avoided.

Mitigation:

New improvements or maintenance of existing range improvements, additional feeding areas, etc., may require cultural resource **inventories, monitoring, and/or data recovery**. In order to mitigate this potential affect to historic properties all ground disturbing activity, salt blocks, and the placement of supplemental feed, etc, must be at least 100 m from the areas of concern. The cultural resource specialist should be involved in discussions for improvements, maintenance, supplemental feeding areas, etc to ensure that the historic properties and area of concern is avoided. This allotment may also contain other undiscovered historic properties and/or resources protected under the National Historic Preservation Act (NHPA), American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O. 13007, or other statutes and executive orders. The BLM may require modification to development proposals to protect such properties, or disapprove any activity that is likely to result in damage to historic properties or areas of Native American concern.

Education/Discovery stipulation: The permittee and all persons specifically associated with grazing operations must be informed that any objects or sites of cultural, paleontological, or scientific value such as historic or prehistoric resources, graves or grave markers, human remains, ruins, cabins, rock art, fossils, or artifacts shall not be damaged, destroyed, removed, moved, or disturbed. If in connection with allotment operations under this authorization any of

the above resources are encountered, the proponent shall immediately suspend all activities in the immediate vicinity of the discovery that might further disturb such materials and notify the BLM authorized officer of the findings. The discovery must be protected until notified in writing to proceed by the authorized officer (36CFR800.110 & 112, 43CFR 0.4).

Invasive, Non-native Species

Affected Environment: Halogeton has been documented on the Riley Gulch Com Allotment.

Environmental Consequences/Mitigation: Weeds generally germinate and become established in areas of surface disturbing activities. Livestock grazing can contribute to the establishment and expansion of noxious weeds through various mechanisms. Improperly managed grazing, (over-grazing), can cause a decline in desirable native plant species and ground cover which provides a niche for noxious weed invasion. In addition, noxious weed seed can be transported and introduced to new areas by fecal deposition or by seed that clings to the animal's coat. Conversely, properly managed livestock grazing which does not create areas of bare ground and which maintains the vigor and health of native plant species, particularly herbaceous species, is not expected to cause a substantial increase in noxious weeds. Since the proposed action was designed to sustain and/or improve land health, no significant impacts to non-native, invasive species are expected. Noxious and invasive plant species are not expected to radically increase as a result of the continuation of livestock grazing practices and most infestations will be isolated to watering facilities, salting areas, and other livestock high concentration locations.

Migratory Birds

Affected Environment:

BLM Instruction Memorandum No. 2008-050 provides guidance toward meeting the Bureau of Land Management's (BLM) responsibilities under the Migratory Bird Treaty Act (MBTA) and the Executive Order (EO) 13186. The guidance directs Field Offices to promote the maintenance and improvement of habitat quantity and quality. To avoid, reduce or mitigate adverse impacts on the habitats of migratory bird species of conservation concern to the extent feasible, and in a manner consistent with regional or statewide bird conservation priorities. The 1988 amendment to the Fish and Wildlife Conservation Act mandates the U.S. Fish and Wildlife Service (USFWS) to "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act (ESA) of 1973." The "*BIRDS OF CONSERVATION CONCERN 2008*" (U.S. Fish and Wildlife Service 2008) is the most recent effort to carry out this mandate.

The MBTA prohibits the "take" of a protected species. Under the Act, the term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The USFWS interprets "harm" and "kill" to include loss of eggs or nestlings due to abandonment or reduced attentiveness by one or both adults as a result of disturbance by human activity, as well as physical destruction of an occupied nest.

The conservation concerns are the result of population declines - naturally or human-caused, small ranges or population sizes, threats to habitat, or other factors. Although there are general patterns that can be inferred, there is no single reason why any species was is on the list. Habitat loss is believed to be the major reason for the declines of many species. When considering potential impacts to migratory birds the impact on habitat, including: 1) the degree of fragmentation/connectivity expected from the proposed project relative to before the proposed project; and 2) the fragmentation/connectivity within and between habitat types (e.g., within nesting habitat or between nesting and feeding habitats. Continued private land development, surface disturbing actions in key habitats (e.g. riparian areas) and the proliferation of roads, pipelines, powerlines and trails are local factors that reduce habitat quality and quantity for many species.

The Glenwood Springs Field Office is within the Southern Rockies/Colorado Plateau Bird Conservation Region (BCR). The 2008 list of Birds of Conservation include the following: Gunnison Sage-Grouse (*Centrocercus minimus*), American Bittern (*Botaurus lentiginosus*), Bald Eagle (*Haliaeetus leucocephalus*), Ferruginous Hawk (*Buteo regalis*), Golden Eagle (*Aquila chrysaetos*), Peregrine Falcon (*Falco peregrines*), Prairie Falcon (*Falco mexicanus*), Snowy Plover (*Charadrius alexandrinus nivosus/tenuirostris*), Mountain Plover (*Charadrius montanus*), Long-billed Curlew (*Numenius americanus*), Yellow-billed Cuckoo (*Coccyzus americanus*), Burrowing Owl (*Athene cunicularia*), Lewis's Woodpecker (*Melanerpes lewis*), Willow Flycatcher (*Empidonax traillii*), Gray Vireo (*Vireo vicinior*), Pinyon Jay (*Gymnorhinus cyanocephalus*), Juniper Titmouse (*Baeolophus ridgwayi*), Veery (*Catharus fuscescens*), Bendire's Thrasher (*Toxostoma bendirei*), Grace's Warbler (*Dendroica graciae*), Brewer's Sparrow (*Spizella breweri*), Grasshopper Sparrow (*Ammodramus savannarum*), Chestnut-collared Longspur (*Calcarius ornatus*), Black Rosy-Finch (*Leucosticte atrata*), Brown-capped Rosy-Finch (*Leucosticte australis*), and Cassin's Finch (*Carpodacus cassinii*).

The GSFO planning area provides both foraging and nesting habitat for a variety of migratory birds that summer, winter, or migrate through the area. The habitat diversity provided by the broad expanses of sagebrush, mixed mountain shrub, oakbrush, aspen, pinyon-juniper woodlands, other types of coniferous forests and riparian and wetland areas support many bird species. The Gray Vireo, Pinyon Jay, Juniper Titmouse, Lewis's Woodpecker and Grace's Warbler are characteristically found in pinyon/juniper woodlands and the Brewer's sparrow (*Spizella breweri*) is found within sagebrush habitats. Many species of raptors (red-tailed hawks, northern goshawks, Cooper's hawks, kestrels and owls) not on the Fish & Wildlife Service's Birds of Conservation Concern list also could occur in the area. Raptor surveys have not been conducted in the area.

Bald eagle (*Haliaeetus leucocephalus*). Bald eagles are increasing in numbers throughout their range and were removed from the federal threatened and endangered species list in 2007 however bald eagles are still protected under the Migratory Bird Treaty Act. Bald eagles are known to winter along portions of the Colorado, Eagle and Roaring Fork Rivers and its major tributaries. Wintering bald eagles are generally present from mid-November to mid-April. Large mature cottonwood trees along the rivers and their major tributaries are used as roosting and perching sites, and these waterways provide the main food sources of fish and waterfowl.

Upland habitats adjacent to these waterways are used as scavenging areas primarily for winter killed animals. Major threats include habitat loss, human disturbance and illegal shooting.

Parachute Creek (just to the east of the allotments) is mapped winter/winter foraging areas for Bald Eagles. Winter foraging areas are defined as areas frequented by wintering bald eagles between November 15 and March 15. These generally are large mapped areas radiating from preferred roosting sites along river corridors.

Environmental Consequences/Mitigation:

Birds generally do not respond to the presence of livestock but are impacted by improper grazing. Livestock grazing has the potential to: reduce ground cover and forage, degrade riparian areas, the spread of exotic species, accidentally destroy ground nests through trampling, and alter natural fire regimes. Grazing can also affect riparian habitats which are vitally important to most migratory bird species. The abundance of food, water, and shade which attracts migratory birds to these areas also attracts livestock. On a landscape scale the greater concern is its cumulative impact on the fragmentation of habitats.

Limited specific bird count or species data exists for the area. Generally responses of individual bird species to land management activities are often habitat and species specific. No intentional take of native bird species is anticipated under the proposed action. The effects of the proposed action on migratory bird species is expected to be minimal and isolated, but not enough to influence populations of migratory birds on a landscape level or cause clear direct or indirect impacts. Given current overall existing habitat conditions/trends (see riparian and vegetation sections), it is unlikely that livestock grazing as proposed (i.e. numbers, duration, terms/conditions attached), would reduce the extent or quality of habitat available for migratory bird breeding functions or movement.

Special Status Species - Plants (includes an analysis of Public Land Health Standard 4)

Affected Environment:

Federally Listed, Proposed or Candidate Plant Species

According to the latest species list from the U. S. Fish and Wildlife Service (<http://mountain-prairie.fws.gov/endspp/CountyLists/COLORADO.htm>), the following Federally listed, proposed, or candidate threatened or endangered plant species may occur within or be impacted by actions occurring in Garfield County: Colorado hookless cactus (*Sclerocactus glaucus*), Ute Ladies' Tresses orchid (*Spiranthes diluvialis*), Parachute beardtongue (*Penstemon debilis*), and DeBeque phacelia (*Phacelia submutica*).

There are no known occurrences or any suitable habitat for any listed, proposed or candidate plant species within or immediately adjacent to the project area.

