

**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-N040-2009-0085-EA

CASEFILE/PROJECT NUMBER: 008186

PROJECT NAME: Raspberry Creek Fence

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

APPLICANT: Grazing Permittee & BLM

DESCRIPTION OF PROPOSED ACTION, BACKGROUND AND ALTERNATIVE:

PROPOSED ACTION:

Construct ½ mile of fence just south of Northwater Creek. The fence will tie into the existing fence on Yellowjacket Creek on the west. On the east the fence will be tied into the existing road closure gate on the road that accesses Raspberry Creek. A cattle guard will be installed in the main road dropping down into Northwater Creek, with the fence extending along the road to the private property boundary (See Map). The fence will be 4-strand barbwire and built to the attached construction standards. Due to the proximity of the project to a segment determined to be eligible under a Wild and Scenic River study, heavy equipment will not be used to remove brush along the proposed fenceline but may be used to set posts for the fence. If brush needs to be cleared from the fenceline it would be done by hand.

BACKGROUND & NEED FOR PROPOSED ACTION:

There have been concerns with the amount of use in the riparian areas on the Clough-Alber allotment. The private property owner plans to fence the 640 acres that they control and this gives the BLM and the permittee an opportunity to use the private boundary fence as part of a pasture system. This is the first section of fence that will be constructed by the permittee as part of the development of a pasture rotation in the allotment. The Clough-Alber is the only allotment on the Roan Plateau that has not been fenced into pastures. The development of a rotational system will allow planned rest during the critical growing season.

NO ACTION:

Do not build the fence and continue with current management.

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 determination was made that the Clough-Alber allotment was meeting all the standards at that time. Northwater, Raspberry and Yellowjacket Creeks all showed signs of improvement between the 1994 and 1999 riparian condition assessments. All three creeks were rated as Functioning-at-risk with an Upward Trend in 1999.

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									
<i>Critical Element</i>	<i>Present</i>		<i>Affected</i>		<i>Critical Element</i>	<i>Present</i>		<i>Affected</i>	
	Yes	No	Yes	No		Yes	No	Yes	No
Air Quality	X		X		Prime or Unique Farmlands		X		X
ACECs	X		X		Threatened, Endangered,	X		X	

					and Sensitive Species*				
Cultural Resources		?		?	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		?		?					

* Public Land Health Standard

AIR QUALITY

Affected Environment: The proposed action area (Garfield County) has been described as an attainment area under CAAQS (Colorado Ambient Air Quality Standards) and NAAQS (National Ambient Air Quality Standards). An attainment area is an area where ambient air pollution amounts are determined to be below NAAQS standards. For more information on existing air quality in the area, refer to the Roan Plateau RMPA and EIS which describes potential effects from oil and gas development (BLM 2006:4-26 to 4-37).

Proposed Action

Environmental Consequences/Mitigation: Implementation of the proposed action would have very little effect on air quality. Short-term localized vehicle emissions would result during cattle guard installation and fence construction operations. Additionally, there is a potential for some dust generation if these activities occur in dry conditions. Since emissions and dust would be minimal and short lived, no mitigation is recommended for these activities.

No Action Alternative:

Environmental Consequences: The no action alternative would have no effect on air quality.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment: The project area lies within the Trapper/Northwater Creek ACEC. This ACEC was designated to provide special management for 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 sullivania, 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 sullivania occurrences. Two significant plant communities are also found within this ACEC.

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 of the ACECs. 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: Construction of the proposed fence could have potential negative impacts on the relevant and important values, especially the condition of Colorado River cutthroat trout habitat. However, if the proposed mitigation measures in the *Threatened, Endangered and Sensitive Species section* are implemented, then impacts should be reduced to acceptable levels. The construction of the proposed fence may improve livestock distribution and provide some growing season rest for the riparian areas which may improve the condition of the cutthroat trout habitat.

The proposed fence would have no impact on the hanging garden sullivania plant communities since these communities only occur in seeps within the canyon walls of lower Northwater Creek, below the project area. The proposed action should maintain or improve the ACEC values.

