U.S. Department of the Interior
Bureau of Land Management
Glenwood Springs Field Office
50629 US Highway 6 & 24
Glenwood Springs, CO 81601

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-140-2009-028 EA

CASEFILE NUMBER: 0507566, 0507672

PROJECT NAME: Grazing Permit Renewals on the Red Hill and West Hardscrabble Allotments

LOCATION: T5S R84W, T5S R85W, T5S R86W – Red Hill No. 08507, West Hardscrabble NO. 08504. Refer to attached allotment maps.

APPLICANT: Grazing Permittees (two grazing permits)

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Proposed Action: The Proposed Action is to renew term grazing permits for the above applicants. The number/kind of livestock, period of use, percent public land and Animal Unit Months (AUMS) will remain the same as the previous permits with one exception as noted in the change to the grazing schedule below. The permits would be issued for a 10-year period. 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.

Scheduled Grazing Use:

Operator No.	Allotment Name & No.	Livestock No. & Kind	Period of use	Percent Public Land	AUMs
0507566	West Hardscrabble No. 08504	395 Cattle	05/16 – 06/30	100	597
	West Hardscrabble No. 08504	10 Cattle	10/16 – 10/31	100	5
	Red Hill No. 08507	179 Cattle	05/10 – 06/24	100	271
0507672	West Hardscrabble No. 08504	128 Cattle	05/16 – 06/30[1]	100	194
	West Hardscrabble No. 08504	10 Cattle	10/16 – 10/31	100	5

[1] The previous permit showed the period of use as 05/01 -06/15. The renewed permit would change this to 05/16 – 06/30 to correspond with the other permittees period of use and the July 1date when cattle are moved to the National Forest allotment.

	Red Hill No. 08507 Wilson Pasture	75 Cattle	04/01 – 04/17	1	1
	Red Hill No. 08507 Upper Pasture	69 Cattle	05/10 – 06/24	100	104
	Red Hill No. 08507 Wilson Pasture	30 Cattle	07/05 – 07/15	1	1
	Red Hill No. 08507 Wilson Pasture	120 Cattle	10/05 – 10/15	1	1

Grazing Preference AUMS:

Operator No.	Allotment Name & No.	Active	Suspended	Total
0507566	West Hardscrabble No. 08504	602	0	602
	Red Hill No. 08507	271	0	271
0507672	West Hardscrabble No. 08504	200	0	200
	Red Hill No. 08507	107	0	107

The following terms and conditions will be carried forward on the renewed permits:

- 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.
- Grazing use on allotment No. 08504 shall be in accordance with the allotment management plan approved on December 19, 1991.
- West Hardscrabble Allotment - An Actual Use Report shall be submitted annually to the BLM office no later than 15 days after grazing use has ended.

Additional Background Information: The West Hardscrabble Allotment is under an Allotment Management Plan (AMP). The AMP specifies a grazing system in which cattle are rotated amongst five different "areas" of the allotment during the spring use period. Period of use in each grazing area varies from 10 to 15 days. The AMP acknowledged that pastures could not be designated due to the lack of fencing and water availability. Given the lack of pasture fencing and lack of water in some areas of the allotment, cattle are actually rotated amongst three to four areas of the allotment. Lower elevation areas of the allotment are used first then cattle are moved to higher elevation areas prior to moving onto the adjacent National Forest allotment. Period of use varies from two to three weeks in each area of the allotment; however, due to lack of pasture fencing there is always some livestock drift between the grazing areas.

Other grazing permits exist on both the West Hardscrabble and Red Hill Allotments that are not scheduled for renewal at this time. The table below summarizes the scheduled grazing use for these permits.

Operator No.	Allotment Name & No.	Livestock No. & Kind	Period of use	Percent Public Land	AUMs
0507522	West Hardscrabble No. 08504	100 Cattle	05/16 – 06/30	100	151
	West Hardscrabble No. 08504	10 Cattle	10/16 – 10/31	100	5

	Red Hill No. 08507	143 Cattle	05/10 – 06/24	100	216
0507661	Red Hill No. 08507	65 Cattle	05/06 – 06/20	100	38

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

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

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

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

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

Name of Plan: Record of Decision and Glenwood Springs Resource Management Plan.

Date Approved/Amended: 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 2002 the BLM Glenwood Springs Field Office conducted the Eagle River South Land Health Assessment which included both the West Hardscrabble and Red Hill Allotments. The Land Health Assessment Report and Determination Document were signed on December 9, 2003.

The West Hardscrabble Allotment did not meet Standard 2 (for Upper Reach Alkali Creek and McHatten Creek) or Standard 4 (specific to sage grouse and *Penstemon harringtonii*). Although the allotment, overall, met Standards 1 and 3, some concerns were noted. Problems were generally related to extensive OHV use in the northwestern part of the allotment, old, decadent sagebrush stands with poor forb production and encroaching junipers, slow recovery of sagebrush in burned areas, and livestock grazing distribution.

This allotment historically supplied habitat for sage grouse, however, none have been observed here for many years.

Several large occurrences and numerous small occurrences of *P. harringtonii* were found on the West Hardscrabble Allotment. However, many of the occurrences showed impacts due to off-road vehicle activity and livestock grazing. Also juniper encroachment into much of the occupied habitat (sagebrush parks) poses a long-term threat to the continued survival and recruitment of this species.

The riparian area of McHatten Creek showed heavy livestock utilization and trampling damage. This is apparently a distribution problem since some portions of the allotment received only slight to light use. The upper reach of Alkali Creek had concerns related to lack of sufficient upland vegetative cover to protect the riparian zone from erosion and deposition during convective storm events. Wildfire suppression and low potential productivity of gypsum soils were considered the main causes.

The Red Hill Common Allotment did not meet Standard 4 for sage grouse. Although grouse historically occurred here, they have not been documented in the area for many years. Primary issues related to sage grouse habitat involve habitat fragmentation and pinyon-juniper

encroachment. Private lands, which border this allotment to the north and east, have housing developments, roads, powerlines, and other disturbances which contribute to poor habitat connectivity on a landscape scale. The allotment met the other standards with isolated problem areas identified. 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, cheatgrass infestation in the lower-elevation sagebrush sites, and a lack of forbs.

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

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

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

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

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

Critical Elements

Table 1. Critical Elements of the Human Environment

Critical Element	*Present*		*Affected*		*Critical Element*	*Present*		*Affected*	
	Yes	No	Yes	No		Yes	No	Yes	No
Air Quality		X		X	Prime or Unique Farmlands		X		X
ACECs		X		X	Special Status Species*	X		X	
Cultural Resources	X		X		Wastes, Hazardous or Solid		X		X
Environmental Justice	X			X	Water Quality, Surface and Ground*	X		X	
Floodplains		X		X	Wetlands and Riparian Zones*	X		X	
Invasive, Non-native Species	X		X		Wild and Scenic Rivers	X		X	
Migratory Birds	X		X		Wilderness/ WSAs		X		X
Native American Religious Concerns	X		X						

* Public Land Health Standard

Cultural Resources and Native American Religious Concerns

Affected Environment: Range permit renewals are undertakings under Section 106 of the National Historic Preservation Act. Additional range improvements (e.g., fences, spring improvements) are subject to compliance requirements under Section 106 and will undergo standard cultural resources inventory and evaluation procedures. During Section 106 review, a cultural resource assessment (GSFO #1009-4) was completed for the West Hardscrabble and Red Hill (#08504 & 08507) on December 10, 2008 following the procedures and guidance outlined in the 1980 National Programmatic Agreement Regarding the Livestock Grazing and Range Improvement Program, IM-WO-99-039, IM-CO-99-007, IM-CO-99-019, CO-2001-026, and CO-2002-029. The results of the assessment are summarized in the table below. A copy of the cultural resource assessment is available at the GSFO office.

Allotment Number	**Acres Inventoried at a Class III level**	**Acres NOT Inventoried at a Class III Level**	**Percent (%) Allotment Inventory data Class III level**	**Number of Cultural Resources known in allotment**	**High Potential of Historic Properties (yes/no)**	**Management Recommendations (Additional inventory required and historic properties to be visited)**
West Hardscrabble (08504)	4039	12,261	25	70	Yes	No additional acres need to be inventoried. 31% of the allotment has 30%+ slopes.
Red Hill (08507)	1754	10,753	14	90	Yes	No additional acres need to be inventoried. 40% of the allotment has 30%+ slopes.
Total	5793	23,014	39	160		

Fifty-four Class III cultural resource inventories have been conducted within these allotments resulting in at least ten percent being surveyed, in many cases the percent inventoried is much higher once the steep slopes (greater than 30%) have been removed from the analysis. These survey resulted in the recording of 160 cultural resources. Sixteen historic properties ranging from prehistoric open camps and areas of Native American concern to homesteads and irrigation ditches are considered eligible or potentially eligible for listing on the National Register of Historic Places. Unidentified historic era sites within this allotment could represent a time frame from the late 1800's through the 1950's; prehistoric sites could represent a time range from 5,000 to 10,000 years before present. Based on available data, there is a high potential for historic properties within the West Hardscrabble and Red Hill allotments.
At present, there are two areas of Native American concern within these allotments. During previous discussions about these areas, the Tribes have requested a ¼ mile buffer to protect them. The BLM will take no action that would adversely affect these areas or location without consultation with the appropriate Native Americans. On November 7, 2008 the Glenwood Springs Field Office mailed an informational letter and maps to the Ute Tribe (Northern Ute Tribe), Southern Ute Tribe, and the Ute Mountain Ute Tribes, identifying the proposed 2009 grazing permit renewals. No response has been received.

A determination of "**Conditional No Adverse Affect"** has been made for this renewal. In order to mitigate the potential affect mitigation has been proposed on all ground disturbing activity and the placement of supplemental feed, etc, must be at a minimum 100 m from the areas of concern and historic properties. 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 are avoided.

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

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

If additional historic properties are located during the subsequent range developments field inventory, these properties will also be assessed for livestock grazing impacts within the term of the permit.

Mitigation**:** No ground disturbing improvements or maintenance, including salt blocks or supplemental feeding areas will be allowed within a 1/4 mile of the two Native American areas of concern. In addition no ground disturbing improvements or maintenance, including salt blocks or supplemental feeding areas will be allowed within 100 m of historic properties. Additionally, maintenance of range improvements not previously inventoried or new improvements may require cultural resource inventories. These allotments may be found to contain historic properties and/or resources protected under the National Historic Preservation Act (NHPA), American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O. 13007, or other statutes and executive orders. The BLM may require modification to development proposals to protect such properties, or disapprove any activity that is likely to result in damage to historic properties or areas of Native American concern. Education/Discovery stipulation needs to be added to the lease renewal.The permitee and all persons specifically associated with grazing operations must be informed that any objects or sites of cultural, paleontological, or scientific value such as historic or prehistoric resources, graves or grave markers, human remains, ruins, cabins, rock art, fossils, or artifacts shall not be damaged, destroyed, removed, moved, or disturbed. If in connection with allotment operations under this authorization any of the above resources are encountered, the proponent shall immediately suspend all activities in the immediate vicinity of the discovery that might further disturb such materials and notify the BLM authorized officer of the findings. The discovery must be protected until notified in writing to proceed by the authorized officer (36CFR800.110 & 112, 43CFR 0.4).

Invasive, Non-native Species

Affected Environment: The West Hardscrable and Red Hill Common grazing allotments contain scattered populations of musk thistle, Scotch thistle, houndstongue, Russian knapweed, and spotted knapweed.

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

Migratory Birds

Affected Environment: 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 migratorynongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act (ESA) of 1973." *Birds of Conservation Concern 2008* (*http://www.fws.gov/migratorybirds/reports/BCC2008/BCC2008m.pdf*) is the most recent effort to carry out this mandate. The conservation concerns may be the result of population declines, naturally or human-caused small ranges or population sizes, threats to habitat, or other factors. The primary statutory authority for *Birds of Conservation Concern 2008* (*BCC 2008*) is the Fish and Wildlife Conservation Act of 1980 (FWCA), as amended. Although there are general patterns that can be inferred, there is no single reason why any species was is on the list. The Glenwood Springs Field Office is within the Southern Rockies/Colorado Plateau Bird Conservation Region (BCR). The 2008 list include the following birds: Gunnison Sage Grouse, American Bittern, Bald Eagle, Ferruginous Hawk, Golden Eagle, Peregrine Falcon, Prairie Falcon, Snowy Plover, Mountain Plover, Long-billed Curlew, Yellow-billed Cuckoo, Burrowing Owl, Lewis's Woodpecker, Willow Flycatcher, Gray Vireo, Pinyon Jay, Juniper Titmouse, Veery, Bendire's Thrasher, Grace's Warbler, Brewer's Sparrow, Grasshopper Sparrow, Chestnut-collared Longspur, Black Rosy-Finch, Brown-capped Rosy-Finch, and Cassin's Finch.

Habitat loss due to alteration or destruction continues to be the major reason for the declines of many species (*http://www.fws.gov/migratorybirds/reports/BCC2008/BCC2008m.pdf*). 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.

The GSFO planning area provides both foraging and nesting habitat for a variety of migratory birds that summer, winter, or migrate through the area. The habitat diversity provided by the broad expanses of sagebrush, mixed mountain shrub, aspen, pinyon-juniper woodlands, other types of coniferous forests, and riparian and wetland areas support many bird species. The pinyon jay is characteristically found in pinyon/juniper woodlands and the Brewer's sparrow *(Spizella breweri*) is found within sagebrush habitats. Other Birds of Conservation Concern 2008 may also occur locally. Many species of raptors (red-tailed hawks, golden eagles, northern goshawks, Cooper's hawks, kestrels and owls) not on the Fish & Wildlife Service's Birds of Conservation Concern list also could occur in the area.

Bald eagle (*Haliaeetus leucocephalus*). Bald eagles are known to winter along portions of the Colorado, Eagle and Roaring Fork Rivers and its major tributaries. Wintering bald eagles are generally present from mid-November to mid-April. Large mature cottonwood trees along the 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 mule deer and elk. Major threats include habitat loss, human disturbance and illegal shooting. 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. The allotments slightly overlap with bald eagle winter range and winter foraging areas along the Eagle River and a .25 mile buffer identifying mapped Bald Eagle roost sites. Roost sites are defined as groups of or individual trees that provide diurnal and/or nocturnal perches for less than 15 wintering bald eagles; these trees are usually the tallest available trees in the wintering area and are primarily located in riparian habitats

Environmental Consequences/Mitigation: Limited bird count or species data exists for the area, however the greater concern is the continued fragmentation of habitat and losses of large blocks of contiguous habitat required by many bird species. No intentional take of native bird species is anticipated under the proposed action. Grazing by cattle could result in the accidental destruction of ground nests through trampling. This impact is expected to be minimal and isolated and would not influence populations of migratory birds on a landscape level. Given current overall existing habitat condition, livestock grazing, as proposed, will not negatively affect the degree of fragmentation/connectivity expected relative to the existing condition of the allotment and the fragmentation/connectivity within and between habitat types (e.g., within nesting habitat or between nesting and feeding habitats would also likely not change. Overall it is unlikely that, livestock grazing in both numbers and duration, as proposed would not reduce the extent or quality of habitat available for migratory bird breeding functions.

