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: DOI-BLM-CO-N040-2009-0054-EA

CASEFILE/PROJECT NUMBER: 0507512

PROJECT NAME: Grazing Permit Transfer with Changes

LEGAL DESCRIPTION: T.5S., R.94W. (Roan Plateau) See attached map, Clough-Alber Allotment #18909, Webster Park Allotment #18902

APPLICANT: Grazing Permittee

DESCRIPTION OF PROPOSED ACTION, BACKGROUND AND ALTERNATIVES:

PROPOSED ACTION: The Proposed Action is to transfer a term grazing permit. The base property and Animal Unit Months (AUMS) authorized by this permit will remain the same as the previous permit. The number/kind of livestock, period of use, and percent public land will be altered from the previous permit. The permit will be issued for a 3-year period and will be re-evaluated upon expiration. The proposed actions are in accordance with 43 CFR 4130.2. The tables below summarize the current grazing schedule as well as the proposed changes.

Current Grazing Schedule:

Allotment Name and No.	Livestock Number & Kind	Pasture	Grazing Period Begin	Grazing Period End	%PL	AUMS
Webster Park #18902	100 Cattle	Webster Mesa	4/20	5/25	100	118
Clough-Alber #18909	1000 Sheep		6/20	10/01	80	547
Webster Park #18902	5 Cattle	Goodrich Park	7/01	10/01	100	15

Proposed Grazing Schedule:

Allotment Name and No.	Livestock Number & Kind	Pasture	Grazing Period Begin	Grazing Period End	%PL	AUMS
Webster Park #18902	1000 Sheep	Webster Mesa	4/5	6/15	20	95
Clough-Alber #18909	1000 Sheep		5/16	7/6	80	274
Clough-Alber #18909	1000 Sheep		9/10	10/31	80	274
Webster Park #18902	1000 Sheep	Goodrich Park	11/1	11/30	20	39

Grazing Preference (AUMS)

Allotment Name/No.	Total	Suspended	Temporary Suspended	Active
Webster Park #18902	700	172	395	133
Clough-Alber #18909	972	422	0	550

The following terms and conditions will be included on the permit:

Grazing management on the Clough-Alber allotment will be in accordance with the Clough-Alber Allotment Management Plan (AMP). The plan is scheduled to be completed 2009-2010.

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.

The permittee and all persons specifically associated with grazing operations must be informed that any objects or sites of cultural, paleontological, or scientific value such as historic or prehistoric resources, graves or grave markers, human remains, ruins, cabins, rock art, fossils, or artifacts shall not be damaged, destroyed, removed, moved, or disturbed. If in connection with allotment operations under this authorization any of the above resources are encountered, the proponent shall immediately suspend all activities in the immediate vicinity 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).

Average utilization levels by livestock should not exceed 50% by weight on key grass species, and 40% of the key browse species current year's growth. Grazing in riparian areas should leave an average minimum 4-inch stubble height of herbaceous vegetation. Once these levels are reached, livestock should be moved to another portion of the allotment, or removed from the allotment entirely for the remainder of the growing season. Application of this term may be flexible to recognize livestock management that includes sufficient opportunity for regrowth, spring growth prior to grazing, or growing season deferment.

A herder will be present on the allotment each day of the grazing season. The herder will make a diligent effort to minimize grazing use by sheep on the creek bottoms. Sheep can be herded to creek bottoms for brief periods for watering purposes only. Once sheep have been watered they will be herded away from the creek bottoms.

Trailing use through the Hubbard Mesa (#18903) and JQS (#18908) allotments will take place in the spring and fall and will be limited to 1 day.

BACKGROUND: The Webster Park allotment has historically included unfenced private land within the allotment boundaries. In 2003 the permit was changed from 20% public land to 100% public land to show that the cattle were being kept on public land during that time period. Since then the operator has gone back to a sheep operation that will rotate use between the public and private land. The Webster Park allotment also reflects temporary suspended AUMs that the permittee has available. These AUMs could likely be restored once oil and gas development activities have been rehabilitated.

The Clough-Alber allotment also has unfenced private property that is included on the permit. The Clough family plans to fence the private portion of this allotment to exclude cattle. Fence construction is likely to being in 2009-2010. This fence would give the BLM and cattle permittee a chance to extend fence off the private property fence which would make a pasture in

Yellowjacket/Raspberry Creek and another pasture on Cook Ridge including Trapper Creek. The reconstruction of exclosures on Trapper Creek are also planned to be completed in 2009. There would also be the opportunity for a third pasture in Tichner draw. The fencing and rotations planned for the allotment should address some of the riparian concerns. An AMP is currently being developed that would incorporate a rotational grazing system. once the fencing can be completed. This will allow for more growing season rest and control of the cattle. The transfer analyzed in this EA is addressing the sheep use on the allotment. This permit would authorize grazing during the spring and fall allowing for rest during the summer months. Sheep will be rotated throughout the allotment to allow for periods of growing season rest. The sheep will be actively herded and will spend limited time in the riparian areas. The Sheep will be moved from the Webster Park allotment to the Clough-Alber allotment via the JQS road. The permittee may also choose to trial sheep on the Cow Creek road. Trailing will occur through both the Hubbard Mesa (#18903) and JQS (#18908) allotments in the spring and fall. Trailing will be limited to 1 day.

The permittee also has a permit on the Forest Service from 6/15 to 9/25. Since these dates overlap with the proposed action it is likely that in some years sheep will not make full use of the permit. These dates will provide the permittee with flexibility to his operations. It is also likely that the most actively used part of this permit is the fall use.

Other Permittees permitted on The Clough-Alber allotment:

Authorization #	Allotment Name and No.	Livestock Number & Kind	Grazing Period Begin	Grazing Period End	%PL	AUMS
0507621	Clough-Alber #18909	134 Cattle	6/16	10/15	100	537

ALTERNATIVES CONSIDERED BUT ELIMINATED:

The No Grazing alternative has been eliminated from further consideration. The Roan Plateau Management Plan allocated AUM's available for livestock grazing use. The applicant for permit transfer is applying to change the season of use from what was identified in the Plan. The change in season of use has initiated this environmental analysis.

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 new guidance in the Roan Plateau Management Plan.

NEED FOR PROPOSED ACTION:

The action 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,(5) to allow use of native rangeland

resource for conversion into protein suitable for human consumption, and (6) to meet the Guidelines for Livestock Grazing Management and the Standards for Land Health.

PLAN CONFORMANCE REVIEW:

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

Name of Plan: Glenwood Springs Roan Plateau Resource Management Plan Amendment.

Date Approved: June 2007; Record of Decision for the Designation of Areas of Critical Environmental Concern for the Roan Plateau Resource Management Plan, March 2008

Decision Number/Page: The action is in conformance with the Grazing and Rangeland goals (ROD-38), and the Grazing Management Guidelines for Riparian Areas (ROD-Appendix B)

Decision Language: Goal 1-"Provide livestock forage while maintaining or enhancing healthy landscapes." Goal 2-"Ensure grazing management conforms to the BLM grazing regulations and the BLM's Colorado Standards for Public Land Health and Guidelines for Livestock Grazing Management."

Standards for Public Land Health:

In January 1997, Colorado BLM approved the Standards for Public Land Health. The five standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands.

The BLM completed a formal land health assessment on the Clough-Alber allotment as part of the Roan Cliffs Landscape Unit in 1999. The Webster Park allotment consists of three parcels of land that are split between two watersheds. The northern parcel was evaluated in 2001 as part of the Rifle Creek Land Health Assessment. The southern parcels were evaluated in 2004 as part of the Rifle-West Land Health Assessment. The determination was made that the Clough-Alber allotment and the northern part of the Webster Park allotment were meeting all the standards at that time. The southern unit of the Webster Park allotment was marginally meeting Standard 3 for plant communities. Concerns noted by the assessment team included lack of perennial grasses, cheatgrass dominating on several sites and decadent unproductive sagebrush. Existing livestock grazing was not considered to be contributing to deterioration of land health conditions.

This environmental analysis must address whether the proposed action or alternatives being analyzed would result in impacts that would maintain, improve, or deteriorate land health conditions relative to these five standards.

COMPLIANCE WITH SECTION 302 OF FLPMA RELATIVE TO THE COMB WASH DECISION

A review of applicable planning documents and a thoughtful consideration of new issues and new demands for the use of the public lands involved in this allotment have been made. This analysis concludes that the current land and resource uses are appropriate.

Reasons for the conclusion are: No new issues or new demands for the use of public lands involved in this grazing allotment have been identified since approval of the land use plan and amendments.

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 2). 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.

Table 2. 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		Threatened, Endangered, and Sensitive 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

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment:

The Record of Decision for the Designation of Areas of Critical Environmental Concern for the Roan Plateau Resource Management Plan Amendment (March, 2008) designated four ACECs in the Roan Plateau Planning Area. The Clough-Alber Allotment falls within the Trapper/Northwater Creek ACEC. The northern parcel of the Webster Park allotment falls within the Magpie Gulch ACEC and the southern parcels lie within the Anvil Points ACEC.

The Trapper/Northwater Creek ACEC was designated to protect important fisheries and ecological values. The area contains a genetically pure population of native, wild, naturally-reproducing Colorado River cutthroat trout. These populations are considered "core conservation populations" and are regionally and nationally important in the conservation of the species. The Trapper/Northwater Creek ACEC also contains the Colorado endemic plant, hanging garden sullivantia, which is narrowly restricted to calcareous seeps, but is common along seeps in the cliffs of the Roan Plateau. The Roan Plateau supports roughly 62 percent of the total number of hanging garden sullivantia occurrences. Two significant plant communities are also found within this ACEC.

The Anvil Points ACEC was designated to protect important scenic, geologic, wildlife and botanical/ecological values. Scenic values are those associated with the steep, white shale cliffs of the Roan Plateau. The claystone cave represents an important geologic feature within this landscape. Wildlife values in the Anvil Points ACEC include nesting habitat for peregrine falcons and golden eagles as well as wildlife seclusion and security areas due to the unroaded and unfragmented nature of the habitat. Botanical values include habitat for Parachute penstemon, Roan Cliffs blazing star, DeBeque milkvetch and a number of significant plant communities.

Magpie Gulch ACEC was designated to protect important visual, wildlife and ecological values. The scenic values are associated with the eastern and northeastern portion of the white cliffs of the Green River shale formation. Wildlife values include raptor nest sites and wildlife security areas. Ecological values are associated with an intact, old-growth Douglas-fir community.

The 2008 ROD for the Designation of ACECs for the Roan Plateau RMP Amendment and EIS prescribed protective measures (NSO/NGD, CSU and TLs) to preserve the scenic, botanical, and wildlife values. The ROD also established acceptable limits on streambank damage caused by livestock grazing. The objective is to preclude any surface-disturbing actions or high levels of activity that might impair the identified values.

Environmental Consequences/Mitigation:

Livestock grazing could have potential negative impacts on the relevant and important values, especially the condition of Colorado River cutthroat habitat and DeBeque milkvetch occurrences. (*see Threatened, Endangered and Sensitive Species &*

Vegetation sections). However, if the stipulations and management actions developed in the RMP ROD and the existing terms and conditions on the permit are enforced, and if regular monitoring indicates proper livestock distribution and levels of use are occurring, then impacts should be reduced to acceptable levels. Continuation of livestock grazing under the existing terms and conditions should not degrade the values for which the Anvil Points, Magpie Gulch and Trapper/Northwater Creek ACECs were designated.

