

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

ENVIRONMENTAL ASSESSMENT

NUMBER: DOI-BLM-CO-N040-2011-0037-EA

CASEFILE NUMBER: 0507661

PROJECT NAME: Grazing Permit Renewal on the Cottonwood Creek (8508) and the Red Hill Common (8507) Allotment

LOCATION: T6S R86W Sec 1, 2, 3, and 4. T5S R86W Sec 1, 2, 3, 4, 10, 11, 12, 13, 14, 15, 16, 21, 22, 23, 24, 25, 26, 27, 34, 35, and 36. T5S 85W Sec 6, 7, 18, 30 and 31. Refer to attached allotment map.

APPLICANT: Grazing Permittee

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Proposed Action: The Proposed Action is to renew the term grazing permit for the above applicant. The number/kind of livestock, period of use, percent public land and Animal Unit Months (AUMS) will remain the same as the previous permit. The permit would be issued for a 10-year period unless the base property is leased for less, but for purposes of the EA, we are assuming 10 years of grazing by this or another applicant (in case of transfer). The proposed action is in accordance with 43 CFR 4130.2. The tables below summarize the scheduled grazing use and grazing preference for the permits.

Mandatory Terms and Conditions **Scheduled Grazing Use:**

Allotment Name & No.	Livestock No. & Kind	Period of use	Percent Public Land	AUMs
Cottonwood Creek 08508	65 Cattle	05/01-10/10	23	80
Red Hill 08507	25 Cattle	05/06-06/20	100	38

Grazing Preference AUMS:

Allotment Name & No.	Active	Suspended	Total
Cottonwood Creek 08508	80	0	80
Red Hill 08507	725	0	725

The following Other Terms and Conditions were included on the previous (expiring) permit 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. Maintenance activities shall be restricted to the footprint (previously disturbed area) of the project as it existed when it was initially constructed. The Bureau of Land Management shall be given 48 hours advance notice of any maintenance work that will involve heavy equipment. Disturbed areas will be reseeded with a certified weed-free seed mixture of native species adapted to the site.¹
- The permittee and all persons associated with grazing operations must be informed that any person who injures, destroys, excavates, appropriates or removes any historic or prehistoric ruin, artifact, object of antiquity, Native American remains, Native American cultural item, or archaeological resources on public lands is subject to arrest and penalty of law. 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.
- If an assessment of rangeland health results in a determination that changes are necessary in order to comply with the standards for public land health and guidelines for livestock grazing management in Colorado, this lease will be reissued subject to revised terms and conditions.

Additional Background Information:

The Red Hill Common Allotment is a common allotment with multiple permittees. The scheduled grazing use shown above is for only one of the permittees. Actual Use Compared to Permitted Use: No Actual Grazing Use Reports have been submitted for this allotment. It is assumed that actual grazing use is the same as the permitted grazing use. The table below summarizes AUMs authorized annually through billings for the last five years.

Red Hill Com

Year	AUMs
2006	38
2007	38
2008	38
2009	38
2010	38

Cottonwood Creek

Year	AUMs
2006	80

¹ This term and condition has been modified from the previous version to help ensure resource protection when heavy equipment is utilized.

2007	25
2008	80
2009	80
2010	80

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 lease 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.

In 2008, a formal Land Health Assessment was conducted in the Deep Creek Landscape which included the Cottonwood Creek allotment. The allotment was found to be meeting all the land health standards. A formal Land Health Assessment was conducted on the Eagle River South Landscape which encompassed the Red Hill Common allotment in 2002. The Red Hill allotment was generally meeting all the standards except Standard 4 for sage grouse. The reasons for failing to meet this standard included habitat fragmentation due to OHV and other recreational activities, lack of fire, loss of habitat on private lands thus reducing habitat continuity and connectivity. Ungulate grazing, both big game and livestock, has resulted in a loss of vegetative diversity and productivity. Other vegetative concerns pertained to heavy hedging on shrubs, pinyon-juniper encroachment into sagebrush sites and a lack of grass and/or forb cover and diversity. Cheatgrass dominated the understory in several low-elevation sagebrush sites and poses a risk of expansion following fire or other disturbances.

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 and are addressed in the appropriate sections below.

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				
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

Air Quality

Affected Environment: Air quality in the project area is typical of undeveloped regions in the western United States. The closest Class I airshed is the Holy Cross Wilderness Area located approximately 38 air miles to the east.

The primary sources of air pollutants in the region are fugitive dust from the desert to the west of the planning area, unpaved roads and streets, seasonal sanding for winter travel, motor vehicles, and wood-burning stove emissions. Seasonal wildfires throughout the western U. S. may also contribute to air pollutants and regional haze. The ambient pollutant levels are usually near or below measurable limits, except for high short-term increases in PM₁₀ levels (primarily wind-blown dust), ozone, and carbon monoxide. Within the Rocky Mountain region, occasional peak ozone levels are relatively high, but are of unknown origin. Elevated concentrations may be the result of long-range transport from urban areas, subsidence of stratospheric ozone or photochemical reactions with natural hydrocarbons. Occasional peak concentrations of CO and SO₂ may be found in the immediate vicinity of combustion equipment. Locations vulnerable to decreasing air quality include the immediate areas around mining and farm tilling, local population centers, and distant areas affected by long-range transportation of pollutants. Representative monitoring of air quality in the general area indicates that the existing air quality is well within acceptable standards.

The EPA General Conformity regulations require that an analysis (as well as a possible formal conformity determination) be performed for federally sponsored or funded actions in non-attainment areas and in designated maintenance areas when the total direct and indirect net air pollutant emissions (or their precursors) exceed specified levels. Since the CRVFO is not within a non-attainment or a maintenance area, the Clean Air Act conformity regulations do not apply.

Environmental Consequences/Mitigation: No impacts to air quality are anticipated with implementation of the proposed action or No-action alternatives. No additional mitigation is required to protect air quality.

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 (CRVFO #1011-7) was completed for the Cottonwood Creek and the Red Hill Common Allotments on February 24, 2011 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 CRVFO.

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)
08508 Cottonwood Creek	127	2383	5%	5	No	125 additional acres need to be inventoried to meet a 10% sample. 39% of the allotment has 30%+ slopes.
08507 Red Hill Common	1969	10498	18%	61	Yes	No additional acres need to be inventoried to meet a 10% sample. 40% of the allotment has 30%+ slopes.

Eighteen Class III cultural resource inventories (CRVFO #s 125, 501, 591, 712, 724, 755, 1176, 9458A, 100-41, 1102-1, 5402-18, 15303-1, 15404-5, 15405-1, 15406-2, 5410-3) have been

conducted within these allotments. Of the 66 cultural resources identified, 11 Historic Properties were identified. Historic properties are cultural or Native American resources that are considered eligible or potentially eligible for listing on the National Register of Historic Places.

Additionally, 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 1960's; Native American sites could represent a time range from 200 to 10,000 years before present. Based on available data surrounding these allotments, there is a low to moderate potential for historic properties within these allotments' unsurveyed areas due primarily to steep slopes and the heavy oak brush community.

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

At present, there are no known areas of Native American concern within this allotment. On November 15, 2010 the Colorado River Valley Field Office mailed an informational letter and an allotment map to the Ute Tribe (Northern Ute Tribe), Southern Ute Tribe, and the Ute Mountain Ute Tribe, identifying the proposed 2011 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 American Tribes.

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, gullyng, and increased potential for unlawful collection and vandalism, however the Discovery Stipulation and subsequent changes in grazing management should mitigate and minimize impacts. Continued grazing may cause substantial ground disturbance and cause cumulative long term irreversible adverse effects to historic properties. Eleven historic properties were identified during the inventories for these allotments which will need to be assessed to determine if livestock are impacting these resources within the term of this permit. A **Conditional No Adverse Effect** has been made for this renewal, subject to cultural resource mitigation measures.

Mitigation: 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. These allotments 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.

Any person who, without a permit, injures, destroys, excavates, appropriates or removes any historic or prehistoric ruin, artifact, object of antiquity, Native American remains, Native American cultural item, or archaeological resources on public lands is subject to arrest and penalty of law.

Invasive, Non-native Species

Affected Environment: A landscape-wide inventory has been completed on the Cottonwood Creek, and Red Hill Allotments. Known infestations include wide spread infestations of houndstongue, plumeless thistle, and Canada thistle with smaller isolated infestations of spotted knapweed, diffuse knapweed, and Russian knapweed. Specific locations of the infestations are stored in a CRVFO weeds geodatabase.