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

Affected Environment:

Federally Listed, Proposed or Candidate Fish, Wildlife, and Plant Species:

According to the latest species list from the U. S. Fish and Wildlife Service (http://mountain-prairie.fws.gov/endspp/CountyLists/COLORADO.pdf), the following Federally listed and candidate species may reside, have habitat, and/or be impacted by actions occurring in Eagle County: Canada lynx, black-footed ferret, Mexican spotted owl, western yellow-billed cuckoo, razorback sucker, Colorado pikeminnow, bonytail chub, humpback chub, Uncompahgre fritillary butterfly, and Ute ladies'-tresses orchid. This plant is found along streams or in wetland areas below 6,500 feet with saturated or subirrigated soils.

Plants:
There are no known occurrences of the Ute ladies' -tresses orchid on the West Hardscrabble or Red Hill Allotments. The Red Hill Allotment does not appear to contain any potential habitat for the orchid. A small amount of potential wetland habitat for this species is found at McHatten Reservoir on the West Hardscrabble Allotment; however, the reservoir is at an elevation of 7,500 feet which is above the known range of this plant species. Furthermore, the proposed period of livestock grazing on this allotment ends on June 30th, which is generally before Ute ladies'-tresses orchid begins growth.

Aquatic Wildlife:
The Colorado pikeminnow, bonytail, humpback chub, and razorback sucker are all located far downstream in the Colorado River below Rifle, Colorado. The Eagle River does not provide habitat for any of these endangered fishes.

Terrestrial Wildlife:
Canada lynx. Canada lynx are a federally threatened and Colorado endangered species. In 2000, the Canada lynx was listed under the ESA as a threatened species throughout its range in the contiguous United States. In February 2008 the USFWS proposed to revise the amount of critical habitat designated under the ESA for the federally threatened Canada lynx. None of the existing or proposed critical habitat is within the scope of this EA. BLM mapped potential Canada lynx habitat does exist within portions of the area with conifers. Potential habitat for lynx in Colorado is defined as those areas having the highest potential of lynx occurrences in the state (see Appendix A).

BLM Sensitive Species:

Plants:
The West Hardscrabble and Red Hill Allotments contain large acreages of occupied habitat for the BLM Sensitive plant species, Harrington's penstemon (*Penstemon harringtonii*). This plant species has been documented in many of the sagebrush communities on both allotments.

Aquatic Wildlife:
The Eagle River, located along the northern boundary of both allotments, contains bluehead and flannelmouth suckers. Both if these fishes are BLM sensitive species. Abrams Creek located within the West Hardscrabble Common allotment contains a core conservation population of pure Colorado River cutthroat trout another BLM sensitive species.

Terrestrial Wildlife:
Greater Sage Grouse. The West Hardscrabble and Red Hill Common allotment are mapped as historic habitat, as no birds have been seen in these areas for years likely due to a variety of factors. The CDOW does not intensively manage the watershed for sage grouse and the area is not part of the *Northern Eagle/Southern Routt Greater Sage-Grouse Conservation Plan.* Habitat fragmentation and loss of habitat resulting from roads, residential and commercial development, off highway vehicle use, public recreation, powerlines and pipelines has reduced connectivity of sagebrush vegetation vital to this species. In addition, fire suppression, drought, and livestock and wild ungulate grazing have all impacted habitat quality for sage grouse. Sagebrush habitats are being invaded by juniper trees, and drought and historic grazing have reduced vegetative productivity and diversity.

Environmental Consequences/Mitigation:

Federally Listed, Proposed or Candidate Species:

Plants:
Due to the lack of suitable habitat for the Ute ladies'-tresses orchid and the fact that livestock grazing on the West Hardscrabble and Red Hill Allotments occurs prior to the timing of growth of this species, grazing should have **"No Effect"** on this Threatened plant species.

Aquatic Wildlife:
The Colorado pikeminnow, bonytail, humpback chub, and razorback sucker are all found far downstream in the Colorado River below the town of Rifle, Colorado. There is no suitable habitat anywhere near either grazing allotment and the proposed action should have **"No Effect"** on any of these endangered fishes.

Terrestrial Wildlife:
Canada lynx. The proposed action would not result in direct mortality of individual lynx. Excessive losses of forage on a large scale could result in a reduction in hiding and movement cover and directly affect lynx's ability to effectively move through the landscape. This is unlikely from grazing and is more consistent with actions such as a severe wildfire. Indirect impacts associated with grazing are mainly associated with competition between livestock and lynx prey species for available forage. The Canada Lynx Conservation Assessment and Strategy identified that "grazing, in conjunction with increasing elk populations, may have resulted in increased competition for forage resources with lynx prey". In summary, livestock compete with lynx prey species (snowshoe hare, jack rabbits, cottontails, blue grouse, voles, squirrels) for available forage. In addition, livestock can remove hiding cover important to the survival of prey species, which could ultimately result in lower prey species productivity and density.

Appendix A contains a habitat assessment specific to Canada lynx and land health standard 4 for the allotments. In summary, the lynx habitat portions of the allotments provided suitable habitat for lynx and their prey species and grazing management does not appear to be impacting the usability of lynx habitat. The proposed action will not result in the destruction or adverse modification of U.S. Fish & Wildlife Service designated critical habitat. Based on the proposed management, the proposed renewal of these two livestock grazing permits **"May Affect, but is**

not likely to Adversely Affect" the Threatened - Canada lynx. Furthermore, the proposed action is in conformance with the recently completed programmatic consultation for lynx regarding the GSFO livestock grazing program. Programmatic consultation for Canada lynx was completed on the entire grazing program as administered by the GSFO. A "May Affect, Not Likely to Adversely Affect" determination was made and concurrence was obtained from the FWS (ES/GJ-6-CO-03-F-013).

BLM Sensitive Species:

Plants:
Harrington's penstemon occurs on both the West Hardscrabble and Red Hill Allotments. The flower stalks of Harrington's penstemon are palatable to livestock. Repeated removal of flower stalks may decrease the ability of the plant to reproduce and sustain a population.

Biological surveys conducted in 2003 within the West Hardscrabble Allotment and a land health assessment completed in 2003 noted evidence of livestock grazing and trampling damage to individuals of this species, particularly along cow trails and areas of livestock concentration. Drought conditions in effect in the early 2000's reduced the amount of total available forage on these allotments, thereby increasing grazing utilization pressure on the remaining vegetation. More normal precipitation patterns since 2005 has improved total vegetation production and decreased overall utilization levels. Additional water sources which have been developed on the Red Hill Allotment since the land health assessment was completed appear to have contributed to improved grazing distribution. Recent observations and monitoring within both allotments have not documented a decrease in population viability associated with livestock grazing. Livestock grazing, as proposed, may result in losses of a small number of individual Harrington's penstemon plants but should not result in a long-term loss of local population viability or result in a trend toward listing of this species.

Analysis on the Public Land Health Standard for Special Status Plant Species:
The land health assessment also noted concerns regarding livestock grazing and trampling damage to individuals of Harrington's penstemon, particularly along cow trails and areas of livestock concentration. However, the return of more normal precipitation patterns and the development of additional water sources since the land health assessment was completed, appear to have contributed to lower utilization levels and improved grazing distribution. Recent observations and monitoring have not documented a decrease in population viability associated with livestock grazing. Based on present conditions, livestock grazing, as proposed, would not likely prevent Standard 4 for special status plant species from being met.

Aquatic Wildlife:
The bluehead and flannelmouth sucker are both native to the Colorado River basin. These species are adapted to the historic natural conditions related to high sediment loads periodically carried by the Eagle River. Continued livestock grazing as proposed should have no negative impacts to either of these fishes.

The Colorado River cutthroat trout population located in Abrams Creek is small and somewhat isolated due to an irrigation water diversion that takes large amounts of the stream's natural flow.

As such, the fish population primarily resides above this diversion. Stream and riparian habitats are in good shape. Livestock grazing is not occurring along the majority of the stream as dense riparian cover and steep topography limits access to cows. Some grazing is occurring in a few areas along the creek, but use is limited to when cows are being moved up onto and back down from adjacent USFS grazing allotments. Limited bank trampling is occurring in a few site specific areas and some increased soil compaction and sedimentation is likely resulting. Excessive sediment can impact trout by silting in important spawning substrates or in the event eggs are present, by smothering eggs. In addition, important micro habitats such as pools needed for overwinter and oversummer thermal protection can be silted in which reduces depth and makes these areas less usable. Aquatic insect productivity can also be reduced due to excessive sediment. This can result in reduced food sources for fish and terrestrial bird and bat species. However, areas where grazing is occurring along the stream are small and downstream of the large water diversion and population center of fish. Both allotments contain adequate growing season rest which should promote plant recovery and regrowth. This will help to stabilize soils and reduce offsite soil movement. Based on water quality data and current stream and riparian habitat condition, continued livestock grazing as proposed should have little impact to these fish.

Analysis on the Public Land Health Standard for Special Status Wildlife Species:
Based on present conditions, livestock grazing, as proposed, would not likely prevent Standard 4 for special status fish species from being met.

Terrestrial Wildlife:
Greater Sage Grouse. The Eagle River South Watershed Land Health Assessment determined that the West Hardscrabble and Red Hill Allotments did not meet Standard 4 for sage grouse. Although only portions of each allotment (approximately 8,420-acres of which approximately 8,200-acres is BLM) contain historic sage grouse habitat, for reporting purposes, the entire allotments' acreages of 12,467 for the Red Hill Common and 16,300 for the West Hardscrabble are reported as not meeting Standard 4. The West Hardscrabble allotment historically supplied habitat for sage grouse, however, none have been observed here for many years. This is attributed largely to habitat fragmentation due to extensive roads and trails and development of adjacent private lands. Although grouse historically occurred in the Red Hill Common allotment, they have not been documented in the area for many years. Primary issues related to sage grouse habitat involve habitat fragmentation and pinyon-juniper encroachment. Private lands, which border this allotment to the north and east, have housing developments, roads, powerlines, and other disturbances which contribute to poor habitat connectivity on a landscape scale. The allotment met the other standards with isolated problem areas identified. 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, cheatgrass infestation in the lower-elevation sagebrush sites, and a lack of forbs. These land health issues can be largely attributed to: private land development, fire suppression, heavy big game winter use, heavy historic livestock grazing.

Analysis on the Public Land Health Standard for Special Status Wildlife Species:
Based on present conditions, livestock grazing, as proposed, would not likely prevent Standard 4 for special status terrestrial wildlife species from being met.

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

Affected Environment:

West Hardscrabble Allotment

The West Hardscrabble Allotment is located south of I-70 and the Eagle River in between the Towns of Eagle to the east and Gypsum to the west. This allotment is within four 6th field watersheds that include from east to west: the 9,748 acre Abrams Creek, the 10,073 acre Brush Creek above Eagle, the 20,198 acre Eagle River above Gypsum, and the 11,736 acre Lower Gypsum Creek. In the southeast corner of the allotment and within the Abrams Creek watershed is the perennial Abrams Creek which is tributary to the perennial Brush Creek to the northeast. Within the Brush Creek watershed is the ephemeral Hockett Creek which is tributary to Brush Creek to the north. Within the Eagle River above Gypsum watershed are the ephemerals Skillman Creek, Alkali Creek, Mchatten Creek, Spring Creek, and Tenderfoot Creek; all of which are tributary to the Eagle River to the north. Within the Lower Gypsum Creek watershed are the ephemerals Hardscrabble Creek and Grundell Creek both of which are tributary to the perennial Gypsum Creek to the northwest.

Red Hill Allotment

The Red Hill Allotment is located south of I-70 and the Eagle River in between the Towns of Gypsum to the east and Dotsero to the west. This allotment is within five 6th field watersheds that include from north to south: the 10,347 acre Eagle River above Dotsero, the 11,736 acre Lower Gypsum Creek, and the 5,987 acre Spring Gulch. In the southeast corner of the allotment is the 3,245 acre Old Mans Gulch and in the southwest corner of the allotment is the 9,808 acre Upper Cottonwood Creek. The Eagle River above Dotsero watershed contains several unnamed ephemeral drainages that are tributary to the Eagle River to the north while the Lower Gypsum Creek watershed contains several unnamed ephemeral drainages and the ephemeral Snake Creek all of which are tributary to the perennial Gypsum Creek to the east. Within the Spring Gulch watershed is the ephemeral Spring Creek which is also tributary to Gypsum Creek to the east. The Old Mans Gulch watershed contains the perennial Old Mans Creek which is tributary to Gypsum Creek to the northeast while the Upper Cottonwood Creek watershed contains the perennial Fitzpatrick Creek which is tributary to the perennial Cottonwood Creek to the northwest.

According to the *Stream Classifications and Water Quality Standards* (CDPHE, Water Quality Control Commission, Regulation No. 33) list, all drainages mentioned above are within the Eagle River Basin segment 10 that includes all tributaries to the Eagle River from a point immediately below the confluence with Lake Creek to the confluence with the Colorado River. This segment has been classified aquatic life cold 1, recreation 1a, water supply, and agriculture. Aquatic life cold 1 indicates that this water course is capable of sustaining a wide variety of cold water biota. Recreation class 1a refers to waters in which primary contact recreation is presumed to be present. In addition, this segment is suitable or intended to become suitable for potable water supplies and agricultural purposes that include irrigation and livestock use.

Drainages within the West Hardscrabble and Red Hill Allotments are not currently listed on State of Colorado's *303(d) List of Water Quality Limited Segments Requiring TMDLS* (CDPHE,

Water Quality Control Commission, Regulation No. 93) or the *Monitoring and Evaluation List* (CDPHE, Water Quality Control Commission, Regulation No. 94). Limited water quality data are available for area drainages that were collected by the BLM Glenwood Springs Field Office in 1981 and during the 2002 Eagle River South Land Health Assessment (see table below). Additional water quality data for the nearby Eagle River, Brush Creek, and Gypsum Creek are available through the USGS.