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 #1009-20) was completed for the Clough-Alber on February 19, 2009 following the procedures and guidance outlined in the 1980 National Programmatic Agreement Regarding the Livestock Grazing and Range Improvement Program, IM-WO-99-039, IM-CO-99-007, IM-CO-99-019, CO-2001-026, and CO-2002-029. The results of the assessment are summarized in the table below. A copy of the cultural resource assessment is available at the GSFO office.

Allotment Number	**Acres Inventoried at a Class III level**	**Acres NOT Inventoried at a Class III Level**	**Percent (%) Allotment Inventory data Class III level**	**Number of Cultural Resources known in allotment**	**High Potential of Historic Properties (yes/no)**	**Management Recommendations (Additional inventory required and historic properties to be visited)**
Clough-Alber	4148	1818	70	36	Yes	No additional acres need to be inventoried. 47% of the allotment has 30%+ slopes.
Total	4148	1818	70	36		

Eleven Class III cultural resource inventories have been conducted within this allotment resulting in the identification of ten historic properties. Historic properties are cultural resources that are considered eligible or potentially eligible for listing on the National Register of Historic Places that need to be preserved. If they cannot be avoided, the adverse impacts must be mitigated. Based on available data, there is a moderate to high potential for historic properties within the allotment. Unidentified historic era sites within this allotment could represent a time frame from the late 1800's through the 1950's; Native American sites could represent a time range from 200 to 10,000 years before present. Based on available data, there is a high potential for historic properties within both allotments.

Subsequent site field visits, inventory, and periodic monitoring may have to be done to identify adverse grazing impacts for the historic properties 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.

At present, there are no known areas of Native American concern within this allotment. 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 Tribe, identifying the proposed 2009 grazing permit renewals. No response has been received. If new data is disclosed, new terms and conditions may have to be added to the permit to accommodate their concerns. The BLM will take no action that would adversely affect these areas or location without consultation with the appropriate Native Americans.

Environmental Consequences: Ten historic properties were identified during the inventories for this allotment; additionally this allotment is located in a cultural high sensitivity area within the Roan Plateau Planning Area Resource Management Plan (RMP 2004). A determination of "**May Adversely Affect"** has been made for this renewal. In order to mitigate this potential affect and comply with the Roan Plan Cultural Resource Management Plan **all** ground disturbing activity must be monitored by a qualified archaeologist and any cultural manifestation identified must be mitigated as it is found in the Record of Decision (ROD 2007:31-32).

The direct impacts that occur where livestock concentrate include trampling, chiseling, and churning of site soils, cultural features, and cultural artifacts, artifact breakage, and impacts from standing, leaning, and rubbing against historic structures, above-ground cultural features, and rock art. Indirect impacts include soil erosion, gullying, and increased potential for unlawful collection and vandalism.

Mitigation**:** Maintenance of range improvements not previously inventoried or new improvements will be subject the Roan Plateau Planning Area cultural resource management plan which could include cultural resource inventories, monitoring, and/or data recovery. 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 permittee and all persons specifically associated with grazing operations must be informed that any objects or sites of cultural, paleontological, or scientific value such as historic or prehistoric resources, graves or grave markers, human remains, ruins, cabins, rock art, fossils, or artifacts shall not be damaged, destroyed, removed, moved, or disturbed. If in connection with allotment operations under this authorization any of the

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

ENVIRONMENTAL JUSTICE

Affected Environment: Review of 2004 data from US Census Bureau indicates the median annual income of Garfield County averages $50,119 and is neither an impoverished or wealthy county. Median annual income of Mesa County averages $40,045 and is not an impoverished or wealthy county. U.S. Census Bureau data from 2006 shows the minority population of Garfield and Mesa County comprises less than 0.7 % of the total population of Colorado[a].

Garfield County	Mesa County
Median Household Income (2004)	Median Household Income (2004)
Estimate	Estimate
$50,119	$40,045

Environmental Consequences/Mitigation: The proposed action and alternatives are not expected to create a disproportionately high and adverse human health impact or environmental effect on minority or low-income populations within the area.

INVASIVE, NON-NATIVE SPECIES

Affected Environment:

Clough-Alber: Noxious weed infestation reports identify Canada thistle *(Cirsium arvense)*, musk thistle (*Carduus nutans* L.) houndstongue *(Cynoglossum officinale)*, bull thistle *(Cirsium vulgare)*, common mullein *(Verbascum Thapsus)*, Scotch thistle *(Onopordum acanthium)*, and yellow toadflax *(Linaria vulgaris)* occurs within the Clough-Alber Allotment. The majority of the weed infestations occur along riparian areas and roads.

Webster Park: Noxious weed infestation reports identify two locations of tamarisk *(Tamarisk sp)* occurs within the Webster Park Allotment. Land health assessments were conducted in the lower elevations of Webster Park in 2004. The report identified cheatgrass dominating on several sites.

[a] Source U.S. Census Bureau: State and County QuickFacts. Data derived from Population Estimates, Census of Population and Housing, Small Area Income and Poverty Estimates, State and County Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits, Consolidated Federal Funds Report
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Environmental Consequences/Mitigation:
Clough-Alber: As livestock come in contact with noxious and invasive weed species they will continue to transport seed via coat and feces to other areas of the allotment. Past heavy livestock grazing and wildlife use is the primary cause for the high levels of noxious weeds in riparian zones on Clough-Alber. Continued overuse of native vegetation would provide a niche for noxious weeds to continue to spread in the future. In contrast, if grazing use levels are controlled to acceptable levels to allow native plants to recover, the spread of noxious weeds will slow. Weed management techniques will need to be implemented to reduce the number of noxious weeds to levels that provide for ecological health of the native communities.

Webster Park: As livestock come in contact with noxious and invasive weed species they will continue to transport seed via coat and feces to other areas of the allotment. Current livestock grazing practices have provided for native plant community health on the Webster Park Allotment. 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 migratory nongame 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.

BLM Instruction Memorandum No. 2008-050 provides interim guidance to enhance coordination and communication toward meeting the Bureau of Land Management's (BLM) responsibilities under the Migratory Bird Treaty Act (MBTA) and the Executive Order (EO) 13186. The guidance directs Field Offices to promote the maintenance and improvement of habitat quantity and quality. To avoid, reduce or mitigate adverse impacts on the habitats of migratory bird species of conservation concern to the extent feasible, and in a manner consistent with regional or statewide bird conservation priorities.

The 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 Gray Vireo, Pinyon Jay, Juniper Titmouse, Lewis's Woodpecker and Grace's Warbler are characteristically found in pinyon/juniper woodlands and the Brewer's sparrow *(Spizella breweri*) is found within sagebrush habitats. 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 eagles (*Haliaeetus leucocephalus*), are known to winter along portions of the Colorado, Eagle and Roaring Fork Rivers and its major tributaries. Wintering bald eagles are generally present from mid-November to mid-April. Large mature cottonwood trees along the rivers and their major tributaries are used as roosting and perching sites, and these waterways provide the main food sources of fish and waterfowl. Upland habitats adjacent to these waterways are used as scavenging areas primarily for winter killed 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.

Proposed Action

Environmental Consequences/Mitigation: The propose grazing does have the potential to impact migratory bird species however limited bird count or species data exists for the area. The relative abundance of similar nesting wildlife habitats over the landscape reduces the concentration of migratory birds in a specific location. It is possible that trampling of ground nesting birds and/or eggs could occur, but intentional take of native birds is not anticipated. Overall grazing would not influence populations of migratory birds on a landscape level.

THREATENED, ENDANGERED, & SENSITIVE SPECIES (includes an analysis on Standard 4)

Affected Environment:

Listed, Proposed, and Candidate Species:
According to the latest species list from the U. S. Fish and Wildlife Service (http://mountain-prairie.fws.gov/endspp/CountyLists/COLORADO.htm), the following Federally listed, proposed, or candidate plant and animal species may occur within or be impacted by actions occurring in Garfield County: Colorado hookless cactus (*Sclerocactus glaucus*), Ute Ladies' Tresses orchid (*Spiranthes diluvialis*), Parachute beardtongue (*Penstemon debilis*), DeBeque phacelia (*Phacelia submutica*), Canada lynx (*Lynx canadensis*), Mexican spotted owl (*Strix occidentalis*), yellow-billed cuckoo (*Coccyzus americanus*), Greenback cutthroat trout (*Oncorhynchus clarkii stomias*), razorback sucker (*Xyrauchen texanus*), Colorado pikeminnow (*Ptychocheilus lucius*), bonytail chub (*Gila elegans*), and humpback chub (*Gila cypha*). The U. S. Fish and Wildlife Service announced the delisting of the bald eagle in June, 2007 with an effective date of August 8, 2007. The BLM now considers the bald eagle a sensitive species.

Plants:
Parachute beardtongue is known to occur within the Green River shale formation of the Roan Cliffs near the Anvil Points Oil Shale Mine. This habitat lies within the northwestern edge of the Webster Park allotment. No other listed, proposed or candidate plant species are known to occur within either the Webster Park or Clough-Alber allotments.

Colorado River Endangered Fishes:
The Webster Park allotment is located within 0.3 miles of the Colorado River and many of the ephemeral drainages on the allotment flow directly into the river. This section of the river is identified as Designated Critical Habitat for the Colorado pikeminnow and razorback sucker. Known occupied habitat is located downstream closer to Grand Junction, Colorado. However, with the recent alterations of upstream movement barriers near Grand Junction, Colorado, it is now possible for fish to move farther upstream than previously allowed. The Bonytail and Humpback chub are both located far downstream near the Colorado/Utah border.

BLM Sensitive Species:
Plants:
BLM sensitive plant species with habitat and/or occurrence records in Garfield County include adobe thistle (*Cirsium perplexans),* DeBeque milkvetch (*Astragalus debequaeus),* Naturita milkvetch (*Astragalus naturitensis),* Roan Cliffs blazing star (*Mentzelia rhizomata*), Piceance bladderpod (*Lesquerella parviflora*), and Harrington's penstemon (*Penstemon harringtonii*). Both the Roan Cliffs' blazing star and DeBeque milkvetch are known to occur within the Webster Park allotment. The Roan Cliff's blazing star is found in the Green River shale formation, often in association with Parachute

beardtongue. Several populations of Roan Cliff's blazing star have been documented in the steep talus slopes along the southeastern edge of the plateau where the Green River shale formation is exposed.

DeBeque milkvetch occurs along the southeastern foothills of the Roan Cliffs in soils derived from the Wasatch formation. This species is found in 8-10 sites within the Webster Park allotment.

Fish:
The Clough-Alber allotment contains two core conservation (99% pure or better) populations Colorado River cutthroat trout in Trapper Creek and Northwater Creek.

The Webster Park allotment is located within 0.3 miles of the Colorado River and many of the ephemeral drainages on the allotment flow directly into the river. Three BLM sensitive fish species reside in the river, flannelmouth suckers, bluehead suckers, and roundtail chubs.

Environmental Consequences/Mitigation:

Listed, Proposed, Candidate Species:
Plants:
Parachute beardtongue grows in the steep talus slopes of the Roan Cliffs and along the upper reaches of the Anvil Points Mine Road. The amount of forage along the road is limited and the slopes adjacent to the road are extremely steep (>50%). Due to the steep slopes and lack of forage, livestock rarely travel this road and no signs of livestock grazing have been documented within the habitat for this species. The continuation of livestock grazing should have **"No Effect"** on Parachute beardtongue or its habitat.