BLM Sensitive Plant Species

BLM sensitive plant species with habitat and/or occurrence records in Garfield County include: adobe thistle (*Cirsium perplexans*), DeBeque milkvetch (*Astragalus debequaeus*), Naturita milkvetch (*Astragalus naturitensis*), Roan Cliffs blazing star (*Mentzelia rhizomata*), Piceance bladderpod (*Lesquerella parviflora*), and Harrington's penstemon (*Penstemon harringtonii*).

There is a documented occurrence of Roan Cliffs blazing star within 1 mile of the Riley Gulch allotment. Documented occurrences of adobe thistle are located within 2 miles of the Riley Gulch allotment. However, suitable habitat for these species does not seem to be found in either the Riley Gulch or Crawford & Kerlee allotments and neither these nor any other BLM sensitive species have been found within these allotments.

Environmental Consequences/Mitigation:

Federally Listed, Proposed or Candidate Plant Species

Due to the absence of any known occurrences or suitable habitat for any listed, proposed or candidate plant species, the proposed action should have “No Effect” on these species.

BLM Sensitive Plant Species

Due to the absence of any known occurrences or suitable habitat for any BLM Sensitive plant species within the Riley Gulch or Crawford & Kerlee allotments, the proposed action should have no impact on these species.

Analysis on the Public Land Health Standard 4 for Plant Special Status Species:

In 2004 the BLM Glenwood Springs Field Office assessed habitat conditions for special status species as part of the Rifle West Watershed Land Health Assessment. Representative occurrences of several special status plants were also visited to assess population conditions for these species. At the time of the assessment, both allotments were rated as achieving or moving towards achieving Standard 4 for special status species.

Special Status Species - Terrestrial Wildlife Species (includes an analysis of Public Land Health Standard 4

Federally Listed, Proposed or Candidate - Terrestrial Wildlife Species

According to the latest species list from the U. S. Fish and Wildlife Service (U.S. Fish and Wildlife Service. 2008), the following Federally listed, proposed, or candidate terrestrial wildlife species may occur within or be impacted by actions occurring within the GSFO (Table 1):

Table 1.

Terrestrial Wildlife Species	Habitat/Range	Eagle County	Garfield County	Mesa County	Pitkin County	Routt County
Black-footed Ferret (<i>Mustela nigripes</i>)	In Colorado habitat includes the eastern plains, the mountain parks and the western valleys. Specifically grasslands or shrublands that supported some species of prairie dog, the ferret’s primary prey.	X				
Canada lynx (<i>Lynx Canadensis</i>)	Mesic forests of lodgepole pine, subalpine fir, Engelmann spruce, and quaking aspen in the upper montane and subalpine zones, generally between 8,000 and 12,000 feet in elevation.	X	X	X	X	X
Mexican spotted owl (<i>Strix occidentalis</i>)	Mature montane forests, shady canyons, and steep canyons. The key components in montane forests are common to old-	X	X		X	

Terrestrial Wildlife Species	Habitat/Range	Eagle County	Garfield County	Mesa County	Pitkin County	Routt County
<i>lucida</i>)	growth forests: uneven-age stands with high canopy closure and tree density, fallen logs and snags.					
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	Mature riparian forests of cottonwoods and other large deciduous trees with a well-developed understory of tall riparian shrubs. Uncommon summer resident of Colorado.	X	X	X	X	X
Uncompahgre fritillary butterfly (<i>Boloria acrocnema</i>)	Patches of snow willow (<i>Salix spp.</i>) at high elevations.	X			X	

These species: their status, their distributions, habitat associations, and as appropriate their association to the project area is summarized below.

Black-footed Ferret (*Mustela nigripes*). Federally listed as endangered. Black-footed ferrets have ranged statewide but never have been abundant in Colorado. Their habitat included the eastern plains, the mountain parks and the western valleys – grasslands or shrub lands that supported some species of prairie dog, the ferret’s primary prey. Little is known about their natural history. They mate in early spring and give birth to a litter of three or four mouse-sized pups after a seven-week gestation period. Black-footed ferrets are reported to be killed. They are susceptible to distemper, predators like owls and coyotes, and vehicles. It is assumed that plowing for agriculture and programs to eradicate prairie dogs have driven the black-footed ferret to the verge of extinction. State and federal biologists have established two major black-footed ferret colonies: one at Coyote Basin (Colorado-Utah border west of Rangely) and another at the BLM’s Wolf Creek Management Area southeast of Dinosaur National Monument (CDOW 2009). No occupied habitat for this species occurs within the area of the proposed action so this species is not considered further.

Canada Lynx (*Lynx canadensis*). Federally listed as threatened. Canada lynx (*Lynx canadensis*) was listed as a federally threatened species, effective April 24, 2000 (Federal Register Volume 65, No. 58). Canada lynx occupy high-latitude or high-elevation coniferous forests characterized by cold, snowy winters and an adequate prey base (Ruggiero et al. 1999). The preferred prey of Canada lynx throughout their range is the snowshoe hare (*Lepus americanus*). In the western United States, lynx are associated with mesic forests of lodgepole pine, subalpine fir, Engelmann spruce, and quaking aspen in the upper montane and subalpine zones, generally between 8,000 and 12,000 feet in elevation. Although snowshoe hares are the preferred prey in Colorado, lynx in also feed on other species such as the mountain cottontail (*Sylvilagus nuttallii*), pine squirrel (*Tamiasciurus hudsonicus*), and blue grouse (*Dendragapus obscurus*).

The U.S. Forest Service (USFS) has mapped suitable denning, winter, and other habitat for lynx within the White River National Forest (WRNF). The mapped suitable habitat in the WRNF comprises several areas known as Lynx Analysis Units (LAUs). Lynx analysis units (LAUs) are management areas that contain suitable lynx habitat and approximate the size of a female home range. Several LAUs border BLM lands however no areas large enough to be considered LAUs occur within the GSFO. BLM lands within the GSFO area generally support the movement of

lynx dispersing to a new area or, potentially, moving to lower elevations during severe winter weather in search of prey. The allotments do not contain mapped habitat or mapped linkage areas so this species is not considered further.

Mexican Spotted Owl (*Strix occidentalis*). Federally listed as endangered. This owl nests, roosts, and hunts in mature coniferous forests in canyons and foothills. The only extant populations in Colorado are in the Pikes Peak and Wet Mountain areas of south-central Colorado and the Mesa Verde area of southwestern Colorado. Because no known occurrences or suitable habitats are present in the project vicinity, this species is not considered further.

Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*). Candidate for Federal listing. This secretive species occurs in mature riparian forests of cottonwoods and other large deciduous trees with a well-developed understory of tall riparian shrubs. Western cuckoos breed in large blocks of riparian habitats, particularly woodlands with cottonwoods (*Populus fremontii*) and willows (*Salix* sp.). A few sightings of yellow-billed cuckoo have occurred in western Colorado along the Colorado River near Grand Junction (USFWS 2009b). Riparian areas in the project area do not provide suitable habitat for this species due to the patchy nature of the stands and the general lack of a tall-shrub understory. Since occurrence is unlikely this species is not considered further.

BLM Sensitive - Terrestrial Wildlife Species

According to the latest *Colorado BLM State Director's Sensitive Species List (Animals and Plants) June, 2000*, the following terrestrial wildlife species may occur within or be impacted by actions occurring within the GSFO (Table 3):

Table 3.

Name	Habitat/Range	Habitat Potential Present / Absent
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>) and Fringed myotis (<i>Myotis thysanodes</i>)	Occur as scattered populations at moderate elevations on the Western Slope, along the foothills of the Front Range and the mesas of southeastern Colorado. Maximum elevation is 7,500 feet. Breeds and roosts in caves, trees, mines, and buildings; hunts over pinyon-juniper, montane conifer, and semi-desert shrubland habitats. Known occurrences - Potential in caves, mines or trees	Present
Northern goshawk (<i>Accipiter gentilis</i>)	Resident in foothills and mountains and occasional in migration and winter at lower elevations. Predominantly uses mature stands of aspen, and pines (ponderosa and lodgepole). Uncommon - seasonal	Present
Goldeneye, Barrow's (<i>Bucephala islandica</i>)	Rare winter resident and spring/fall migrant in lowlands and mountains; a few breed in the northern mountains. Uncommon - seasonal	Absent
Ibis, white-faced (<i>Plegadis chihi</i>)	Inhabits wet meadows, marsh edges and reservoir shorelines. Very rare, non-breeding, summer migrant to western Colorado valleys and mountain lakes. Main breeding area is in the San Luis valley.	Absent
Greater sage grouse (<i>Centrocercus urophasianus</i>)	Resident of relatively large, open sagebrush flats or rolling sagebrush hills. Uncommon and unlikely in this part of the GSFO or associated habitats	Absent

The following paragraphs address species with a habitat potential to be present in the project area.

Fringed Myotis (*Myotis thysanodes*) and Townsend's Big-eared Bat (*Plecotus townsendii*).

Occur as scattered populations at moderate elevations on the Western Slope of Colorado. Habitat associations are not well defined. Both of these bats will forage over water and along the edge of vegetation (pinyon-juniper woodlands, montane conifer woodlands, semi-desert shrublands) for aerial insects. Although they commonly roost in caves, rock crevices, mines, or buildings, they also may roost in tree cavities. Both species are widely distributed and usually occur in small groups. The animals roost in rock crevices, caves, mines, buildings and trees. Townsend's big-eared bat is not very abundant anywhere in its range and this is attributed to patchy distribution and limited availability of suitable roosting habitat (Gruver, J.C. and D.A. Keinath 2006).