2002 Eagle River South Watershed Land Health Assessment							
Stream Name	**Date**	**Discharge (cfs)**	**Temp. (°C)**	**Cond. (µS\cm)**	**pH**	**Salinity 0/00**	**Sediment (mg/l)**
Alkali Creek nr Gypsum	5/23/2002	0.59	8.2	193	8.3	0	
McHattan Ck (5S,85W,Sec 23,NWSE)	5/30/2002	0.028	14.5	258	8.4	0	
Spring Creek nr Gypsum (abv culvert)	5/30/2002	0.53	16	310	8.3	0	
Abrams Ck @JPO-2 diversion	6/4/2002	0.14	6	140	8.5	0	
West Middle Fork Abrams Ck abv confluence	6/4/2002	0.223	6.5	141	8.3	0	
East Middle Fork Abrams Ck abv confluence	6/4/2002	0.375	9	180	8.3	0	
Abrams Ck @ Mrs Paye Ditch diversion	6/4/2002	0.074	14	1600	8.2	1.25	
Hernage Creek Spring	6/21/2002	0.002	11.5	179	8.2	0	
Third Gulch Spring	6/27/2002	0.005	12	1225	8.5	1	
Salt Creek trib to Brush Ck nr Eagle	6/28/2002	0.06	13	262	7.8	0	
Trail Gulch trib to Brush Ck nr Eagle	6/28/2002	0.018	17	440	8.6	0	
Grundell Creek	7/8/2002	0.07	13	318	8.7	0	
Hardscrabble Gulch	7/8/2002	0.11	13	203	8.4	0	
Old Mann Gulch	7/8/2002	0.09	17.5	650	8.4	0	
Fitzpatrick Gulch	7/9/2002	0.002	10	1820	7.9	1.5	
Brush Creek (7 samples)	1/9/1981	15-78	6.8	796	8	-	26-372
Salt Creek (2 samples)	8/9/1981	2.5-3.9	13.5	2225	8.75	-	
Abrams Creek (3 samples)	5/8/1981	0.1-0.7	8	957	8.5	-	

Environmental Consequences: Grazing activities would result in soil compaction and displacement that increase the likelihood of erosional processes, especially on steep slopes and areas devoid of vegetation. Soil detachment and sediment transport are likely to occur during runoff events associated with spring snowmelt and short-duration high intensity thunderstorms. In addition, the number of livestock in the area would increase the amount of feces present in close proximity to nearby drainages. The introduction of livestock feces to water bodies often leads to water quality degradation by increasing fecal coliform bacteria levels. Due to the close proximity of the proposed activities to area drainages, there is potential that additional sediment associated with grazing practices as well as fecal coliform bacteria from livestock feces could

reach the ephemeral and perennial drainages mentioned above. However, based on historical area water quality data being good this doesn't appear to be a significant problem thus no mitigation is being proposed at this time.

Analysis on the Public Land Health Standard for Water Quality: In 2002 the BLM Glenwood Springs Field Office conducted the Eagle River South Land Health Assessment in which they measured water quality parameters on area drainages. Data results suggested that higher elevation stream segments generally have better water quality than lower elevation segments. Personnel concluded that at the time all waters in the assessment area were meeting the standards for water quality established by the State of Colorado. Due to past and present conditions in the two allotments, the proposed action would not likely prevent Standard 5 for Water quality from being met.

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

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

Allotment	Riparian Area Name	Miles	Year Assessed	Condition Rating
West Hardscrabble	Grundell Creek	1.8	2001	Proper Functioning Condition
	Hardscrabble Gulch	2.4	2002	Proper Functioning Condition
	Sheep Creek	1.2	2002	Proper Functioning Condition
	McHatten Creek	1.5	2002	Functioning at Risk – Downward Trend
	Alkali Creek Lower Reach	1.9	2002	Proper Functioning Condition
	Alkali Creek Upper Reach	1.0	2002	Functioning at Risk – No Apparent Trend
	Abrams Creek	3.8	2002	Proper Functioning Condition
	Hernage Creek	0.4	2002	Proper Functioning Condition
Red Hill	Old Mans Gulch	1.0	2002	Proper Functioning Condition
	Fitzpatrick Gulch	0.4	2002	Proper Functioning Condition

Because of the condition rating for McHatten Creek and Alkali Creek Upper Reach, the allotment was not meeting Standard 2 (riparian systems) according to the 2003 Land Health Evaluation and Determination Document. Causal factors for the condition rating for McHatten Creek were heavy livestock grazing and trampling which have reduced riparian vegetation cover. Other factors were convective storm events and livestock/big game use in uplands which have resulted in excessive erosion. In response to grazing concerns on McHatten Creek, a pipeline was constructed in 2004 which supplies two additional sources of water away from the riparian zone. A change in salting locations was also implemented to help move livestock away from the riparian zone. Subsequent monitoring (photo plots, photo points, and riparian stubble height) on McHatten Creek were established in 2004. A comparison of baseline photos taken in 2004 and 2007 indicate there has been some increase in cover of herbaceous riparian plant species, some widening of the riparian zone, and some reduction in bank trampling. Riparian stubble height

measurements conducted in 2004, 2006, 2007 and 2008 show utilization within acceptable limits (average stubble height was not less than four inches for any riparian plant species).
Causal factors for the condition rating of Alkali Creek Upper Reach were drought and soils (Gypsum land-Gypsumsiorthids complex) producing sparse vegetation coverage in uplands adjacent to stream and causing some reduction in the amount of riparian vegetation.

Environmental Consequences/Mitigation:

West Hardscrabble Allotment:
Under the proposed grazing schedule, the allotment would be grazed for a 46 day period in the late spring and early summer. Rotational grazing use is also practiced on the allotment and the period of use generally varies from two to three weeks in each area of the allotment. The duration and period of use would allow for ample grazing rest and recovery time for riparian plant species. In consideration of this and the condition of riparian zones described in the Affected Environment, renewal of the grazing permit is not expected to cause adverse impacts to riparian zones. The condition of riparian areas would be maintained or improved. There would be no cumulative impacts.

Red Hill Allotment:
Under the proposed grazing schedule, that portion[2] of the allotment containing riparian areas would be grazed for a 45 day period in the late spring and early summer. The duration and period of use would allow for ample grazing rest and recovery time for riparian plant species. In consideration of this and the condition of riparian zones described in the Affected Environment, renewal of the grazing permit (including the proposed changes in grazing use) is not expected to cause adverse impacts to riparian zones. The condition of riparian areas would be maintained or improved. There would be no cumulative impacts.

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 East Hardscrabble allotment encompasses Abrams Creek that was found to be eligible under a Wild and Scenic Eligibility Study in 2007. Abrams Creek will be managed to preserve the identified Outstanding Remarkable Values (ORV's) until such a time as a suitability study is completed. The ORV's identified for Abrams Creek was a core conservation population of Colorado River cutthroat trout. The overall objective is to not allow surface disturbing activities that might impair the identified ORV's or its preliminary classification, which was classified as recreational. (*see Threatened, Endangered and Sensitive section; Fish*).

Environmental Consequences/Mitigation: The proposed action is not likely to negatively impact the identified ORV's (*see TES section*) due to the provision for growing season rest and adequate

[2] The "Wilson Pasture" of the Red Hill Allotment does not contain riparian areas and is not considered in this analysis.

plant rest and recovery periods which should maintain good vegetative cover and help to limit offsite soil movement adjacent to Abrams Creek. Monitoring data, current stream and riparian habitat condition, and the continued livestock grazing as proposed should have little impact to these fish and thus would have no impacts to the streams identified ORV's or preliminary classification.

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.

Resource	*NA or Not Present*	*Present and Not Affected*	*Present and Affected*
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

Range Management:

Affected Environment: Refer to the Proposed Action section for the description of the Affected Environment.

Environmental Consequences/Mitigation: The proposed action would make the period of use (May 16 – June 30) the same for all grazing permittees on the West Hardscrabble Allotment. This would change the duration of grazing use, currently authorized for all grazing permittees on the allotment, from 61 days to 46 days. The shorter duration of grazing use would be a benefit to range management as this would allow for more grazing rest and recovery time for vegetation and would decrease the likelihood of grazing regrowth.

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

Affected Environment: According to the *Soil Survey of Aspen-Gypsum Area, Colorado: Parts of Eagle, Garfield, and Pitkin Counties* (USDA 1992), the West Hardscrabble and Red Hill Allotments contain 11 different soil map units that can be identified by the numerical code assigned by the soil survey (e.g. Coulterg loam=20). These soil map units are scattered throughout the allotments and have been identified as having low to severe erosion hazards. In addition, a few areas within the allotments are mapped as CSU 4 (Controlled Surface Use) for erosive soils on slopes greater than 30% and as NSO 15 (No Surface Occupancy) for slopes greater than 50% regardless of soil type. Following is a brief description of the 11 soil map units found within the West Hardscrabble and Red Hill Allotments.

- Coulterg loam (20) – This deep, well drained soil is found on mountainsides and fans at elevations ranging from 7,500 to 9,500 feet and on slopes of 12 to 50 percent. This soil is derived from alluvium and colluvium composed of siltstone, shale, and limestone rock. Surface runoff for this soil is medium to rapid and the water erosion hazard is moderate to severe. Primary uses for this soil include woodland and wildlife habitat.
- Cushool-Rentsac complex (25) – This soil map unit is found on mountains and mesa side slopes at elevations ranging from 6,200 to 7,600 feet and on slopes of 15 to 65 percent. Approximately 45 percent of this soil map unit is Cushool soil and 40 percent Rentsac soil. The Cushool soil is moderately deep, well drained, derived from sandstone and shale, and is found on slopes of 15 to 50 percent. Surface runoff for this soil is rapid and the erosion hazard is classified as severe. The Rentsac soil is shallow, well drained, derived from sandstone, and is found on slopes of 25 to 65 percent. Surface runoff for this soil is rapid and the erosion hazard is classified as severe. Primary uses for this soil map unit include rangeland, wildlife habitat, Christmas trees, firewood, and fence posts.
- Earsman-Rock outcrop complex (33) – This soil map unit is found on mountainsides and ridges at elevations ranging from 6,000 to 8,500 feet and on slopes of 12 to 65 percent. Approximately 45 percent of this unit is Earsman very stony sandy loam and 35 percent Rock outcrop. The Earsman soil is shallow, excessively drained, and derived from calcareous redbed sandstone. Surface runoff for this soil map unit is rapid and the water erosion hazard is classified as slight to severe depending on slope. Primary uses for this soil map unit include rangeland, wildlife habitat, fence posts, and firewood.
- Evanston loam (39) – This deep, well drained soil formed in mixed alluvium and is found on alluvial fans, terraces, and valley sides at elevations ranging from 6,500 to 8,000 feet and on slopes of 6 to 25 percent. Surface runoff for this soil is medium and the erosion hazard is classified as moderate. Primary uses for this soil include rangeland, wildlife habitat, and homesites.
- Goslin fine sandy loam (49) – This deep, well drained soil is found on toe slopes, fans, and terraces at elevations ranging from 6,200 to 7,500 feet and on slopes of 3 to 6 percent. Parent material for this soil includes redbed sandstone and shale. Surface runoff for this soil is slow and the water erosion hazard is classified as slight to moderate. Primary uses for this soil include livestock grazing, hay production, and pastures.
- Gypsum land-Gypsiorthids complex (55) – This soil map unit is found on mountainsides, hills, and in drainageways on slopes of 12 to 65 percent. Approximately 65 percent of the unit is Gypsum land and 20 percent Gypsiorthids. The remaining 15 percent of the unit is composed of a mix of map units. The Gypsum land is primarily exposed gypsum

material while the Gypsiorthids are moderately deep, well drained and derived from colluvium with high gypsum content. Surface runoff for this unit is very rapid and the water erosion hazard is slight to severe. This unit is used primarily for wildlife habitat.

- Jerry loam (64) – This deep, well drained soil is found on alluvial fans and hills at elevations ranging from 7,500 to 9,500 and on slopes of 25 to 65 percent. This soil is derived from sandstone and shale alluvium. Surface runoff is very rapid and the water erosion hazard is moderate. This soil is used primarily for rangeland purposes.
- Southface cobbly sandy loam (99) – This deep, well drained soil is found on mountainsides, valley sides, and alluvial fans at elevations ranging from 6,000 to 7,000 feet and on slopes of 25 to 65 percent. It is derived from redbed sandstone and shale colluvium and alluvium. Surface runoff is rapid and the water erosion hazard is moderate. Primary uses for this soil include wildlife habitat and rangeland.
- Torriorthents-Camborthids-Rock outcrop complex (104) – This soil map unit occurs on south-facing mountainsides, hills, and ridges with slopes ranging from 6 to 65 percent. Approximately 45 percent of this unit is Torriorthents, 20 percent Camborthids, and 15 percent Rock outcrop. The Torriorthents are shallow to moderately deep, well drained, and are derived from sedimentary rock. Surface runoff is rapid and the water erosion hazard is severe. The Camborthids are shallow to deep, well drained, and are derived from sandstone, shale, and basalt. Surface runoff is rapid and the water erosion hazard is severe. The Rock outcrop component of this unit consists of exposed sandstone, shale, and basalt. This soil map unit is used primarily for wildlife habitat.
- Torriorthents-Camborthids-Rock outcrop complex (105) – This soil map unit occurs on south-facing mountainsides, hills, and ridges with slopes ranging from 45 to 95 percent. Approximately 45 percent of this unit is Torriorthents, 20 percent Camborthids, and 15 percent Rock outcrop. The Torriorthents are shallow to moderately deep, well drained, and are derived from sedimentary rock. Surface runoff is rapid and the water erosion hazard is severe. The Camborthids are shallow to deep, well drained, and are derived from sandstone, shale, and basalt. Surface runoff is rapid and the water erosion hazard is severe. The Rock outcrop component of this unit consists of exposed sandstone, shale, and basalt. This soil map unit is used primarily for wildlife habitat.
- Yamo loam (115) – This deep, well drained soil is found on fans and toe slopes at elevations ranging from 6,200 to 7,500 feet and on slopes of 6 to 12 percent. This soil is derived primarily from sandstone, shale, and gypsum colluviums. Surface runoff for this soil is medium and the water erosion hazard is slight. Primary uses for this soil include rangeland, hayland, pasture, and homesite development.

Environmental Consequences/Mitigation: Grazing activities would result in soil compaction and displacement that increase the likelihood of erosional processes, especially on steep slopes and areas devoid of vegetation. Soil detachment and sediment transport are likely to occur during runoff events associated with spring snowmelt and short-duration high intensity thunderstorms. Due to the close proximity of the proposed activities to area drainages, there is potential that additional sediment associated with grazing practices could reach the drainages mentioned in the water section. However, based on the existing slope and vegetation conditions and recently assessed soil conditions, this doesn't appear to be a significant problem thus no mitigation is being proposed at this time.

Analysis on the Public Land Health Standard 1 for Upland Soils: In 2002 the BLM Glenwood Springs Field Office conducted the Eagle River South Land Health Assessment which included both the West Hardscrabble and Red Hill Allotments. During the assessment, personnel determined that all 12,467 acres of the Red Hill Allotment were achieving or moving towards achieving Standard 1 while some areas within the 16,300 acres of the West Hardscrabble Allotment were achieving with problem areas. Problems within the West Hardscrabble Allotment include unregulated OHV use in the northwestern part of the allotment causing some erosion due to loss of biological soil crusts and other vegetative cover, and bare ground resulting in pedestalling and water flow patterns. Based on past and present conditions within the allotments, the proposed action would not likely prevent Standard 1 for Upland Soils from being met.