Colorado River Endangered Fishes:
These native fish are endemic to the Colorado River basin and reside almost exclusively within the mainstem Colorado River and its periodically flooded sidechannel impoundments and backwater habitats. All of these fish are all well adapted to the high sediment loads traditionally carried by the Colorado River and its larger tributaries. In general, periodic to frequent influxes of sediment are important in the creation and maintenance of important microhabitats for these species. Movement and redistribution of sediments helps to create and maintain backwater habitats important to many life stages of these fish. Periodic inundation of floodplain areas with water/sediment provides optimal seedbed areas for native cottonwood regeneration to occur. Any increased sediment loading into ephemeral drainages and eventually the Colorado River resulting from continued livestock grazing as proposed would have **"No Effect"** to these fishes or their habitat.

BLM Sensitive Species:
Plants:
The Roan Cliffs blazing star occurs within the Green River formation of the Roan Cliffs and in gullies and drainages where Green River shale has been deposited downslope via

alluvial or colluvial action. Livestock do not generally graze on the steep talus slopes below the cliffs; however some livestock trampling damage has been noted along the gullies and drainages where the Roan Cliffs blazing star occurs.

Mitigation:

- As stated in the permit terms and conditions, "the herder will make a diligent effort to minimize grazing use by sheep on the creek bottoms. Sheep can be herded to creek bottoms for brief periods for watering purposes only. Once sheep have been watered they will be herded away from the creek bottoms." This stipulation will apply to the Webster Park allotment as well as the Clough-Alber allotment.

Livestock do not generally prefer to graze on DeBeque milkvetch species since this species, like many milkvetch species, concentrates selenium in its leaves. The Webster Park allotment has not been grazed by sheep in recent history. There is a possibility of damage to or loss of DeBeque milkvetch plants if sheep are forced to graze on it due to a lack of more palatable forage. Periodic monitoring of DeBeque milkvetch populations will be conducted to determine whether any trampling or grazing of plants is occurring. If damage to milkvetch populations occurs, the permittee will be instructed to avoid herding sheep into areas occupied by DeBeque milkvetch.

Colorado River cutthroat trout:
The proposed change in season of use for sheep would provide for some growing season rest. Sheep grazing would continue to result in some soil compaction and displacement and increase the likelihood of erosional processes, especially on steeper slopes, areas devoid of vegetation, and at livestock concentration areas such as salting and mineral sites, water sources, and creek bottoms. Streambank alteration has occurred and would likely continue to occur along portions of both Trapper and Northwater Creek. As large herbivores, e.g., elk, deer, and cattle, walk along streambanks or across streams, the animals' weight can cause shearing that result in a breakdown of the streambank and subsequent widening of the stream channel. It also exposes bare soil, increasing the risk of erosion of the streambank. Animals walking along the streambank may increase the amount of soil exposed to the erosive effects of water by breaking or cutting through the vegetation and exposing roots and/or soil. Excessive trampling causes soil compaction, resulting in decreased vegetative cover, less vigorous root systems, and more exposure of the soil surface to erosion (Burton et al. 2008). Soil detachment and sediment transport are likely to occur during spring runoff from snowmelt and during short-duration high intensity thunderstorms. Allowing prolonged use within the creek bottoms increases the potential for increased sediment loading into both of the cutthroat trout streams present.

Increases in sediments entering these streams can impact resident cutthroat trout by covering spawning/rearing areas, thereby reducing the survival of fish embryos and juveniles (USDA Forest Service 2000). Excessive sedimentation can also fill in important pool habitats reducing their depth and making them less usable by cutthroat and other aquatic organisms. Pool habitats are important as over-summer and over-winter thermal refugia areas for these fish and are limited especially in Trapper Creek.

A number of sublethal effects to resident cutthroat may also occur as a result of sedimentation, including avoidance behavior, reduced feeding and growth, and physiological stress (Waters 1995). Over the long-term, increased sediment loads reduce primary production in streams (USDA Forest Service 2000). Reduced insect productivity results from excessive sediment that fills in the interstitial spaces between stream substrates needed by these aquatic invertebrates. This loss is stream productivity can disrupt the food chain and result in reduced food sources for resident cutthroat as well as terrestrial bird and bat species.

The reduction of streamside riparian vegetation can alter the nutrient dynamics of the aquatic habitat. In areas where riparian vegetation has been depleted or lost, a shift in energy inputs from riparian organic matter to primary production by algae and vascular plants have been predicted (Minshall et al. 1989) and observed (Spencer et al. 2003). The increased solar radiation that results from the loss of streamside (or poolside, etc.) vegetation causes temperatures, light levels, and autotrophic production (i.e., plants and algae) to increase. This change in a stream's food web could alter the composition of food and thus energy sources that are available to resident cutthroat and aquatic invertebrates. Terrestrial insect diversity and productivity also decreases with reductions in streamside vegetation which also effects food availability for resident fish. Increased stream temperatures affect cutthroat by reducing their growth efficiency and increasing their likelihood of succumbing to disease. Prolonged and excessive utilization of streamside/riparian vegetation can also result in increased peak flows as vegetation is not sufficient to slow stream velocities and act as a "sponge" to retain water over longer periods. This can result in reduced water quantities throughout the summer into fall when stream temperatures are at their highest which further negatively impacts resident fish. These effects may occur until such time as sufficient streamside vegetation is re-established along disturbed portions of the streams.

Prolonged livestock congregation within these small stream corridors is also affecting water quality. With increased nutrient input and limited summer and fall streamflows, eutrophication can occur. This is the condition in which the increase of mineral and organic nutrients has reduced the dissolved oxygen levels within the stream, producing an environment that favors plant life over animal life. In other words, the mineral and organic nutrient levels being inputted into the streams are greater than the streams flows can handle or carry through the system. This routinely occurs within portions of both Trapper and Northwater Creek and results of this are often seen as large algae blooms that form dense patches of algae within each creek. This further depletes oxygen levels and reduces habitat quality for resident cutthroat.

All of the above effects are negatively impacting resident cutthroat trout and can result in declines in species recruitment and overall productivity.

Mitigation:
To minimize the above impacts from continued livestock grazing as proposed, the following mitigation is recommended:

- Enforce and monitor compliance of permit stipulations in a timely manner with an emphasis on riparian/stream stipulations and actions versus upland monitoring.

- A new Management Action associated with two new ACEC's located on the Roan Plateau that covers streams within this allotment states: Objective: Minimize direct impacts to streambanks resulting from livestock grazing. Management Action: Manage livestock grazing within the ACEC so that streambank damage does not exceed ten percent of the stream length. Conduct grazing so that this threshold is not exceeded and monitor to assure that this management action is being addressed.

- Discuss problem and concern areas with permittees prior to turnout and emphasize the need for improvement in riparian and stream habitats.

Bluehead sucker, Flannelmouth sucker, Roundtail chub:
These native fish are endemic to the Colorado River basin and reside within the mainstem Colorado River and its major tributary rivers/streams. These fish are all well adapted to the high sediment loads traditionally carried by the Colorado River and its larger tributaries. In general, periodic to frequent influxes of sediment are important in the creation and maintenance of important microhabitats for these species. Movement and redistribution of sediments helps to create and maintain backwater habitats important to many life stages of these fish. Periodic inundation of floodplain areas with water/sediment provides optimal seedbed areas for native cottonwood regeneration to occur. Any increased sediment loading resulting from the continued livestock grazing as proposed should have minimal negative impact to these species or their habitats.

Analysis on the Public Land Health Standard for T&E Species:
A formal Land Health Assessment was completed for the Clough-Alber allotment back in 1999. The northern part of the Webster Park allotment was assessed (Goodrich Park) was assessed in 2001 and the southern portions were assessed in 2004. At that time the majority of the lands and streams within the Clough-Alber allotment were meeting Standard 4. Trapper Creek appears to still be meeting with portions of the stream in an upward trend and other segments with no trend apparent. The upper portions of Northwater Creek and large areas along Raspberry and Yellowjacket Creeks within the allotment appear to be trending downward as livestock grazing use has been heavy in these areas in recent years. The proposed transfer and change in season of use for sheep may help to minimize impacts along the streams as sheep would be grazed in spring and fall with summer growing season rest. In addition, sheep are to be herded to fresh feed every few days with limited watering permitted along area streams. This will discourage excessive use at any one site for too long. Cattle grazing, which also occurs on this allotment, is believed to be the primary reason for poor riparian and stream conditions in upper Northwater, Raspberry, and Yellowjacket Creeks.

The assessment of Webster Park determined that the allotment was meeting Standard 4 for special status, threatened, and endangered species at the time. The proposed sheep

grazing, with implementation of the mitigation and terms proposed, should not result in a failure to achieve Standard 4.

WATER QUALITY, SURFACE AND GROUND (includes an analysis on Standard 5)

Affected Environment:

Clough-Alber Allotment

The Clough-Alber Allotment is located northwest of the City of Rifle and north of Interstate 70 and the Colorado River within a 21,862 acre unnamed 6th field watershed through which the perennial Northwater Creek and its tributaries flow. Major perennial tributaries to Northwater Creek include Tichner Draw to the north and Raspberry and Yellowjacket Creeks to the south. Along the northwest boundary of the allotment is the perennial Trapper Creek which converges with Northwater Creek at the western terminus of the allotment boundary to form East Middle Fork of Parachute Creek.

According to the *Stream Classifications and Water Quality Standards* (CDPHE, Water Quality Control Commission, Regulation No. 37) list, drainages within the Clough-Alber Allotment are within the Lower Colorado River Basin segment 8 that includes the mainstem of Northwater and Trapper Creeks, including all tributaries and wetlands, from their sources to the confluence with the East Middle Fork of Parachute Creek. This segment has been classified aquatic life cold 1, recreation N, water supply, and agriculture. Aquatic life cold 1 indicates that these waters are capable of sustaining cold water biota including sensitive species or could become suitable. Recreation class N refers to waters that are not suitable or intended to become suitable for primary contact recreation. This segment is however suitable or intended to become suitable for potable water supplies and agricultural purposes that include irrigation and livestock use. In addition, the State has currently given this stream segment an Outstanding Waters designation that affords such waterbodies additional water quality protection.

The State of Colorado has developed a *303(d) List of Water Quality Limited Segments Requiring TMDLS* (CDPHE, Water Quality Control Commission, Regulation No. 93) that identifies stream segments that are not currently meeting water quality standards with technology based controls alone and a *Monitoring and Evaluation List* (CDPHE, Water Quality Control Commission, Regulation No. 94) that identifies water bodies suspected to have water quality problems. At this time, the drainages within the Clough-Alber Allotment are not listed on either of these two lists.

Historically water quality data has been collected on the Roan Plateau by various agencies and groups that include: continuous monitoring by the USGS from 1976-1983, data collected by the Department of Energy in 1981, data collected by the BLM Glenwood Springs Field Office in 1999 as part of the Roan Cliffs Land Health Assessment, and data collected by Colorado Trout Unlimited in 2007. Following are the water quality results in order from those sampling events.