Northern Goshawk (*Accipiter gentilis*). The Northern Goshawk is the largest North American accipiter. The goshawk is a forest habitat generalist that uses a variety of forest type, forest ages, structural conditions and successional stages. Goshawks prey on small-medium sized birds and mammals. It breeds in coniferous deciduous and mixed forests. The nest is typically located on a northerly aspect in a drainage or canyon and is often near a stream. Nest areas contain one or more stands of large, old trees with a dense canopy cover. A goshawk pair occupies its nest area from March until late September. The nest area is the center of all movements and behaviors associated with breeding from courtship through fledging.

Environmental Consequences/Mitigation:

Federally Listed, Proposed or Candidate - Terrestrial Wildlife Species.

No U.S. Fish & Wildlife Service designated critical habitat for any of the above terrestrial wildlife species is found within the GSFO. No occupied habitat is present within the vicinity that could be directly or indirectly impacted by the proposed action. The areas where livestock grazing is being renewed, the allowable number of animal unit months and periods of use, along with the land health standards and terms/conditions are compatible with continuing to maintain adequate habitat conditions (suitability and connectivity) for Federally Listed, Proposed or Candidate Terrestrial wildlife species that may pass through the allotments. Due to the absence of any known occurrences, suitable habitat or landscape linkage for any listed, proposed or candidate terrestrial wildlife species, the proposed action should have "No Effect" on these species.

BLM Sensitive Terrestrial Wildlife Species.

Fringed Myotis and Townsend's Big-eared Bats. Distribution seems is likely to be locally determined by availability of roosts, such as caves, mines, tunnels, crevices and masonry structures with suitable temperatures. No bat roosts or hibernaculum have been documented within the area of the proposed action.

The greatest threats in order of priority to Townsend's Big-eared Bat (and likely Fringed Myotis) are the: (a) loss/modification/disturbance of roosting habitat resulting from uninformed closure of abandoned mines, recreation and renewed mining at historical sites; (b) loss/modification/disturbance of foraging habitat resulting from elimination of forest canopy,

elimination or alteration of wetland habitat and conversion of native shrub and grasslands to urban or agricultural uses; and (c) exposure to environmental toxins (Gruver, J.C. and D.A. Keinath 2006). It is plausible that over-grazing by livestock could contribute to the decline of the functionality of foraging habitat for bats. The allowable number of animal unit months and periods of use, along with land health standards and terms/conditions; should continue to maintain adequate habitat conditions (suitability and connectivity) for bats.

Northern Goshawk. It is plausible that over-grazing by livestock could contribute to the decline of the functionality of the habitat. A reduction in forage availability could limit prey population density. However no nest sites are known to occur within the area of the proposed action and nesting birds are unlikely in the predominant habitat types. The allowable number of animal unit months and periods of use, along with land health standards and terms/conditions; should continue to maintain adequate habitat conditions (suitability and connectivity) for Northern goshawks.

Analysis on the Public Land Health Standard 4 for Terrestrial Wildlife Special Status Species: (partial, see also Plants and Aquatic Wildlife): BLM utilizes *standards* (conditions needed to sustain public land health) and *guidelines* (management tools, methods, strategies, and techniques designed to maintain or achieve healthy public lands as defined by the standards) to assess and manage livestock grazing (BLM 1997). In 2004, a land health assessment was conducted on the landscape which encompasses this proposed action. This analysis concurs with the 2004 land health assessment. Causal factors affecting terrestrial wildlife special status species include: natural gas development, lack of fire - juniper encroachment, historic domestic livestock grazing combined with heavy big game winter use, drought and dominance of vegetation by undesirable/weedy species – most notably cheatgrass (BLM 2004). Current livestock grazing was not identified as an issue. The renewal of the grazing permit may cumulatively contribute to the standard not being achieved but independently should not prevent Standard 4 from being met.

Special Status Species - Aquatic Wildlife Species (includes an analysis of Public Land Health Standard 4

Federally Listed, Proposed or Candidate - Aquatic Wildlife Species

According to the latest species list from the U. S. Fish and Wildlife Service (U.S. Fish and Wildlife Service. 2008), the following Federally listed, proposed, or candidate aquatic wildlife species may occur within or be impacted by actions occurring within the GSFO (Table 2):

Aquatic Wildlife Species	Habitat/Range	Eagle County	Garfield County	Mesa County	Pitkin County	Routt County
Greenback cutthroat trout (<i>Oncorhynchus clarki stomias</i>)	Cold, clear, gravelly headwater streams and mountain lakes. Originally found in the mountain and foothill areas of the Arkansas and South Platte river systems in Colorado and part of Wyoming.	X	X	X	X	X
Bonytail (<i>Gila elegans</i>)	Large, fast-flowing waterways of the Colorado River system.	X	X	X	X	X

Aquatic Wildlife Species	Habitat/Range	Eagle County	Garfield County	Mesa County	Pitkin County	Routt County
Colorado pikeminnow (<i>Ptychocheilus lucius</i>)	Swift flowing muddy rivers with quiet, warm backwaters of the Green, Yampa, White, Colorado, Gunnison, San Juan, and Dolores rivers.	X	X	X	X	X
Humpback chub (<i>Gila cypha</i>)	Deep, fast-moving, turbid waters often associated with large boulders and steep cliffs such as canyon-bound portions of the Colorado River system such as Black Rocks and Westwater canyons.	X	X	X		X
Razorback sucker (<i>Xyrauchen texanus</i>)	Deep, clear to turbid waters of large rivers and reservoirs over mud, sand or gravel. Currently low numbers in the Yampa, Colorado and Gunnison rivers. Reproducing populations remain only in the Colorado River near Grand Junction.	X	X	X	X	X

These species: their status, their distributions, habitat associations, and as appropriate their association to the project area is summarized below.

Greenback Cutthroat Trout (*Oncorhynchus clarki stomias*). Federally listed as threatened. The greenback cutthroat trout was not identified on the USFWS list for Garfield County; however, recent surveys have identified a population in Cache Creek, located several drainages east of the project area. The greenback is the subspecies of cutthroat trout native to the Platte River drainage on the Eastern Slope of Colorado, while the Colorado River cutthroat trout is the subspecies native to Garfield County and throughout the Western Slope of Colorado. Although the occurrence of greenbacks in Cache Creek and potentially elsewhere in the GSFO and WRNF areas is apparently the result of human intervention (e.g., sanctioned or *ad hoc* translocation of fish from the Eastern Slope), its status as threatened applies to Western Slope populations. However, because drainages within the project area do not support this species, it is not considered further.

These four species of Federally listed big-river fishes occur within the Colorado River drainage basin downstream from the project area. The main factor identified as potentially affecting these fishes is the consumptive use of water from the Colorado River or its tributaries, resulting in decreased flows and adverse modification of critical habitat.

Bonytail (*G. elegans*). Federally listed as endangered. This large chub is a member of the minnow family. Their current distribution and habitat status are largely unknown due to its rapid decline prior to research into its natural history. Historically, bonytails were present in the Colorado River system, which includes the Yampa, Green, Colorado and Gunnison rivers. The bonytail is extremely rare in Colorado and no self-sustaining population exist throughout the Colorado River basin. Only one has been captured in the state since 1980. Restoration stocking of bonytail in the wild to develop adult populations is the priority recovery action in Colorado.

Colorado Pikeminnow (*Ptychocheilus lucius*). Federally listed as endangered. The Colorado pikeminnow (formerly Colorado squawfish) Colorado pikeminnow were once abundant in the main stem of the Colorado River and most of its major tributaries in Colorado, Wyoming, Utah,

New Mexico, Arizona, Nevada, California and Mexico. Now, they exist primarily in the Green River below the confluence with the Yampa River, the lower Duchesne River in Utah, the Yampa River below Craig, Colo., the White River from Taylor Draw Dam near Rangely downstream to the confluence with the Green River, the Gunnison River in Colorado, and the Colorado River from Palisade, Colo., downstream to Lake Powell. Biologists believe Colorado pikeminnow populations in the upper Colorado River basin are now relatively stable and in some areas may even be growing. Designated Critical Habitat for the Colorado pikeminnow includes the Colorado River and its 100-year floodplain west (downstream) from the town of Rifle.

Humpback Chub (*Gila cypha*). Federally listed as endangered. The nearest known habitat for the humpback chub and bonytail is within the Colorado River approximately 70 miles downstream from the project area. Only one population of humpback chub, at Black Rocks west of Grand Junction, is known to exist in Colorado.

Razorback Sucker (*Xyrauchen texanus*). Federally listed as endangered. The razorback sucker was once widespread throughout most of the Colorado River Basin from Wyoming to Mexico. In the upper Colorado River Basin, they are now found only in the upper Green River in Utah, the lower Yampa River in Colorado and occasionally in the Colorado River near Grand Junction. Because so few of these fish remain in the wild, biologists have been actively raising them in hatcheries in Utah and Colorado and stocking them in the Colorado River. Designated critical habitat for the razorback sucker includes the Colorado River and its 100-year floodplain west (downstream) from the town of Rifle.

BLM Sensitive - Aquatic Wildlife Species

According to the latest *Colorado BLM State Director's Sensitive Species List (Animals and Plants) June, 2000*, the following aquatic wildlife species may occur within or be impacted by actions occurring within the GSFO (Table 4):

Table 4.