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

Affected Environment: The lower elevations of the West Hardscrabble Allotment consist of sagebrush, rabbitbrush and winterfat in the deeper soils of the drainages and the benches. The shallow-soiled steep slopes and ridges are generally covered with pinyon-juniper woodlands. At middle elevations, vegetation is predominantly oakbrush/mixed mountain shrubs. The more mesic, highest elevations of the allotment support aspen woodlands and Douglas-fir forests.

The allotment supports a mosaic of species and age classes. Much of the sagebrush community is old and decadent, and some of the pinyon-juniper woodlands are old or overmature, but early seral grasses and sprouting shrubs are found on areas burned in the last 15-20 years. Some cheatgrass is present but does not dominate within the vegetative community. Other noxious weeds such as houndstongue and various species of thistle have been documented in the allotment, particularly in the burned areas or other disturbed areas.

The Red Hill Allotment is dominated by sagebrush and rabbitbrush, with pinyon-juniper woodlands on the ridges and steeper slopes. Some oakbrush/mixed mountain shrublands are present on the higher elevations of the allotment. Cheatgrass is present in disturbed areas and along roads and in the low elevation sagebrush/winterfat community.

The Land Health Assessment noted that pinyon-juniper encroachment was widespread within the allotment. Since the findings of the land health assessment, many areas of P/J encroachment or decadent sagebrush have been treated via hydro-axe, brushbeating or fire crews with chain saws.

Environmental Consequences/Mitigation: In spring or summer, cattle graze predominantly on herbaceous vegetation such as grasses and forbs. Prolonged grazing or poor livestock distribution may result in areas of bare ground or a reduction in the diversity and cover of herbaceous species. Proper grazing management and livestock distribution removes only a portion of the current year's growth and does not deplete root reserves.

The proposed grazing schedule for the West Hardscrabble Allotment is for 523 cattle to graze for 45 days from mid-May to the end of June and for 10 cattle for 15 days in October. Cattle are rotated amongst 3 to 4 different "areas" of the allotment, with the lower elevations being used first and moving to higher elevations and finally on to the adjacent National Forest allotment.

With implementation of the pasture rotation system, no one area should be grazed for more than 15 days. This should provide adequate rest and recovery either prior to or following grazing for seed dissemination and seedling establishment.

The Red Hill Allotment is also under a pasture rotation system. Grazing begins in one pasture on April 1st and extends until October 15th in the other pasture. However, the informal rotation system on this allotment should provide for adequate rest and recovery prior to or following grazing to ensure healthy vegetative conditions. Lack of water on this allotment has created challenges in the past with poor grazing distribution. Development of additional water sources in 2003 has resulted in some improvement in livestock distribution and reduced areas of heavy use.

Analysis on the Public Land Health Standard for Plant and Animal Communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): In 2002 the BLM Glenwood Springs Field Office conducted the Eagle River South Land Health Assessment which included both the West Hardscrabble and Red Hill Allotments. Both allotments were meeting Standard 3 for plant communities at the time of the assessment, but certain concerns were noted. These concerns were generally related to extensive OHV use in the northwestern part of the West Hardscrabble Allotment, old, decadent sagebrush stands with poor forb production and encroaching junipers, slow recovery of sagebrush in burned areas, cheatgrass infestation in the lower elevation sagebrush sites on the Red Hill Allotment.

Since the findings of the land health assessment, many areas of P/J encroachment or decadent sagebrush on the Red Hill Allotment have been treated via hydro-axe, brushbeating or fire crews with chain saws. Development of additional water sources has resulted in some improvement in livestock distribution and reduced areas of heavy use. The BLM is in the process of developing a new land use plan which will address some of the concerns regarding unregulated OHV use. These actions should improve current land health conditions on the allotments. Continuation of livestock grazing under the pasture rotation systems should provide for adequate rest and recovery prior to or following grazing to maintain vegetative health. The proposed action should have little bearing on the ability of these allotments to continue to meet Standard 3 for healthy plant communities.

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

Affected Environment:

Red Hill Common Allotment:
This allotment contains two perennial streams Old Mans Gulch, and Fitzpatrick Gulch. Neither of these waters is known to contain fish as they are very small with limited flow. The allotment is bounded to the southwest by perennial Cottonwood Creek which contains brook trout. The Eagle River runs along the northern boundary of the allotment and contains rainbow, brown, and brook trout, mottled sculpin, and speckled dace in addition to the bluehead and flannelmouth suckers addressed in the TES Section above. Gypsum Creek runs along and near the eastern border of the allotment and contains brook, brown, and rainbow trout, and mottled sculpin. All of these perennial waters contain aquatic insects that are important as food for fish and a variety

of terrestrial bird, bat, and other animal species. In addition to these perennial waters, numerous ephemeral drainages are present on the allotment that feed the perennial waters noted.

West Hardscrabble Common Allotment:
This allotment contains three perennial streams, Abrams Creek, McHatten Creek, and Spring Creek. Abrams creek contains a core conservation population of pure Colorado River cutthroat trout which are addressed in the TES Section above. McHatten Creek is small with limited flow and does not contain any fish. Spring Creek may contain a population of Colorado River cutthroat trout but recent (limited) sampling efforts on portions of the stream have not confirmed the presence of any fish species. Flow in this creek is consistent but limited and sufficient pool/holding habitat appears very limited. The Eagle River is located just north of the allotment and contains rainbow, brown, and brook trout, mottled sculpin, and speckled dace in addition to the bluehead and flannelmouth suckers addressed in the TES Section above. To the west is Gypsum Creek which contains brook, brown, and rainbow trout, and mottled sculpin. All of these perennial waters contain aquatic insects that are important as food for fish and a variety of terrestrial bird, bat, and other animal species. In addition to these perennial waters, numerous ephemeral drainages are present on the allotment that feed the perennial waters noted.

Environmental Consequences/Mitigation:

Red Hill Common Allotment and West Hardscrabble Common Allotment:
The proposed action is to reauthorize grazing for another 10 year period by the operator in question. The only change is that spring use would be moved back two weeks moved back two weeks from May 1 to June 16 to May 15 to June 30. Grazing activities would result in some soil compaction and displacement and increase the likelihood of erosional processes, especially on steep slopes, areas devoid of vegetation, and in concentration areas such as salting sites and stock waters. Soil detachment and sediment transport are likely to occur during runoff events associated with spring snowmelt and short-duration high intensity thunderstorms. Due to the close proximity of the proposed grazing activities to area drainages, there is potential that additional sediment associated with grazing practices could reach the ephemeral and perennial drainages mentioned above. Excessive sediment can impact trout and sculpin by silting in important spawning substrates or in the event eggs are present, by smothering eggs. In addition, important micro habitats such as pools needed for overwinter and oversummer thermal protection can be silted in which reduces depth and makes these areas less usable. Aquatic insect productivity can also be reduced due to excessive sediment. This can result in reduced food sources for fish and terrestrial bird and bat species. However, both allotments contain adequate growing season rest which should promote plant recovery and regrowth. This will help to stabilize soils and reduce offsite soil movement. Based on current water quality data and stream and riparian habitat condition, continued livestock grazing should have little impact to these downstream fishes.

Analysis on the Public Land Health Standard 3 for Plant and Animal Communities (partial, see also Vegetation and Wildlife, Terrestrial)**:**

Red Hill Common Allotment:

This allotment had a formal Land Health Assessment completed back in 2002. Area streams were generally meeting Standard 3 for aquatic wildlife at that time. Continued livestock grazing as proposed should have little bearing on the areas ability to continue to meet Standard 3 for aquatic wildlife.

West Hardscrabble Common Allotment:
This allotment had a formal Land Health Assessment completed back in 2002. Area streams were generally meeting Standard 3 for aquatic wildlife at that time. McHatten Creek did show signs of excessive livestock trailing along the creek which was resulting extensive patches of bare ground and increased sediment concerns. Since that time changes in salting sites and a new water source located away from the creek have helped to reduce livestock use along the stream. Continued grazing as proposed should have little bearing on the areas ability to continue to meet Standard 3 for aquatic wildlife.

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

Affected Environment:
Terrestrial Habitat. The latest assessment of habitat condition occurred in the 2002 Eagle River South Watershed Landscape Health Assessment. Habitats in this landscape range from predominantly sagebrush flats in the lower elevations to pinyon/juniper woodlands, mixed mountain shrub, oak, aspen, aspen/mixed conifer, and some mixed conifer in the highest elevations. Riparian habitat consisting of a variety of vegetative species is also present and is mainly associated with the major perennial streams of the area. Riparian habitat is extremely important to a variety of fish and wildlife species many of which depend on riparian habitats for all or a portion of their life requirements.

Sagebrush stands provide important habitat for a variety of obligate species of birds, and are particularly important as food and cover for wintering big game within the Eagle South landscape. Pinyon-juniper woodlands provide important foraging and nesting habitat for some raptor species and many migratory song birds, and provide security, foraging, and thermal cover for a variety of small game, big game, and nongame wildlife. Mixed mountain shrub and oak habitats are important to turkey, black bear, mule deer and elk among others.

Aspen are important habitats for a variety of species including big game, turkeys, blue grouse, black bears, and rabbits, among others. Aspen provide forage, and thermal and hiding cover, as well as birthing and nursing habitat for big game, and nesting habitat for some species of raptors and cavity nesting birds. Lodgepole pine and spruce-fir stands provide thermal, security, and bedding cover for big game and are important for cavity nesting birds, some raptors, and many owl species. Snowshoe hare, red squirrels, and many other species of small mammals.

The current condition of fish and wildlife habitats varies across the landscape. Upland habitats have been altered by roads (both authorized and unauthorized), powerlines, pipelines, fences, public recreation use, residential and commercial development, vegetative treatments and livestock and wild ungulate grazing. These human uses contribute to degradation of habitat quality, fragmentation of habitat for several species and the expansion of areas supporting noxious and exotic vegetative species.

Species of High Public Interest. 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. Portions of these allotments are mapped as important big game winter habitat. A large portion of both allotments overlap with severe winter range. A small portion of the lower elevations overlap with elk severe winter range. Severe winter range is considered that part of the overall range where 90% of the individuals are located when the annual snowpack is at its maximum and/or temperatures are at a minimum in the two worst winters out of ten.

The Lower Colorado River Habitat Management Plan 2008-2012 indicates the 2006 post hunt elk population to be an estimated 5,950 within data analysis unit (DAU) E-16 (game management units 44,444, 45 and 47). The CDOW recommended population objective for elk is 6,000. As indicated the elk population is stable and meeting the population objectives set by the CDOW. CDOW recommended population objective for deer is 7,000. The 2006 post hunt population estimate was 10,160 deer in game management DAU D-14 (GMU 44). Currently the deer numbers are likely near the 7,000 deer population objective due to the locally severe winter of 2007-08.

Environmental Consequences/Mitigation: Given the diversity of vegetation found on these allotments, it can be presumed that these allotments provides cover, forage, breeding, and nesting habitat for a variety of big game, small game, and non-game mammals, reptiles, and birds. There is no indication that native terrestrial wildlife populations are not spatially distributed across the landscape with a density, composition, and frequency of species suitable to ensure reproductive capability and sustainability. It is unlikely that the proposed action would have any large scale negative impacts to density, composition, and frequency of terrestrial species or terrestrial wildlife habitat. These allotments receive adequate growing season rest and plant rest and recovery periods. The proposed grazing management should maintain habitat condition and provide for the forage and cover needs of resident wildlife.

Species of High Public Interest. The magnitude of competitive interactions between big game and livestock is poorly understood. Livestock and wild ungulate carrying capacities should be evaluated holistically and be used to guide stocking rate decisions and wild ungulate population objectives. Qualitatively viewing the big game population trends and objectives in relationship to the proposed stable level of livestock AUMs, is can be assumed that the current stocking rates will continue to be compatible with CDOW big game objectives.

Analysis on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): Based on the grazing management in place, the LHA and the existing allotment data, the proposed action should have little bearing on the areas ability to meet, maintain, or move towards meeting Standard 3 for terrestrial wildlife.

SUMMARY OF CUMULATIVE IMPACTS

Cumulatively, many of the future actions (e.g. human development, farming, ranching, and recreation) planned on private and state lands may have some undetermined effect on lynx and lynx habitat.

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 November 13, 2008 regarding grazing permits and associated allotments scheduled for renewal in 2009. The public was provided an opportunity to offer any information or concerns, or to be considered as an interested public on a permit or allotment scheduled for renewal. There have been no responses received specific to the permit renewal or allotments addressed in this NEPA document. The Glenwood Springs Field Office Internet NEPA Register also lists grazing permit renewal NEPA documents that have been initiated. They are generally posted approximately one month prior to the estimated completion date.

The following individuals, groups, organizations and/or local governments were also consulted:

Ute IndianTribe
Southern Ute Indian Tribe
Ute Mountain Ute Tribe
U.S. Fish & Wildlife Service
Grazing permittees associated with the permit renewals

INTERDISCIPLINARY REVIEW:

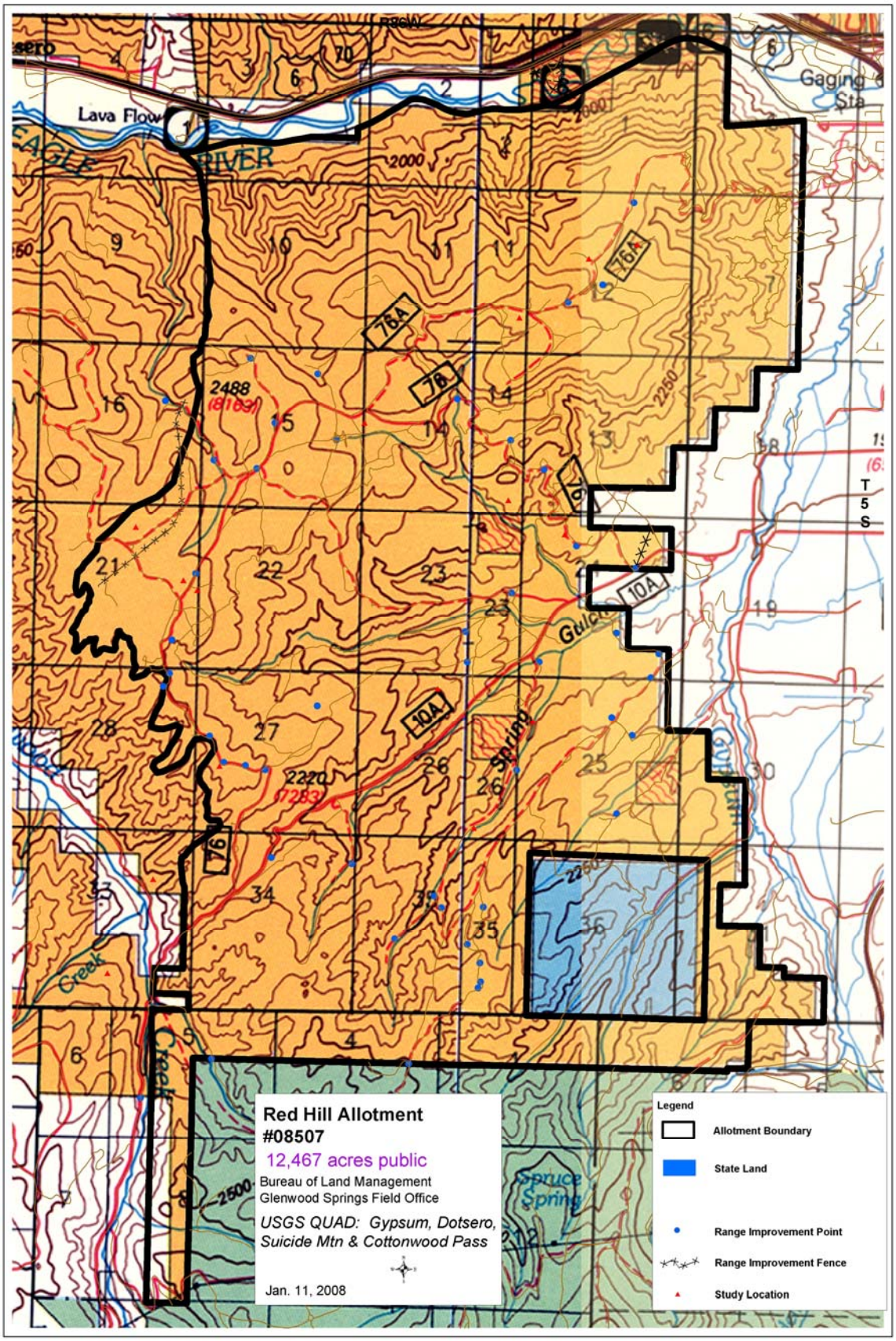
Name	***Title***	***Responsibility***
Michael Kinser	Rangeland Management Specialist	NEPA Lead, Wetlands and Riparian Zones, Range Management
Jeff O'Connell	Hydrologist/Geologist	Soil, Air, Water, Geology
Kay Hopkins	Outdoor Recreation Planner	WSR, Wilderness, VRM
Cheryl Harrison	Archaeologist	Cultural Resources and Native American Concerns
Brian Hopkins	Wildlife Biologist	Migratory Birds, Terrestrial Wildlife, T/E/S
Carla DeYoung	Ecologist	ACEC, Vegetation, T/E/S Plants, Land Heath Stds
Tom Fresques	Fisheries Biologist	Aquatic Wildlife and T/E/S Aquatic Wildlife

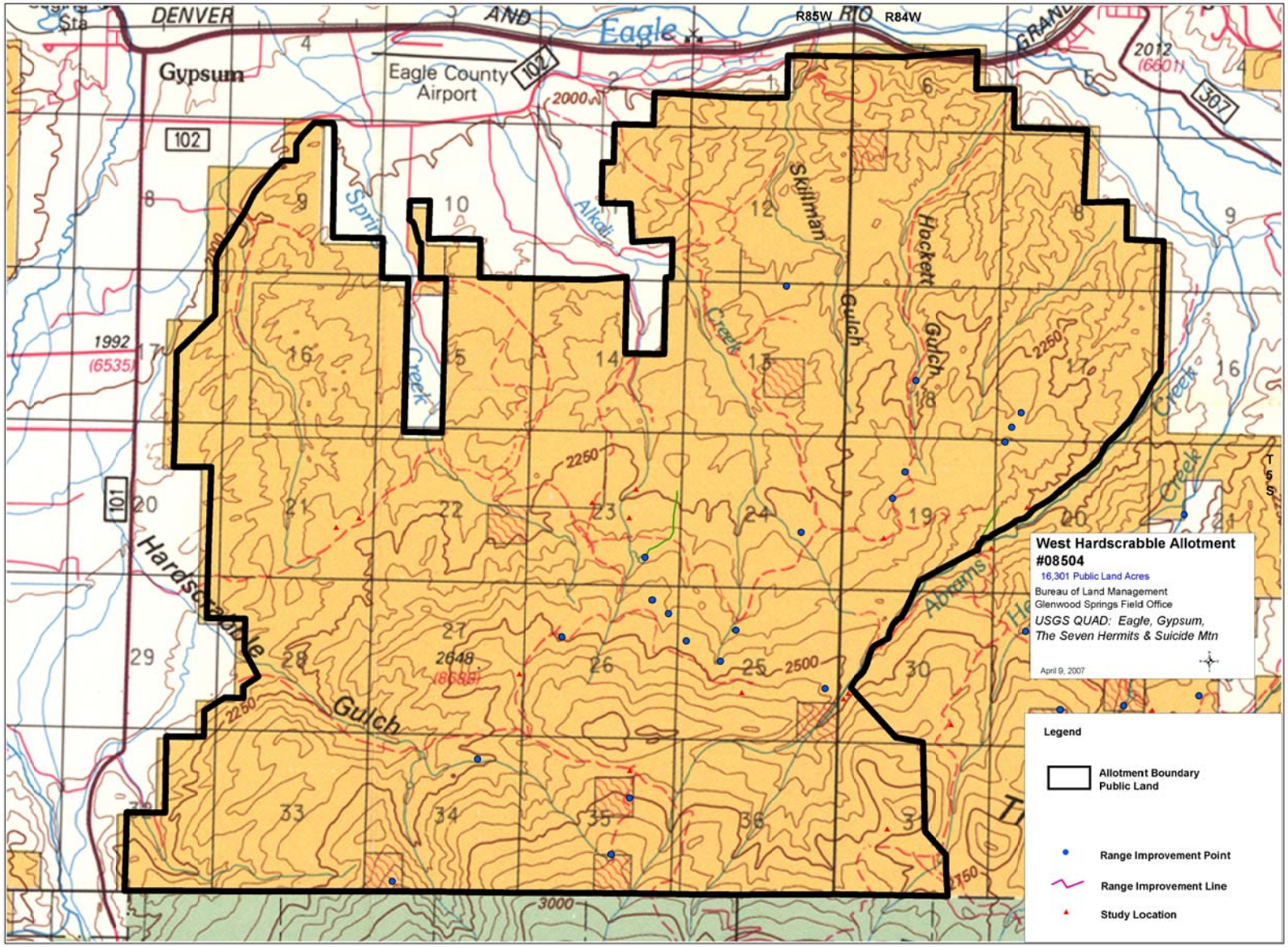
ATTACHMENTS: Allotment Maps

APPENDICES:

A - Biological Assessment for the Glenwood Springs Field Office Regarding Grazing Permit Renewals and Canada Lynx – FY 2009

B – Biological Opinion ES/GJ-6-CO-03-F-013


Red Hill Allotment
#08507
12,467 acres public
Bureau of Land Management
Glenwood Springs Field Office
USGS QUAD: Gypsum, Dotsero, Suicide Mtn & Cottonwood Pass
Jan. 11, 2008
Legend
Allotment Boundary
State Land
Range Improvement Point
Range Improvement Fence
Study Location
Lava Flow
EAGLE RIVER
Gaging Sta
Gulch
Spring
Creek
Spruce Spring
76A
76
10A
T 5 S


DENVER
AND
Eagle
R85W
RIO
R84W
Gypsum
Eagle County Airport
102
307
2012
(6601)
1992
(6535)
Spring Creek
Alkali Creek
Skillman Gulch
Hackett Gulch
Creek
Abrams Creek
Hardscrabble Gulch
2000
2250
2500
2648
(8685)
3000
T 5 S
West Hardscrabble Allotment
#08504
16,301 Public Land Acres
Bureau of Land Management
Glenwood Springs Field Office
USGS QUAD: Eagle, Gypsum, The Seven Hermits & Suicide Mtn
April 9, 2007
Legend
Allotment Boundary
Public Land
Range Improvement Point
Range Improvement Line
Study Location

APPENDIX A

Biological Assessment for the Glenwood Springs Field Office Regarding Grazing Permit Renewals and Canada Lynx – FY 2009

Garfield, Routt, Eagle and Pitkin Counties, Colorado

February 12, 2009

Submitted by:

Bureau of Land Management
Glenwood Springs Field Office
Glenwood Springs, CO

Prepared by:

Desa Ausmus, Wildlife Biologist
Bureau of Land Management
Little Snake Field Office
Craig, CO

I. Introduction

The Canada lynx was listed as a threatened species under the Endangered Species Act (Federal Register, Volume 65, No. 58, March 24, 2000) effective April 24, 2000. In the proposed rule, the U.S. Fish and Wildlife Service concluded that the population in the United States is threatened by human alteration of forests, low numbers as a result of past overexploitation, expansion of the range of competitors and elevated levels of human access into lynx habitat. The final rule designating critical habitat was published in the Federal Register on November 9, 2006. There is no critical habitat designated in Colorado.

Threatened and endangered species are managed under the authority of the Endangered Species Act of 1973 (PL 93-205, as amended). The Endangered Species Act requires Federal agencies to ensure that all actions which they authorize, fund, or carry out are not likely to jeopardize the continued existence of any endangered or threatened species, or result in the destruction or adverse modification of their critical habitat. This Biological Assessment regarding the renewal of 12 livestock grazing permits was prepared in accordance with the above provisions.

II. Project Description and Location

The proposed action consists of the renewal of term grazing permits on twelve allotments that either contain mapped lynx habitat, are located within a mapped landscape linkage or both. Each permit will be issued for a 10-year period, unless the base property is leased for less, but for purposes of the BA, we are assuming 10 years of grazing by the current applicant, or another applicant, in the case of a transfer. These allotments are all located within the Glenwood Springs Field Office (GSFO). Table 1 identifies the twelve allotments and lists allotment name, allotment type, acres of public land and predominant habitat type.

All 12 allotments were included in the Glenwood Springs Field Office's programmatic biological assessment. Site-specific consultation has not been completed for four of the allotments. Eight of the allotments have already had site-specific consultations and these permits are being re-issued for another 10 year period. Each consultation made a "May Affect, Not Likely to Adversely Affect" determination and a concurrence letter was received from FWS. Additional data, supporting this determination for these eight allotments, is included in this BA.

Table 1. Allotment Type, Size and Dominant Habitat Type in Lynx Habitat

ALLOTMENT NAME	LIVESTOCK TYPE	ACRES OF PUBLIC (BLM) LAND	PREDOMINANT HABITAT TYPE
Antelope Creek	cattle	3,820	pinyon-juniper/ sagebrush/aspen/ lodgepole
Cantley Homestead	cattle	331	aspen/oakbrush/fir
Jackson	cattle	322	oakbrush/spruce-fir/aspen
W. Hardscrabble Common	cattle	16,300	oakbrush/sage/aspen/ conifer
Spruce Gulch Common	cattle	1,715	oakbrush/aspen/Douglas-fir/ ponderosa pine
Red Hill Common	cattle	11,936	pinyon-juniper/sage
Porcupine Common	cattle	1,927	oak brush /juniper /moutain shrub
E. Hardscrabble	cattle	7,614	pinyon-juniper /mountain shrub
Salt Creek Forest	cattle	780	pinyon-juniper /mountain shrub/ sage
E. Divide Common	cattle	13,777	oakbrush/aspen/spruce-fir
N. Thompson Creek Common	cattle	3,415	oakbrush /pinyon-juniper
Harris Gulch	sheep	2,238	conifer/aspen/oakbrush

Total = 12 **Total Acres = 64,175**

III. Consultation History

To date, the GSFO has completed 8 project level consultations regarding livestock grazing and Canada lynx. These were all specific to individual permits up for renewal for a given year for permits/leases on grazing allotments that contained mapped lynx habitat. Each consultation made a "May Affect, Not Likely to Adversely Affect" determination and a concurrence letter was received from FWS.

In addition, programmatic consultation (ES/GJ-6-CO-03-F-013) for Canada lynx was completed on the entire grazing program as administered by the GSFO. A "May Affect, Not Likely to Adversely Affect" determination was made and concurrence was obtained via a Biological Opinion from the FWS. A Biological Opinion was required at the time due to the Kessler Court Decision. Since that time, that decision has been remanded and a BO is no longer required for NLAA determinations. Copies of all of these Biological Assessments, concurrence letters, and the Biological Opinion are available for review at the Glenwood Springs Field Office.

This Biological Assessment is for Canada lynx, and is at the site-specific project level and tiers to the programmatic grazing consultation noted above.

IV. Species Considered & Species Evaluated

Table 2 below, contains a list of Threatened, Endangered, Proposed, and Candidate species located or with potential to be located on lands administered by the Bureau of Land Management's Glenwood Springs Field Office. Although all of the below listed species are found on the GSFO species list, the only species addressed under this consultation is Canada lynx. Other species would be consulted on in the event of any "May Effect" determination through NEPA analysis.

Table 2. List of Threatened, Endangered and Candidate Species

Common Name	Scientific Name	Federal Status
Bony-tailed chub	*Gila elegans*	Endangered
Colorado pikeminnow	*Ptychocheilus lucius*	Endangered
Humpback chub	*Gila cypha*	Endangered
Razorback sucker	*Xyrauchen texanus*	Endangered
Black-footed ferret	*Mustela nigripes*	Endangered
Uncompahgre fritillary butterfly	*Boloria acrocnema*	Endangered
Canada lynx	*Lynx candensis*	Threatened
Ute ladies'-tresses orchid	*Spiranthes diluvialis*	Threatened
Uinta Basin hookless cactus	*Sclerocactus glaucus*	Threatened
Mexican spotted owl	*Strix occidentalis lucida*	Threatened
Parachute penstemon	*Penstemon debilis*	Candidate
DeBeque phacelia	*Phacelia scopulina var. submutica*	Candidate
Yellow-billed cuckoo	*Coccyzus americanus*	Candidate

V. Description of the Species (Canada Lynx) and their Habitat

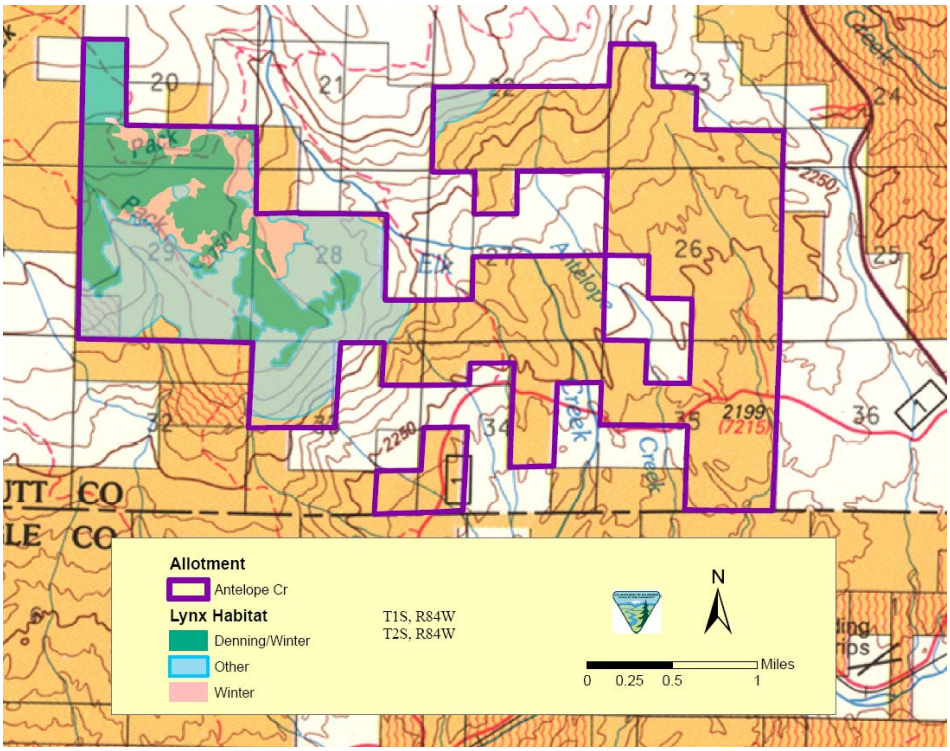
The general summary of lynx habitat was discussed in the Programmatic Consultation ES/GJ-6-CO-03-F-013, which this BA is tiered to. Below is site specific information on local habitat conditions within the 12 livestock grazing allotments being addressed in this BA. Information includes proposed management, allotment habitat characteristics, existing range data, and data collection associated with Land Health Assessments (LHA) regarding Standard 4 for lynx that was conducted on the allotments.