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. However, this effect is minimal as compared to other weed seed dispersal vectors such as vehicle routes and ground disturbing activities. 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 2009) 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 Colorado River Valley Field Office (CRVFO) is within the Southern Rockies/Colorado Plateau Bird Conservation Region (BCR). The 2008 list of Birds of Conservation Concern (USFWS 2008) include the following:

Table - 2008 List of Birds of Conservation Concern within the CRVFO

Species	Habitat Description	Potential Occurrences in Project Area	Potentially Impacted by the Proposed Action or Alternatives
Gunnison Sage-Grouse (<i>Centrocercus minimus</i>)	Sagebrush communities for hiding and thermal cover, food, and nesting; open areas with sagebrush stands for leks; sagebrush-grass-forb mix for nesting; wet meadows for rearing chicks. Year-round resident, breeding	Not Present	No
American Bittern (<i>Botaurus lentiginosus</i>)	Marshes and wetlands; ground nester. Summer resident.	Not Present	No
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	Nests in forested rivers and lakes; winters in upland areas, often with rivers or lakes nearby. Generally winter resident, occasional breeding.	Unlikely	No
Ferruginous Hawk (<i>Buteo regalis</i>)	Open, rolling and/or rugged terrain in grasslands and shrubsteppe communities; also grasslands and cultivated fields; nests on cliffs and rocky outcrops. Fall/ winter resident, non-breeding.	Unlikely	No
Golden Eagle (<i>Aquila chrysaetos</i>)	Open country, grasslands, woodlands, and barren areas in hilly or mountainous terrain; nests on rocky outcrops or large trees. Year-round resident, breeding.	Present	No
Peregrine Falcon (<i>Falco peregrines</i>)	Open country near cliff habitat, often near water such as rivers, lakes, and marshes; nests on ledges or holes on cliff faces and crags. Spring/summer resident, breeding.	Possibly Present	No

Species	Habitat Description	Potential Occurrences in Project Area	Potentially Impacted by the Proposed Action or Alternatives
Prairie Falcon (<i>Falco mexicanus</i>)	Open country in mountains, steppe, or prairie; winters in cultivated fields; nests in holes or on ledges on rocky cliffs or embankments . Spring/summer resident, breeding.	Unlikely	No
Snowy Plover (<i>Charadrius alexandrinus nivosus/tenuirostris</i>)	Sparsely vegetated sand flats associated with pickleweed, greasewood, and saltgrass. Spring migrant, non-breeding. Spring migrant, non-breeding.	Not Present	No
Mountain Plover (<i>Charadrius montanus</i>)	High plain, cultivated fields, desert scrublands, and sagebrush habitats, often in association with heavy grazing, sometimes in association with prairie dog colonies ; short vegetation.	Not Present	No
Long-billed Curlew (<i>Numenius americanus</i>)	Lakes and wetlands and adjacent grassland and shrub communities. Spring/ fall migrant, non-breeding.	Not Present	No
Yellow-billed Cuckoo (<i>Coccyzus americanus</i>)	Riparian, deciduous woodlands with dense undergrowth; nests in tall cottonwood ,mature willow riparian, moist thickets, orchards, abandoned pastures. Summer resident, breeding.	Not Present	No
Burrowing Owl (<i>Athene cunicularia</i>)	Open grasslands and low shrublands often in association with prairie dog colonies; nests in abandoned burrows created by mammals; short vegetation.	Not Present	No
Lewis's Woodpecker (<i>Melanerpes lewis</i>)	Open woodland, often logged or burned, including oak, coniferous forest (often ponderosa), riparian woodland, and orchards, less often in pinyon-juniper.	Possibly Present	Yes
Willow Flycatcher (<i>Empidonax traillii</i>)	Riparian and moist, shrubby areas; winters in shrubby openings with short vegetation. Summer resident, breeding.	Not Present	No
Gray Vireo (<i>Vireo vicinior</i>)	Open pinyon-juniper woodlands. Uncommon summer resident, breeding.	Possibly Present	Yes
Pinyon Jay (<i>Gymnorhinus cyanocephalus</i>)	Pinyon-juniper woodland. Year-round resident, breeding.	Present	Yes
Juniper Titmouse (<i>Baeolophus ridgwayi</i>)	Pinyon-juniper woodlands, especially juniper; nests in tree cavities. Year-round resident, breeding.	Possibly Present	Yes
Veery (<i>Catharus fuscescens</i>)	Dense riparian thickets and hillside brush near streams. Uncommon spring/fall migrant in Eastern Colorado.	Possibly Present	Yes
Bendire's Thrasher (<i>Toxostoma bendirei</i>)	Desert, especially areas of tall vegetation, cholla cactus, creosote bush and yucca, and in juniper woodland Possible summer resident.	Unlikely	No
Grace's Warbler (<i>Dendroica graciae</i>)	Breeds in ponderosa pine forests. Uncommon summer resident in southwest Colorado.	Not Present	No
Brewer's Sparrow (<i>Spizella breweri</i>)	Summer resident that primarily breeds in sagebrush-grass stands and shrublands. Migrant at low elevations.	Present in Summer	Yes
Grasshopper Sparrow (<i>Ammodramus savannarum</i>)	Open grasslands and cultivated fields. Spring migrant, non-breeding.	Possibly Present	Yes
Chestnut-collared Longspur (<i>Calcarius ornatus</i>)	Open grasslands and cultivated fields. Spring migrant, non-breeding.	Not Present	No

Species	Habitat Description	Potential Occurrences in Project Area	Potentially Impacted by the Proposed Action or Alternatives
Black Rosy-Finch (<i>Leucosticte atrata</i>)	Open country including mountain meadows, high deserts, valleys, and plains; breeds/ nests in alpine areas near rock piles and cliffs. Winter resident, non-breeding.	Not Present	No
Brown-capped Rosy-Finch (<i>Leucosticte australis</i>)	Alpine meadows, cliffs, and talus and high-elevation parks and valleys. Summer residents, breeding.	Not Present	No
Cassin's Finch (<i>Carpodacus cassinii</i>).	Open montane coniferous forests; breeds/ nests in coniferous forests. Year-round resident, breeding.	Possibly Present	Yes

The CRVFO 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. Species such as the Gray Vireo, Pinyon Jay, Juniper Titmouse, Lewis's Woodpecker, Cassin's Finch and Grace's Warbler may be present in pinyon/juniper woodlands and the Brewer's sparrow (*Spizella breweri*) may be present in sagebrush habitats. Many species of raptors (red-tailed hawks, Cooper's hawks, kestrels and owls) not on the Fish & Wildlife Service's 2008 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. The project area is considered bald eagle winter range and winter foraging area (see map below). 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.

Environmental Consequences/Mitigation: Livestock grazing can alter vegetation structure, composition, and function. Effects on migratory birds are dependent on the species of interest and may be adverse or beneficial depending on grazing timing, frequency, and intensity. Aerial, bark and canopy insectivores may be less influenced by grazing than species feeding on nectar, insects, or seeds in the understory or on the ground. Birds may be displaced as a result of fence and pond construction/maintenance and/or grazing. Trampling of nests, eggs, or young could occur. Losses or decreases in vegetation from overgrazing can decrease rodent prey species and affect local populations of raptors.

Grazing (sheep or cattle) at 50% of current year's growth would be expected to maintain vertical and horizontal vegetative structure and complexity where it presently exists. Areas lacking vegetative structure and complexity would be expected to be lacking bird species richness. This is especially important in riparian areas since riparian areas are essential habitat for bird species

of the arid and semiarid west, including upland birds, waders, shorebirds, raptors, neotropical migratory birds and passerines.” The destruction of riparian areas is viewed as the most important factor in the decline of western land bird species (NRCS 2010).

Based on field observations the proposed action should continue to maintain adequate upland and riparian habitat conditions (suitability and connectivity) to ensure migratory bird species are maintained at viable population levels commensurate with the species and habitats’ potential. Over the term of the permit suitable habitat to support a diversity and density of migratory bird populations in these drainages should be maintained.

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

Affected Environment: Both the Cottonwood Creek and Red Hill allotments are in Eagle County. The table below summarizes the 2010 species list from the U. S. Fish and Wildlife Service for Federally listed, proposed, or candidate plant species and the November 2009 Colorado BLM State Director’s Sensitive Species List for BLM sensitive plants that may occur within Eagle County and be impacted by the proposed action.

Table - Special Status Plant Species in Eagle County

Federally Listed, Proposed or Candidate Plant Species		
Species	Habitat	Habitat Potential Present / Absent
Ute ladies’-tresses orchid (<i>Spiranthes diluvialis</i>)	Habitat for this threatened species is found below 6,500 feet along streams, lakes or in wetland areas with seasonally saturated or subirrigated soils.	Absent: No riparian or wetland habitat below 6,800 feet in either allotment. No known suitable habitat
BLM Sensitive Plant Species		
Species	Habitat	Habitat Potential Present/Absent
Harrington’s penstemon (<i>Penstemon harringtonii</i>)	Open sagebrush communities on rocky loam or rocky clay loam soils between the elevations of 6,200 to 10,000 feet.	Present: Multiple populations exist on Red Hill allotment. No populations found on Cottonwood Creek allot

Harrington’s penstemon

Harrington’s penstemon is found in sagebrush and sagebrush/mixed mountain shrub habitat on rocky loam or rocky clay loam soils. Within the Red Hill allotment, Harrington’s penstemon is found in the sagebrush steppe habitat all across the upper slopes of Red Hill. A small amount of potential habitat for Harrington’s penstemon has been identified on the Cottonwood Creek allotment, but no populations have been documented there.

Environmental Consequences/Mitigation:

Ute Ladies’-tresses. Due to the absence of any occupied or suitable habitat for Ute ladies’-tresses orchid within or adjacent to the Cottonwood Creek or Red Hill Common allotments, the proposed action would have “No Effect” on this listed plant species.

Harrington’s penstemon.

The flowering stalks of Harrington’s penstemon are highly palatable to livestock and wildlife. Livestock grazing has the potential to create adverse impacts to Harrington’s penstemon if repeated removal of flowering stalks over a period of years prevents the plants from reproducing.

Utilization data for the Red Hill Common allotment in 2002 and 2008 reported an average utilization of 18%. The permittee for this grazing permit took non-use in 2010; however, the other permittees did graze the allotment. Average utilization in 2010 was approximately 13%. This level of utilization should leave enough flowering stalks to ensure reproductive capability and sustain long-term viability of the local population.