Long-term Stream Discharge Data for USGS Gaging Stations, Parachute Creek Basin

Station Name/Location	Station Number	Period of Record	Avg. and Range of Annual Mean Flow	Avg. and Max. Annual Peak Flow	Avg. and Min. Annual Low Flow
Northwater Creek	09092830	10/1/76 - 5/16/83 8/19/77 - 5/5/82	4.1 cfs 0.5 - 7.5 cfs	84 cfs 225 cfs	0.25 cfs 0.01 cfs

Long-term Water Quality Data for USGS Gaging Stations, Parachute Creek Basin							
Station Name/Location	Station Number	Period of Record	Temp. (°C)	pH	Conductivity (µS/cm)	Suspended Sediment Conc. (mg/L)	Suspended Sediment Load (tons/day)
Northwater Creek	09092830	2/76 - 5/83	0 - 21	7.7 - 8.6	380 - 697	10 - 61	0.01 - 1.0

DOE Discharge and Water Quality data for NOSR 1 streams					
Stream Name	Sampling Period	Discharge (cfs)	Temp. (°C)	Cond. (µS/cm)	pH
Northwater Creek	seasonal, 1981	0-81	0-17	380-530	8-8.5
Trapper Creek (1 sample)	Sept. 1981	0.5	15.5	560	8.7

1999 Roan Cliffs Land Health Assessment						
Stream Name	Date	Discharge (cfs)	Temp. (°C)	Cond. (µS\cm)	pH	Salinity 0/00
Northwater Creek	7/6/1999	1.20	22.6	445	-	0
Raspberry Creek	7/13/1999	0.06	18.5	369	8.2	0.1
Trapper Creek	7/6/1999	0.41	20.2	451	-	0
Yellowjacket Creek	7/13/1999	0.14	18.0	372	8.6	0.25

2007 Colorado Trout Unlimited Water Quality Data							
Stream	Date	E. coli	pH	Dissolved Oxygen mg/L	Ammonia NH3 mg/l	Nitrate NO3 mg/l	Hardness CaCO3 mg/L
Northwater Creek	8/30/07	285	8.5	7.4	0	0.046	216
	11/07/07	325	7.0	8.9	0.05	0.132	188
Trapper Creek	6/06/07	13.4	7.8	8.1	0	0.414	214
	11/07/07	1986	8.5	8.8	0	0	220

In addition, the BLM Glenwood Springs Field Office collected water quality data in summer 2008 prior to and following seasonal grazing activities. These samples were taken at areas where cattle have historically concentrated in the past and were analyzed by Grand Junction Laboratories. The following table presents the laboratory water chemistry results from summer 2008 sampling.

2008 BLM Roan Plateau Water Chemistry Lab Results								
Stream Name	Northwater	Northwater	Raspberry	Raspberry	Trapper	Trapper	Yellowjacket	Yellowjacket
Date	6/11/2008	10/23/2008	6/11/2008	10/23/2008	6/10/2008	10/23/2008	6/11/2008	10/23/2008
pH	8.5	8.15	8.2	7.65	8.3	8.1	8.25	8.1
Conductivity (umhos/cm)	420	529	375	481	424	528	386	463
Sodium (mg/l)	25	27	25.5	28.5	26.5	37	26	30.9
Calcium	48	59	40	53	49	52	43	46

(mg/l)								
Magnesium (mg/l)	18	26	11	22	15	27	12	25
Potassium (mg/l)	0.6	0.4	0.6	0.5	0.8	0.5	0.6	0.5
Chloride (mg/l)	4	2	4	4	2	2	4	4
Sulfate (mg/l)	18	14	21	22	19	25	20	26
Phenol Alk (mg/l)	12	0	0	0	0	0	0	0
Total Alk (mg/l)	219	273	189	259	217	272	193	233
Bicarbonate (mg/l)	236	330	229	313	263	329	234	282
Carbonate (mg/l)	14	0	0	0	0	0	0	0
Dissolved Solids (mg/l)	240	332	218	296	244	314	244	282
Hardess (mg/l)	194	254	145	222	184	240	156	217
Hydroxide (mg/l)	0	0	0	0	0	0	0	0
Acidity (mg/l)	0	0	0	0	0	0	0	0
Fluoride (mg/l)	0.07	0.02	0.04	0.06	0.08	0.14	0.05	0.02
Total Suspended Solids (mg/l)	0	0	0	12	7	0	0	5
Fecal Coliform Bacteria (col/100ml)	4	39	1	484	0	117	1	242

While most of the water quality data results consist of basic parameters that cannot be directly correlated to grazing activities, data collected by Colorado Trout Unlimited in 2007 and the BLM in 2008 show elevated levels of E. Coli bacteria and Fecal Coliform bacteria following the grazing season. These bacteria are present in the intestinal tracts of warm blooded animals and are measured in colonies per 100ml of water. The current E. Coli standard for this segment based on recreation class N is 630 colonies per 100ml which means that the sample collected by Colorado Trout Unlimited on Trapper Creek on November 7, 2007 exceeded this standard.

Studies in the Pacific Northwest on streams containing salmonids have shown that the optimal level of fecal colonies for aquatic ecosystems is around 50 fecal colonies per 100ml and should not exceed 100 fecal colonies for freshwater systems (EPA 1991, Bjornn & Reiser 1991). Samples collected by the BLM on Raspberry, Trapper, and Yellowjacket Creeks on October 23, 2008 exceed the 100 fecal colonies per 100ml level. Given the presence of sensitive trout species in drainages on the Roan Plateau, one would expect the standards to be similar.

In addition to water quality monitoring, streambank monitoring occurred in summer 2008 by BLM personnel on major drainages on the Roan Plateau. The results have shown that livestock are occupying the riparian areas for extended periods throughout the grazing season. These activities have resulted in decreased vegetative cover and loss

of riparian function and bank failures. Together these negative impacts lead to loss of aquatic cover and habitat by increasing temperatures and sediment input.

Webster Park Allotment

The Webster Park Allotment is located northwest of the City of Rifle and north of Interstate 70 and the Colorado River within three 6th field watersheds that include: the 6,773 acre Thirty-Two Mile Gulch in the northern portion, the 4,693 acre Hubbard Gulch in the center, and a 24,411 acre unnamed watershed in the southern portion. Within the Thirty-Two Mile Gulch watershed is the perennial Goodrich Gulch which is at the headwaters of Thirty-Two Mile Gulch. The Hubbard Gulch watershed contains the ephemeral Yellowslide Gulch and the ephemeral Hubbard Gulch while the unnamed watershed to the south contains several unnamed ephemeral tributaries to the Colorado River.

According to the *Stream Classifications and Water Quality Standards* (CDPHE, Water Quality Control Commission, Regulation No. 37) list, drainages within the Webster Park Allotment are within the Lower Colorado River Basin segment 4a that includes all tributaries to the Colorado River from the confluence with the Roaring Fork River to a point immediately below the confluence with Parachute Creek. This segment has been classified aquatic life cold 2, recreation N, water supply, and agriculture. Aquatic life cold class 2 refers to waters not capable of sustaining a wide variety of cold or warm water biota due to habitat, flows, or uncorrectable water quality conditions. Recreation class N refers to waters that are not suitable or intended to become suitable for primary contact recreation. This segment is however suitable or intended to become suitable for potable water supplies and agricultural purposes that include irrigation and livestock use

The State of Colorado has developed a *303(d) List of Water Quality Limited Segments Requiring TMDLS* (CDPHE, Water Quality Control Commission, Regulation No. 93) that identifies stream segments that are not currently meeting water quality standards with technology based controls alone. Drainages within the Webster Park Allotment are within the Lower Colorado Basin segment COLCLC04a that includes tributaries to the Colorado River from the Roaring Fork River to Parachute Creek. This segment has been listed as impaired due to Selenium and has been given medium priority by the State. The drainages within the Webster Park Allotment are not currently listed on the *Monitoring and Evaluation List* (CDPHE, Water Quality Control Commission, Regulation No. 94) that identifies water bodies suspected to have water quality problems. Limited water quality data for area drainages exist that was collected by the BLM Glenwood Springs Field Office as part of the 2001 Rifle Creek Land Health Assessment. The following table presents those results.

2001 Rifle Creek Land Health Assessment						
Stream Name	**Date**	**Discharge (cfs)**	**Temp. (°C)**	**Cond. (µS\cm)**	**pH**	**Salinity 0/00**
Goodrich Gulch	5/7/01	0.004	6.5	710	8.5	0.75
Thirty Two Mile Gulch- upper reach	5/7/01	0.07	15	1080	8.5	0.8

Environmental Consequences/Mitigation:

Clough-Alber Allotment

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 any of the drainages mentioned above.

As mentioned above, existing conditions appear to be degrading based on recent streambank monitoring and water quality data. The proposed action involves the introduction of additional livestock into the allotment than in previous years, thus it is anticipated that conditions would continue to degrade. Additional livestock would result in more streambank trampling, riparian vegetation loss, and elevated Fecal Coliform and E. Coli bacteria levels. These impacts in turn result in changes in stream geomorphology, aquatic habitat loss, and water quality degradation. All these variables are directly related and correlative to overgrazing. Bank stability is lost and additional sediment becomes available for transport which results in channel widening, aggradation, and lower water levels. Decreased water levels and loss of riparian vegetation result in raised temperatures, low dissolved oxygen levels, and turbid waters; all of which are detrimental to salmonids and indicators of water quality degradation.

Existing conditions clearly suggest concentrated livestock use in area drainages, thus recommended mitigation is to limit the amount and period of use in drainages on the Roan Plateau. The current proposed action would allow approximately two months of summer rest from July 6 through September 10, giving vegetation, streambanks, and riparian areas some time to regenerate. Streambank and water quality monitoring will continue for the next three years and would allow staff to evaluate conditions and the effectiveness of proper grazing rotation. It is anticipated that more intensive monitoring and communication with permittees could improve existing conditions by dispersing livestock more effectively throughout the season of use.

Mitigation: To minimize the above impacts from continued livestock grazing as proposed, the following mitigation is recommended:

- Enforce and monitor compliance of permit stipulations in a timely manner with an emphasis on riparian/stream stipulations and actions versus upland monitoring.
- A new Management Action associated with two new ACEC's located on the Roan Plateau that covers streams within this allotment states: Objective: Minimize direct impacts to streambanks resulting from livestock grazing. Management Action: Manage livestock grazing within the ACEC so that

streambank damage does not exceed ten percent of the stream length. Conduct grazing so that this threshold is not exceeded and monitor to assure that this management action is being addressed.

- Discuss problem and concern areas with permittees prior to turnout and emphasize the need for improvement in riparian and stream habitats.

Webster Park Allotment
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 area drainages and be transported to the Colorado River. However, based on historical area water quality data being good, the scheduled amount of livestock and season, and the lack of major perennial drainages; the likelihood of measureable water quality degradation would be minimal.

Analysis on the Public Land Health Standard 5 for Water Quality:
Clough-Alber Allotment
In summer 1999, the BLM Glenwood Springs Field Office evaluated drainages within the Clough-Alber Allotment as part of the Roan Cliffs Unit Land Health Assessment. Water quality parameters collected at that time were limited, but showed no violation of the water quality standards established by the State of Colorado. Since that time, Colorado Trout Unlimited and the BLM collected water quality data that showed elevated levels of E. Coli and fecal coliform bacteria, some of which exceeded State standards and expected levels for salmonid bearing streams. At this time, it is believed that Standard 5 for Water Quality is not being met in specific stream segments with elevated coliform levels. However, it is anticipated that the two months of season rest and implementation of mitigation measures would result in overall improvements in area water quality.