CULTURAL RESOURCES and NATIVE AMERICAN RELIGIOUS CONCERNS

Affected Environment: Two cultural resource inventories (GSFO# 1048 and 8396-1) have been conducted in the project area. No historic properties were identified during these surveys that are eligible or potentially eligible for listing on the National Register of Historic Places. Also no areas of Native American concern were located. Ground disturbing activity for the gate was monitored in the fall of 2008 (GSFO# 1009-25) by a GSFO archaeologist. No evidence of intact buried cultural material was observed during the excavation.

The Ute tribes claim this area as part of their ancestral homeland. At present, no Native American concerns are known within the project area and none were identified during the inventories. Additionally, the Ute tribes did not indicate that there are any areas of concern in this area during consultation for the Roan Plateau Plan.

The action is located within a cultural high sensitivity zone in the Roan Plateau Planning Area, Resource Management Plan (RMP, 2004:3-71 to 3-78; and 4-151 to 4-167). This sensitivity zone as defined in the RMP includes areas previously inventoried with the potential for cultural remains are likely but obscured by dense vegetation. Specific cultural resource stipulations are set forth in the RMP Record of Decision (6.2.1 p. 31-32) defining mitigation actions to be taken in this zone. The preferred mitigation in this high sensitivity zone is monitoring of ground disturbing activity by a qualified archaeologist to determine if there is any evidence of any cultural manifestation.

A recent grazing permit renewal for this allotment in 2009 indicated a high potential for historic properties within this allotment.

Proposed Action

Environmental Consequences: Cultural resources and/or Native American Concerns could be directly impacted by this action a determination of “**May Adversely Affect**” was made. In addition indirect and cumulative effects could result if livestock trail along the fence to the extent that erosion occurs to the extent that unidentified buried cultural/Native American concerns are exposed. Additional indirect and or cumulative effects could occur if an unidentified resource is encountered and not reported to the Authorized Officer increasing the potential for illicit collection and/or vandalism. All personnel involved should be aware of the Discovery/Education stipulation. It is unlikely that significant Native American areas of concern will be identified during the monitoring but, should they be found the Tribes would be notified immediately.

Mitigation: In order to mitigate the potential adverse direct effects and comply with the Roan Cultural Resource Management Plan ground disturbing activity for the cattleguard should be monitored by a qualified archaeologist. No monitor is necessary for the fence as long as large the vegetation is removed by hand. If it becomes necessary to use heavy equipment to clear the brush a monitor will be required.

This monitor will be limited to the top of the ridge fingers and on slopes of less than 30%. No monitoring is necessary in the Yellowjacket Creek drainage and the unnamed drainage to the west.

- No ground disturbing construction activities will begin prior to the archaeologist’s arrival. The proponent is responsible for notifying the archaeologist at least 72 hours in advance of any proposed ground disturbance.
- If cultural resources are discovered, all ground disturbing activities in the vicinity of identified find(s) will be halted and a buffer area at least 100 ft on each side of the find(s) will be protected from any additional disturbance until which time as the find(s) is mitigated via data recovery. Appropriate samples for analysis will be collected, a stratigraphic profile will be drawn, and samples for paleoenvironmental reconstructions will be taken as appropriate.

The Discovery/Education stipulation: The National Historic Preservation Act (NHPA) requires that if newly discovered cultural resources are identified during project implementation, work in that area must stop and the agency Authorized Officer notified immediately (36 CFR 800.13). The Native American Graves Protection and Repatriation Act (NAGPRA), requires that if inadvertent discovery of Native American Remains or Objects occurs, activity must cease in the area of discovery, a reasonable effort made to protect the item(s) discovered, and immediate notice made to the BLM Authorized Officer, as well as the appropriate Native American group(s) (IV.C.2). Notice may be followed by a 30-day delay (NAGPRA Section 3(d)). Further actions also require compliance under the provisions of NHPA and the Archaeological Resource Protection Act.

No Action

Environmental Consequences: The potential of finding cultural or areas of Native American concern obscured by vegetation and or in a buried context would not occur reducing the potential of adding to our knowledge of Native American use of the Roan Plateau. The cultural manifestations/areas of Native American concern would remain buried and therefore, protected.

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.