Analysis on the Public Land Health Standard 4 for Special Status Plant Species (partial, see also Special Status Terrestrial and Aquatic Wildlife Species): A formal Land Health Assessment was conducted on the Eagle River South Landscape which included the Red Hill allotment in 2002. A formal Land Health Assessment was conducted on the Deep Creek landscape which encompasses the Cottonwood Creek allotment in 2008. Both allotments were meeting the land health standard for special status plants at the time of the assessment. The land health assessment found few Harrington’s penstemon plants that were trampled or had flower stalks grazed. The continuation of livestock grazing under the proposed schedule and intensity should have little adverse impact on special status plants and Standard 4 would continue to be achieved.

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

Affected Environment: The following table summarizes the latest: 1) species list (USFWS 2010) from the U. S. Fish and Wildlife Service for Federally listed, proposed, or candidate aquatic wildlife species and 2) Colorado BLM State Director's Sensitive Species List for terrestrial species; that may occur within the CRVFO in Garfield County and be impacted by the proposed action.

Table – Special Status Terrestrial Wildlife Species

Federally Listed, Proposed or Candidate Terrestrial Wildlife Species			
Species	Habitat/Range	Occurrence	Potentially Impacted by the Proposed Action or Alternatives

Federally Listed, Proposed or Candidate Terrestrial Wildlife Species			
Canada lynx (<i>Lynx Canadensis</i>)	Federally listed as threatened. Canada lynx occupy high-latitude or high-elevation coniferous forests characterized by cold, snowy winters and an adequate prey base. In the western US, 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 (<i>Lepus americanus</i>) are the preferred prey, lynx in also feed on mountain cottontails (<i>Sylvilagus nuttallii</i>), pine squirrels (<i>Tamiasciurus hudsonicus</i>), and blue grouse (<i>Dendragapus obscurus</i>). The Forest Service has mapped suitable denning, winter, and other habitat for lynx within the White River and Routt National Forests. The mapped suitable habitat comprises areas known as Lynx Analysis Units (LAUs) that are the approximate the size of a female's home range. Several LAUs include small parcels of BLM lands.	Landscape Linkage Present	No
Mexican spotted owl (<i>Strix occidentalis lucida</i>)	Federally listed as endangered. This owl nests, roosts, and hunts in mature coniferous forests in canyons and foothills. The key habitat components are old-growth forests with uneven-age stands, high canopy closure, high tree density, fallen logs and snags. 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.	Absent	No
Greater Sage-grouse (<i>Centrocercus urophasianus</i>)	Candidate for Federal listing. Sage-grouse, as the name implies, are found only in areas where sagebrush is abundant, providing both food and cover. Sage-grouse prefer relatively open sagebrush flats or rolling sagebrush hills. In winter, sagebrush accounts for 100% of the diet for these birds. In addition, it provides important escape cover and protection from the elements. In late winter, males begin to concentrate on traditional strutting grounds or leks. Females arrive at the leks 1-2 weeks later. Leks can occur on a variety of land types or formations (windswept ridges, knolls, areas of flat sagebrush, flat bare openings in the sagebrush. Breeding occurs on the leks and in the adjacent sagebrush, typically from March through May. Females and their chicks remain largely dependent on forbs and insects for food well into early fall. Within the CRVFO sage-grouse are still present in the northeast part of the Field Office in the Northern Eagle/Southern Routt population, while small (<500 birds), probably has, or had, a relationship with the larger population in Moffat, Rio Blanco and western Routt counties, and probably with the Middle Park population to the east.	Absent	No

Federally Listed, Proposed or Candidate Terrestrial Wildlife Species			
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	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 (<i>Populus fremontii</i>) and willows (<i>Salix</i> sp.). A few sightings of yellow-billed cuckoo have occurred in western Colorado along the Colorado River near Grand Junction however it is an uncommon summer resident of Colorado. Suitable but unoccupied habitat exists for this bird species along Wallace Creek. This stream has been monitored for the presence of this species but none have been found.	Absent	No
Uncompahgre fritillary butterfly (<i>Boloria acrocnema</i>)	Federally listed as endangered. The butterfly has been verified at only two areas in the San Juan Mountains in Colorado. There is anecdotal evidence of other colonies in the San Juans and southern Sawatch ranges in Colorado. The butterfly exists above treeline in patches of its larval host plant, snow willow. The butterfly is most often found on north and east facing slopes, which provide a moist, cool, microclimate. The greatest known controllable threat is butterfly collecting. Climatological patterns, disease, parasitism, predation, and trampling of larvae by humans and livestock might pose additional threats.	Absent	No
Colorado BLM Sensitive Terrestrial Wildlife Species			
Species	Habitat/Range	Occurrence	Potentially Impacted by the Proposed Action or Alternatives
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 of Colorado. Habitat associations are not well defined. Both of these bats will forage over water and along the edge of vegetation 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. 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).	Possibly Present	Yes
Northern goshawk (<i>Accipiter gentilis</i>)	The goshawk is an uncommon 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). 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.	Absent	No

Federally Listed, Proposed or Candidate Terrestrial Wildlife Species			
Goldeneye, Barrow's (<i>Bucephala islandica</i>)	This bird is an uncommon winter resident and spring/fall migrant in lowlands and mountains. A few may breed in the northern mountains such as the Flat Tops Wilderness Area. Goldeneye's prefer alkaline-freshwater lakes in parkland areas and to a lesser extent subalpine/alpine lakes/beaver ponds for breeding.	Absent	No
Ibis, white-faced (<i>Plegadis chihi</i>)	The species inhabits primarily freshwater wetlands, especially cattail (<i>Typha</i> spp.) and bulrush (<i>Scirpus</i> spp.) marshes. This bird is a very rare, non-breeding, summer migrant to western Colorado valleys and mountain lakes. This species feeds in flooded hay meadows, agricultural fields, and estuarine wetlands. This species breeds in isolated colonies in mainly shallow marshes with "islands" of emergent vegetation. This species is more commonly found on the eastern slope of Colorado (e.g. San Luis valley).	Absent	No

Canada Lynx. BLM lands generally support the movement of lynx dispersing to new areas or moving to lower elevations during severe winter weather in search of prey. Several mapped landscape linkages occur within the CRVFO. The Glenwood landscape linkage includes portions of these allotments. It provides for movement between the Flattops, south through Glenwood Canyon, and then across shrub-steppe habitats to the Red Tables.

Environmental Consequences/Mitigation: Generally livestock grazing can alter vegetation structure, composition, and function. Effects on terrestrial wildlife are dependent on the species of interest and may be adverse or beneficial depending on AUMs permitted, grazing timing, frequency, and intensity.

Canada Lynx. This analysis is: a) in conformance with and tiered to the programmatic consultation regarding the CRVFO livestock grazing program (ES/GJ-6-CO-03-F-013) and b) summarizes the main points in the unpublished Biological Assessment (BA) for Federally Listed Threatened, Endangered, and Proposed Species for the Colorado River Valley Field Office - 2011 Grazing Permit Renewals (BLM 2010).

Cottonwood Creek Allotment. The Cottonwood Creek allotment ranges in elevation from 7,300 feet to 8,700 feet. Vegetation consists primarily of aspen, oakbrush, and sagebrush shrublands. The linkage area portion of the allotment consists of ephemeral/intermittent drainages that drain into Cottonwood Creek. As such, no riparian proper functioning condition (PFC) assessments have been conducted on these drainages.

Monitoring data from the mid-1970's indicated that the upper elevation portions, containing the linkage area, of the allotment were in good condition, but the lower elevation sagebrush, pinyon/juniper, and mixed mountain shrubs were in fair to poor condition. Browse condition throughout the allotment was less than satisfactory. Sagebrush was decadent with little understory cover.

A 2001 site visit assessed the area for lynx. The site visit noted the range conditions were good. Good structural diversity of habitat with oak and aspen intermixed. Aspen stand looked mediocre. There were 3+ age classes noted and a few saplings were present and trees looked diseased. The habitat at the site is marginal for lynx and should be removed from potential habitat maps.

The 2010 on-site assessment concurred with the findings of the 2008 land health assessment and previous site visits (e.g. grazing compliance inspections). Broad areas of habitat where animals can find food, shelter and security existed in the linkage area portion of the allotment. The structure and/or composition of the upland vegetation was what was expected at the sites visited. Good residual herbivore upland forage to sustain lynx and/or prey remained at the end of the season of grazing use. Ocular utilization levels within lynx habitat were estimated to be light (0-5%) category with occasional areas of moderate use (6-20%). Neither livestock grazing nor any other land management practices were found to be negatively contributing to the ability of native plant communities to support lynx and their prey.

Red Hill Common Allotment. This is a large allotment that contains a small strip of land that falls within an identified habitat linkage zone delineated for lynx. The linkage area portion of the allotment consists of mainly a mixed mountain shrubs with some Douglas fir, gambel's oak and aspen. The linkage area consists of ephemeral/intermittent drainages that lead into Cottonwood Creek. As such, no riparian proper functioning condition assessments have been conducted on the drainages.

The 2003 Eagle River South Watershed Land Health Assessment (BLM 2003) determined that the Red Hill Common allotment was achieving land health standards with a few problem areas. The linkage area portion of the allotment consists of ephemeral drainages that drain into Cottonwood Creek. As such, no riparian proper functioning condition (PFC) assessments were conducted on the drainages and standard 2 was not assessed. In relation to standard 3, certain concerns were raised regarding hedging on shrubs, pinyon-juniper encroachment into sagebrush sites, and a lack of forbs. Cheatgrass dominates the understory in several low-elevation sagebrush sites and poses a risk of expansion following fire or other disturbances.