Webster Park Allotment
The northern portion of the Webster Park Allotment was evaluated by the BLM Glenwood Springs Field Office in 2001 as part of the Rifle Creek Watershed Land Health Assessment while the southern portion of the allotment was evaluated in 2004 as part of the Rifle-West Watershed Land Health Assessment. During those assessments, very limited water quality parameters were measured that did not show any violation of the water quality standards established by the State of Colorado. However, some visual observations indicate accelerated erosion and elevated sediment loading. Based on historical area water quality data being good, the scheduled amount of livestock and season, and the lack of major perennial drainages; the proposed action would not likely prevent Standard 5 for Water Quality from being met in the Webster Park Allotment.

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

Affected Environment: The Webster Park Allotment does not contain any known wetland or riparian resources. The table below lists known riparian areas and their Proper Functioning Condition (PFC) assessment for the Clough-Alber Allotment:

Riparian Area Name	Miles	Year Assessed	Condition Rating
Yellowjacket Creek	2.0	1999	Functioning at Risk – Upward Trend
Raspberry Creek	2.0	1999	Functioning at Risk – Upward Trend
Northwater Creek – Middle Reach	1.7	1999	Functioning at Risk – Upward Trend
Northwater Creek – Lower Reach	2.1	1994	Functioning at Risk – Not Apparent Trend
Tichner Draw	0.7	1994	Functioning at Risk – Downward Trend
Trapper Creek – Upper Exclosure	0.6	1994	Functioning at Risk – Not Apparent Trend
Trapper Creek – Lower Exclosure	0.5	1999	Proper Functioning Condition
Trapper Creek – Lower Reach	1.2	1994	Functioning at Risk – Not Apparent Trend

In addition to the riparian areas listed above, numerous springs exist on the allotment. These have not been inventoried or accessed. Several of the assessments conducted in 1994 noted issues with heavy livestock grazing. The 1999 assessments did not document any issues with current grazing use.

The Land Health Assessment Roan Cliffs Unit, dated 1999, stated that virtually all of the riparian zones accessed show definite signs of improvement since the 1994 PFC assessment with widening of the riparian zone evident, a decrease in the amount of bare soil or cut banks and recruitment of woody and/or herbaceous riparian species.

Several riparian photo point monitoring locations have been established on the Clough-Alber Allotment. Some of these photos were retaken in 2007 and 2008. The table below summarizes the interpretation of trend and other observations for these photo points.

Location	Years	Trend Interpretation and Observations
Raspberry Creek at road jct. Sec 20 NENW	2005 2008	Not a good view of the riparian zone. No changes in the riparian area are apparent. Trend appears static.
Northwater Creek at confluence of Yellowjacket Creek	1990 1998 2008	Throughout all years, riparian zone is widening. There is an increase in production, cover and diversity of riparian plant species, and a decrease in bare ground. Trend is upward.
Northwater Creek at confluence of Raspberry Creek	2005 2008	Throughout all years, riparian zone is widening. There is an increase in production, cover and diversity of riparian plant species, and a decrease in bare ground. Trend is upward.
Northwater Creek at JQS boundary	2005 2008	No changes in the riparian area are apparent. Trend appears static. The system lacks diverse cover and composition of riparian plant species. The area appears to have heavy grazing use by cattle.
Raspberry Creek at confluence of Northwater Creek	2005 2008	Riparian zone appears to have widened somewhat and there is some increase in production, cover and diversity of riparian plant species, and a decrease in bare ground. Trend is upward.
Yellowjacket Creek at road jct. Sec 20 SWNE	2005 2007	Photos were taken at different time of year (Sept 22, 2005 & Nov. 2, 2007) which makes comparison more difficult. Riparian vegetation cover had decreased and bare ground increased. Trend is downward. Amount of bank damage had increased compared to 2005 photos. Heavy utilization levels by cattle were apparent in 2007

Location	Years	Trend Interpretation and Observations
		(very little stubble height remaining). The system lacks diverse cover and composition of riparian plant species.

Recent riparian utilization data is limited. Riparian stubble height measurements conducted along Raspberry Creek in 2008 showed no less than an average of 4 inches for all species monitored. Another one along Northwater Creek (near the boundary of the JQS Allotment) in 2008 showed an average stubble height of 3 inches or less for all species monitored. Stubble height measurement conducted along Yellowjacket Creek in 2007 also showed an average stubble height of 3 inches or less for all species monitored.

The monitoring data above indicate there are current grazing management issues with parts of Raspberry Creek, Northwater Creek and Yellowjacket Creek. Trend is static or downward and heavy grazing use/utilization are evident. Riparian area condition is improving along portions of Northwater and Raspberry Creeks.

Environmental Consequences/Mitigation: The proposed action would transfer and issue a grazing permit for sheep. The period and duration of use would be 52 days in the late spring/early summer and 52 days in the fall. There would be a 65 day period of rest between the two grazing seasons. Although this offers a period of grazing rest and recovery time for riparian plant species, grazing use would still take place by cattle from the other permit on the allotment. Permit terms and conditions would require herding practices to minimize grazing use in creek bottoms and would establish utilization limits for riparian plant species. These terms and conditions would tend to mitigate and offset any negative impacts to riparian areas from sheep grazing.

Assuming there will be monitoring, compliance/enforcement of permit terms and conditions, sheep use would not be expected to cause adverse impacts to riparian areas.

In the event terms and condition are not adhered to, adverse impacts to riparian areas would likely occur. These impacts include:

- Soil compaction, bank shearing, or severing of roots of riparian vegetation, which are needed for plant survival and bank stability (Behnke and Raleigh 1978).
- Trampling damage that can lead to greater erosion or deposition, change in channel geomorphology, and less soil moisture (Skovlin 1984, Legge et al. 1981).
- Defoliation of important plants at times that do not allow for recovery, for long periods that lead to many repeated defoliations, or at intensities that set back plant growth (Wyman et al. 2006).
- A decline in the condition of the riparian vegetation (e.g., reduced age-class diversity, species composition, and cover).

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 land health conditions for riparian systems. This assumes that adequate monitoring, compliance and enforcement of permit terms and conditions takes place. In the event this does not occur, land health conditions relative to riparian systems may decline.

WILD AND SCENIC RIVERS

Affected Environment: The Clough-Alber allotment adjoins two streams (3 segments of Trapper Creek, and 1 segment of Northwater Creek) that were found to be eligible under a Wild and Scenic Eligibility Study in 2002. All eligible segments 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 these segments were their core conservation populations (99% genetic purity or better) of Colorado River cutthroat trout within Trapper Creek and for the trout and for its rare hanging garden sullivantia within Northwater Creek (*see Threatened, Endangered and Sensitive sections for; Fish, Plants*). The overall objective is to not allow surface disturbing activities that might impair those identified ORV's or the individual segments preliminary classifications which range from wild to recreational.

Environmental Consequences/Mitigation: The proposed action within the Clough Alber allotment has potential to negatively impact the identified ORV's if the mitigation suggested in the Threatened, Endangered and Sensitive Species section, the Riparian and Wetland Zones section, and the Water Quality, Surface and Ground sections are not strictly adhered to.

In addition, stipulations from the June 2007; Record of Decision for the Approval of Portions of the Roan Plateau Resource Management Plan Amendment and Environmental Impact Statement as amended by Plan Maintenance Change No. 1, which applies the following stipulation: "NSO/NGD Wild and Scenic River Eligibility Corridor". The Management action: "Apply a NGD/NSO to the 7,833 acres until such a time a suitability study is completed. At that time if the waterways are to be suitable the NGD/NSO would remain in place. If the waterways are found not to be suitable, the NGD/NSO for this action would be removed."

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	

RANGE MANAGEMENT

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

Environmental Consequences/Mitigation: This permit would authorize grazing use by sheep early in the spring and late in the fall. Early spring use on the Webster park allotment would focus some of the grazing pressure on cheatgrass and rest the allotment during the summer when warm season grasses are growing. Early spring use on the Clough-Alber would be focused on green-up of grasses, forbs, and shrubs. Late fall use on both allotments would be focused on dormant grasses and shrubs. This use period would avoid the critical growing periods of the forage resources during the later spring and summer months.

The JQS road would be used for trailing purposes in the spring and fall. Trailing will be limited to one day to avoid conflicts with other permitted activities on the Hubbard Mesa and JQS allotments. It is likely that the road will not be passable due to snow drifts during the permitted time period. This authorization will allow sheep on the road as early as May 16. For this reason the grazing period on Webster Park and Clough-Alber overlap in the spring. Sheep will stay on the Webster Park allotment until they can be safely moved onto the JQS road.

Riparian problems have been noted on this allotment and are being addressed. The problems are the result of cattle use in the major drainages. Sheep use has historically not been the cause of riparian issues since they are actively herded and bed on the ridge tops. Sheep use will be limited in riparian areas to watering purposes only.

SOILS (includes an analysis on Standard 1)

Affected Environment: According to the *Soil Survey of Rifle Area, Colorado: Parts of Garfield and Mesa Counties* (USDA 1985), the Clough-Alber Allotment (*36, 48, 52, 53, 60*) contains five different soil map units and the Webster Park Allotment (*9, 21, 34, 35, 37, 39, 62, 66, 67, 71*) contains 10 different soil map units that can be identified by the numerical code assigned by the soil survey (e.g. Irigul channery loam=36). These soil map units are scattered throughout their respective allotments and have been identified as having slight to severe erosion hazards. In addition, some areas along drainages within the Clough-Alber allotment are mapped as CSU 4 (Controlled Surface Use) for erosive soils on slopes greater than 30% and NSO 15 (No Surface Occupancy) for slopes greater than 50% regardless of soil type. By contrast, a high percentage of the Webster Park

Allotment is mapped as NSO 15 and CSU 4. Following is a brief description of the 15 different soil map units found within the Clough-Alber and Webster Park Allotments.

Clough-Alber Allotment

- Irigul channery loam (36) –This shallow, well drained, rolling to steep soil is found on upland ridges and mountainsides at elevations ranging from 7,800 to 8,700 feet and on slopes of 9 to 50 percent. It is derived from sandstone and marlstone. Surface runoff for this soil is medium and the erosion hazard is slight. Primary uses for this soil include wildlife habitat and grazing.
- Northwater loam (48) – This deep, well drained soil is found on mountainsides at elevations ranging from 7,600 to 8,400 feet and on slopes of 15 to 65 percent. The Northwater loam is derived from sedimentary rocks. Surface runoff for this soil is slow and the erosion hazard is slight. Primary uses for this soil include grazing, wildlife habitat, and recreation.
- Parachute loam (52) – This moderately deep, well drained soil is found on mountainsides at elevations ranging from 7,500 to 8,700 feet and on slopes of 25 to 65 percent. Parent material for this soil is sandstone. Surface runoff for this soil is medium and erosion hazard is moderate. Primary uses for this soil include wildlife habitat and limited grazing.
- Parachute-Rhone loams (53) – These gently sloping to steep soils are found on ridges and mountainsides at elevations ranging from 7,600 to 8,600 feet and on slopes of 5 to 30 percent. The Parachute soil is derived from sandstone and or marlstone while the Rhone soil is derived from fine-grained sandstone. Approximately 55 percent of this unit consists of the Parachute soil while approximately 30 percent is the Rhone soil. The Parachute soil is moderately deep, well drained, and has a moderate erosion hazard with medium surface runoff. The Rhone soil is deep, well drained, and has a slight erosion hazard with slow surface runoff. Primary uses for these soils include grazing and wildlife habitat.
- Rhone loam (60) – This deep, well drained, gently sloping to steep soil is found on ridges and mountainsides at elevations ranging from 7,600 to 8,600 feet and on slopes of 5 to 30 percent. This soil is derived from sandstone and marlstone. Surface runoff for this soil is slow and the erosion hazard is slight. Primary uses for this soil include wildlife habitat and limited grazing.