^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
 Last Revised: Wednesday, 02-Jan-2008 15:11:03

INVASIVE, NON-NATIVE SPECIES

Affected Environment: A number of noxious weeds are found within the project area. Cheatgrass, houndstongue, and musk thistle have all been documented in the vicinity of the proposed action. The majority of noxious weeds occur within over utilized riparian areas on the allotment.

Environmental Consequences:

Proposed Action: Surface-disturbing activities, such as the proposed action, create a niche for the invasion or expansion of noxious weeds, particularly in areas where noxious weeds are already present in the vicinity. The proposed action would subsequently reduce the effect of livestock grazing on invasive, non-native species within riparian areas in the Clough-Alber Allotment. The added fence and pasture system would allow more rest to native vegetation in riparian areas allowing for greater resistance to noxious weed establishment and spread.

Mitigation:

To reduce the opportunities for weeds to become established, the disturbed areas will be reseeded with a certified weed-seed free mixture of native grasses adapted to the site. The permittee will monitor the disturbance to detect the presence of any noxious weeds and will be responsible for promptly controlling any noxious weeds on the Colorado State List A or B (except redstem filaree) within the area disturbed from construction. If the permittee chooses to use herbicides as the control method on public lands, a Pesticide Use Proposal shall be submitted to the BLM and approved prior to initiating any herbicide spraying.

The operator is to ensure equipment involved in land disturbing actions be clean of noxious weed seeds or propagative parts prior to entry on site. When working in areas with noxious weeds, equipment should be cleaned prior to moving off site.

No Action Alternative: Under this alternative, the proposed fence would not be constructed. The presence of noxious weeds would likely continue under current conditions, unless BLM aggressively pursues weed control activities.

MIGRATORY BIRDS

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

The 1988 amendment to the Fish and Wildlife Conservation Act mandates the U.S. Fish and Wildlife Service (USFWS) to "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act (ESA) of 1973." *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. Although there are general patterns that can be inferred, there is no single reason why any species was is on the list. Habitat loss is believed to be the major reason for the declines of many species. When considering potential impacts to migratory

birds the impact on habitat, including: 1) the degree of fragmentation/connectivity expected from the proposed project relative to before the proposed project; and 2) the fragmentation/connectivity within and between habitat types (e.g., within nesting habitat or between nesting and feeding habitats). Continued private land development, surface disturbing actions in key habitats (e.g. riparian areas) and the proliferation of roads, pipelines, powerlines and trails are local factors that reduce habitat quality and quantity for many species.

The Glenwood Springs Field Office is within the Southern Rockies/Colorado Plateau Bird Conservation Region (BCR). The 2008 list 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.

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

Bald eagle (*Haliaeetus leucocephalus*). Bald eagles are known to winter along portions of the Colorado, Eagle and Roaring Fork Rivers and its major tributaries. Wintering bald eagles are generally present from mid-November to mid-April. Large mature cottonwood trees along the 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 (specifically cottonwood stands), 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.

Environmental Consequences:

The federal listing rule stated the primary causes affecting migratory birds are urban and agricultural development, water diversion and impoundment, stream channelization, improper livestock grazing, invasion of exotic tamarisk or salt-cedar, off-road vehicle use, other recreational uses and the hydrological changes resulting from these and other land uses.

Because of their water and plant availability, riparian areas provide important stopping points for neotropical migratory birds passing through the area. More than 80% of migratory birds use riparian habitats during breeding season or migration (<http://biology.usgs.gov/cro/98nps-10.htm>). Degraded riparian areas are viewed as one the most important factors in the decline of western land bird species (<ftp://ftp-fc.sc.egov.usda.gov/WHMI/WEB/46.pdf>).

Another characteristic of naturally vegetated riparian areas of particular value to migratory birds is their connectivity function. Riparian corridors serve as connective lifelines that enable wildlife movement necessary to maintain healthy wildlife populations. Loss or degradation of these corridors results in habitat fragmentation, a major cause of wildlife decline.

The removal of brush would have a negligible and short-term negative effect on migratory birds. The ability to improve livestock management through the development of a rotational system will allow planned rest during the critical growing season which would improve conditions for migratory birds. The proposed action would ensure that riparian and upland habitats within the allotment provide conditions suitable to meet the life history requirements of migratory bird species.