In relation to standard 4, the report determined that range conditions located within the higher elevations of the subject allotments looked good. Only individual lower elevation sites, were found to not be meeting Standard 3. Overall condition of habitats located within the landscape linkage was sufficient given recent climatic conditions, to facilitate movement of lynx through the area. The bigger concern regarding movement and dispersal is the general fragmentation of habitats due to several factors including private land proximity and development, Interstate 70, roads, powerlines, and pipelines.

Grazing inspections since 1994 have generally indicated the range conditions were good with low livestock use. Weed infestations and heavy big game use was noted. A 2001 lynx assessment noted the habitat was diverse with a good vegetative structure. Vegetation was healthy with good production. Aspen at the site were healthy with three different age classes observed. Some recruitment was evident. Mountain mahogany was moderately browsed, and elk and some deer sign was abundant. No obvious problems with regard to the habitats capability to serve as a movement and/or dispersal corridor. Livestock grazing was not a problem.

The 2010 on-site assessment concurred with the findings of the 2003 land health assessment and previous site visits. Broad areas of habitat where animals can find food, shelter and security existed in the linkage area portion of the allotment. Good residual herbivore upland forage to sustain lynx and/or prey remained at the end of the season of grazing use. Ocular utilization levels within lynx habitat were

estimated to be light (0-5%). Neither livestock grazing nor any other land management practices were found to be negatively contributing to the ability of native plant communities to support alternative prey species and lynx during dispersal movements.

Determination for Canada Lynx. As per the programmatic consultation (ES/GJ-6-CO-03-F-013), for allotments containing no lynx habitat but overlap with a mapped linkage area, the assessment of public land health standard 3 was used to determine vegetative and wildlife condition. The proposed action is anticipated to continue to leave sufficient forage for lynx prey species and provide adequate cover for movement and dispersal of lynx between larger forested habitats. Thus it was concluded the allotment with the current grazing system and stocking rates continues to achieve public land health standards for standard 3.

In areas where livestock grazing is being renewed, the allowable number of AUMs and periods of use, along with the land health standards and terms/conditions are anticipated to result in acceptable residual herbivore forage and riparian conditions necessary to maintain adequate lynx and prey habitat. Directly, indirectly or cumulatively the proposed actions have been determined not to result in the destruction or adverse modification of USFWS designated critical habitat for Canada lynx. The proposed action would not negatively affect the suitability of habitats within a LAU. Connectivity to other habitats across the linkage area would not be degraded. The allotment and the grazing management operation are anticipated to meet land health standard 2 and 3 within linkage areas and mechanisms are in place for adherence to these standards.

In 2000 the Fish and Wildlife Service concurred with BLM's "May Affect, Not Likely to Adversely Affect" determination for activities associated with the grazing permit renewal for the Cottonwood Creek Allotment. This project level analysis has reached a determination of "May Affect, Not Likely to Adversely Affect (NLAA)" for the Canada lynx on both allotments because the proposed action is predicted to only result in insignificant and/or discountable effects to lynx and their habitat.

Livestock grazing actions, for which a determination of NLAA is made, falls within the "blanket concurrence" and the streamlined consultation process provided by the USFWS under a programmatic agreement. As a foundation for the streamlined section 7 process, the BLM and USFWS have developed a set of project decision screens for activities determined by the agencies to cause inconsequential or unlikely effects to the Canada lynx. The assumptions and criteria upon which the screens are based have been fully met by this grazing permit renewal and are documented in the project file.

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

Healthy functioning riparian ecosystems and uplands provide habitat for a diverse and abundant plant community and in turn insect populations that attract numerous foraging bat species. Properly managed livestock grazing (i.e. meeting land health standards) is generally compatible with bat species. The development and maintenance of water sources for livestock may unintentionally provide beneficial effects to foraging bat species. As long as acceptable utilization levels are maintained and land health standards are achieved there would be no direct or indirect effects of grazing on bat species that forage over these areas.

Analysis on the Public Land Health Standard 4 for Special Status Terrestrial Wildlife Species: (partial, see also Special Status Plants and Aquatic Wildlife): The 2008 Deep Creek land health assessment reported the all of the sites visited in lynx habitat/linkages were found to be in good condition, providing healthy and productive habitat for lynx and their prey. Based on the overall condition of upland and riparian habitats located on public lands, Standard 4 for Canada lynx was being met within the Deep Creek landscape. The 2010 on-site inspections by the FO biologist concur with the 2008 land health assessment. The continuation of livestock grazing, as proposed, is not likely to result in a failure to achieve standard 4 for special status terrestrial wildlife communities.

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

Affected Environment: The following table summarizes the latest: 1) species list (USFWS 2010) from the U. S. Fish and Wildlife Service for Federally listed, proposed, or candidate aquatic wildlife species and 2) Colorado BLM State Director's Sensitive Species List for aquatic species; that may occur within the CRVFO and be impacted by the proposed action.

Table – Special Status Aquatic Wildlife Species

Federally Listed, Proposed or Candidate Aquatic Wildlife Species			
Species	Habitat/Range	Occurrence	Potentially Impacted by the Proposed Action or Alternatives
Greenback cutthroat trout (<i>Oncorhynchus clarki stomias</i>)	Federally listed as threatened. 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 the Western Slope of Colorado. Historically found in cold, clear, gravely headwater streams and mountain lakes of the Arkansas and South Platte River systems in Colorado and part of Wyoming. The greenback cutthroat trout was not identified on the USFWS list for Garfield County; however, recent surveys have identified a population in Cache Creek.	Absent	No
Bonytail (<i>Gila elegans</i>)	Federally listed as endangered. This large chub is a member of the minnow family found in large, fast-flowing waterways of the Colorado River system. Their current distribution and habitat status are largely unknown due to its rapid decline prior to research into its natural history. The bonytail is extremely rare in Colorado and no self-sustaining population exists. Only one has been captured in the state since 1980.	Absent	No

Federally Listed, Proposed or Candidate Aquatic Wildlife Species			
Colorado pikeminnow (formerly Colorado squawfish) (<i>Ptychocheilus lucius</i>)	Federally listed as endangered. The Colorado pikeminnow exists 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.	Absent	No
Humpback chub (<i>Gila cypha</i>)	Federally listed as endangered. Found in deep, clear to turbid waters of large rivers and reservoirs over mud, sand or gravel. The nearest known habitat for the humpback chub 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.	Absent	No
Razorback sucker (<i>Xyrauchen texanus</i>)	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.	Absent	No
Colorado BLM Sensitive Aquatic Species			
Species	Habitat/Range	Occurrence	Potentially Impacted by the Proposed Action or Alternatives
Northern leopard frog (<i>Rana pipiens</i>)	Generally found between 3,500 to 11,000 feet, in wet meadows and in shallow lentic habitats. They require year-round water sources, deep enough to provide ice free refugia in the winter. Within the CRVFO, this species has been documented in locales where quality riparian vegetation exists in conjunction with perennial water sources. Larger populations of this species have been documented northwest of King Mountain within the small drainage that feeds 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.	Absent	No

Federally Listed, Proposed or Candidate Aquatic Wildlife Species			
Bluehead sucker (<i>Catostomus discobolus</i>), Flannelmouth sucker (<i>Catostomus latipinnis</i>), and Roundtail chub (<i>Gila robusta</i>)	Primarily found in larger rivers just down stream of the allotments but may also be found in smaller tributaries with good connectivity to larger river systems. These fish are endemic to the Colorado River basin and reside within the mainstem Colorado River and its major tributary streams. Given their biology, feeding habits, habitat needs, and niche in the ecosystem, these species can persist in the face of actions that increase sediments to streams and rivers containing these species.	Absent	No
Mountain sucker (<i>Catostomus platyrhynchus</i>)	The mountain sucker is found primarily in small, low-mid elevation streams in northwestern Colorado with gravel, sand or mud bottoms. They inhabit undercut banks, eddies, small pools, and areas of moderate current. Young fish prefer backwaters and eddies. A population of mature adults is found in Steamboat Lake. Within the CRVFO, only known occurrence is in Piceance Creek.	Absent	No
Colorado River cutthroat trout (CRCT) (<i>Oncorhynchus clarkii pleuriticus</i>)	CRCT are one of three subspecies of native trout found in Colorado. CRCT prefer clear, cool headwaters streams with coarse substrates, well-distributed pools, stable streambanks, and abundant stream cover. CRCT have been documented as occurring in several streams including: Parachute Creek, Abrams Creek, Battlement Creek, Mitchell Creek, North Thompson Creek and Red Dirt Creek. It is likely that all of the perennial waters capable of harboring fish historically contained this native trout species. CRCT have hybridized with non-native salmonids in many areas, reducing the genetic integrity of this subspecies. Rainbow trout hybridize with cutthroat trout. Brook and brown trout tend to replace them in streams and rivers.	Absent	No

Environmental Consequences/Mitigation: No special status aquatic wildlife species are known to exist in the allotments or would likely be impacted by the proposed action.

Analysis on the Public Land Health Standard 4 for Special Status Aquatic Wildlife Species: (partial, see also Special Status Plants and Terrestrial Wildlife): Not applicable.

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

Affected Environment: *Red Hill Common Allotment:* The Red Hill Common allotment is located within the Eagle River basin. Primary drainages inside the allotment include Spring Gulch and Old Man Gulch. Old Man Gulch is a perennial tributary to perennial Gypsum Creek. Spring Gulch is an ephemeral tributary to Gypsum Creek downstream of Old Man Gulch. Gypsum Creek is a perennial tributary to the Eagle River at Gypsum, CO. The Eagle River is tributary to the Colorado River at Dotsero, CO.