Webster Park Allotment

- Badland (9) – This soil map unit consists of steep, barren land that has been dissected by intermittent drainages. This unit occurs in soft shale, sandstone, and siltstone of the Green River, Wasatch, Mancos, and Mesa Verde Formations. This soil map is approximately 85 percent unvegetated, has very severe erosion hazard, and frequent active erosion.
- Cushman-Lazear stony loam (21) – This soil map unit is found on mountainsides and mesa breaks at elevations ranging from 5,000 to 7,000 feet and on slopes of 15 to 65 percent. They are derived from sandstone and shale rocks.

Approximately 45 percent of this soil map unit is Cushman soil, 40 percent Lazear soil, and the other 15 percent a mixture of soil types. The Cushman soil is moderately deep, well drained and has medium surface runoff with severe erosion hazard. The Lazear soil is shallow, well drained and has moderately rapid surface runoff with severe erosion hazard. Primary uses for this soil include wildlife habitat and grazing.

- Ildefonso stony loam (34) - This deep, well drained, hilly soil is found on mesas, sides of valleys, and alluvial fans at elevations from 5,000 to 6,500 feet and on slopes of 25 to 45 percent. This soil is derived primarily from basalt and may contain a small amount of eolian material at the top of the unit. Surface runoff for this soil is medium and erosion hazard is severe. Primary uses for this soil include grazing and wildlife habitat.
- Ildefonso-Lazear complex (35) – This moderately sloping to very steep soil complex is found on hillsides and mesa breaks at elevations ranging from 5,000 to 6,500 feet and on slopes of 6 to 65 percent. The Ildefonso soil is derived from basalt and the Lazear soil formed in shale and sandstone residuum. About 50 percent of this complex is Ildefonso, 30 percent the Lazear soil, and 20 percent other soils. Surface runoff for the Ildefonso soil is medium and the erosion hazard is moderate. Surface runoff for the Lazear soil is rapid and the erosion hazard is severe. Primary uses for this complex include wildlife habitat and grazing.
- Irigul channery loam (37) – This shallow, well drained soil is found on north-facing ridges and mountainsides at elevations ranging from 7,800 to 8,700 feet and on slopes of 50 to 70 percent. It is derived from sandstone and marlstone rocks. Surface runoff for this soil is rapid and the erosion hazard is severe. This soil is used primarily for wildlife habitat.
- Jerry loam (39) – This deep, well drained soil is found on mountainsides at elevations ranging from 7,000 to 9,500 feet and on slopes of 12 to 50 percent. Parent material for this soil is sandstone, shale, and basalt. Surface runoff for this soil is slow and the erosion hazard is moderate. Primary uses for this soil include wildlife habitat and grazing.
- Rock outcrop-Torriorthents complex (62) – This soil map unit consists of bedrock and soils of variable depth occurring on slopes of 50 to 80 percent. The majority of the complex is rock outcrop which consists primarily of Green River shale. The remainder of the complex is Torriorthents which are shallow to moderately deep, clayey to loamy soils containing gravel, cobbles, and stones. Surface runoff is rapid to very rapid and erosion hazard is moderate to severe. This complex is used primarily for limited grazing.
- Torriorthents-Camborthids-Rock outcrop complex, steep (66) – This soil map unit consists of sandstone and shale bedrock and soils of variable depth occurring on slopes of 15 to 70 percent. About 45 percent of this complex is Torriorthents, 20 percent is Camborthids, and 15 percent is Rock outcrop. The Camborthids occur on the lower toe slopes on foothills and mountainsides while the Torriorthents are

found on the foothills and mountainsides below the Rock outcrop. The Torriorthents are shallow to moderately deep, and clayey to loamy with gravel, cobbles, and stones. The Camborthids are shallow to deep and clayey to loamy. Rock outcrop primarily consists of Mesa Verde sandstones and Wasatch shales with occasional basaltic boulders and stones. This complex is characterized by moderate to severe erosion hazard. Primary uses for this complex include grazing, wildlife habitat, and recreation.

- Torriorthents-Rock outcrop complex, steep (67) – This complex consists of stony soils and exposed outcrops of Mesa Verde sandstone and Wasatch shale that occur on slopes of 15 to 70 percent. Approximately 60 percent of this complex is Torriorthents and 25 percent is Rock outcrop. The Torriorthents are clayey to loamy and contain gravel, cobbles, and stones; many of which are basaltic in origin. They are found on mountainsides below the Rock outcrop. Erosion hazard for this complex varies from moderate to severe. Primary uses for this complex include limited grazing, wildlife habitat, and recreation.
- Villa Grove-Zoltay loams (71) – These soils occur on mountainsides and alluvial fans at elevations ranging from 7,500 to 7,600 feet and on slopes of 15 to 30 percent. About 50 percent of this soil map unit is the Villa Grove soil and 40 percent the Zoltay soil. The remaining 10 percent of this soil map unit consists of varying amounts of Vale, Potts, and Morval soils. The Villa Grove soil is deep, well drained and has slow surface runoff with slight erosion hazard. The Zoltay soil is deep, well drained and has medium surface runoff with moderate erosion hazard. Primary uses for these soils include grazing, wildlife habitat, and irrigated pasture.

Environmental Consequences/Mitigation: As mentioned above, areas within the Clough-Alber and Webster Park Allotments occur on soils with severe erosion hazards and on slopes greater than 30% (17°). 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 nearby drainages. However, based on existing and recently assessed soil conditions and generally good vegetative cover; the likelihood of excessive soil degradation and transport to nearby drainages is minimal.

Analysis on the Public Land Health Standard 1 for Upland Soils: In summer 1999, the BLM Glenwood Springs Field Office evaluated the Clough-Alber Allotment as part of the Roan Cliffs Unit Land Health Assessment in which staff determined that Standard 1 for Upland Soils was being achieved. The northern portion of the Webster Park Allotment was evaluated in 2001 as part of the Rifle Creek Watershed Land Health Assessment while the southern portion of the allotment was evaluated in 2004 as part of the Rifle-West Watershed Land Health Assessment. During those assessments, conditions within those allotments were rated as achieving Standard 1 for Upland Soils.

Based on the results of the land health assessments and existing soil conditions, the proposed activities would not likely prevent Standard 1 for Upland Soils from being met.

VEGETATION (includes an analysis on Standard 3)

Affected Environment:

Clough-Alber Allotment

The Clough-Alber allotment lies above the rim of the Roan Plateau at elevations ranging from 7,700 feet to 9,000 feet. The allotment is dissected by Northwater, Raspberry, Yellowjacket and Trapper Creeks. North-facing slopes along these drainages are generally covered in mixed conifer forests of Engelmann spruce and subalpine fir. Lower Trapper Creek is predominantly aspen with some spruce and fir intermingled. The southern slopes along the drainages support a mix of shale barrens and mountain grasslands. Sagebrush shrublands and mountain grasslands dominate along the ridgetops. Yellowjacket and Raspberry Creeks are vegetated with aspens and grasses. Lower Trapper and Northwater Creeks are dominated by willows and other riparian shrubs.

Significant Natural Plant Communities:

The Roan Plateau Final RMP (BLM, 2006) identified three significant plant communities within the Clough-Alber allotment. The Indian ricegrass (*Achnatherum hymenoides*) shale barrens community is found in the allotment on south-facing slopes of Northwater Creek. The hanging garden sullivantia (*Sullivantia hapemanii*), a Colorado endemic plant that is restricted to calcareous seeps on steep canyon walls, is found in the canyons of lower Northwater Creek where seeps in the canyon walls provide year-round water to supports the species. Another significant plant community, the subalpine big sagebrush/Thurber's fescue (Artemisia *tridentata ssp. vaseyana/Festuca thurberi*) is found along Northwater Creek on private land within the allotment.

Monitoring on Clough-Alber Allotment

Upland utilization levels were monitored at four different study sites in 2001, 2005 and 2007. Average utilization levels exceeded 50% at only one site in 2007. No trend monitoring data is available to assess long-term trends in vegetative conditions.

Webster Park Allotment

The Webster Park allotment is primarily a south and east-facing allotment below the rim of the Roan Plateau with hot, dry summers and little growing season precipitation. Elevations on the allotment range from 9,000 feet at the Plateau rim, to a low elevation of 5,400 feet on the flats north of I-70. The allotment is dissected by many narrow ridges and deep ravines. The north-facing ravine slopes support a mature, old-growth stand of Douglas-fir. Just below the steepest cliffs, a mixed mountain shrubland community of Gambel oak, serviceberry, snowberry, and mountain mahogany gives way to more extensive pinyon-juniper woodlands. Above the valley floor, Wyoming big sagebrush parks are found on small terraces and mesas. On the valley floor and lower

foot slopes, salt desert shrublands of shadscale, common saltbush and greasewood dominate. Cheatgrass is common in both the Wyoming sagebrush and salt desert shrub communities.

Monitoring on Webster Park Allotment
The monitoring files indicate monitoring data has been collected for the Webster Park allotment in only one year, 2007. The allotment, or at least the one study site where data was collected, appears to have received no livestock use in 2007. The monitoring data is insufficient to evaluate the effects of livestock grazing on this allotment.

Environmental Consequences/Mitigation:
Clough-Alber Allotment
The proposed action is to change the period of use for sheep grazing on the allotment from season-long grazing (6/20 to 10/1) to late spring-early summer (5/16 to 7/6) and early fall (9/10 to 10/31). There would be a 65 day period of rest between the two grazing seasons. Although this offers a period of grazing rest and recovery time for upland plant species, summer grazing use would still take place by cattle from the other permit on the allotment.

The current sheep permit has not been used for several years and yet concerns already exist regarding riparian conditions and utilization levels. The proposed action would introduce more livestock grazing into the allotment than in previous years, thus it is anticipated that conditions may continue to degrade. If sheep and cattle are diligently herded out of the riparian zones as stated in the terms and conditions on the permit, this may increase grazing pressure on upland vegetation.

Mitigation:
- Nightly bedding grounds will be moved at least every five days and will not be reused for the remainder of the grazing season. On the Clough-Alber allotment, sheep herding practices will be designed to avoid areas where cattle tend to congregate.
- Monitor utilization on key upland species. Acceptable utilization limits will not exceed the levels in the permit terms and conditions. Studies should be continued annually for at least 3-5 years until it can be demonstrated that average utilization is within the acceptable limits established in the grazing permit. If utilization limits are found to be within acceptable limits after 3-5 years, upland utilization may be conducted less frequently.
- Trend monitoring on key upland species would be conducted according to the schedule in the GSFO Monitoring Plan. If monitoring data determines a downward trend in vegetative conditions, the permit may be revised with new terms.

Implementation of this mitigation, and the other terms and conditions on the permit, including utilization limits, would tend to offset most of the negative impacts from sheep grazing.