No Action Alternative:

The continued decline in riparian and upland habitat conditions within the allotment would make the allotment less suitable to meeting the life history requirements (including nesting) of migratory bird species.

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:

No suitable habitat is found within the project area for any of the four federally-listed, proposed or candidate plant species that occur in Garfield County. No occupied habitat is present in the vicinity that could be indirectly impacted by the proposed action.

Aquatic Wildlife:

Colorado River Endangered Fishes (Colorado pikeminnow, razorback sucker, humpback chub, and bonytail):

Designated Critical Habitat for the Colorado pikeminnow and razorback sucker is located in the main stem of the Colorado River approximately 30 miles downstream of the Rasberry creek fence project site at the Highway 13 bridge crossing. Designated Critical Habitat for the humpback chub and bonytail is located in the Black Rocks section of the Colorado River near the Colorado/Utah border well over 110 miles downstream.

Terrestrial Wildlife:

No suitable habitat exists for any Federally listed, proposed or candidate terrestrial wildlife species in or near the project area.

BLM Sensitive Species:

Plants:

Habitat for Colorado pikeminnow and razorback sucker, and over 110 miles upstream from Designated Critical Habitat for humpback chub and bonytail. Construction of the fence will provide for development of rotational system and upland habitats should receive adequate growing season rest and plant rest and recovery periods. This should maintain adequate vegetative cover across the allotment and reduce the risk of bare ground and potential offsite soil movement. In addition, these fish are all well adapted to the high sediment loads traditionally carried by the Colorado River. Periodic influxes of sediment are important in the creation and maintenance of important micro-habitats such as backwaters.

Terrestrial Wildlife:

Due to the absence of any occupied or suitable habitat within or immediately adjacent to the project area, the proposed action would have “**No Effect**” to any of the listed, proposed or candidate terrestrial wildlife species.

BLM Sensitive Species:

Plants:

Due to the absence of any known occupied or suitable habitat for BLM sensitive plant species, the proposed action would have no impact on these species.

Aquatic Wildlife:

Flannelmouth sucker, bluehead sucker, roundtail chub:

Construction of the fence as proposed should have no negative impacts to any of these fish or their habitats. The distance to where these fish are downstream of the project is fairly large and these fish are all well adapted to the high sediment loads traditionally carried by the Colorado River. Periodic influxes of sediment are important in the creation and maintenance of important micro-habitats such as backwaters.

Colorado River cutthroat trout:

The construction of the new fence would result in some soil compaction and displacement and increase the likelihood of erosional processes. 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 proximity of the proposed fence to Northwater Creek and Raspberry Creek, which are both perennial, there is potential that some additional sediment, associated with the construction, could reach these streams. Excessive sediment input can impact Colorado River cutthroat trout by silting in important spawning substrates and can smother eggs and reduce productivity. Increased sediment can also fill in limited pool habitats needed as important summer and winter thermal refugia by fish. Aquatic insects can be impacted as the spaces between stream substrates where these insects live, is silted in. This reduces stream productivity and reduces food sources for fish and terrestrial bat and bird species.

Negative impacts should be minimal to Colorado River cutthroat trout given that brush would only be cleared by hand as needed, reducing exposure of bare soil. This would lessen the potential for soil compaction and offsite sedimentation. Construction of the proposed fence would allow for the creation of pastures within the allotment which would facilitate rest rotation within the allotment. This would provide for adequate growing season rest and plant recovery periods and would maintain adequate vegetative cover across the allotment and reduce the risk of bare ground and potential offsite soil movement. In addition, impacts to riparian and stream habitats would be reduced as livestock would not be allowed to concentrate along the stream during the entire grazing season as is currently the case.

In the event heavy equipment is used to set posts, it is likely that increases in soil compaction, bare ground, and offsite soil movement potential could increase. To minimize impacts of heavy equipment, mitigation is proposed:

Mitigation:

To reduce the opportunities for offsite sediment transport, all disturbed areas will be reseeded with a mixture of native grasses and possibly forbs (native or non-aggressive, exotic forbs) adapted to the site. All seed to be applied on public land must have a valid seed test, within one year of the acceptance date. The seed will be accepted if accompanied by an official seed analysis report that provides documentation to show no noxious, prohibited or restricted weed seed per CO, UT and WY(s) weed law and no more than 0.5% by weight of other weed seeds.