The Red Hill Common allotment is also situated within water quality stream segment 10a of the Eagle River Basin (Upper Colorado Basin). Stream segment 10a is defined as “All tributaries to the Eagle River, including all wetlands, from a point immediately below the confluence with Lake Creek to the confluence with the Colorado River, except for specific listings in Segments 10b, 11 and 12, and those waters included in Segment 1 (CDPHE–WQCC. 2010a).”

Cottonwood Creek Allotment: The Cottonwood Creek allotment is located within the Upper Colorado River basin. Primary drainages inside the allotment include Cottonwood Creek, Tom Creek, and Fitz-Patrick Creek. Fritz-Patrick Creek is a perennial tributary to Cottonwood Creek. Tom Creek is a perennial tributary to Cottonwood Creek downstream of Fitz-Patrick Creek. Cottonwood Creek is a perennial tributary to the Colorado River approximately 5 miles downstream of Dotsero, CO.

The Cottonwood Creek allotment is situated within water quality stream segment 7a of the Upper Colorado River Basin. Stream segment 7a of the Upper Colorado River Basin is defined as “All tributaries to the Colorado River, including all wetlands, from a point immediately above the confluence with the Blue River and Muddy Creek to a point immediately below the confluence with the Roaring Fork River, which are not on National Forest lands, except for specific listings in Segment 7b, 7c and in the Blue River, Eagle River, and Roaring Fork River basins) (CDPHE–WQCC. 2010a).

Table 1 identifies stream classifications and water quality standards for Upper Colorado River Basin stream segments 7a and 10a (Eagle River Basin) as outlined in CDPHE, Regulation No. 33.

Table 1:		Numeric Standards					
Stream Segment	Classifications	Physical and Biological	Inorganic (mg/l)		Metals (µg/l)		
COUCUC07a	Aq Life Cold 1 Recreation N Water Supply Agriculture	T=TVS(CS-II).C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=630/100ml	NH3(ac/ch)=TVS Cl2(ac)=0.019 Cl2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO2=0.05 NO3=10 Cl=250 SO4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=WS Mn(ac/ch)=TVS Hg(ch)=0.01(tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS

COUCEA10a	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I),C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH3(ac/ch)=TVS Cl2(ac)=0.019 Cl2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO2=0.05 NO3=10 Cl=250 SO4=WS	As(ch)=0.02(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=WS Mn(ac/ch)=TVS Hg(ch)=0.01(tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS
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CDPHE–WQCC. 2010a

The CDPHE —Integrated Water Quality Monitoring and Assessment Report-2010 update to the 2008 305(b) Report (CDPHE-WQCC. 2010c) was reviewed to determine the current status of assessment and determination of water quality within each allotment. The Colorado Integrated Reporting Category (IR) value assigned to stream segment 7a and 10a (Eagle River basin) assessment units in the —Status of Water Quality in Colorado – 2010 document was IR=2. Stream segment 7a is described as fully supporting agriculture, water supply and secondary contact recreation while insufficient information was available for making a determination on aquatic life cold. Stream segment 10a (Eagle River basin) is described as fully supporting agriculture, water supply, and primary contact recreation while insufficient information was available for making a determination on aquatic life cold 1. In Colorado, the majority of the assessed surface water bodies fall into IR Categories 1, 2, and 3. Category 1 indicates waters attaining water quality standards. Colorado has elected to place segments where not all uses have been assessed in IR Category 2. In some cases, a complete assessment of all uses cannot be completed do to the lack of data, but the data that is available indicates that at least some of the uses that were assessed are fully supporting. IR Category 3 indicates that insufficient data is available to determine whether or not the classified uses are being attained. Category 4 indicates waters which are not supporting a standard for 1 or more classified uses, but a TMDL is not needed. IR Category 5 indicates that available data and/or information indicate that at least one classified use is not being supported or is threatened, and a TMDL is needed. Segments must be placed in Category 5 when, based on existing and readily available data and/or information, technology-based effluent limitations required by the Clean Water Act (CWA), more stringent effluent limitations, and other pollution control requirements are not sufficient to implement an applicable water quality standard and a TMDL is needed. This category constitutes the Section 303(d) list of waters impaired by a pollutant (CDPHE-WQCC. 20010c).

The 2010 CDPHE-WQCC Regulation No. 93 Section 303d List of Impaired Waters and Monitoring and Evaluation List, was reviewed to determine if Upper Colorado River stream segment 7a and 10a (Eagle River basin) were listed. The affected portions of stream segments 7a and 10a were not identified on the 303(d) or Monitoring and Evaluation list (CDPHE-WQCC. 2010b). The Eby Creek portion of Eagle River basin segment 10a was identified on the States M&E list for potential selenium impairments. However, this stream is not located within the allotment boundaries.

Groundwater: The primary source of groundwater within the allotment boundaries is located in shallow alluvial/colluvial deposits adjacent to stream courses. One groundwater well was identified within the Red Hill Common allotment. The legal location of this unnamed well is T5S, R86W Section 13 SE. Use types identified for this structure are “other” and “monitoring”. Total depth is 440 feet below ground surface and the perforated length extends from 370 feet to 440 feet below ground surface. Static water level was reported to be 360 feet below ground surface. No other information was available for this structure. Two springs were identified

through the CRVFO spring database. Spring Gulch and Mary Jane Springs are both located within the Red Hill Common allotment. Stock watering is the beneficial use types identified for these water sources. The BLM holds water rights for both of these sources. Additional information on these springs is located Table Y. Fitz-Patrick Spring (also identified in Table Y) was not identified in the CRVFO spring data base. However, through a review of the CDSS water rights database, the legal location for this spring source places it on BLM.

Water Rights: The Colorado Decision Support System (CDSS) water rights database was reviewed to determine if any water rights fall within the allotment boundaries. Table Y is a product of the CDSS water rights database and identifies all water rights (and associated water rights information) within the allotment boundaries.

Table Y: Water rights within allotment boundaries.

Water Right Name	Water Source	Q10	Q40	Q160	Sect	Twship	Range	PM	Adj Date	Appr Date	Use Type	Structure Type	Rate Amount (CFS)	Case No
FITZP SPRING	COTTONWOOD CREEK		N W	N W	3	6S	86W	S	12/31/1972	12/31/1940	fire, stock	Spring	0.001	W0467
LOWER SPRING GULCH SPRING AB	GYPSUM CREEK	S W	SE	N W	25	5S	86W	S	12/31/2006	6/28/1935	stock	Spring	0.0022	06CW0034
LOWER SPRING GULCH SPRING C	GYPSUM CREEK	NE	N W	N W	25	5S	86W	S	12/31/2006	6/28/1935	stock	Spring	0.0022	06CW0034
LOWER SPRING GULCH SPRING D	GYPSUM CREEK	SE	N W	N W	25	5S	86W	S	12/31/2006	6/28/1935	stock	Spring	0.0022	06CW0034
MARY JANE SPRING	GYPSUM CREEK	NE	NE	NE	34	5S	86W	S	12/31/1983	8/30/1983	recreation, domestic, stock	Spring	0.01	83CW0280

CDSS 2011

One notable issue with the above table relating to Fitz-Patrick (FITZP spring) is the fact that no spring source is identified through the CRVFO springs data layer. However, given the legal description of this source, it is located on BLM. The legal location for this source needs to be ground-truthed and water rights need to be filed in the name of the appropriate surface owner (BLM).

Environmental Consequences/Mitigation: *Surface Water:* Direct impacts to surface water quality resulting from grazing could be elevated nutrient levels (fecal coliform) in area surface waters if cattle begin to congregate near water sources for extended periods of time. Indirect impacts may result from excessive utilization reducing effective vegetative cover, elevating erosion potential and increasing sediment delivery to area streams which would negatively impact water quality. However, under the proposed action, the current terms and conditions of the existing grazing

permit would be renewed for an additional 10-year period. Terms and conditions of the lease would be modified if an assessment of rangeland health results in a determination that changes are necessary in order to comply with the standards for public land health. Water quality in the affected stream segment continues to meet State water quality standards and riparian conditions continue to function under existing grazing practices. It is anticipated that given favorable environmental conditions, desirable forage plants are anticipated to increase/maintain effective ground cover as litter accumulation and plant reproduction rates will be held constant or elevated from current conditions. Increasing/maintaining effective ground cover with desirable vegetation contributes to soil stability promoting healthy watersheds and encouraging water quality maintenance/improvement. Therefore, successful implementation of the proposed action should help maintain or improve water quality. With successful implementation of the proposed grazing management plan desirable vegetative communities with potential to expand will do so (the rate of recovery may be slower than if grazing did not occur on the landscape). As a result, cumulative benefits to watershed health and water quality are anticipated to follow. Authorized grazing subject to all terms and conditions under the proposed action will suffice as mitigation.

Groundwater: The proposed action is not anticipated to directly or indirectly impact groundwater resources.

Water Rights: Water rights with use types identified for stock will be put to beneficial use under the proposed action. Water developments will be maintained in functional conditions as part of the lease agreement. The BLM will ground-truth the location of Fitz-Patrick Spring and file for water rights if appropriate.

Analysis on the Public Land Health Standard 5 for Water Quality: Public Land Health Standard 5 for Water quality is currently being met in water quality stream segments 7a and 10a of the Upper Colorado River basin. The proposed action will not alter this finding.