Webster Park Allotment

The proposed action is to change the permit on the Webster Park allotment from grazing 100 cattle from 4/20 to 5/25 and 5 cattle from 7/1 to 10/1, to grazing sheep from 4/5 to 6/15 and from 11/1 to 11/30. Sheep grazing in early spring would focus some of the grazing pressure on cheatgrass as it germinates and begins growth in winter or early spring. According to the land health assessment, cool-season perennial grasses are limited in abundance on the allotment, but spring grazing would also target these species. The allotment would be rested during the summer when warm season grasses are growing. Late fall and early winter use by sheep would likely focus on Wyoming big sagebrush as grasses would be dormant and low in protein. This allotment is also important mule deer winter range and deer also utilize primarily Wyoming big sagebrush in winter.

Mitigation:

- On the Webster Park allotment, monitor utilization on cool-season perennial grasses after the spring grazing period and on sagebrush and grasses after the fall-winter grazing use. Acceptable utilization limits will not exceed the levels in the permit terms and conditions. Studies should be continued annually for at least 3-5 years until it can be demonstrated that average utilization is within the acceptable limits established in the grazing permit.

The JQS road would be used for trailing purposes in the spring and fall. This authorization would allow sheep on the road as early as May 16. For this reason the grazing period on Webster Park and Clough-Alber overlap by 30 days in the spring. However, the JQS road is often not passable due to snow drifts until June. Sheep grazing beyond the permitted time period may have adverse impacts on native perennial grasses and forbs.

Mitigation:

- If utilization data indicates that average utilization levels on key grasses are still within acceptable limits, BLM may authorize the permittee to remain on the Webster Park allotment for up to 10 beyond the May 25th Gazing Period End Date.

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

A formal Land Health Assessment was completed for the Clough-Alber allotment in 1999. The Webster Park allotment consists of several parcels in two different watersheds. The northern part of the allotment was assessed in 2001 and the southern portion in 2004. The determination was made that the Clough-Alber allotment and the northern part of the Webster Park allotment were meeting Standard 3 for Plant Communities at that time. The southern unit of the Webster Park allotment was marginally meeting Standard 3 for Plant Communities. Concerns noted by the assessment team included lack of perennial grasses, cheatgrass dominating on several sites and decadent unproductive sagebrush. Existing livestock grazing was not considered to be contributing to deterioration of land health conditions.

Sheep grazing on the Webster Park allotment during the fall-winter period is anticipated to focus on browsing of sagebrush. The sheep browsing use will be cumulative with ongoing big game winter browse utilization. A decline in sagebrush condition could result if utilization levels exceed the level where plants can maintain adequate carbohydrate reserves and adequate photosynthetic activity to sustain plant health. The proposed sheep grazing, with implementation of all the mitigation and terms proposed, should not result in a failure to achieve Standard 3 for Plant Communities.

WILDLIFE AQUATIC (includes an analysis on Standard 3)

Affected Environment:

The Clough-Alber allotment contains several perennial waters. The primary streams are Northwater Creek and Trapper Creek, and Raspberry and Yellowjacket Creeks, and Tichner Draw. In addition, three other unnamed perennial drainages tributary to Northwater Creek is located on the allotment. Northwater and Trapper Creek both contain Core Conservation population of Colorado River cutthroat trout which are addressed in the TES Section above. The remaining streams are too small to support fish due to limited flow and lack of pools. All of these streams contain aquatic invertebrates.

The Webster Park allotment contains one perennial stream in the northern most portion of the allotment, Thirty Two Mile Gulch. The remainder of the allotment is drained via ephemeral washes. The Colorado River is located within 0.3 miles of the allotments southern border. Thirty Two Mile Gulch contains no fish due to limited summer flow. In addition to those special status species addressed in the TES Section above, the Colorado River in the area near the allotment contains brown trout, white suckers, carp, long-nose suckers, and speckled dace. Both waters contain aquatic invertebrates.

Environmental Consequences/Mitigation:

Continued livestock grazing as proposed would result in some soil compaction and displacement and increase the likelihood of erosional processes, especially on steeper slopes, areas devoid of vegetation, and at livestock concentration sites such as stock ponds, salting and mineral sites, and drainage bottoms. Grazing activities would result in increased erosion potential and sediment available for transport to nearby drainages. Soil detachment and sediment transport are likely to occur during spring runoff from snowmelt and during short-duration high intensity thunderstorms. Proposed grazing would heighten the potential for increased sediment loading into the small ephemeral drainages and eventually the Colorado River.

The majority of the non status fish species found in the Colorado River are sediment tolerant and would not be negatively impacted by potential increased sedimentation associated with continued and proposed grazing activities. Brown trout which would be most impacted by increased sediments are limited in this part of the river as this area is nearing the downstream distribution of this species. The Colorado River in this area

provides marginal habitat based on water temperatures and turbidity. Impacts to this species from sediment would be that same as those addressed in the TES Section above for Colorado River cutthroat trout.

Analysis on the Public Land Health Standard for Plant and Animal Communities (partial, see also Vegetation and Wildlife, Terrestrial):
A formal Land Health Assessment was completed for the Clough-Alber allotment in 1999. At that time these streams were meeting Standard 3 for Aquatic Wildlife. Trapper Creek appears to still be meeting with portions of the stream in an upward trend and other segments with no trend apparent. The upper portions of Northwater Creek and large areas along Raspberry and Yellowjacket Creeks within the allotment appear to be trending downward as livestock grazing use has been heavy in these areas in recent years. The proposed transfer and change in season of use for sheep may help to minimize impacts along the streams as sheep would be grazed in spring to mid-summer and then fall with some growing season rest. In addition, sheep are to be herded to fresh feed every few days with limited watering permitted along area streams. This will discourage excessive use at any one site for too long. Cattle grazing, which also occurs on the allotment, is the primary reason for poorer than desired riparian and stream conditions in upper Northwater, Raspberry, and Yellowjacket Creeks. Thirty Two Mile Gulch and the Colorado River are meeting Standard 3 for aquatic wildlife.

MITIGATION:
Water - Clough-Alber Allotment
Streambank and water quality monitoring will continue for the next three years and would allow staff to evaluate the effectiveness of proper grazing rotation. The proposed action involves approximately two months of rest from July 6 through September 10, thus it is anticipated that conditions could improve. More intensive monitoring and communication with permittees could also improve existing conditions by dispersing livestock more effectively throughout the season of use.

WILDLIFE TERRESTRIAL (includes an analysis on Standard 3)

Affected Environment:
The allotment provides important habitat for a variety of obligate species of birds, raptors, small mammals, reptiles, and are particularly important as food and cover for wintering big game. Terrestrial habitats have historically been physically altered by roads, fences, buildings, public recreation use, vegetative treatments and livestock developments.

Species of High Public Interest. BLM lands within this allotment provide a portion of the less-developed summer range available to deer and elk. The allotments overlap with CDOW mapped deer and elk summer range and elk production areas. Summer range is that part of the overall range where 90% of the individuals are located between spring green-up and the first heavy snowfall. Summer range is not necessarily exclusive of winter range; in some areas winter range and summer range may overlap. Elk production

areas are that part of the overall range of elk known to be occupied by the females from May 15 to June 15 for calving.

Data analysis Unit (DAU) E-10 (Yellow Creek) includes game management units (GMUs) 21, 22, 30, 31, 32. The Yellow Creek E-10 DAU is located in west-central Colorado and includes the Bookcliffs, Piceance Basin, and the Roan Plateau areas. The elk population in DAU E-10 was relatively low in the 1950's and has shown steady growth in recent years. The population peaked in 2001 at 10,725 elk, and is now approximately 8,700 elk. The population objective for the Yellow Creek DAU of 3,000 elk has never been formalized. The objective was based on early models that underestimated the population and is unrealistically low. More advanced and sophisticated models estimate a current population size of 8,700. The population objective was established prior to the development of DAU plans and process of development of population objectives. Thus, there has not been extensive public review or review by the BLM of the population objective of 3,000 elk. A more realistic population objective is probably 8,000- 10,000 elk. This objective was first introduced during the DAU planning process begun in 1999 and was selected as the preferred alternative, prior to the postponement of plan approvals due to CWD concerns. This population objective is the basis of current DAU planning. The key conflict issues this large DAU involve habitat quality on winter range, wild horse competition between wildlife, and oil and natural gas development. (CDOW 2009).

Environmental Consequences/Mitigation:
The terrestrial wildlife objectives for the allotment are derived from the Roan Plateau Area RMPA. The terrestrial wildlife objective is "*Protect wildlife security areas, habitat connectivity, habitat carrying capacity and winter range*". The RMPA identified several management actions however they are mainly directed at gas development and surface disturbing activities. One somewhat confusing and conflicting management action is applicable to livestock grazing, "*Within the constraints of the other resource management objectives and activities, maintain or enhance the habitats capable of sustaining existing or increasing populations of wildlife*".

Recent visual observations of riparian areas, noted in the Wetlands and Riparian Zone section, indicates compliance has lapsed and there is a decline in the condition of the riparian vegetation (e.g., reduced age-class diversity, species composition, and cover). Riparian corridors are particularly valuable for terrestrial wildlife because they offer food and security. Healthy riparian corridors provide vital connective lifelines that enable wildlife movement necessary to maintain habitat connectivity. Degraded riparian areas reduce the overall area's functionality as wildlife habitat and can reduce the habitats capability of sustaining existing or increasing populations of 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. The specific wildlife concerns in these allotments are related to overgrazing riparian areas and competition for sagebrush on winter range. The cumulative effects of degraded riparian areas along with the other

issues (e.g. quality of winter range, natural gas development) will make sustaining existing or increasing populations of big game difficult. Qualitatively viewing big game population trends and objectives in relationship to the analysis of this proposed action, it can be assumed that the proposed action will not contribute to helping meet CDOW's big game objectives. The proposed action may be in conflict with the terrestrial wildlife objective. However, the proposed action is consistent with the applicable wildlife management action from the Roan Plateau RMPA.

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

A formal Land Health Assessment was completed for the allotment back in 1999. At that time, Standard 3 for terrestrial wildlife communities was being met. This analysis points out that the riparian conditions have deteriorated over the last 10 years. There is also concern that the length of the proposed grazing season could impact upland conditions thus affecting the density, composition, and frequency of wildlife species that utilize the allotments. Sheep, grazing on the Webster Park allotment during the fall and winter will likely directly compete with wintering mule deer. As stated in the vegetation section, a broad decline in sagebrush condition could result if utilization levels exceed the level where plants can maintain adequate carbohydrate reserves and adequate photosynthetic activity to sustain plant health and growth. Unless monitoring and enforcement maintains land health conditions the proposed action has the potential to contribute to reducing the spatial distribution of wildlife above and below the Roan Cliffs.

CUMULATIVE IMPACTS SUMMARY:

Clough-Alber Allotment

As mentioned in this analysis, conditions in riparian areas appear to be degrading based on recent cattle grazing. Although, the proposed action involves sheep grazing and includes approximately two months of rest from July 6 through September 10, it is expected that sheep use will also affect the riparian areas but to a lesser degree.

The following mitigation measures have been identified in this analysis to prevent cumulative impacts from becoming significant and will be included as terms and conditions of the permit.

MITIGATION:

Nightly bedding grounds will be moved at least every five days and will not be reused for the remainder of the grazing season. On the Clough-Alber allotment, sheep herding practices will be designed to avoid areas where cattle tend to congregate.