Name	Habitat	Habitat Potential Present / Absent
Northern leopard frog (<i>Rana pipiens</i>)	Wet meadows and the banks and shallows of marshes, ponds, glacial kettle ponds, beaver ponds, lakes, reservoirs, streams, and irrigation ditches.	Present
Flannelmouth sucker (<i>Catostomas latipinnis</i>)	Generally restricted to rivers and major tributaries.	Absent nearby in Colorado River
Roundtail chub (<i>Gila robusta</i>)	Generally restricted to rivers and major tributaries.	Absent nearby in Colorado River
Colorado River cutthroat trout (<i>Oncorhynchus clarki pleuriticus</i>)	Occurs in clear, cool headwaters streams with coarse substrates, well-distributed pools, stable streambanks, and abundant stream cover.	Present in Parachute Creek ½ mile east

The following paragraphs address species with a habitat potential to be present in the project area.

Leopard Frog (*Rana pipiens*). Northern leopard frogs are generally found between 3,500 to 11,000 feet in Colorado, in wet meadows and in shallow lentic habitats. Northern leopard frogs

require year 'round water sources, deep enough to provide ice free refugia in the winter. The presence of northern leopard frogs has been associated with sites with more herbaceous cover as opposed to sites with earlier successional stages of emergent vegetation. Leopard frogs feed primarily on emergent adults of aquatic insects or on terrestrial insects attracted to the water. Within the GSFO, this species has been documented in various locales. Suitable habitat is abundant within the GSFO, and is located where quality riparian vegetation exists in conjunction with reliable perennial water sources. Larger populations of this species have been documented northwest of King Mountain within the small drainage that feeds and exits King Mountain (Ligon) Reservoir, June Creek and East Divide Creek south of Silt, Colorado, and in portions of the Rifle Creek watershed north of Rifle, Colorado. Population declines have been attributed to habitat alteration and loss, the effects of introduced bullfrogs and gamefish, aerial pesticide applications, and droughts that limit the availability of year 'round water

Flannemouth Sucker (*C. latipinnis*), and Roundtail Chub (*Gila robusta*). These native non-game fishes generally have habitat requirements similar to those of the Federally listed big-river fishes described above. Both the flannemouth sucker and roundtail chub are known to occur in the Colorado River. They are potentially affected by major activities that alter water quality or flow regimes in Colorado River tributaries. The main factor identified as potentially affecting these fishes is the consumptive use of water from the Colorado River or its tributaries, resulting in decreased flows and adverse modification of critical habitat.

Colorado River cutthroat trout (*Oncorhynchus clarki pleuriticus*). Colorado River cutthroat trout (CRCT) are one of three subspecies of native trout found in Colorado. This Conservation Strategy has been initiated by the wildlife agencies in Colorado, Utah and Wyoming to reduce threats to CRCT. CRCT have hybridized with non-native salmonids in many areas, reducing the genetic integrity of this subspecies (CRCT Coordination Team 2006).

This species has been documented as occurring within the mainstem of Parachute Creek on private lands. It is likely that all of the perennial waters capable of harboring fish historically contained this native trout species. Competition with non-native salmonids including rainbow, brook, and brown trout is the major factor contributing to the absence/decline of this native species. Riparian habitats in and adjacent to Parachute Creek have not been assessed due to private land. However, based on limited visual observations it appears that at least the upper portions of the creek have habitat capable of supporting this species.

Environmental Consequences/Mitigation:

Federally Listed, Proposed or Candidate - Aquatic Wildlife Species.

Big-river Fishes. As large herbivores (e.g., elk, deer, and cattle) walk along streambanks or across streams, the animals' weight can cause shearing that result in a breakdown of the streambank and subsequent widening of the stream channel. It also exposes bare soil, increasing the risk of erosion of the streambank. Animals walking along the streambank may increase the amount of soil exposed to the erosive effects of water by breaking or cutting through the vegetation and exposing roots and/or soil. Excessive trampling causes soil compaction, resulting in decreased vegetative cover, less vigorous root systems, and more exposure of the soil surface to erosion (Burton, Cowley, and Smith 2008). Soil detachment and sediment transport are likely to occur during spring runoff from snowmelt and during short-duration high intensity

thunderstorms. Allowing prolonged use within the creek bottoms increases the potential for increased sediment loading into perennial waters.

The four species of Federally listed big-river fishes are endemic to the Colorado River basin and reside almost exclusively within the mainstem Colorado River and its periodically flooded side channel impoundments and backwater habitats approximately 4 miles away. All of these fish are all well adapted to the high sediment loads traditionally carried by the Colorado River and its larger tributaries. In general, periodic to frequent influxes of sediment are important in the creation and maintenance of important microhabitats for these species. Movement and redistribution of sediments helps to create and maintain backwater habitats important to many life stages of these fish. Periodic inundation of floodplain areas with water/sediment provides optimal seedbed areas for native cottonwood regeneration to occur.

The proposed action does not directly affect the Colorado River and as such will have little to no direct effect on these species or their habitat. Any resultant increased sediment loading into ephemeral drainages - and eventually the Colorado River - likely will have negligible indirect and off-site negative impact to these species or their habitats. Due to the: (a) absence of any known occurrences within the area, (b) lack of suitable habitat for any listed, proposed or candidate aquatic wildlife species within the area and (c) negligible indirect and off-site negative impact the proposed action; it is concluded the proposed action will likely have “No Effect” on these species.

BLM Sensitive - Aquatic Wildlife Species.

Leopard Frog. Livestock could possibly trample adults and eggs at wetland margins and remove riparian vegetation. Water quality and siltation could affect insect and frog reproduction. However no frogs are known to occur within the area of the proposed action and their presence is unlikely due to the distance from known populations. If the area is used in the future the allowable number of animal unit months and periods of use, along with the land health standards and terms/conditions are compatible with continuing to maintain adequate wetland/riparian habitat conditions (suitability and connectivity) for to ensure Leopard frogs are maintained at viable population levels commensurate with the species and habitat's potential.

Colorado River cutthroat trout. Parachute Creek lies ½ mile east of the allotments and contains CRCT. Increases in sediments can impact resident cutthroat trout by covering spawning/rearing areas, thereby reducing the survival of fish embryos and juveniles. Excessive sedimentation can also fill in important pool habitats reducing their depth and making them less usable by cutthroat and other aquatic organisms. Pool habitats are important as over-summer and over-winter thermal refugia areas for these fish. Over the long-term, increased sediment loads reduce primary production in streams (USDA Forest Service 2000). Reduced insect productivity results from excessive sediment that fills in the interstitial spaces between stream substrates needed by these aquatic invertebrates. This loss in stream productivity can disrupt the food chain and result in reduced food sources for resident cutthroat

Data from land health assessments and analysis presented in other sections of this EA, reasonably conclude that the proposed action is not expected to indirectly and off-site contribute sediments to Parachute Creek due to the distances involved and the intervening upland and

riparian vegetation. So no impacts are expected in species recruitment and overall productivity in Parachute Creek.

Flannelmouth suckers and Roundtail chubs. The impacts to Flannelmouth suckers and Roundtail chubs are ecologically similar Colorado River endangered fishes described above. These species are endemic to the Colorado River basin and reside within the mainstem Colorado River and its major tributary rivers/streams. These fish are all well adapted to the high sediment loads traditionally carried by the Colorado River and its larger tributaries. Any indirect – off-site increased sediment loading into ephemeral drainages and eventually the Colorado River resulting from the proposed action would have minimal negative impact to these species or their habitats.

Analysis on the Public Land Health Standard 4 for Aquatic Wildlife Special Status Species: (partial, see also Plant and Terrestrial Wildlife): BLM utilizes *standards* (conditions needed to sustain public land health) and *guidelines* (management tools, methods, strategies, and techniques designed to maintain or achieve healthy public lands as defined by the standards) to assess and manage livestock grazing (BLM 1997). In 2004, a land health assessment was conducted on the landscape which encompasses this proposed action. At that time the main factor identified as affecting these fish is the depletion of water, resulting in decreased flows and adverse modification of critical habitat. Based on overall habitat condition within the landscape area, Standard 4 was being achieved (BLM 2004). The proposed action does not result in decreased flows or adverse modification of critical habitat and should have no measurable impact on the areas ability to continue to meet standard 4 for aquatic wildlife.

Water Quality, Surface & Ground (includes an analysis of Public Land Health Standard 5)

Affected Environment: The Crawford/Kerlee and Riley Gulch Allotments are located roughly northwest and west of the Town of Parachute and north of the Colorado River and I-70. The Crawford and Kerlee Allotment is within an 18,410 acre unnamed 6th field watershed that contains several unnamed ephemeral drainages that are directly tributary to Parachute Creek to the east. The Riley Gulch Allotment is within a 19,804 acre unnamed 6th field watershed that contains the ephemeral Riley Gulch and its tributaries that are directly tributary to Parachute Creek to the northeast.

According to the *Stream Classifications and Water Quality Standards* (CDPHE, Water Quality Control Commission, Regulation No. 37) list, the drainages mentioned above are within the Lower Colorado River Basin segment 11h that includes the mainstem of Parachute Creek and all tributaries to its confluence with the Colorado River. This segment has been classified aquatic life cold 2, recreation P and agriculture. The aquatic life cold 2 classification indicates that these waters are not capable of sustaining a wide variety of cold water biota. Recreation class P indicates that these waters have the potential to be used for primary contact recreation. In addition, the agriculture designation indicates that these waters are used for agricultural purposes that include irrigation and livestock use.