Terrestrial Wildlife:

Bald Eagles are addressed in the Migratory Birds section. Other BLM sensitive terrestrial wildlife species could be present at times in the allotment however, due to the absence of any occupied or suitable habitat within or adjacent to the project area, the proposed action would likely have negligible impact on any BLM sensitive terrestrial wildlife species.

No Action Alternative

Under the No Action alternative, no fence construction would occur and no potential for additional sediment entering Northwater or Raspberry Creek would result. In addition, no pastures would be created within the Clough-Alber Allotment. This would continue to allow livestock use along and within Northwater Creek throughout the grazing season. As is currently the case, the creek would not receive adequate growing season rest. This would continue to result in impacts to stream and riparian habitats as livestock trample vegetation and banks, reduce streamside cover, and add excessive sediment to the creek. Excessive sediment input can impact Colorado River cutthroat trout by silting in important spawning substrates and can smother eggs and reduce productivity. Increased sediment can also fill in limited pool habitats needed as important summer and winter thermal refugia by fish. Aquatic insects can be impacted as the spaces between stream substrates where these insects live, is silted in. This reduces stream productivity and reduces food sources for fish and terrestrial bat and bird species.

Analysis on the Public Land Health Standard for T&E Species:

A formal Land Health Assessment was completed for this area back in 1999. At that time, the project area was generally meeting the standard. However, since that time stream and riparian habitats across portions of the Clough-Alber allotment appear to have declined in condition due at least in part to improper livestock grazing. The proposed action should help to move the allotment towards meeting this standard as pasture rotation is incorporated which would provide growing season rest and improved riparian and stream habitat condition along Northwater and Raspberry Creeks.

WASTES, HAZARDOUS OR SOLID

Affected Environment: Vehicle fuel and lubricants would be used during fence construction and cattle guard installation.

Proposed Action

Environmental Consequences/Mitigation: Fuels and lubricants would be stored in appropriate containers and refueling would occur in designated areas. Activities would occur in close proximity to three major perennial drainages that include Northwater Creek, Raspberry Creek, and Yellowjacket Creek. Based on existing slope angles and good vegetative cover; it is unlikely that fuels or lubricants

would be transported to area drainages. However, appropriate spill prevention and cleanup practices would be implemented as needed.

No Action Alternative

Environmental Consequences: Under the no action alternative there would be no fuel or lubricants present associated with vehicles.

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

Affected Environment: Proposed activities would occur on the Roan Plateau adjacent to Raspberry and Yellowjacket Creek and south of Northwater Creek within a 21,862 acre unnamed 6th field watershed. Within this area, these streams have moderate to high gradients, low to moderate sinuosity, and are vertically controlled by shale bedrock from the Parachute Creek Member of the Green River Formation. These bedrock controlled channels are characterized by riffle reaches and marginal pool development.

According to the State of Colorado's *Stream Classifications and Water Quality Standards* (CDPHE, Water Quality Control Commission, Regulation No. 37) list, the three streams mentioned above are within the Lower Colorado River Basin segment 8 that includes the mainstem of Northwater and Trapper Creeks, including all tributaries, wetlands, lakes and reservoirs 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. These classifications indicate that this segment is capable of sustaining a wide variety of cold water biota, not suitable or intended for primary contact recreation, and suitable or intended to become suitable for potable water supplies and agricultural purposes that include irrigation and livestock use. In addition, this segment has been given an "outstanding waters" designation to further protect designated uses.

At this time, the streams mentioned above are not currently listed on the State of Colorado's *303(d) List of Water Quality Limited Segments Requiring TMDLS* (CDPHE, Water Quality Control Commission, Regulation No. 93) or the *Monitoring and Evaluation List* (CDPHE, Water Quality Control Commission, Regulation No. 94) as a waterbody suspected to have water quality problems.