Wetlands and Riparian Zones (includes an analysis on Public Land Health Standard 2)

Affected Environment: The table below lists known riparian areas and the Proper Functioning Condition (PFC) assessment for the allotments under this permit renewal:

Allotment	Riparian Area Name	Miles	Year Assessed	Condition Rating
Red Hill	Fitzpatrick Gulch	0.4	2002	Proper Functioning Condition
	Old Mans Gulch	1.0	2002	Proper Functioning Condition
Cottonwood Creek	Cottonwood Creek	0.7	2008	Proper Functioning Condition
	Tom Creek	1.1	2008	Proper Functioning Condition

There were no issues or concerns raised with livestock grazing on the riparian areas listed above. There is no current monitoring, inventory or documented field observations for the affected riparian areas other than the PFC assessment discussed above.

Environmental Consequences/Mitigation: Direct impacts to vegetation from livestock grazing include removal of forage (herbivory) and trampling damage. Indirect impacts from livestock grazing may also result in soil compaction and erosion. Poor grazing management practices can result in excessive utilization, soil compaction or repeated defoliations that do not allow sufficient time for rest and recovery of plant species. Reduced vigor or death of plant species may result as well as increased potential for weed invasion or other undesirable vegetation. Excess herbivory or trampling damage can lead to greater erosion or deposition, changes in channel geomorphology, and less soil moisture. Conversely, well-managed grazing can provide a variety of environmental benefits. Herbivory can remove old or of dead growth that allows for an increase green matter (re-growth). Hoof action from livestock can be used to plant seed which promotes the germination and establishment of new plants. Targeted grazing can be a useful tool to control undesirable invasive plant species or reduce fuels that contribute to severe wildfires. Livestock grazing that promotes and is compatible with healthy riparian vegetation contributes to sustainable levels of aboveground biomass, root growth, and root strength in streambanks. Through overbank flows, riparian vegetation is naturally defoliated or buried by stream and sediment deposition. Livestock can contribute to the maintenance of vegetation by defoliating dormant or dead growth in between these overflow events, thus increasing green matter and hence root strength and growth (Wyman et al. 2006).

Red Hill Allotment

The duration and period of grazing use on the Red Hill allotment would be 1.5 months in late spring (May 6 to June 20). Under this grazing management, repeated defoliation of riparian plant species is less likely to occur and there would be a period of grazing rest throughout most of the growing season. Some trampling and soil compaction would be expected; however, this would occur over a short period which would minimize adverse impacts. In consideration of the above and the conditions of riparian zones described in the Affected Environment, the Proposed Action is not expected to cause adverse impacts to riparian zones. There would be no cumulative impacts.

Cottonwood Creek Allotment

The period of grazing use is 5.5 months throughout most of the growing season which can cause adverse impacts (e.g., reduction in plant vigor, decline in riparian species composition and production, bank damage) to riparian zones since very little time remains for grazing rest and recovery for riparian plant species. However, in this case, grazing use has not resulted in these impacts along Tom Creek or Cottonwood Creek. Most of the grazing use occurs on the unfenced private land portion of the allotment (23 percent public land) which mitigates impacts to the riparian areas on public land. In consideration of the above and the conditions of riparian zones described in the Affected Environment, the Proposed Action is not expected to cause adverse impacts to riparian zones. There would be no cumulative impacts.

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

Wild and Scenic Rivers

Affected Environment: The Red Hill Com (8507) Allotment's northern portion is adjacent to the Eagle River that was found to be eligible under a Wild and Scenic Eligibility Study in 2007. The Eagle River will be managed to preserve the identified Outstanding Remarkable Values (ORV's) until such a time as a suitability study is completed. The ORV identified for the Eagle River was Recreational (Floatboating). The overall objective is to not allow surface disturbing activities that might impair that identified ORV or the segment's preliminary classification, which was classified as recreational.

Environmental Consequences/Mitigation: Livestock grazing impacts visitors on an individual basis. For some recreationists, just the signs of livestock grazing, such as the presence of cattle, fences, cropped forage, trampled vegetation, or manure, affect the natural aesthetics and their visit. In some instances, visitors enjoy ranchers working cattle or cattle drives. Therefore, the proposed action will not affect the ORV as a whole or the classification of the segment.

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: A review of soil units mapped by NRCS in the Aspen-Gypsum Area, indicates 12 affected soil units within the allotment Red Hill allotment and 5 affected soil units

within the Cottonwood Creek allotment. Table Z outlines significant soil characteristics for each soil unit affected.

Table Z: Affected soil units.

Allotment	Soil Name	slope range	drainage class	Surface run-off classification	Erosion Class
Red Hill	Almy loam	12 to 25 percent	well drained	medium	moderate
Red Hill/Cottonwood	Anvik-Skylick-Sligting association	25 to 50 percent	well drained	rapid	moderate to severe
Red Hill	Arle-Ansari-Rock outcrop complex	12 to 50 percent	well drained	medium to rapid	slight to severe
Red Hill/Cottonwood	Coulterg loam	12 to 50 percent	well drained	medium to rapid	moderate to severe
Red Hill	Cushool-Rentsac complex	15 to 65 percent	well drained	rapid	severe
Red Hill	Earsman-Rock outcrop complex	12 to 65 percent	excessively drained	rapid	slight to severe depending on slope
Red Hill	Goslin fine sandy loam	3 to 6 percent	well drained	slow	slight to moderate
Red Hill/Cottonwood	Gypsum land-Gypsiorthids complex	12 to 65 percent	well drained	very rapid	slight to severe
Red Hill/Cottonwood	Jerry loam	25 to 65 percent	well drained	very rapid	moderate
Red Hill	Southface cobbly sandy loam	12 to 25 percent	well drained	rapid	moderate
Red Hill	Southface cobbly sandy loam	25 to 65 percent	well drained	rapid	moderate
Red Hill	Torriorthents-Camborthids-Rock outcrop complex	45 to 95 percent	well drained	rapid	severe
Red Hill	Yamo loam	6 to 12 percent	well drained	medium	slight
Red Hill/Cottonwood	Yamo loam	12 to 25 percent	well drained	rapid	severe

NRCS 2011.

Environmental Consequences/Mitigation: Direct impacts to soil resources associated with livestock grazing include soil compaction and increased soil erosion resulting from decreased plant cover/stabilization. Soil compaction reduces infiltration rates elevating potential for erosive overland flows. Furthermore, compaction can alter soil productivity and result in increased potential for establishment of invasive species. Invasive species often do not have desired soil stabilizing characteristics typically found in native or desirable species.

Over grazing or poor grazing management may lead to reduced plant cover leaving soils exposed to erosional processes. As a result, erosion potential is elevated in areas lacking sufficient plant cover. In these areas, valuable topsoil can be lost limiting site potential for extended periods of time (topsoil forms very slowly in arid environments). However, under the proposed action the

current grazing management plan will continue for another 10-year period. Terms and conditions of the lease would be modified if an assessment of rangeland health results in a determination that changes are necessary in order to comply with the standards for public land health. Soil health and vegetation communities' conditions continue meet land health standards and are properly functioning under existing grazing practices.

It is anticipated that given favorable environmental conditions, desirable forage plants are anticipated to increase/maintain effective ground cover as litter accumulation and plant reproduction rates will be held constant or elevated from current conditions. Increasing/maintaining effective ground cover with desirable vegetation contributes to soil stability promoting a healthy landscape. Therefore, successful implementation of the proposed action should help maintain or improve soil health. With successful implementation of the proposed grazing management plan desirable vegetative communities with potential to expand will do so (the rate of recovery may be slower than if grazing did not occur on the landscape). As a result, cumulative benefits to soil health are anticipated to follow. Authorized grazing subject to all terms and conditions under the proposed action will suffice as mitigation.

Analysis on the Public Land Health Standard 1 for Upland Soils: The Cottonwood Creek allotment was assessed in 2008 as part of a formal land health assessment in the Deep Creek landscape. Likewise, a formal land health assessment was conducted on the Eagle River South landscape which encompassed the Red Hill Common allotment in 2002. Standard 1 was identified as being met in both landscapes.

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

Affected Environment:

The Cottonwood Creek allotment contains 865 acres of public land and 1,646 acres of private land ranging in elevation from 7,150 feet to 8,800 feet. The private lands include the more productive valley bottoms and the gentler slopes within the area. The public land portion of the allotment consists mostly of steep terrain dominated by dense oakbrush/mixed mountain shrubs with small sagebrush parks on the ridgelines and south-facing slopes and some pockets of Douglas-fir on the steep north-facing slopes. Riparian vegetation along Tom Creek is comprised of a mix of cottonwoods, aspen, Douglas-fir, willows and other riparian shrub species.

The Red Hill allotment encompasses 12,467 acres of public land ranging in elevation from 6,200 feet along the drainages and alluvial terraces to 8,400 feet in the rolling foothills northeast of Cottonwood Pass. Vegetation consists of Basin big sagebrush along the low-elevation ephemeral drainages. Middle elevations are comprised of pinyon-juniper woodlands on the steeper, south-facing slopes, and Gambel oak/mixed mountain shrubs on the north-facing slopes. Mountain big sagebrush occupies the flatter mesas and ridgetops, and patches of Douglas-fir are found on north-facing slopes in the upper elevations.