MONITORING:

Monitor utilization on key upland species. Acceptable utilization limits will not exceed the levels in the permit terms and conditions. Studies should be continued annually for at least 3-5 years until it can be demonstrated that average utilization is within the acceptable limits established in the grazing permit. If utilization limits are found to be within acceptable limits after 3-5 years, upland utilization may be conducted less frequently.

PERSONS/AGENCIES CONSULTED:
Grazing Permittee
Southern Ute Tribe, Chairman
Northern Ute Tribe, Chairman
Ute Mtn. Ute Tribe, Chairman

Notices of public scoping were issued through the Colorado BLM's Internet web page providing the public an opportunity to obtain information or offer concerns on grazing permits or allotments 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.

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility
Isaac Pittman	Rangeland Management Specialist	Range, NEPA Lead
Mike Kinser	Rangeland Management Specialist	Riparian Zones
Jeff O'Connell	Hydrologist/Geologist	Soil, Air, Water, Geology
Kay Hopkins	Outdoor Recreation Planner	Wilderness, VRM
Carla DeYoung	Ecologist	ACEC, T/E/S Plants, Vegetation, Land Health Assessments
Cheryl Harrison	Archaeologist	Cultural & Native American Concerns
Tom Fresques	Fisheries Biologist	Wildlife Aquatic, T/E/S (Fish)
Brian Hopkins	Wildlife Biologist	Wildlife Terrestrial, T/E/S (Terrestrial Wildlife)
Dereck Wilson	Range Management Specialist	Invasive, Non-native Species

SIGNATURE OF PREPARER: Isaac P. Pittman

DATE SIGNED: 5/13/2009

ATTACHMENTS: Allotment Maps

REFERENCES:

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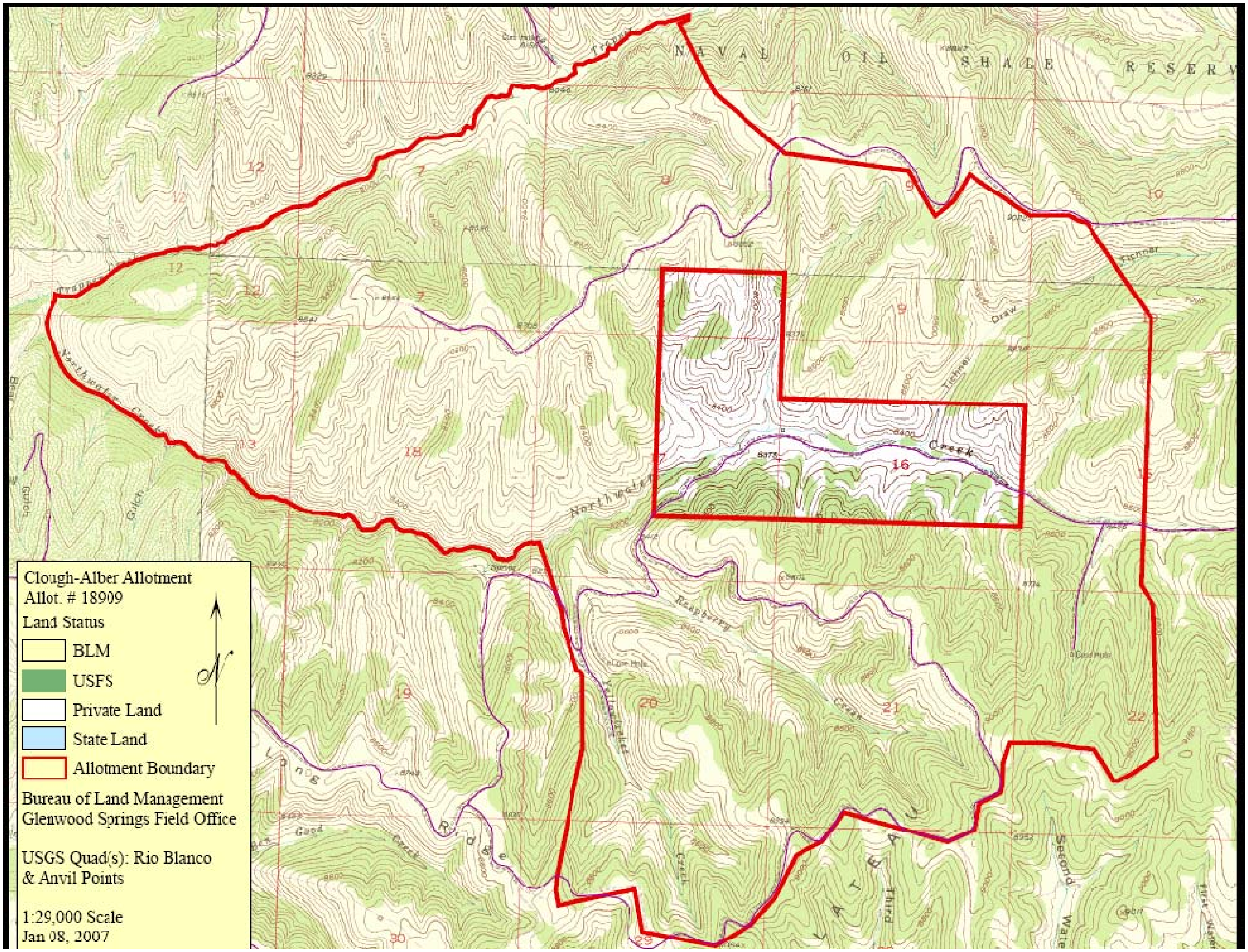
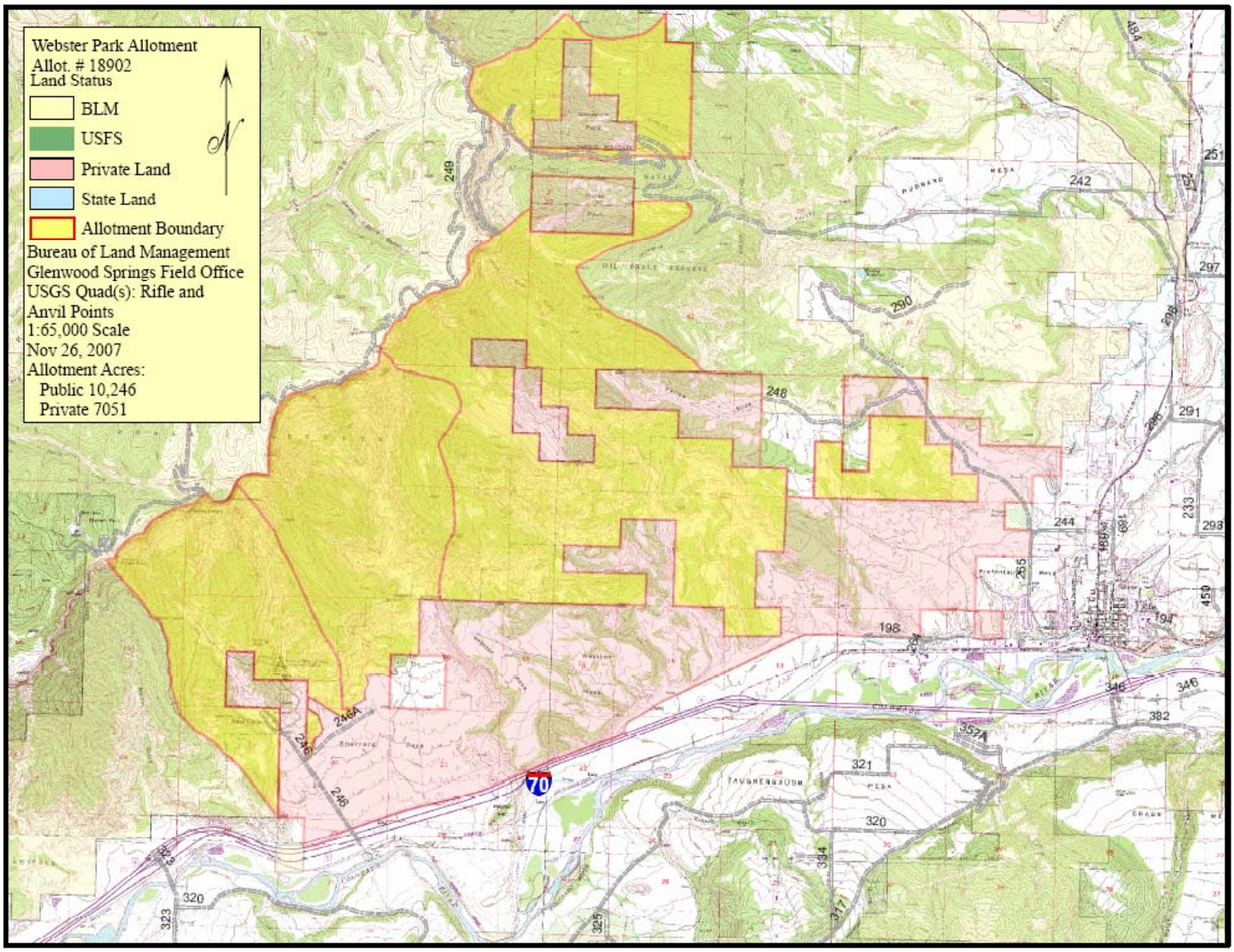

Clough-Alber Allotment
Allot. # 18909
Land Status
BLM
USFS
Private Land
State Land
Allotment Boundary
Bureau of Land Management
Glenwood Springs Field Office
USGS Quad(s): Rio Blanco
& Anvil Points
1:29,000 Scale
Jan 08, 2007


Webster Park Allotment
Allot. # 18902
Land Status
BLM
USFS
Private Land
State Land
Allotment Boundary
Bureau of Land Management
Glenwood Springs Field Office
USGS Quad(s): Rifle and
Anvil Points
1:65,000 Scale
Nov 26, 2007
Allotment Acres:
Public 10,246
Private 7051
70

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

FINDING OF NO SIGNIFICANT IMPACT

Grazing Permit Transfer with changes on the Clough-Alber Allotment.

DOI-BLM-CO140-2009-0054-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 Dean Gulch 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 Environmental Impacts section of the EA. The proposed action with mitigation measures 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.*

The Clough-Alber Allotment falls within the Trapper/Northwater Creek ACEC. The northern parcel of the Webster Park allotment falls within the Magpie Gulch ACEC and the southern parcels lie within the Anvil Points ACEC. Eleven Class III cultural resource inventories have been conducted within the Clough-Alber allotment resulting in the identification of ten historic properties.

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 Clough-Alber and Webster Park 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 identified issues with recent cattle grazing on the Clough-Alber allotment resulting in an apparent downward trend in riparian areas. The proposed grazing schedule for sheep would rest the allotment during the summer months and would therefore reduce the amount of use in the riparian areas by sheep. Mitigation measures have also been identified in this analysis to prevent cumulative impacts from becoming significant and will be included as terms and conditions of the permit.

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.

Eleven Class III cultural resource inventories have been conducted within the Clough-Alber allotment resulting in the identification of ten historic properties. A determination of "**May Adversely Affect"** has been made. In order to mitigate this potential affect and comply with the Roan Plan Cultural Resource Management Plan **all** ground disturbing activity must be monitored by a qualified archaeologist and any cultural manifestation identified must be mitigated as it is found in the Record of Decision.

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 is not likely to adversely affect any 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

5/13/2009
Date