The drainages mentioned above are not currently listed on the State of Colorado’s *303(d) List of Water Quality Limited Segments Requiring TMDLS* (CDPHE, Water Quality Control Commission, Regulation No. 93) or the *Monitoring and Evaluation List* (CDPHE, Water Quality Control Commission, Regulation No. 94) as waterbodies suspected to have water quality problems. At this time, very limited current water quality data is available for the drainages mentioned above.

Environmental Consequences/Mitigation: Grazing activities could result in soil compaction and displacement that increase the likelihood of erosional processes, especially on steep slopes and areas devoid of vegetation. Soil detachment and sediment transport are likely to occur during runoff events associated with spring snowmelt and short-duration high intensity thunderstorms. In addition, the number of livestock in the area would increase the amount of feces present in close proximity to nearby drainages and could lead to stream bank trampling. The introduction of livestock feces to waterbodies often leads to water quality degradation by increasing fecal coliform bacteria levels and often leads to algal blooms which increase water temperatures. However, based on the lack of perennial drainages of concern in the allotment and good vegetative cover, the potential for measureable water quality degradation in nearby perennial drainages of concern (i.e. Parachute Creek) associated with the proposed activities is minimal.

Analysis on the Public Land Health Standard 5 for Water Quality: In 2004 the BLM Glenwood Springs Field Office assessed water quality conditions in the area as part of the Rifle West Watershed Land Health Assessment. During the assessment, limited water quality parameters were collected but suggested overall good water quality. Conductivity in Riley Gulch and Parachute Creek appeared relatively high at times but could be attributed to existing geologic conditions. Based on the period of use, good vegetative cover and the lack of perennial drainages of concern within these allotments, the proposed activities would not likely prevent Standard 5 for Water Quality from being met.

WETLANDS and RIPARIAN ZONES (includes an analysis on Standard 2)

Affected Environment: Affected Environment: The table below lists known riparian areas and their Proper Functioning Condition (PFC) assessment for each allotment:

Allotment	Riparian Area Name	Approximate Miles	Year Assessed	Condition Rating
Riley Gulch	Riley Gulch Lower Reach	0.9	2004	Functioning at Risk Downward Trend
	Riley Gulch Upper Reach	1.0	2004	Proper Functioning Condition
Crawford & Kerlee	None present			

The Proper Functioning Condition assessments above did not raise or identify any issues with livestock grazing. The functioning at risk rating was due to road issues (encroachment, poor culvert placement). There is no current monitoring, inventory or documented field observations for the affected riparian areas other than what is discussed above.

Environmental Consequences/Mitigation:

Under the proposed grazing schedule, the Riley Gulch Allotment would be grazed for a 34 day period in the late spring. The duration and period of use would allow for ample grazing rest and recovery time for riparian plant species. In consideration of this and the condition of riparian zones described in the Affected Environment, renewal of the grazing permit is not expected to cause adverse impacts to riparian zones. The condition of riparian areas would be maintained or improved. There would be no cumulative impacts.

There would be no impacts to riparian resources on the Crawford & Kerlee Allotment since they are not present within the allotment.

Analysis on the Public Land Health Standard 2 for riparian systems: The proposed action would not result in failure to achieve this standard and should maintain land health conditions for riparian systems.

Other Affected Resources

In addition to the critical elements, the resources presented in Table 2 were considered for impact analysis relative to the proposed action and no action alternative. Resources that would be affected by the proposed action and no action alternative are discussed below.

Table 2. Other Resources Considered in the Analysis.			
<i>Resource</i>	<i>NA or Not Present</i>	<i>Present and Not Affected</i>	<i>Present and Affected</i>
Access and Transportation		X	
Cadastral Survey		X	
Fire/Fuels Management	X		
Forest Management	X		
Geology and Minerals	X		
Law Enforcement		X	
Paleontology	X		
Noise	X		
Range Management			X
Realty Authorizations		X	
Recreation		X	
Socio-Economics		X	
Soils*			X
Vegetation*			X
Visual Resources		X	
Wildlife, Aquatic*			X
Wildlife, Terrestrial*			X

*Public Land Health Standard

Soils (includes an analysis of Public Land Health Standard 1)

Affected Environment: According to the *Soil Survey of Rifle Area, Colorado: Parts of Garfield and Mesa Counties* (USDA 1985), the Crawford/Kerlee and Riley Gulch Allotments contain three different soil map units that can be identified by the numerical code assigned by the soil

survey. These soil map units are identified as having moderate to severe erosion hazard potential. In addition, a small percentage of these allotments are mapped as CSU 4 (Controlled Surface Use) for erosive soils on slopes greater than 30% while a high percentage of these allotments are mapped NSO 15 (No Surface Occupancy) for slopes greater than 50% regardless of soil type. Following is a brief description of the three soil map units found within the two allotments.

- Parachute loam (52) – This moderately deep, well drained soil is found on mountainsides at elevations ranging from 7,500 to 8,700 feet and on slopes of 25 to 65 percent. Parent material for this soil is sandstone. Surface runoff for this soil is medium and erosion hazard is moderate. Primary uses for this soil include wildlife habitat and limited grazing.
- Rock outcrop-Torriorthents complex (62) – This soil map unit consists of bedrock and soils of variable depth occurring on slopes of 50 to 80 percent. The majority of the complex is rock outcrop which consists primarily of Green River shale. The remainder of the complex is Torriorthents which are shallow to moderately deep, clayey to loamy soils containing gravel, cobbles, and stones. Surface runoff is rapid to very rapid and erosion hazard is moderate to severe. This complex is used primarily for limited grazing.
- Torriorthents-Camborthids-Rock outcrop complex, steep (66) – This soil map unit consists of sandstone and shale bedrock and soils of variable depth occurring on slopes of 15 to 70 percent. About 45 percent of this complex is Torriorthents, 20 percent is Camborthids, and 15 percent is Rock outcrop. The Camborthids occur on the lower toe slopes on foothills and mountainsides while the Torriorthents are found on the foothills and mountainsides below the Rock outcrop. The Torriorthents are shallow to moderately deep, and clayey to loamy with gravel, cobbles, and stones. The Camborthids are shallow to deep and clayey to loamy. Rock outcrop primarily consists of Mesa Verde sandstones and Wasatch shales with occasional basaltic boulders and stones. This complex is characterized by moderate to severe erosion hazard. Primary uses for this complex include grazing, wildlife habitat, and recreation.

Environmental Consequences/Mitigation: Grazing activities would result in soil compaction and displacement that increase the likelihood of erosional processes, especially on steep slopes and areas devoid of vegetation. Soil detachment and sediment transport are likely to occur during runoff events associated with spring snowmelt and short-duration high intensity thunderstorms. Based on the scheduled period of use, good vegetative cover, and the lack of perennial drainages of concern within these allotments, the potential for measureable sediment transport and negative soil impacts is minimal.

Analysis on the Public Land Health Standard 1 for Upland Soils: In 2004 the BLM Glenwood Springs Field Office assessed area conditions as part of the Rifle West Watershed Land Health Assessment. During that time, both allotments were rated as achieving or moving towards achieving standards. Based on the period of use in the proposed action and good vegetative cover, the proposed activities would not likely prevent Standard 1 from being met.

Vegetation (includes an analysis of Public Land Health Standard 3)

Affected Environment:

The lower portion of the Riley Gulch allotment consists of moderately sloped foothills above Parachute Creek. The upper part of the Riley Gulch allotment straddles several steep, north-facing ridges and ravines. Vegetation in the lower portion of the allotment is dominated by big sagebrush and black sage with Pinyon-juniper woodlands. Upper portions of the allotment are dominated by mixed mountain shrublands and stands of Douglas-fir.

The Crawford & Kerlee allotment consists of steep northeastward-trending ridges and ravines. Vegetation on the south-facing slopes is dominated by big sagebrush and salt desert scrub. The north-facing slopes are dominated by Gambel oak/mixed mountain shrubs intermingled with patches of Douglas-fir trees. A small percentage of the Douglas-fir appears to have succumbed to disease and is dead or dying. Diversity and cover of perennial grasses is somewhat lower than expected on both allotments.

Environmental Consequences/Mitigation:

The proposed grazing schedule for the Riley Gulch allotment is from 5/13 to 6/15 which is one day shorter than the previous grazing schedule. The proposed grazing schedule for the Crawford & Kerlee allotment adds two days of trailing use from 10/29-10/30 to the previous permitted use from 5/1-6/15. Little or no livestock utilization has been noted in the few years when utilization or trend data has been collected on this allotment. Given the lack of utilization it is difficult to evaluate the effect of livestock grazing at the levels proposed. The grazing schedule does provide for some growing season rest which should allow adequate time to restore root reserves and provide for seed dissemination and seedling establishment. Also the Crawford & Kerlee allotment includes additional forage on private lands which should alleviate some of the growing season grazing pressure on vegetation. Renewal of the grazing permit is not expected to cause adverse impacts to vegetative health.

Analysis on the Public Land Health Standard for Plant Communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): In 2004, a formal land health assessment was conducted on the landscape which encompasses this proposed action. At that time, the Riley Gulch and Crawford & Kerlee Allotments were rated as achieving or moving towards achieving the Standard for plant communities on a site-specific basis. Fragmentation of vegetative communities at the landscape scale was a factor in failing to meet the Standard for animal communities. Fragmentation is a result of intensive oil and gas development within the landscape. Livestock grazing as proposed should not prevent Standard 3 from being met.