<u>Allotments without site specific consultations</u>

1. Antelope Creek

Background

The Antelope Creek Allotment contains 3820 acres of BLM managed lands. Lynx habitat is mapped in the north-west portion of the allotment and is comprised of 559 acres of winter/ denning habitat, 162 acres of winter foraging habitat and 736 acres of other habitat. Lynx habitat in this allotment is not currently located within an LAU, but lies within the Egeria Landscape Linkage. Vegetation within lynx habitat is comprised primarily of lodgepole pine, ponderosa pine, spruce and aspen.



Map displaying lynx habitat on the Antelope Creek allotment

The Antelope Creek Allotment is located in the Colorado River - Burns to State Bridge watershed. A formal LHA was completed for this landscape in 2006/2007. All of the sites visited in lynx habitat were found to be meeting Standard 3 for healthy plant and animal communities. All areas containing lynx habitat 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 Colorado River – Burns to State Bridge watershed. Movement is not being impeded and vegetation capable of providing alternative prey for lynx is abundant.

Habitat assessments specific to Canada lynx were completed for this allotment in 2008. Sites in both winter foraging and other habitat were evaluated. Overall, the allotment was in good condition. Utilization ranged from none to slight, with only wild ungulate sign noted. Abundant grasses and forbs were present with good diversity and productivity in aspen stands. Areas dominated by lodgepole pine forest had a sparse, but appropriate understory. The Antelope

Creek Allotment was meeting Standard 4 and current grazing management does not appear to be impacting the usability of lynx habitat.

Photos of lynx habitat on the Antelope Creek Allotment

The main riparian areas within this allotment are Antelope Creek, Elk Creek, Stifel Creek and Tepee Creek. A riparian condition assessment (PFC) was done in 2006 and all sections of the above creeks within the Antelope Creek Allotment were rated as Proper Functioning. Riparian vegetation was in good condition and was providing suitable cover for wildlife movement.

Proposed Action

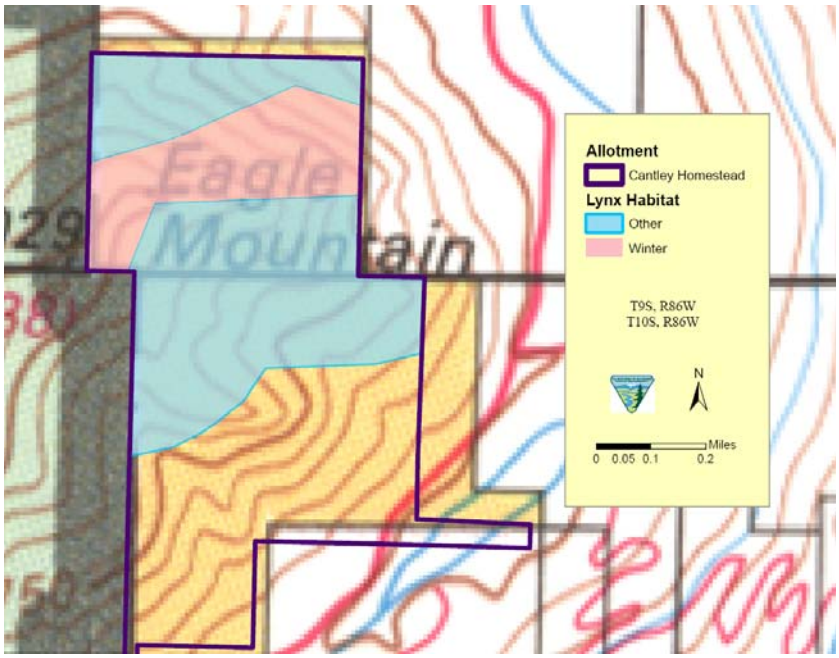
Public Land Acres	Livestock Kind & No.	Period of use	% Public Land	AUMs
3820	107 Cattle	05/01 – 07/31	100	324

Grazing in this allotment is permitted from the beginning of May through the end of July. Cattle are moved through the allotment during the three month grazing period, ensuring that no area receives season long grazing. This grazing system allows for sufficient growing season rest and adequate plant recovery periods. Seed production, dissemination, and seedling establishment are not hindered from livestock grazing.

2. Cantley Homestead

Background

The Cantely Homestead Allotment contains 331 acres of BLM managed lands. Lynx habitat is comprised of 55 acres of winter foraging habitat and 145 acres of other habitat. Lynx habitat in this allotment is not currently located within an LAU, but lies adjacent to the White River National Forest's Snowmass LAU. Vegetation within lynx habitat is comprised primarily of aspen, spruce/fir and oakbrush.



Map displaying lynx habitat on the Cantley Homestead Allotment.

No formal LHA has been completed for this allotment. The allotment was visited in 2008 to assess lynx habitat. Lynx habitat within this allotment is very steep and probably receives little, if any, grazing from domestic livestock. Wild ungulate sign was noted just below mapped winter habitat. Although 145 acres of other lynx habitat is mapped within this allotment, most of the vegetation is oakbrush and is not considered to have high value to lynx or their prey species.

Proposed Action

Public Land Acres	**Livestock Kind & No.**	**Period of use**	**% Public Land**	**AUMs**
331	50 cattle	6/21 – 6/30	100	17

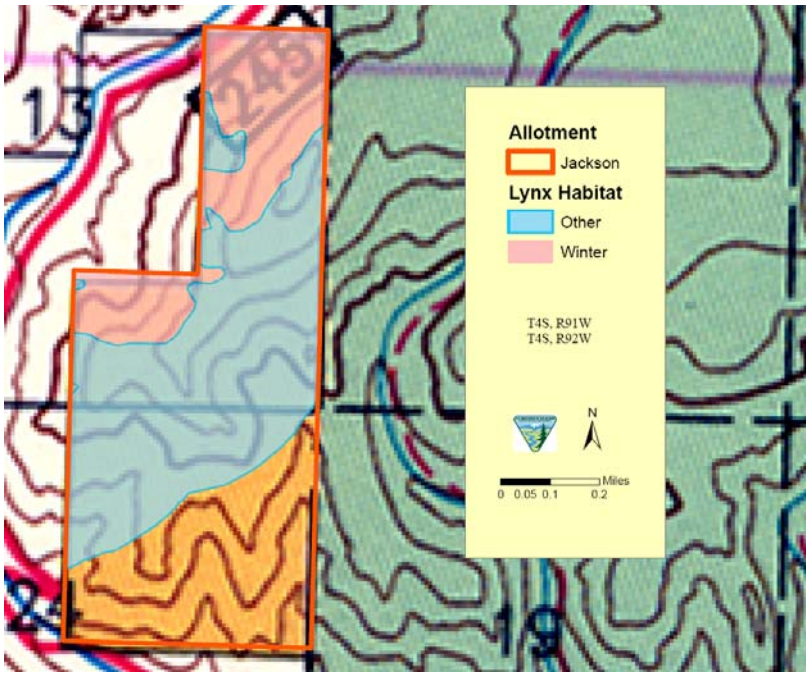
Livestock grazing is permitted on the Cantley Homestead Allotment for 10 days each June. Cattle are basically trailed through the lower elevations of the allotment on their way to the White River National Forest. This allotment receives adequate growing season rest which allows for plant rest and recovery. Seed production, dissemination, and seedling establishment is not being hindered. It is unlikely that grazing is impacting lynx habitat on the Cantley Homestead Allotment.

Photos of lynx habitat on the Cantley Homestead Allotment

3. Jackson

Background

The Jackson Allotment contains 322 acres of BLM managed lands. Lynx habitat is mapped in the northern two thirds of the allotment and is comprised of 70 acres of winter habitat and 159 acres of other habitat. Lynx habitat in the allotment is not within a LAU, but is adjacent to the White River National Forest BarHL LAU. Vegetation in mapped lynx habitat is comprised of aspen/spruce-fir and oakbrush.



Map displaying lynx habitat on the Jackson Allotment.

Photo of lynx habitat on the Jackson allotment

A formal LHA was completed for this allotment in 2007/2008. Due to the steep topography, the allotment was assessed from the base of the hill. No evidence of livestock grazing or any land health issues were noted. Since much of the lynx habitat within this allotment is very steep, it probably receives little, if any, grazing from domestic livestock. Although 145 acres of other lynx habitat is mapped within this allotment, most of the vegetation is oakbrush and is not considered to have high value to lynx or their prey species.

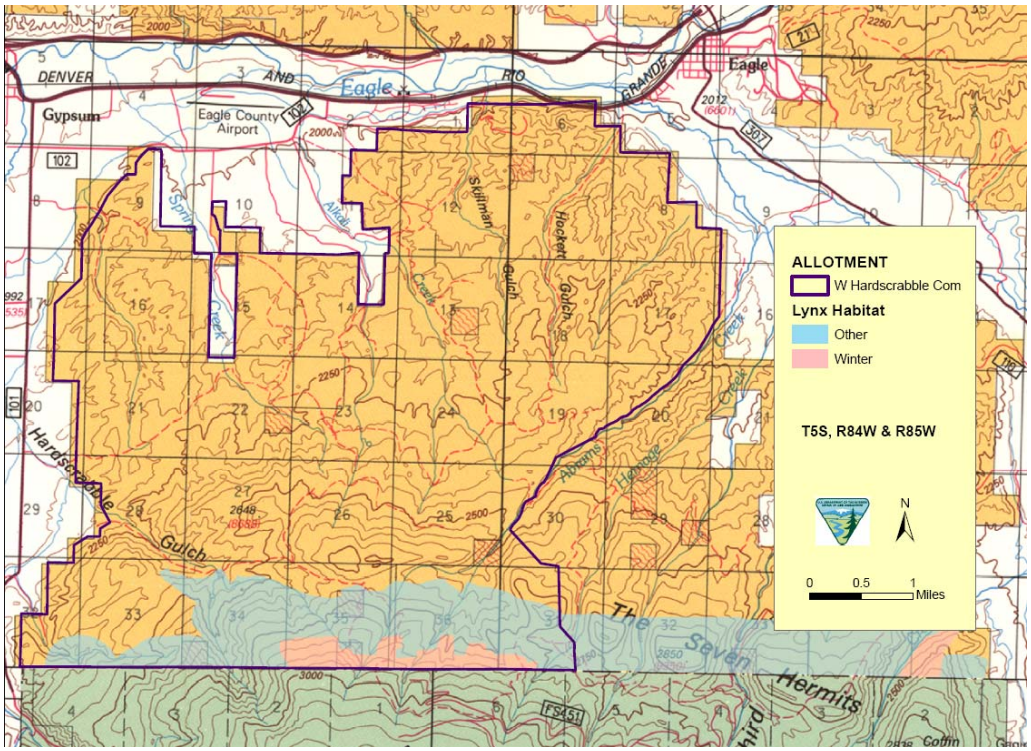
Proposed Action

Public Land Acres	Livestock Kind & No.	Period of use	% Public Land	AUMs
322	20 Cattle	06/16 – 07/31	100	30

Grazing is permitted on the allotment for about six weeks during the summer. Only the flatter portion of the allotment, at the top of the slope is likely utilized by livestock. The allotment is being managed within BLM's guidelines and receives adequate rest for plant recovery.

4. W. Hardscrabble Common

The W. Hardscrabble Common Allotment contains 16,300 acres of BLM managed lands. Lynx habitat is mapped in the extreme southern portion of the allotment and consists of 325 acres of winter habitat and 1765 acres of other habitat. Lynx habitat in the allotment is not within a LAU, but is adjacent to the White River National Forest's Battlement LAU. Vegetation in mapped lynx habitat includes lodgepole pine, aspen stands, sagebrush and oakbrush.



Map displaying lynx habitat on the W. Hardscrabble Allotment.

The W. Hardscrabble Common Allotment is located in the Eagle River South watershed. A formal LHA was completed for this landscape in 2002/2003. The allotment as a whole was considered to be meeting Standard 3 for healthy plant and animal communities, with some problem areas. The main problems were found on the lower elevation sagebrush sites. On these sites, sagebrush was in poor condition with pinyon-juniper encroachment. Many sites had low vigor and productivity, possible due to drought conditions that year. Higher elevation areas containing lynx habitat were found to be in good condition, providing healthy and productive habitat for lynx and their prey. The allotment was determined to be meeting Standard 4 for Canada lynx.

Habitat assessments specific to Canada lynx were completed for this allotment in 2003. Sites in both winter foraging and other habitat were evaluated. Overall, lynx habitat in the allotment was in good condition. Grazing in areas dominated by aspen and lodgepole pine was low. Some weeds, such as Canada thistle, musk thistle and houndstongue were noted. The W. Hardscrabble Common Allotment was meeting Standard 4 and current grazing management does not appear to be impacting the usability of lynx habitat.

Photo of lynx habitat on the W. Hardscrabble allotment

Proposed Action

Public Land Acres	Operator number	Livestock Kind & No.	Period of use	% Public Land	AUMs
16,300	1	395 cattle	5/01 – 6/30	100	597
		10 cattle	10/16 – 10/31	100	5
	2	128 cattle	5/01 – 6/30	100	194
		10 cattle	10/16 – 10/31	100	5
	3	100 cattle	5/01 – 6/30	100	151
		10 cattle	10/16 – 10/31	100	5

The West Hardscrabble Allotment is under an Allotment Management Plan (AMP). The AMP specifies a grazing system in which cattle are rotated amongst five different "areas" of the allotment during the spring use period. Period of use in each grazing area varies from 10 to 15 days. The AMP acknowledged that pastures could not be designated due to the lack of fencing and water availability. Given the lack of pasture fencing and lack of water in some areas of the allotment, cattle are actually rotated amongst three to four areas of the allotment. Lower elevation areas of the allotment are used first then cattle are moved to higher elevation areas prior to moving onto the adjacent National Forest allotment. Period of use varies from two to three weeks in each area of the allotment; however, due to lack of pasture fencing there is always some livestock drift between the grazing areas.