Environmental Consequences:

Cottonwood Creek allotment

No recent monitoring data exists for the Cottonwood Creek allotment. Livestock tend to use the private lands where the more productive grazing land is found and spend less time on the public

land which is generally steep and less accessible due to the dense oakbrush. The Land Health Assessment did not document any resource concerns except that Kentucky bluegrass was common throughout the allotment and shrubs were moderately to heavily hedged. Continuation of livestock grazing, as proposed, on the Cottonwood Creek allotment should continue to maintain adequate vegetative conditions to ensure diverse, productive and reproducing plant populations.

Red Hill Common allotment

The Red Hill Common allotment is a common allotment grazed by several permittees. The grazing schedule for this permit is from 5/6 to 6/20. Grazing for seven weeks in the early spring should leave adequate time following grazing to permit regrowth and recovery of native grasses. Utilization studies conducted in 2002, 2008 and 2010 showed slight to light use on key grasses at all locations monitored. Utilization in 2002 and 2008 averaged 18% with a minimum of 4% and a maximum of 48%. In 2010, this permittee took non-use, however, the other permittees did graze the allotment. Utilization was very light, in the 10% range, at all sites monitored. Grazing at this level should leave adequate vegetative material to replenish root reserves and maintain vegetative health. Continuation of livestock grazing, as proposed, on the Red Hill Common allotment should maintain diverse, vigorous and reproducing plant populations.

Analysis on the Public Land Health Standard for Plant and Animal Communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial):

For the most part, Red Hill Common allotment was meeting Standard 3. Overall, ground cover was adequate to protect soils, and vegetation was in fair to good condition. However, certain concerns were raised regarding hedging on shrubs, pinyon/juniper encroachment into sagebrush sites, and a lack of forbs. Cheatgrass dominated the understory in several low-elevation sagebrush sites and poses a risk of expansion following fire or other disturbances. Reasons for failing to meet the standard on several sites within the allotment were heavy ungulate grazing resulting in loss of vegetative diversity and productivity, lack of fire, and OHV use. Existing livestock grazing was not identified as a substantial factor in failing to achieve the standards. Continuation of livestock grazing, as proposed, on the Red Hill Common allotment should not result in a further decline in vegetative conditions, and would not likely prevent Standard 3 from being met on the allotment as a whole.

The Cottonwood Creek allotment is part of the Deep Creek Landscape which was assessed in 2008. The assessment found that Cottonwood Creek allotment was meeting all of the standards at the time. The lower elevations of the allotment are important big game winter range and palatable shrubs showed evidence of moderate to heavy hedging. The sagebrush/mixed mountain shrublands had very diverse shrub and forb composition. Grasses were less abundant and diverse than expected, with Kentucky bluegrass comprising the dominant grass. Based on the results of the land health assessment, the continuation of livestock grazing on the Cottonwood Creek allotment with the same number of AUMS, class of livestock, period of use, and percent public land should have no adverse impacts on vegetation and Standard 3 would continue to be achieved.

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

Affected Environment: *Amphibians.* Several amphibians of interest are found within the CRVFO, 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. This species is of concern in Colorado due to its limited occurrence and small range.

Fish. Records from the late 1970's, 80's, and as recently as the 90's, indicate that Cottonwood Creek support brook trout (*Salvelinus fontinalis*). Brook trout were introduced to Colorado in 1872, and are native to Canada and the Eastern U.S. These fish are known to outbreed and out compete other native species of fish, helped by its fall spawning. Portions of Cottonwood Creek were sampled via backpack electroshocker during the 2008 land health assessment but no fish were collected. However large portions of the stream were not sampled and it is possible that fish reside in areas not sampled or on private land parcels.

Environmental Consequences/Mitigation: Livestock grazing can have direct negative impacts on streams containing sediment-intolerant aquatic species. Livestock have a tendency to concentrate their foraging use in riparian areas. There are four general components of an aquatic system that can be affected by livestock grazing streamside vegetation, stream channel morphology, shape and quality of the water column and the structure of the soil portion of the streambank (Behnke, R. J., and R. F. Raleigh 1979). The primary impacts on aquatic species and their habitats are habitat alteration, increased water temperatures, macroinvertebrate productivity and increased sedimentation and turbidity. For example, reductions in stream productivity can disrupt the food chain and result in reduced food sources for resident fish species.

Amphibians can be impacted by alteration of limited breeding habitats and overwinter habitats. Many species burrow into soil substrates during summer or winter. Activities that disturb the ground have the potential to disrupt amphibians and result in direct mortality. Breeding ponds can be drained or lowered in volume or have shorelines altered that can impact breeding sites and limit productivity.

Field observations indicate that the habitat components are currently in good condition. It is anticipated that maintaining the current grazing scheme will maintain critical habitat needs such as: water temperatures for coldwater fish species, overhead cover, sediment levels entering the stream, spawning habitat and conditions for egg incubation, macroinvertebrate diversity and stream channel morphology; leading to negligible impacts to aquatic species.

Analysis on the Public Land Health Standard 3 for Aquatic Wildlife Species: (partial, see also Special Status Plants and Terrestrial Wildlife): A 2008 land health assessment reported that Standard 3 is being met for aquatic wildlife on all BLM managed stream sections within the assessment area. The 2010 on-site inspections by the FO biologist concur with the land health

assessment determination for Cottonwood Creek. It is concluded that that continuation of livestock grazing, as proposed, is not likely to result in a failure to achieve standard 3 aquatic animal communities. Thus the proposed action of renewing grazing permits with the same number/kind of livestock, period of use, percent public land and AUMS would likely result in maintaining the existing land health conditions for land health standard 3.

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

Affected Environment: The CRVFO supports a wide variety of terrestrial wildlife species that summer, winter, or migrate through BLM lands. 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 Dusky 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*) are 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. BLM lands provide a large portion of the undeveloped winter range available to deer and elk. The CRVFO'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.

Environmental Consequences/Mitigation: Livestock grazing can alter vegetation structure, composition, and function. On the other hand, livestock grazing can have a beneficial effect on forage quality by removing the rough or dried seedheads and stems, while leaving or creating the more palatable leaves for deer or elk to graze later in the season. Effects on terrestrial wildlife are dependent on the species of interest and may be adverse or beneficial depending on grazing numbers, timing, frequency, and intensity. Since the livestock AUMs authorized are estimated to remove 50% or less of the annual vegetative component - thereby leaving no less than 50% of the vegetative resource for use by wildlife - the proposed action would provide for adequate amounts of herbaceous vegetation necessary to continue to meet the needs of the various terrestrial wildlife species. The low percent of public land (Cottonwood Creek allotment), the very low number of AUMs (both allotments) and the period of use (spring only on the Red Hill allotment) would likely continue to have negligible or slight positive effects on wildlife. Based on field observations the proposed action should continue to maintain adequate habitat conditions (suitability and connectivity) to ensure local terrestrial wildlife species are maintained at viable population levels commensurate with the species and habitats' potential. Also see the riparian and vegetation sections.

Analysis on the Public Land Health Standard for Terrestrial Animal Communities (partial, see also Vegetation and Wildlife, Aquatic): The 2008 Deep Creek land health assessment reported the vast majority of the landscape is providing productive wildlife habitat. Good age class distribution among shrubs, good abundance and diversity of perennial grasses, and good forb diversity were prevalent in most areas. Landscapes exhibit connectivity of habitat or presence of corridors to prevent habitat fragmentation. Overall, this landscape is currently meeting Standard 3 for maintaining productive wildlife communities. The 2010 on-site inspections by the FO biologist concur with the 2008 land health assessment. The continuation of livestock grazing, as proposed, is not likely to result in a failure to achieve standard 3 terrestrial animal communities.

SUMMARY OF CUMULATIVE IMPACTS

Wildlife (inc. Special Status Species). The area covered by the proposed action only comprises a small portion of the watershed. Cumulatively, many of the future actions planned on private and other lands may have some undetermined effect on wildlife including special status species habitat. The proposed action would create negligible landscape-level cumulative impacts to wildlife when viewed in conjunction with those activities currently occurring and reasonably certain to occur on adjacent private/other lands.

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 June 1, 2010 regarding grazing permits and associated allotments scheduled for renewal in 2011. 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 Colorado River Valley 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
- Ute Mtn. Ute Tribe Chairman and Tribal Historic Preservation Officer
- Northern Ute Tribal Chairman
- Southern Ute Tribal Chairman

INTERDISCIPLINARY REVIEW:

<i>Name</i>	<i>Title</i>	<i>Responsibility</i>
Monte Senor	Rangeland Management Specialist	NEPA Lead, Invasive, Non-native Species, Range Management
Michael Kinser	Rangeland Management Specialist	Wetlands and Riparian Zones,
Nathan Dieterich	Hydrologist	Air Quality, Water Quality, Soils
Carla DeYoung	Ecologist	ACEC, Vegetation, T/E/S Plants, Land Heath Stds
Greg Wolfgang	Outdoor Recreation Planner	VRM, Recreation, Travel Management
Kimberly Miller	Outdoor Recreation Planner	WSR, Wilderness, Recreation
Cheryl Harrison	Archaeologist	Cultural Resources and Native American Concerns
Brian Hopkins	Wildlife Biologist	Migratory Birds, Terrestrial Wildlife and T/E/S Terrestrial Wildlife, Aquatic Wildlife and T/E/S Aquatic Wildlife