Wildlife, Terrestrial (includes an analysis of Public Land Health Standard 3)

Affected Environment:

The GSFO supports a wide variety of terrestrial wildlife species that summer, winter, or migrate through the area. The habitat diversity provided by the broad expanses of sagebrush, mixed mountain shrub, aspen, pinyon-juniper woodlands, other types of coniferous forests, and riparian/wetland areas support many species. The current condition of wildlife habitats varies across the landscape. Some habitat is altered by power lines, pipelines, fences, public recreation use, residential and commercial development, vegetative treatments, livestock and wild ungulate grazing, oil and gas development, and roads/trails. These factors have contributed to some degradation/fragmentation of habitat as well as causing disturbance to some species.

Reptiles

Reptile species most likely to occur include the western fence lizard (*Sceloporus undulatus*) and gopher snake (bullsnake) (*Pituophis catenifer*) in xeric shrublands or grassy clearings and the western terrestrial garter snake (*Thamnophis elegans*) along creeks. Other reptiles potentially present along creeks, although more commonly found at lower elevations than the site, are the milk snake (*Lampropeltis triangulum*) and smooth green snake (*Opheodrys vernalis*).

Birds

Passerine (perching) birds commonly found in the area include the: American robin (*Turdus migratorius*), Pinyon jay (*Gymnorhinus cyanocephalus*) western scrub-jay (*Aphelocoma californica*), and black-billed magpie (*Pica pica*). Two gallinaceous species, the wild turkey (*Meleagris gallopavo*) and the Dusty grouse (*Dendragapus obscurus*), are found here.

Birds of prey (eagles, falcons, hawks, and owls) may migrate through the area or nest in cottonwoods, conifers, or very tall oaks, while the numerous songbirds and small mammal populations provide the primary prey base. Common raptor species in the area include the: red-tailed hawk (*Buteo jamaicensis*), golden eagle (*Aquila chrysaetos*) American kestrel (*Falco sparverius*), great horned owl (*Bubo virginianus*), Cooper's hawk (*Accipiter cooperii*), and sharp-shinned hawk (*A. striatus*).

Numerous streams, rivers, reservoirs, ponds, and associated riparian vegetation provide habitat for a wide variety of waterfowl and shorebirds. Common species include: great blue herons (*Ardea Herodias*), Canada geese (*Branta canadensis*), mallards (*Anas platyrhynchos*), pintails (*A. acuta*), gadwalls (*A. strepera*), and American wigeon (*A. americana*) are common.

Mammals

Numerous small mammals reside within the planning area, including ground squirrels (*Spermophilus* spp.), chipmunks (*Neotamias* spp.), rabbits (*Sylvilagus* spp.), skunks (*Mephitis mephitis*), and raccoons (*Procyon lotor*). Many of these small mammals provide the main prey for raptors and larger carnivores. These species are most likely to occur along the drainages, near the margins of dense oakbrush, in pinyon-juniper woodland, or in the small area of aspen and spruce/fir. Larger carnivores expected to occur include the bobcat (*Lynx rufus*) and the coyote (*Canis latrans*). Black bears (*Ursus americanus*) make use of oaks and the associated chokecherries and serviceberries for cover and food, while mountain lions (*Felis concolor*) are likely to occur during seasons when mule deer (*Odocoileus hemionus*) are present.

Big Game. The mule deer (*Odocoileus hemionus*) is a recreationally important species that are common throughout suitable habitats in the region. Another recreationally important big game ungulate (hoofed animal), the Rocky Mountain elk (*Cervus elaphus nelsonii*), is also present. Mule deer and elk usually occupy higher elevations, forested habitat, during the summer and then migrate to sagebrush-dominant ridges and south-facing slopes at lower elevation in the winter.

Mule Deer. The proposed action lies within CDOW game management unit (GMU) 32. No finalized DAU Plan exists for DAU-41. The current population objective for deer in DAU D-41

is 16,500 animals. The current population estimate for this DAU is approximately 10,980 animals. Deer numbers in D-41 are significantly below population objectives. Populations were historically higher in the 1960's and early 1980's. Since the severe winters of 1983-84, this herd has continued to steadily decline. A variety of factors have likely contributed to this decline including intensive natural gas development, drought, increased roads, powerlines, residential and commercial developments, increased public recreation, Interstate 70, and limited winter range among others (BLM 2004).

Elk. The Yellow Creek Elk Herd Data Analysis Unit Plan - DAU E-10 indicates the 2004 post hunt elk population to be an estimated at 8,700 elk within GMUs: 21, 22, 30, 31 and 32. The CDOW recommended population objective for elk is 8,000 – 10,000. The elk population in DAU E-10 was relatively low in the 1950's and has shown steady growth in recent years. The population peaked in 2001 at 10,725 elk, and is now approximately 8,700 elk (CDOW 2006).

BLM lands provide a large portion of the undeveloped winter range available to deer and elk. The GSFO's Resource Management Plan (RMP) allocated existing forage proportionately to livestock and big game, the criterion being active preference for livestock and 5-year average demand for big game. The RMP allocated all available forage on allotments in big game winter range -unavailable to livestock because of stocking rate limitations or slope restrictions - to big game. Summer range was not limiting to big game; therefore, allocating forage beyond CDOW population goals in summer range was deemed to be unnecessary since winter range is what limits herd size. In addition, the RMP allocated additional forage produced through vegetation manipulation on wildlife winter range first to big game and then to livestock up to active preference. On summer range, allocate additional forage was allocated to livestock first.

Environmental Consequences/Mitigation:

Reptiles

It is plausible that over-grazing by livestock could contribute to the decline of the functionality of the habitat for reptiles. Impacting upland and riparian vegetation could disturb or kill individual reptiles and their prey populations. Mainly, the project area is outside the range (overall, elevation, habitat) of most reptile species of interest and known to occur in the GSFO. Secondly, land health standard 2 for riparian systems and standard 3 for productive plant communities are being achieved (BLM 2004). Thus the allowable number of animal unit months and periods of use, along with land health standards and terms/conditions; should continue to maintain adequate habitat conditions (suitability and connectivity) to ensure reptiles are maintained at viable population levels commensurate with the species and habitat's potential.

Birds and Mammals

Overgrazing affects bird and mammals by altering habitat structure and food availability. Grazing invariably reduces the height and ground cover of plants, at least temporarily, thus reducing the cover they need for protection, feeding, roosting and nesting. There is no indication or data to support that the proposed action would have any large scale negative impacts to density, composition, or frequency of terrestrial species or the quality or connectivity of terrestrial wildlife habitat. This area receives adequate growing season plant rest and recovery periods. The land health assessment data along with range compliance data indicates that current livestock grazing consistent with achieving land health standards for bird and mammal species.

Big Game

In entire area is CDOW mapped mule deer critical winter range. This dataset was created by combining Deer DAUs, mule deer winter concentration areas, and "high density" mule deer severe winter range data. The most significant issues are loss of habitat due to urban growth, gas development and rural subdivision development; Interstate 70 as a source of roadkills and as a barrier to migration and competition between deer and elk for remaining habitat.

Both Riley and Starkey Gulches are part of known and mapped elk migration routes. The north half of the Riley Gulch allotment and small portions are CDOW mapped winter concentration areas defined as that part of the winter range of elk where densities are at least 200% greater than the surrounding winter range density during the average five winters out of ten from the first heavy snowfall to spring green-up.

Most issues between domestic livestock and big game concerns forage allocation and land health.

Forage Allocation. Managing the timing and intensity of livestock grazing is critical to maintaining habitat conditions preferable to big game. For example, cattle grazing during the early season could improve the quality of winter forage for elk but cattle must be removed early enough to allow plants to re-grow. However, the magnitude of competitive interactions between big game and livestock is poorly understood. Livestock and wild ungulate carrying capacities should be evaluated holistically and be used to guide stocking rate decisions and wild ungulate population objectives. The GSFO's RMP allocated existing forage proportionately (50/50) to livestock and big game. Qualitatively viewing the big game population trends and CDOW objectives in relationship to the proposed action (maintaining the existing level of livestock AUMs and periods of use, along with land health standards and terms/conditions), it can be assumed that the proposed action (based on the cumulative annual use of forage by big game and domestic livestock) remains compatible with the CDOW big game objectives.

Analysis on the Public Land Health Standard for Terrestrial Animal Communities (partial, see also Vegetation and Wildlife, Aquatic): BLM utilizes *standards* (conditions needed to sustain public land health) and *guidelines* (management tools, methods, strategies, and techniques designed to maintain or achieve healthy public lands as defined by the standards) to assess and manage livestock grazing (BLM 1997). In 2004, a formal land health assessment was conducted on the landscape which encompasses this proposed action. Mule deer in particular have been impacted as the majority of activity has and continues to occur within crucial and limited winter range habitats. Causal factors for the standard not being met for terrestrial wildlife include: natural gas development, lack of fire - juniper encroachment, historic domestic livestock grazing combined with heavy big game winter use, drought and dominance of vegetation by undesirable/weedy species – most notably cheatgrass. (BLM 2004). Current livestock grazing was not identified as an issue. The renewal of the grazing permit may cumulatively contribute to the standard not being achieved but independently should not prevent Standard 3 from being met.