Grazing in this allotment is permitted from the beginning of May through the end of June. Grazing also occurs for about two weeks in the fall. Cattle are moved through the allotment during both grazing periods, ensuring that no area receives season long grazing. This grazing

system allows for sufficient growing season rest and adequate plant recovery periods. Seed production, dissemination, and seedling establishment are not hindered from livestock grazing.

Allotments with completed site-specific consultations

Allotment specific consultations have been completed for the following eight allotments. One allotment, Harris Gulch, is proposed to have a change in livestock class. The other seven allotments will have no change or very minor changes to the grazing permits. The proposed action is to re-issue the grazing permit for another 10 years. Since the grazing schedules have already been consulted on, they will not be re-stated in this BA. New information collected since the initial consultation, supporting the NLAA determination is presented below.

1. Harris Gulch

A site specific consultation was completed for grazing within the Harris Gulch Allotment in 2008. The permitee would like to change the class of livestock from cattle to sheep.

A formal LHA was completed for this allotment. Four sites throughout the allotment were visited, three outside of lynx habitat and one in lynx habitat. Overall, the allotment was in good condition and was meeting the standard for healthy and productive plant and wildlife communities**.** One site visited in the allotment did not meet standard 3 for healthy vegetative communities due to weeds. This was a small livestock concentration area which represents less that 10% of the allotment. The most recent range monitoring was completed in the summer of 2005, outside of lynx habitat. This allotment is meeting Standard 4 and livestock grazing is not degrading lynx habitat.

Proposed Action

Previous Grazing Schedule:

Public Land Acres	Livestock Kind & No.	Period of use	% Public Land	AUMs
3316 acres	78 cattle	6/15 to 8/31	90%	180

Proposed Grazing Schedule:

Public Land Acres	Livestock Kind & No.	Period of use	% Public Land	AUMs
3316 acres	800 sheep	06/15 – 07/15	90%	147
	800 sheep	10/19 – 10/25	90%	33

The Harris Gulch Allotment would be grazed for four weeks in the early summer and again in the fall for six days. This would provide adequate growing season rest which allows for plant rest and recovery. Seed production, dissemination, and seedling establishment would not be hindered. The allotment is currently in good condition, and the proposed changes to the permit are not expected to change the condition of lynx habitat on the allotment.

2. E. Hardscrabble

A site specific consultation was completed for grazing within the E. Hardscrabble Allotment in July of 2000. Since this time, a formal land health assessment (2002/2003) and a lynx habitat evaluation (2000) have been completed.

The E. Hardscrabble Allotment is located in the Eagle River South watershed. A formal LHA was completed for this watershed in 2002/2003. Some sites within the allotment were found to not be meeting Standard 3 for health plant and animal communities. The main problems were found on the lower elevation sagebrush sites. On these sites, sagebrush was in poor condition with pinyon-juniper encroachment. Many sites had low vigor and productivity, possible due to drought conditions that year. Weeds were also found on several of these sites. Vegetative communities in upper elevations were in much better condition. Aspen and conifer stands had better vigor and productivity than lower elevation sites. All sites within mapped lynx habitat were found to be meeting Standard 3 and provided suitable habitat for lynx and their prey.

Habitat assessments specific to Canada lynx were completed for this allotment in 2000, after the initial consultation was complete. Nine sites were visited within the allotment. Overall, lynx habitat in the allotment was in good condition. Utilization ranged from none to slight and livestock sign was noted at five of the sites. Milk thistle and hounds tongue were found at one site. The E. Hardscrabble Common Allotment was meeting Standard 4 and current grazing management does not appear to be impacting the usability of lynx habitat.

3. Salt Creek Forest

A site specific consultation was completed for grazing within the Salt Creek Forest Allotment in July of 2000. Since this time, a formal LHA and a lynx habitat evaluation have been completed.

The Salt Creek Forest Allotment is located in the Eagle River South watershed. A formal LHA was completed for this watershed in 2002/2003. The allotment was found to be meeting Standard 3 for healthy plant and animal communities. The allotment is in good condition and provides productive habitat for Canada lynx. The Salt Creek Forest Allotment was meeting Standard 4 and current grazing management does not appear to be impacting the usability of lynx habitat.

Habitat assessments specific to Canada lynx were completed for this allotment in 2000, after the initial consultation was complete. Two sites were visited within lynx habitat. Utilization was none to slight with no evidence of livestock use. The vegetative community was in good condition and aspen regeneration was abundant at one site. At least 4 different age classes of aspen were noted with many small saplings present. Understory grasses, shrubs, and forbs were diverse and abundant and in good condition. The allotment was meeting Standard 4.

4. Porcupine

A site specific consultation was completed for grazing within the Porcupine Allotment in July of 2000. Since this time, a formal LHA and a lynx habitat evaluation have been completed.

The Porcupine Allotment is located in the Rifle-West watershed. A formal LHA was completed for this watershed in 2004/2005. One site within lynx habitat was visited. Mapped habitat in the allotment is located on steep side hills or within steep drainages that are not being accessed by livestock. Lynx habitat in the allotment was in good condition. Understory vegetation was in good condition and aspen and conifer trees were healthy. Based on the overall condition of habitat, Standard 4 for Canada lynx was being met.

Habitat assessments specific to Canada lynx were completed for this allotment in 2000, after the initial consultation was complete. One site was assessed but a larger portion was hiked through. This allotment is mostly mixed mountain shrub with some Doug-fir and aspen in the southeast corner. Evidence of livestock use was apparent. Utilization was light except for along the main cattle trail through the heavy oakbrush where in small openings use was moderate to heavy. Understory grasses were productive and vigorous. Canada thistle and broader areas of houndstongue were noted. Livestock sign was far less evident farther up the steep slope to the east. This is where the best lynx habitat was located with a denser stand of Doug-fir and a couple of aspen stringers. Several small seeps and springs with cottontails were noted. Lynx habitat within the Porcupine Allotment is in good condition and the allotment was meeting Standard 4.

5. North Thompson Creek

A site specific consultation was completed for grazing within the North Thompson Creek Allotment in July of 2000. Since this time a lynx habitat evaluation (2001) has been completed. No formal LHA has been completed for this allotment.

Lynx habitat in this allotment is located on a steep northeast facing slope. The habitat was diverse with good vegetative structure and diversity. Vegetation was healthy with good production. Aspen at the site were healthy with at least 3 different age classes noted. Some recruitment was evident in the area. Some elk sign was noted as was bear sign. Livestock grazing is not occurring on this portion of the allotment due to the steep terrain and is not an issue. The site appears to be in late seral stage or nearing climax. The allotment was determined to be meeting Standard 4 for Canada lynx.

6. Spruce Gulch Common

A site specific consultation was completed for grazing within the Spruce Gulch Common Allotment in November of 2000. Since this time, a formal LHA has been completed. A wildfire burned some of the lynx habitat within this allotment in 2008.

The Spruce Gulch Common Allotment is located in the Rifle-West watershed. A formal LHA was completed for this watershed in 2004/2005. One site within lynx habitat was visited. Mapped habitat in the allotment is located on steep side hills or within steep drainages that are not being accessed by livestock. Lynx habitat in the allotment was in good condition.

Understory vegetation was in good condition and aspen and conifer trees were healthy. Based on the overall condition of habitat, Standard 4 for Canada lynx was being met.

7. Red Hill Common

A site specific consultation was completed for grazing within the Red Hill Common Allotment in November of 2000. Since this time, a formal LHA and a lynx habitat evaluation have been completed.

The Red Hill Common Allotment is located in the Eagle River South watershed. A formal LHA was completed for this watershed in 2002/2003. For the most part, the Red Hill Common Allotment was meeting land health standards. Overall, ground cover was adequate to protect soils and vegetation was in fair to good condition. Some issues were found on the lower elevation sagebrush sites. Vegetative communities in upper elevations were in much better condition. All sites within mapped lynx habitat were found to be meeting Standard 3 and provided suitable habitat for lynx and their prey.

Habitat assessments specific to Canada lynx were completed for this allotment in 2001. One site was visited within the allotment. The habitat was diverse with good vegetative structure. Vegetation was healthy with good production. Aspen at the site were healthy with 3 different age classes noted. Some recruitment was evident. Mountain mahogany was moderately browsed and elk and some deer sign was evident. No livestock sign was noted and use was obviously slight. The allotment was meeting Standard 4 and was providing productive habitat for Canada lynx.

8. East Divide Common

A site specific consultation was completed for grazing within the East Divide Common Allotment in December of 2001. Since this time, a lynx habitat evaluation has been completed.

Habitat assessments specific to Canada lynx were completed for this allotment in 2002. Three sites were assessed in lynx habitat on this allotment. Aspen were very healthy and large but age class diversity was somewhat lacking. At least 3 age classes were noted and some regeneration was occurring across the area but small saplings were being stripped of their leaves. This was likely from elk and possibly cattle. It appeared that aspen regeneration may be being hindered across large portions of the allotment. Conifers were in good condition with smaller and larger trees present. Understory was diverse with good structure and good productivity. Livestock sign was present but use was light in the forested, heavy canopied areas. Small openings showed slightly higher use on grasses. Overall, the allotment was found to be meeting Standard 4 and providing suitable and productive habitat for Canada lynx.

VI. Effects of Proposed Action on Canada Lynx

The general effects of livestock grazing were disclosed and discussed in the Programmatic Consultation ES/GJ-6-CO-03-F-013, which this BA is tiered to. Site specific effects related to the renewal of these twelve grazing permits are discussed below.

VI.1. Proposed Action(s) Relative Effects to Lynx Productivity Risk Factors

The biggest potential effect to lynx is livestock competition with lynx prey species for forage resources. Any reductions in forage that would lead to a reduction in prey or prey density could result in lower lynx productivity over time. However, based on existing range data for these allotments, utilization levels within lynx habitat are generally in the slight to light category with occasional areas of moderate use. Given the grazing management strategies in place, it is unlikely that any allotment will receive heavy or severe grazing pressure. Livestock are distributed across the allotments primarily within the rangeland habitats (sagebrush, p/j) outside of forested lynx habitats, and generally do not concentrate in any one area too long.

All of the allotments containing lynx habitat and addressed in this BA are being managed to meet one or more of the following guidelines:

- Periodic rest or deferment from grazing during the critical [plant] growth periods
- Adequate [plant] recovery and regrowth periods
- Opportunity for seed dissemination and seedling establishment

Each of the allotments incorporates at least some rest during the growing season and adequate plant recovery and regrowth periods via the implementation of rotation, deferral, or season of use. As such, it is likely that opportunities for seed dissemination and seedling establishment are occurring, given localized climate conditions related to moisture capture and drought. Managing these allotments within the above guidelines should ensure that these allotments continue to meet the Public Land Health Standards. Water developments for livestock are generally located within the sagebrush – grassland habitats away from mapped lynx habitat. This helps to distribute livestock use away from the more densely forested habitats, and limits use within riparian areas.

VI.2. Proposed Action(s) Relative Effects to Lynx Movement Risk Factors

General Movement and Dispersal

The LCAS identified several risk factors that could affect lynx movements, including the alteration of shrub-steppe habitat which could contribute to reduced incidence and success of lynx dispersal across shrub-steppe habitats. It is plausible that over grazing by livestock could be a factor contributing to the decline of the shrub-steppe plant community, thus reducing forage availability to the point that it limits leoprid population density. The LCAS states that livestock grazing within shrub-steppe within the elevational ranges of forested lynx habitat should be managed to maintain or achieve mid seral or higher condition, to maximize cover and prey availability.

Identified Habitat Linkages

Four habitat linkages have been identified and mapped within the GSFO. These linkages are comprised of public, private, state and USFS lands and serves as likely corridors in which lynx

might travel during dispersal movements. These corridors link larger forested landscapes located on adjacent White River and Routt National Forest lands. Small portions of the each linkage provide the vegetative components (summer forage, winter forage, and possibly some denning habitat) necessary to support and possibly sustain lynx. However, the majority of vegetation located within these linkages does not provide lynx habitat. These vegetative communities provide habitat for alternative prey species and cover for movement and dispersal. The Antelope Creek Allotment is located within the Egeria Landscape Linkage.

It is plausible that over-grazing by livestock could be a factor contributing to the decline of the functionality of landscape linkages. A reduction in forage availability could limit prey population density. In addition, a reduction in vegetative cover could impair lynx's ability to successfully move through the landscape.

However, based on how the Antelope Creek Allotment would be managed, impacts to lynx and lynx habitat should be insignificant. The permit calls for growing season rest and ample opportunity for plant regrowth and recovery. Seed production, dissemination and seedling establishment should not be hindered under the proposed management schemes. Continued livestock grazing should create no barrier to potential lynx movement.

VII. Inter-related and Inter-dependant Effects

Wild ungulates also play a role in the overall condition of vegetation across the 568,000-acre GSFO. The GSFO serves as primary mule deer and elk winter range for several CDOW Data Analysis Units (DAU's). Most elk move to high elevations and other landownership (National Forest Service Lands) as snow melts in the spring. Deer disperse more than elk across all elevations in the summer. Thus, grazing ungulates are relatively constant on many portions of all allotments throughout the year. The conditions of all allotments change annually with varying weather patterns (e.g. drought) and varying ungulate utilization and distribution. Elk in particular may be having some localized impacts to aspen stands, due to high utilization levels on young saplings. Deer concentrate more heavily on browse and may be partially to blame for poor sagebrush condition in some heavily used winter ranges.

VIII. Cumulative Effects

As it pertains to ESA, cumulative effects are defined as: *those effects of future State or private activities, not involving Federal activities that are reasonably certain to occur within the action area of the Federal action subject to consultation.* [50 CFR 402.02]

Cumulative effects do not include any past or ongoing action, but "involve only future non-Federal actions". Future Federal actions requiring separate consultation (unrelated to the proposed action) are not considered in the cumulative effects section.

In addition to public lands, the GSFO planning area contains a large amount of private land, and some scattered parcels of state land and state wildlife area lands. An undetermined amount, and diverse variety of land management activities are ongoing on private and state lands adjacent to BLM administered lands within the GSFO. Future actions reasonably certain to occur are

numerous and varied on these lands. Human development is occurring at an ever-increasing rate as native rangelands and ranches are being converted to residential and commercial properties. This trend is reasonably certain to continue to some degree. In addition, farming, ranching, and various recreational activities are ongoing and are reasonably certain to continue on other private and state lands. Livestock grazing is also occurring on some private and state lands within the area, and is reasonably certain to continue in some areas despite an overall reduction in grazing and other agricultural activities due to the selling of ranches and resulting residential and commercial developments.