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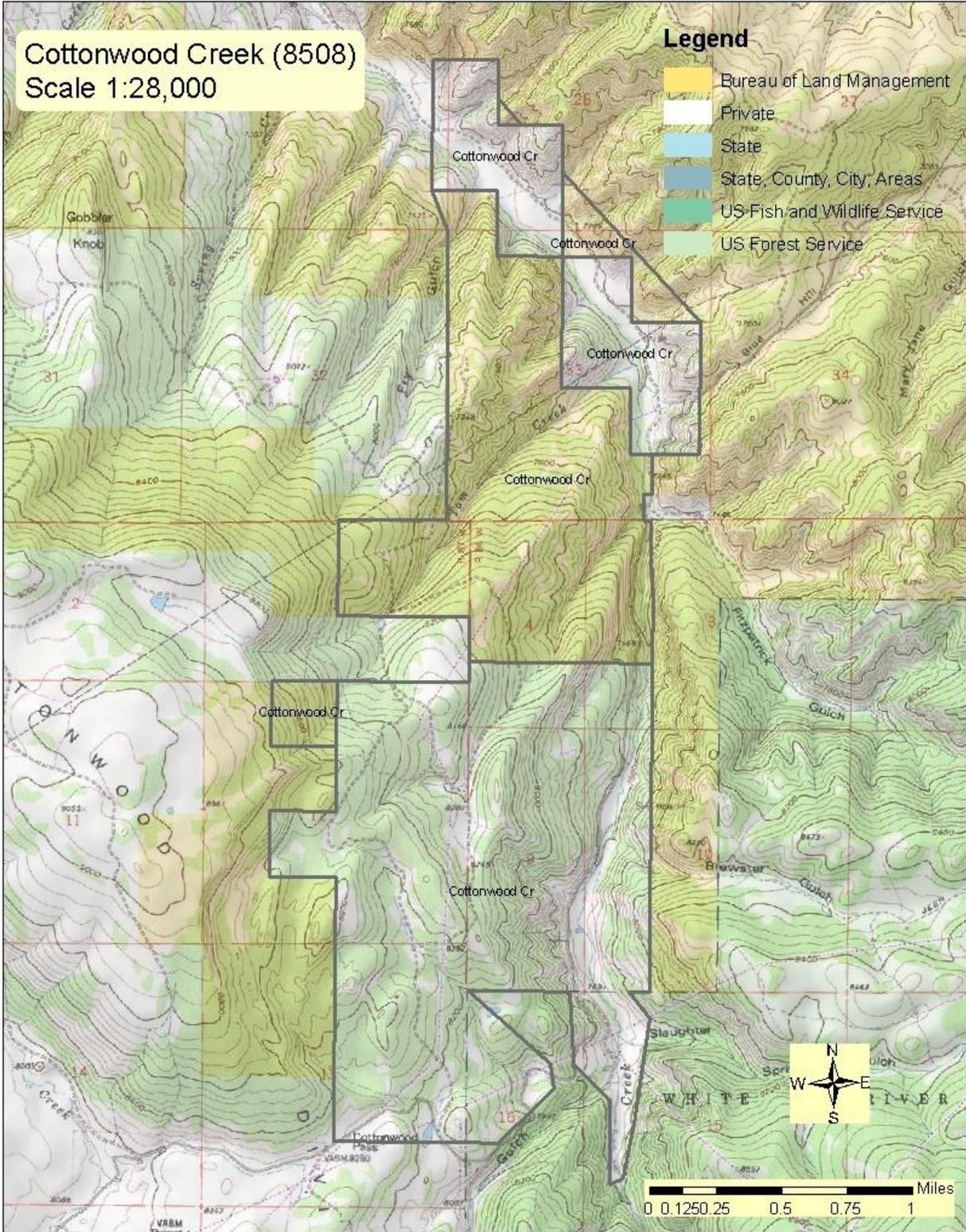
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APPENDICES: None

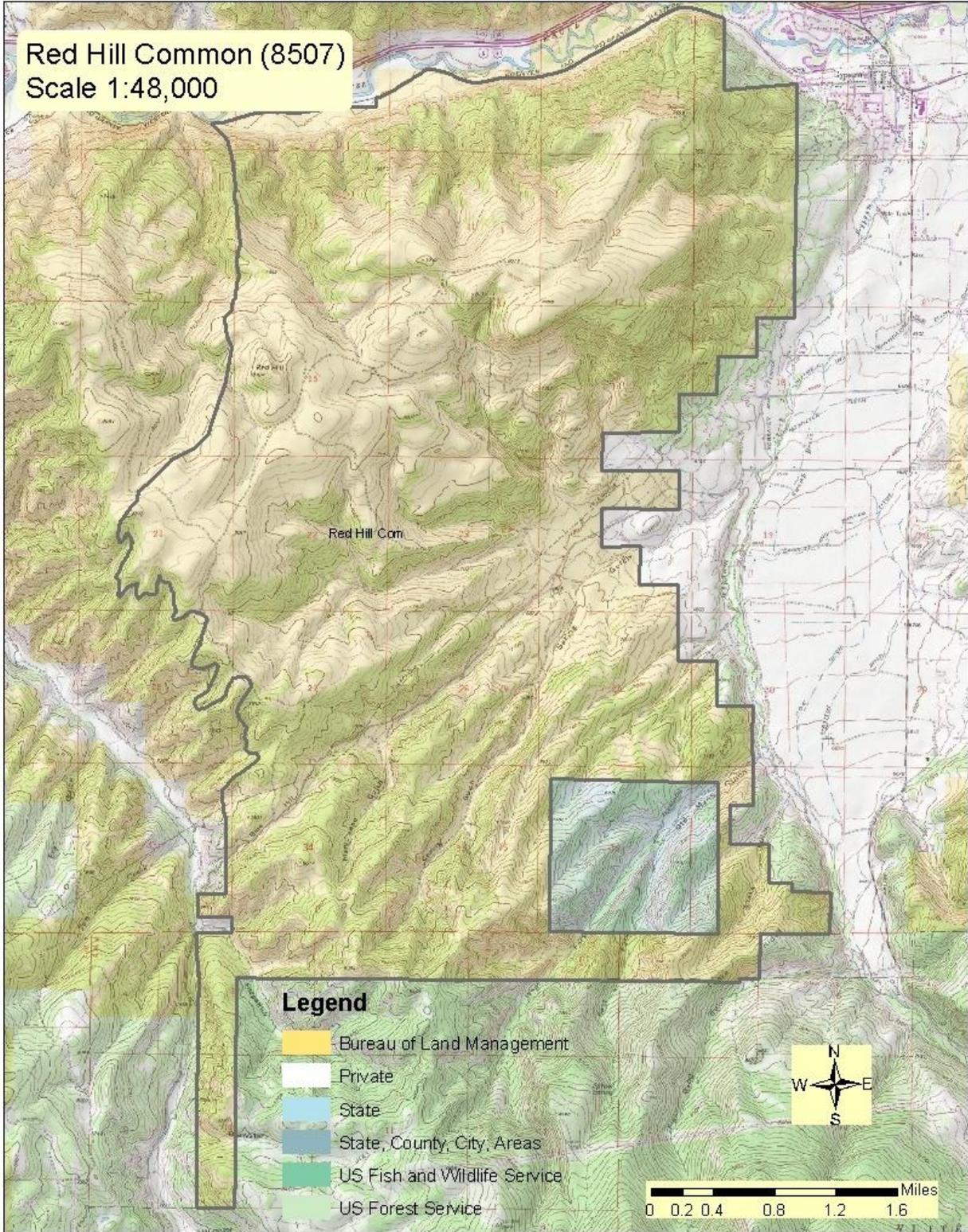
ATTACHMENTS: Allotment Map

PREPARER: Monte Senor

DATE: March 1, 2011



Red Hill Common (8507)
Scale 1:48,000



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Colorado River Valley FIELD OFFICE

FINDING OF NO SIGNIFICANT IMPACT

Grazing Permit Renewal on the Cottonwood Creek and Red Hill Com Allotments

DOI-BLM-N040-2011-0037-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 lease renewal on the Cottonwood Creek and Red Hill Common 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 lease 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 prime and unique farmlands, caves, wild and scenic rivers, wilderness study, areas, or ACECs.

The Red Hill Com (8507) Allotment's northern portion is adjacent to the Eagle River that was found to be eligible under a Wild and Scenic Eligibility Study in 2007. The Eagle River will be managed to preserve the identified Outstanding Remarkable Values (ORV's) until such a time as a suitability study is completed.

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

The analysis did not identify any effects that are 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 Cottonwood Creek and Red Hill 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.

The EA discloses that cumulatively, many of the future actions planned on private and other lands may have some undetermined effect on wildlife including special status species habitat. The proposed action would create negligible landscape-level cumulative impacts to wildlife when viewed in conjunction with those activities currently occurring and reasonably certain to occur on adjacent private/other lands.

8. The degree to which the action may adversely affect scientific, cultural, or historical resources, including those listed in or eligible for listing in the National Register of Historic Places.

Eleven historic properties were identified during the inventories for these allotments which will need to be assessed to determine if livestock are impacting these resources within the term of this permit. The EA discloses the adverse impacts that could occur to cultural resources from livestock grazing. A Conditional No Adverse Effect has been made for this renewal, subject to cultural resource mitigation measures.

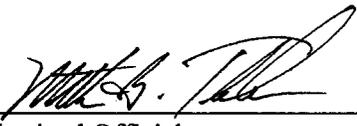
9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

There is no designated critical habitat for any listed Threatened or Endangered species within the project area. The EA discloses that the proposed action may affect, but is not likely to adversely affect" the Threatened - Canada lynx. The proposed action would have no adverse impacts to any other species listed as threatened or endangered.

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 Official
Colorado River Valley Field Office

3-24-11

Date