Wildlife, Aquatic (includes an analysis of Public Land Health Standard 3):

Affected Environment:

Fish

The allotments are mostly drained by ephemeral washes. Fisheries potential is limited for the short section of perennial water found in the Riley Gulch. No fish are known to exist in the perennial stream due to low seasonal flows and heavy sedimentation caused by flashy runoff and local geologic conditions. The stream likely contains aquatic insects.

Amphibians

Several amphibians of interest are found within the GSFO, the Boreal Toad (*Bufo boreas boreas*) and the Great Basin spadefoot toad (*Spea intermontana*). The distribution of the boreal toad is restricted to areas with suitable breeding habitat in spruce-fir forests and alpine meadows generally between 7,500 and 12,000 feet elevation. Breeding habitat includes lakes, marshes, ponds, and bogs with sunny exposures and quiet shallow water. Great Basin spadefoot toads occupy arid grasslands and high sagebrush, desert shrub, and pinion-juniper woodlands. Great Basin spadefoot toad has been documented in the western third of the field office from the town of Rifle west to the boundary with the Grand Junction Field Office. This represents the eastern extent (fringe) of the species overall range and populations are believed to be small and sporadic.

Environmental Consequences/Mitigation:

Fish

Continued grazing activities could result in some soil compaction and displacement and increase the likelihood of erosional processes, especially on steep slopes, areas devoid of vegetation, and at livestock concentration areas such as stock waters, salting sites, and drainage bottoms. The reauthorization of grazing as proposed provides for plenty of growing season rest and adequate plant rest and recovery periods which should maintain good vegetative cover and help to limit offsite soil movement. Stream and riparian habitats are in good condition, and continued livestock grazing as proposed should have minimal impact to nearby streams, fish, or their habitats.

Amphibians

It is plausible that over-grazing by livestock could contribute to the decline of the functionality of the habitat for amphibians. Overgrazing impacts on wetlands and riparian vegetation could impact individual animals and prey populations. Primary, the project area is outside the range (overall, elevation, and habitat) of most amphibian species of interest and known to occur in the GSFO. Secondly, land health standard 2 for riparian systems is being achieved (BLM 2004). Thus the allowable number of animal unit months and periods of use, along with land health standards and terms/conditions; should continue to maintain adequate habitat conditions (suitability and connectivity) to ensure amphibians are maintained at viable population levels commensurate with the species and habitat's potential.

Analysis on the Public Land Health Standard 3 for Aquatic Animal Communities (partial, see also Vegetation and Wildlife, Terrestrial): BLM utilizes *standards* (conditions needed to sustain public land health) and *guidelines* (management tools, methods, strategies, and techniques

designed to maintain or achieve healthy public lands as defined by the standards) to assess and manage livestock grazing (BLM 1997). In 2004, a formal land health assessment was conducted on the landscape which encompasses this proposed action. Habitat/riparian management are a concern for the lower sections of Riley Gulch. Riley Gulch suffers from intensive natural gas development, and more specifically, poor quality roads and culverts adjacent to each stream, and increases in numbers and miles of well pads, roads, and pipelines that are all contributing increased sediment (BLM 2004). Livestock grazing was not identified as an issue, and the renewal of the grazing permit should not prevent Standard 3 from being met.

SUMMARY OF CUMULATIVE IMPACTS

Cumulative effects have been identified in this analysis pertaining to cultural and wildlife resources. Substantial ground disturbance related to livestock grazing may cause cumulative, long term, irreversible adverse effects to historic properties and may cumulatively contribute to livestock grazing standards not being achieved. Mitigation has been included to avoid these effects.

SUMMARY OF MITIGATION IDENTIFIED

1. New improvements or maintenance of existing range improvements, additional feeding areas, etc., may require cultural resource **inventories, monitoring, and/or data recovery**. In order to mitigate this potential affect to historic properties all ground disturbing activity, salt blocks, and the placement of supplemental feed, etc, must be at least 100 m from the areas of concern. The cultural resource specialist should be involved in discussions for improvements, maintenance, supplemental feeding areas, etc to ensure that the historic properties and area of concern is avoided. This allotment may also contain other undiscovered historic properties and/or resources protected under the National Historic Preservation Act (NHPA), American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O. 13007, or other statutes and executive orders. The BLM may require modification to development proposals to protect such properties, or disapprove any activity that is likely to result in damage to historic properties or areas of Native American concern.
2. The permittee and all persons specifically associated with grazing operations must be informed that any objects or sites of cultural, paleontological, or scientific value such as historic or prehistoric resources, graves or grave markers, human remains, ruins, cabins, rock art, fossils, or artifacts shall not be damaged, destroyed, removed, moved, or disturbed. If in connection with allotment operations under this authorization any of the above resources are encountered, the proponent shall immediately suspend all activities in the immediate vicinity of the discovery that might further disturb such materials and notify the BLM authorized officer of the findings. The discovery must be protected until notified in writing to proceed by the authorized officer (36CFR800.110 & 112, 43CFR 0.4).

PERSONS AND AGENCIES CONSULTED:

A notice of public scoping was posted on the Colorado BLM's Internet web page and a news release was issued on October 20, 2009 regarding grazing permits and associated allotments scheduled for renewal in 2010. The public was provided an opportunity to offer any information or concerns, or to be considered as an interested public on a permit or allotment scheduled for renewal. There have been no responses received specific to the permit renewal or allotments addressed in this NEPA document. The Glenwood Springs Field Office Internet NEPA Register also lists grazing permit renewal NEPA documents that have been initiated. They are generally posted approximately one month prior to the estimated completion date.

The following individuals, groups, organizations and/or local governments were also consulted:
Grazing permittee associated with the permit renewal
Southern Ute Tribe
Northern Ute Tribe
Ute Mtn. Ute Tribe

INTERDISCIPLINARY REVIEW:

<i>Name</i>	<i>Title</i>	<i>Responsibility</i>
Isaac Pittman	Rangeland Management Specialist	NEPA Lead
Michael Kinser	Rangeland Management Specialist	Wetlands and Riparian Zones, Range Management
Jeff O'Connell	Hydrologist/Geologist	Soil, Air, Water, Geology
Greg Wolfgang	Outdoor Recreation Planner	WSR, Wilderness, VRM, Recreation
Cheryl Harrison	Archaeologist	Cultural Resources and Native American Concerns
Brian Hopkins	Wildlife Biologist	Migratory Birds, Terrestrial Wildlife, T/E/S Terrestrial Wildlife, Aquatic Wildlife and T/E/S Aquatic Wildlife
Carla DeYoung	Ecologist	ACEC, Vegetation, T/E/S Plants, Land Health Stds
Dereck Wilson	Rangeland Management Specialist	Invasive, Non-native Species

REFERENCES:

- Bureau of Land Management (BLM). 1997. [Online]. Website: http://www.blm.gov/co/st/en/BLM_Programs/grazing/rm_stds_guidelines.html. [Accessed on 12-24-2009].
- Bureau of Land Management (BLM). 2000. [Online]. Website: http://www.blm.gov/co/st/en/BLM_Programs/botany/Sensitive_Species_List_.html. [Accessed on 12-22-2009].
- Bureau of Land Management (BLM), Glenwood Springs Field Office. 2004. Land Health Assessment Report Rifle-West Watershed. Glenwood Springs, Colorado. Unpublished. 28 pages.
- Burton, T.A., E.R. Cowley, and S.J. Smith. 2008. Monitoring Streambanks and Riparian Vegetation – Multiple Indicators. Version 5.0. USDI Bureau of Land Management. Idaho State Office. Boise, ID.

- Colorado Division of Wildlife (CDOW). 2006. [Online]. Website: http://wildlife.state.co.us/NR/rdonlyres/186E3F3D-8777-4B51-9914-A2F1BC4B6DE9/0/E10DAUPlan_YellowCreek.pdf. [Accessed on 12-24-2009].
- Colorado Division of Wildlife (CDOW). 2006a. [Online]. Website: wildlife.state.co.us/NR/rdonlyres/CE7CBD6E-4915-4F59-B088-7852245493DE/0/D11DAUPlan_Bookcliffs.pdf. [Accessed on 12-23-2009].
- Colorado Division of Wildlife (CDOW). 2009. [Online]. Website: <http://wildlife.state.co.us/WildlifeSpecies/SpeciesOfConcern/Mammals/BlackfootedFerret.htm>. [Accessed on 12-22-2009].
- Colorado Division of Wildlife (CDOW). 2009a. [Online]. Website: <http://wildlife.state.co.us/WildlifeSpecies/Profiles/Birds/GreaterSageGrouse.htm>. [Accessed on 12-22-2009].
- Colorado Division of Wildlife (CDOW). 2009c. [Online]. Website: <http://wildlife.state.co.us/apps/gmumaps/BigGameGMUmap.pdf>. [Accessed on 12-23-2009].
- Cornell Lab of Ornithology (CLO). 2009. [Online]. Birds of North America Online. Website: <http://bna.birds.cornell.edu/bna/species/548/articles/distribution>. [Accessed on 12-28-2009].
- CRCT Coordination Team. 2006. Conservation strategy for Colorado River cutthroat trout (*Oncorhynchus clarkii pleuriticus*) in the States of Colorado, Utah, and Wyoming. Colorado Division of Wildlife, Fort Collins. 24p.
- Gruver, J.C. and D.A. Keinath. 2006. Townsend's Big-eared Bat (*Corynorhinus townsendii*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/townsendbig-earedbat.pdf>. [Accessed on 12-22-2009].
- Northern Eagle/Southern Routt Greater Sage-Grouse Work Group. 2004. Northern Eagle/Southern Routt Greater Sage-Grouse Conservation Plan. Colorado Division of Wildlife, Denver, Colorado.
- U.S. Department of Agriculture Forest Service (USDA Forest Service). 2002. Biological Assessment for the Implementation of the Preferred Alternatives for the Sierra Nevada Forest Plan Draft Environmental Impact Statement. Forest Service Pacific Southwest Region. Vallejo, California.
- U.S. Fish and Wildlife Service (USFWS). 2008. Birds of Conservation Concern 2008. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, Virginia. 85 pp. [Online version available at <<http://www.fws.gov/migratorybirds/>>]
- U.S. Fish and Wildlife Service. 2009. [Online]. Website: <http://www.fws.gov/mountain-prairie/endspp/CountyLists/COLORADO.pdf>. [Accessed on 12-22-2009].