Cumulatively, many of the future actions planned on private and state lands may have some undetermined effect on lynx and lynx habitat. The proposed action is not anticipated to result in negative cumulative impacts to lynx when viewed in conjunction with those activities currently occurring and reasonably certain to occur on adjacent private and state lands.

IX. Determination of Effects

Based on the proposed management, the proposed renewal of these twelve livestock grazing permits "MAY AFFECT, BUT IS NOT LIKELY TO ADVERSELY AFFECT" the Threatened - Canada lynx. Furthermore, the proposed action is in conformance with the recently completed programmatic consultation for lynx regarding the GSFO livestock grazing program. None of the actions will result in the destruction or adverse modification of Fish & Wildlife Service designated critical habitat.

Due to this determination, Formal Consultation is not determined to be necessary. This Biological Assessment is being submitted in order to obtain concurrence with our determination that management of these twelve grazing allotments is within the guidance outlined in the Programmatic Biological Opinion. In addition we seek to have this BA appended to the Programmatic Biological Opinion.

Rationale:

1. Permit standards and guidelines that result in acceptable residual herbivore forage and acceptable riparian conditions are design features of all BLM livestock grazing permits/allotment management plans as directed in the *Glenwood Springs Resource Management Plan* (1984, revised 1988), and *Colorado Public Land Standards for Public Land Health and Guidelines for Livestock Grazing* (1997).

2. Range and Land Health Assessment data shows that lynx habitat within these twelve allotments are in good condition. Where livestock grazing is occurring utilization has generally been light with some areas of moderate use. Light to moderate use should leave sufficient forage for lynx prey species and provide adequate cover for movement and dispersal.

APPENDIX B

Biological Opinion ES/GJ-6-CO-03-F-013

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
764 Horizon Drive, Building B
Grand Junction, Colorado 81506-3946

IN REPLY REFER TO:
ES/GJ-6-CO-03-F-013
TAILS 65413-2009-I-0066

April 2, 2009

Memorandum

To: Field Manager, Bureau of Land Management, Glenwood Springs Field Office, Glenwood Springs, Colorado

From: Acting Western Colorado Supervisor, Fish and Wildlife Service, Ecological Services, Grand Junction, Colorado

Subject: Comments on Storm King Allotment Livestock Grazing Permit issuance under Programmatic Biological Opinion ES/GJ-6-CO-03-F-013

Your letter dated February 13, 2009, included the project level Biological Assessment (BA) for the effects of renewing 10-year grazing permits on 12 allotments. Your letter was received in our office on February 17, 2009. Your project level BA tiers to programmatic biological opinion ES/GJ-6-CO-03-F-013, and provides information which updates our programmatic consultation. The programmatic opinion analyzed the effects of your grazing program on Canada lynx.

Project Description

The proposed action consists of the renewal of 10-year grazing permits on 12 allotments that are within a lynx landscape linkage or contain mapped lynx habitat. These allotments are located within the Glenwood Springs Field Office (GSFO). All 12 allotments up for renewal were previously addressed during the programmatic consultation. Eight of the allotments were issued 10-year permit renewals in the past and are now up for renewal again. The remaining four allotments have not been analyzed at the site-specific level and are addressed herein.

Allotments with prior section 7 consultation

Harris Gulch
Section 7 consultation was completed for the Harris Gulch allotment in 2008. However, the permittee has proposed to change the class of livestock from cattle to sheep. The proposal will allow sheep grazing on the 3,316 acre allotment as follows:

- 800 sheep/ grazing period from June 15 – July 15/ 147 animal unit months (AUMs)
- 800 sheep/ grazing period from October 19 – October 25/ 33 AUMs

Section 7 consultation has been completed on seven additional allotments (see following list) in the past to address the effects of grazing on lynx. With the exception of the Harris Gulch allotment (above), no proposed changes in livestock class, timing restrictions or requirements are proposed in the following allotments. Specifics regarding livestock class, timing restrictions or requirements within these allotments are documented in the programmatic biological opinion.

East Hardscrabble
Salt Creek Forest
Porcupine
North Thompson Creek
Spruce Gulch Common
Red Hill Common
East Divide Common

Allotments without prior site specific section 7 consultation

The following allotments were identified in the programmatic BO ES/GJ-6-CO-03-F-013. However, site specific information was not provided and project level analysis under section 7 was never completed.

Antelope Creek
The Antelope Creek allotment consists of 3,820 acres, grazes 107 cattle during a period spanning May 1 – July 31 and yielding 324 AUMs. Livestock are moved throughout the allotment during the three month grazing period to ensure that no area receives season long grazing pressure.

Cantley Homestead
The Cantley Homestead allotment contains 331 acres, grazes 50 cattle during a period spanning June 21 – June 30 yielding 17 AUMs. Livestock are trailed through the lower elevation of the allotment on the way to grazing allotments on the White River National Forest.

Jackson
The Jackson allotment contains 322 acres, grazes 20 cattle, during a period spanning June 16-July 31.

West Hardscrabble Common
The West Hardscrabble Common allotment contains 16,300 acres and is used by three separate operators. The grazing season within this allotment is split with the first rotation occurring between May 1 – June 30 and the second rotation occurring October 16 – October 31. All three operators graze during the same time period, grazing 623 cattle in the first rotation yielding 942 AUMs. The second rotation allows a total of 30 cattle (10 per operator), yielding a total of 15 AUMs (5 per operator). The West Hardscrabble allotment is under an allotment management plan (AMP), which specifies that cattle will be rotated amongst five different "area" of the allotment during the first rotation. Each "area" is grazed for a period of 10-15 days.

Status of the Species and Environmental Baseline

The status of the species tiers to the extensive description of the status of the species in biological opinion ES/GJ-6-CO-03-F-013 and is updated with the following information.

Lynx in Colorado are considered a portion of the lower 48 distinct population segment currently listed under the Act. The Colorado Division of Wildlife (CDOW) is currently tracking approximately 43 adult lynx. Two hundred eighteen lynx have been released during the reintroduction program. There are 114 known mortalities and 61 missing animals (Shenk, CDOW, pers. comm., 2009). The CDOW continues to monitor the population to the extent possible. It has become nearly impossible to determine the extent of the lynx population in Colorado due to failed collars, unknown mortalities, etc. Highway mortality ranks as one of the highest human caused mortalities factors for the Colorado lynx reintroduction overall, only exceeded by animals that have been shot. Three release protocols were used during the initial releases of lynx. By adjusting the release protocol, CDOW observed a reduction in the number of starvation deaths (Shenk 2004). Shenk (pers. comm. 2008) observed that 3 lynx have died of starvation under their current release protocol, one each in years 2000, 2001, and 2008. One hundred sixteen kittens have been born in Colorado (Shenk 2006), but survival of kittens is currently unknown. The CDOW reported zero reproduction in 2007 and 2009.

Table 2. Kittens born in Colorado

Year	Number of Kittens
2003	16
2004	36
2005	46
2006	11
2007	0
2008	0

In addition, on August 20, 2008, the Service issued biological opinion ES/LK-6-CO-08-F-024, to the U.S. Forest Service for a proposal to amend seven Forest Plans within the Southern Rocky Mountain Geographic area (i.e. Colorado and southeastern Wyoming). Biological opinion number ES/LK-6-CO-08-F-024 contains the latest range-wide status of the Canada lynx and is incorporated here by reference.

Environmental Baseline

The environmental baseline for the proposed action is generally described in programmatic biological opinion ES/GJ-6-CO-03-F-013. Standards and guidelines that direct livestock grazing for the Glenwood Field Office are designed to allow grazing at a sustainable level. However, conditions within individual allotments may be influenced by other things, including wild ungulate populations, drought, etc.

The BA reported that all of the 12 grazing allotments are in good condition within the lynx habitat areas and are meeting standard 4 of the Colorado Standards for Public Land Health. The BA reported that aspen regeneration may be hindered across large portions of the East Divide Common allotment but reported that standard four was still being met. In addition, the BA reported that a fire occurred within the Spruce Gulch Common Allotment.

Effects Analysis

The general effects of livestock grazing are contained in the programmatic biological opinion ES/GJ-6-CO-03-F-013.

The biggest potential effect to lynx is livestock competition with lynx prey species for forage resources. Any reductions in forage that would lead to a reduction in prey or prey density could result in lower lynx productivity over time. Given the existing and proposed grazing management strategies, BLM believes that reauthorization of grazing permits for the allotments discussed herein will continue to meet the Public Land Health Standards. As stated in the programmatic opinion, we have concluded that the Standards for public land health are adequate to support lynx conservation. The existence of these standards alone does not necessarily ensure compliance with the standards.

Two of the allotments were reported to have somewhat degraded condition. A fire was reported to have occurred within the Spruce Gulch Common allotment. However, the fire occurred in very steep terrain and livestock grazing is not anticipated to occur within the burned area and will not effect regeneration of the vegetation. Regeneration of aspen clones have been hindered within the East Divide Common allotment. Based on information documented in the programmatic biological opinion ES/GJ-6-CO-03-F-013, the current conditions within the East Divide Common allotment represent degraded conditions compared to past evaluations of habitat conditions. However, the BA concluded that the allotment was meeting standard 4 of the Colorado Standards for Public Land Health.

The lynx habitat components contained within the allotments considered herein make up only a portion of the lynx habitat within their respective landscapes including lynx analysis units and landscape linkages. The majority of lynx habitat lies within the U.S. Forest Service boundary. Therefore, lynx habitat contained within the allotments described herein function as part of a larger landscape and management of the larger landscape for lynx requires a coordinated effort between land management agencies. Several of the allotments considered herein fall within one or more of the landscape linkages, and compliance to the standards for public land health will ensure that the appropriate habitat conditions exist within each linkage to facilitate movement of lynx across the landscape.

Updated Cumulative Effects Analysis

In addition to public lands, the Glenwood Springs Field Office planning area contains a large amount of private land, and some scattered parcels of State land and State wildlife area lands. An undetermined amount, and diverse variety of land management activities are ongoing on private and State lands adjacent to Bureau of Land Management administered lands within the Glenwood Springs Field Office area. Future actions reasonably certain to occur are numerous and varied on these lands. Human development is occurring at an ever-increasing rate as native rangelands and ranches are being converted to residential and commercial properties. This trend is reasonably certain to continue to some degree. In addition, farming, ranching, and various recreational activities are ongoing and are reasonably certain to continue on other private and

State lands. Livestock grazing is also occurring on some private and State lands within the area, and is reasonably certain to continue in some areas despite an overall reduction in grazing and other agricultural activities due to the selling of ranches and resulting residential and commercial developments.

Cumulatively, many of the future actions planned on private and State lands may have some undetermined effect on lynx and lynx habitat. The proposed action is not anticipated to result in negative cumulative impacts to lynx when viewed in conjunction with those activities currently occurring and reasonably certain to occur on adjacent private and state lands.

Conclusion

After reviewing the current status of the Canada lynx, the environmental baseline for the action area, the effects of the action, and the cumulative effects, it is the Service's opinion that the proposed renewal of grazing permits on the subject allotments, is not likely to jeopardize the continued existence of the Canada lynx. Furthermore, the Service concurs with the "may affect, not likely to adversely affect" determination of the BA.

On November 9, 2006, the Service published its final rule designating critical habitat for lynx. Habitats within Colorado were not included in the final rule. Therefore, no adverse modification of critical habitat will result from the proposed action.

Rationale

Permit standards and guidelines that result in acceptable residual herbivore forage and acceptable riparian conditions are design features of all BLM livestock grazing permits/allotment management plans as directed in the *Glenwood Springs Resource Management Plan* (1984, revised 1988), and *Colorado Public Land Standards for Public Land Health and Guidelines for Livestock Grazing*. These same standards and guidelines are consistent with Lynx Conservation Assessment and Strategy (LCAS) standards and guidelines. Therefore, grazing as proposed is predicted to only result in insignificant and/or discountable effects to lynx and their habitat. Although regeneration of aspen trees within the East Divide Common Allotment may be inhibited by livestock grazing, other factors may be contributing to this condition, including impacts from wild ungulates. In addition, lynx habitat within the allotment is a minor contributor to larger blocks of habitat on the White River National Forest.

Incidental Take Statement

Take is to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct (Endangered Species Act, 16 U.S.C. 1531 et seq.).
Harm is an act which actually kills or injures wildlife. Such acts may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering (50 CFR 17.3).

Harass is an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering (50 CFR 17.3). Incidental take is a taking that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant (50 CFR § 402.02).

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be a prohibited taking under the Act, provided that such taking is in compliance with the terms and conditions of an Incidental Take Statement.

Amount or extent of take anticipated

In issuing an incidental take statement, the Service provides a statement of anticipated incidental take. Generally, incidental take is expressed as the number of individuals reasonably likely to be taken or the extent of habitat likely to be destroyed or disturbed, and over what time period the anticipated take will occur. We do not anticipate that the proposed action will result in take of lynx.

Comment/Recommendations

We will attach this project level analysis to biological opinion number ES/GJ-6-CO-03-F-013. It may be necessary to reinitiate consultation at the programmatic level if an individual project generated by the BLM's grazing program results in jeopardy or adverse modification determination, or an adverse effect determination is made for any allotment permit renewal.

KBroderdorp:BLMGSFOStormKingAllotmentLivestockGrazingPermitsCL.doc:040209

Literature Cited

Shenk, T.M. 2004. Colorado Division of Wildlife Job Progress Report. Post Release Monitoring of Lynx Reintroduced to Colorado. 9 pp.

Shenk, T.M. 2006. Colorado Division of Wildlife Research Report. Post Release Monitoring of Lynx Reintroduced to Colorado. 46 pp.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
GLENWOOD SPRINGS FIELD OFFICE

FINDING OF NO SIGNIFICANT IMPACT

Grazing Permit Renewal on the Red Hill and West Hardscrabble Allotments

DOI-BLM-CO140-2009-0028-EA

Finding of No Significant Impact
I have reviewed the direct, indirect and cumulative effects of the proposed action documented in the EA for the grazing permit renewal on the Brush Creek Allotment. The effects of the proposed action are disclosed in the Alternatives and Environmental Impacts sections of the EA. Implementing regulations for NEPA (40 CFR 1508.27) provide criteria for determining the significance of the effects. Significant, as used in NEPA, requires consideration of both *context* and *intensity* as follows:

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

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

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

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

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

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

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

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

Unique characteristics for the allotments have been identified and addressed in the EA. These include wetlands/riparian zones and cultural resources. Application of mitigation measures for cultural resources results in a determination of "Conditional No Adverse Affect" for historic properties that occur in the allotments. The proposed action is not expected to cause adverse impacts to riparian zones. No other unique characteristics are known to occur in the allotments.

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 Red Hill and West Hardscrabble 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 analysis in the EA did not identify any related actions with cumulative significant effects.

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

The proposed action is not considered to adversely affect districts, sites, highways or structures. A determination of "Conditional No Adverse Affect" has been made for historic properties that occur in the allotments.

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
Glenwood Springs Field Office

Date 4/17/2009