U.S. Fish and Wildlife Service. 2009a. [Online]. Website:
http://ecos.fws.gov/docs/recovery_plan/940317.pdf. [Accessed on 12-22-2009].

U.S. Fish and Wildlife Service. 2009b. [Online]. Website:
http://ecos.fws.gov/docs/candforms_pdf/r8/B06R_V01.pdf . [Accessed on 12-27-2009].

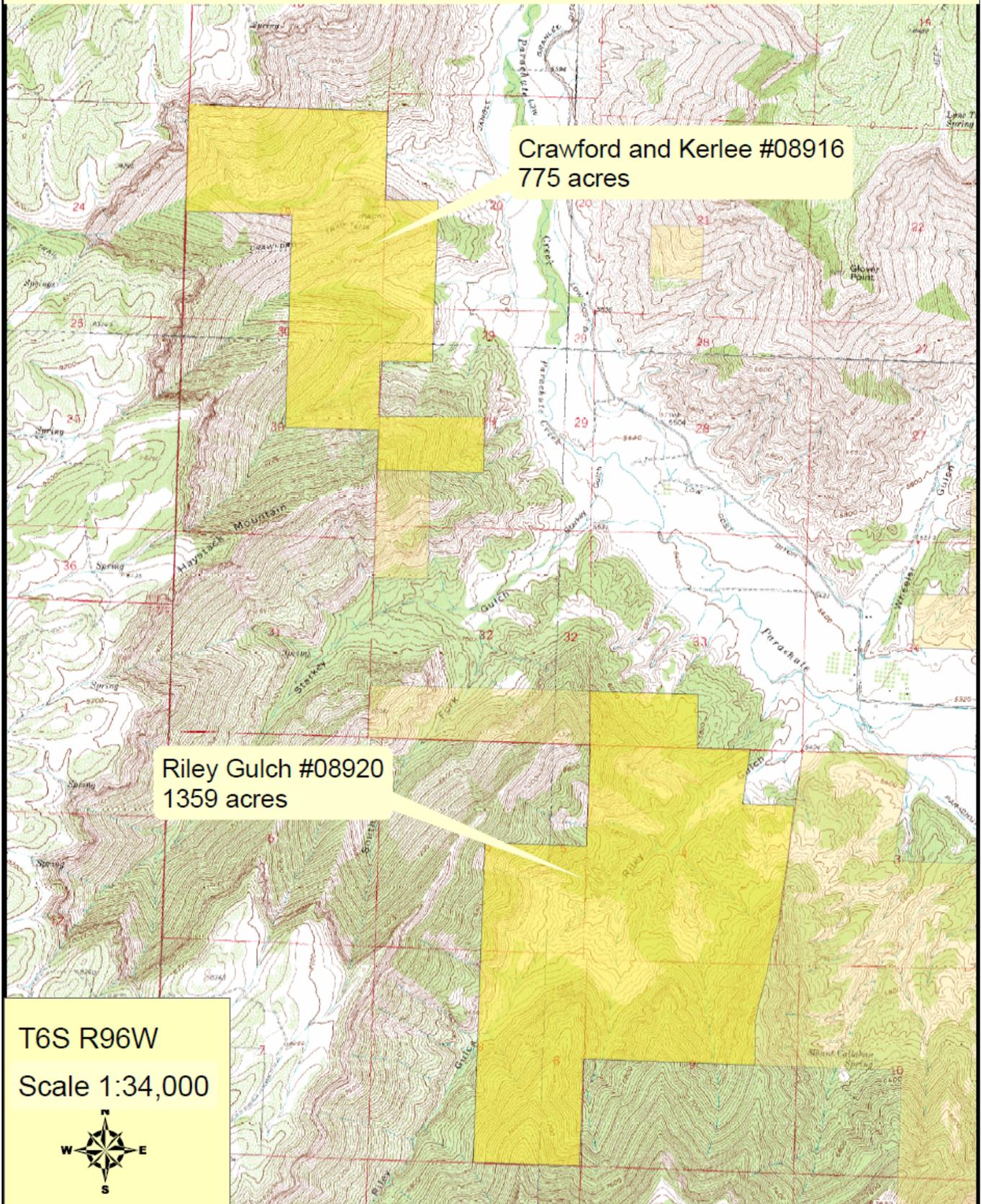
APPENDDICES: None

ATTACHMENTS: Allotment Map

PREPARED BY: Isaac Pittman

DATE: 3/3/2010

Crawford and Kerlee and Riley Gulch Allotments



Crawford and Kerlee #08916
775 acres

Riley Gulch #08920
1359 acres

T6S R96W
Scale 1:34,000



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
GLENWOOD SPRINGS FIELD OFFICE
FINDING OF NO SIGNIFICANT IMPACT

Grazing Permit Renewal on the Riley Gulch and Crawford and Kerlee Allotments

DOI-BLM-CO140-2010-0016-EA

Finding of No Significant Impact

I have reviewed the direct, indirect and cumulative effects of the proposed action documented in the EA for the grazing permit renewal on the Riley Gulch and Crawford and Kerlee Allotments. The effects of the proposed action are disclosed in the Alternatives and Environmental Impacts sections of the EA. Implementing regulations for NEPA (40 CFR 1508.27) provide criteria for determining the significance of the effects. Significant, as used in NEPA, requires consideration of both *context* and *intensity* as follows:

(a) Context. This requirement means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short and long-term effects are relevant (40 CFR 1508.27):

The disclosure of effects in the EA found the actions limited in context. The planning area is limited in size and activities limited in potential. Effects are local in nature and are not likely to significantly affect regional or national resources.

(b) Intensity. This requirement refers to the severity of the impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following are considered in evaluating intensity (40 CFR 1508.27).

1. Impacts that may be both beneficial and/or adverse.

Impacts associated with the livestock grazing permit renewal are identified and discussed in the Affected Environment and Environmental Consequences section of the EA. The proposed action will not have any significant beneficial or adverse impacts on the resources identified and described in the EA.

2. The degree to which the proposed action affects health or safety.

The proposed activities will not significantly affect public health or safety. The purpose of the proposed action is to allow for multiple uses while maintaining or improving resource conditions to meet standards for rangeland health in the allotment. Similar actions have not significantly affected public health or safety.

3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

At present, there is one known area of Native American concern within this allotment. No historic properties were identified during the inventories for this allotment and the addition of one day for trailing should not increase the potential for impacts to cultural resources. A determination of No Adverse Affect has been made for this renewal.

4. The degree to which the effects are likely to be highly controversial.

The possible effects of continued livestock grazing are not likely to be highly controversial.

5. The degree to which the effects are highly uncertain or involve unique or unknown risks.

The possible effects on the human environment are not highly uncertain nor do they involve unique or uncertain risks. The technical analyses conducted for the determination of the impacts to the resources are supportable with use of accepted techniques, reliable data, and professional judgment. Therefore, I conclude that there are no highly uncertain, unique, or unknown risks.

6. The degree to which the action may establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration.

This EA is specific to the Riley Gulch and Crawford and Kerlee Allotments. It is not expected to set precedent for future actions with significant effects or represent a decision in principle about a future management consideration in or outside of this allotment.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

This EA identified that continued livestock grazing may cumulatively effect riparian habitats if livestock concentrate and cause significant surface disturbance. The 2004 Land Health Assessment rated the lower portions of Riley Gulch as “Functioning at Risk with a downward trend”. This rating was due to significant sedimentation from oil and gas development. Although livestock grazing was not identified as a factor in this rating it may cumulatively contribute if livestock grazing guidelines are not followed.

8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant, cultural, or historical resources.

At present, there is one known area of Native American concern within this allotment. No historic properties were identified during the inventories for this allotment and the addition of one day for trailing should not increase the potential for impacts to cultural resources. A determination of No Adverse Affect has been made for this renewal.

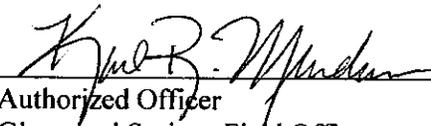
9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

There is no endangered or threatened species or its habitat included within the assessment area.

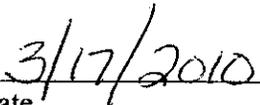
10. *Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.*

The proposed action does not violate or threaten to violate any Federal, State or local laws or requirements imposed for the protection of the environment.

Based upon the review of the test for significance and the environmental analyses conducted, I have determined that the actions analyzed in the EA will not significantly affect the quality of the human environment. Accordingly, I have determined that the preparation of an Environmental Impact Statement is not necessary for this proposal.



Authorized Officer
Glenwood Springs Field Office



Date