Proposed Action

Environmental Consequences/Mitigation: Proposed activities would result in some 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 in disturbed areas adjacent to perennial drainages during runoff events associated with spring snowmelt and short-duration high intensity thunderstorms. In addition, the vehicle used for fence installation would cross Raspberry Creek a minimum of two times to accomplish this work.

The amount of exposed soil associated with the proposed activities would be minimal and it is likely that existing vegetation and prompt revegetation of disturbed areas would minimize the likelihood of sediment transport to area drainages. Some soil compaction would result from the rubber tired vehicle, but it is expected to be minimal due to sufficient vegetated groundcover. The vehicle crossing Raspberry Creek would likely have little effect on water quality and channel morphology if it occurs at an area with a bedrock channel substrate, stable vegetated banks, and during periods of low-flow. To further minimize the likelihood of soil degradation and sediment transport, mechanical activities would occur during dry conditions.

No Action Alternative

Environmental Consequences: The no action alternative would exacerbate the current situation resulting in continued negative impacts to water quality. Livestock would continue to access these areas for long periods of time resulting in bank trampling and sediment delivery to Northwater, Raspberry, and Yellowjacket Creeks which could in turn result in increases in water temperature and decreases in dissolved oxygen levels. In addition, fecal coliform and nutrient levels would likely increase from the presence of livestock and may result in algal blooms.

Analysis on the Public Land Health Standard for Water Quality: In 1999 the BLM Glenwood Springs Field Office completed the Roan Cliffs Land Health Assessment in which measured water quality parameters suggested that surface waters appear to be meeting the standards for water quality established by the State of Colorado. It is not likely that the proposed action would prevent Standard 5 from being met. The proposed action would benefit water quality by limiting the period of livestock use in the major drainages mentioned above. The no action alternative would exacerbate the current situation resulting in continued soil and water quality degradation.

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

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

Location	Years	Trend Interpretation and Observations
Raspberry Creek		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 (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:

Proposed Action: Construction of the proposed fence would cross riparian areas along Raspberry and Yellowjacket Creek. There may some destruction and temporary loss of riparian vegetation at the above sites due to construction activities; however, the proposed action would require vegetation clearing by hand only which would minimize any destruction or loss of riparian vegetation. There may be a small amount (less than 100 square feet) of destruction and loss of riparian vegetation from post hole digging activities. In addition, the livestock trailing that typically occurs along fence lines would cause a small amount (less than 240 square feet) of loss of riparian vegetation. Construction of the fence would create pastures that would be utilized for rotational grazing. The rotational grazing would reduce the duration of grazing use on all riparian areas in the allotment and would allow more grazing rest and recovery time for riparian plant species. The improved grazing management above would help improve the condition of all riparian areas within the allotment. This would more than offset any negative impacts to riparian areas from construction activities or livestock trailing along the fence line.

No Action Alternative: There would not be any loss or destruction of riparian vegetation from construction activities or from livestock trailing along the fence line. The duration of grazing use on all riparian areas would not be reduced. Increased grazing rest and recovery time for riparian plant species would not occur. This alternative would not result in improved grazing management or help to improve the condition of all riparian areas within the allotment.

Analysis on the Public Land Health Standard for Riparian Systems: The proposed action would help improve grazing management, help improve the condition of riparian areas, and help achieve Colorado Public Land Health Standards 2 (riparian systems).

WILD AND SCENIC RIVERS

Affected Environment:

Northwater Creek was found to be eligible under the “Roan Plateau, Eligibility Report for the National Wild and Scenic River System, May 2002.” The stream segment was found to meet the Outstandingly Remarkable Value (ORV) criteria for its core conservation population of Colorado River cutthroat trout and its botanic values (*Hanging Garden Sullivantia*). The Northwater Creek segment is currently undergoing the next part of the study phase for “suitability” under the Glenwood Springs Resource Management Plan revision. However, until the suitability is completed all stream segments found to be “eligible” must be managed to protect the streams identified ORV’s and the preliminary classification identified in the report. The proposed action is within a segment identified as “Wild”. Classification criteria and guidelines for shoreline development within wild segments states the following (*Interagency Wild and Scenic Rivers Coordinating Council , December 1999*):

- “Essentially primitive. Little or no evidence of human activity.
- The presence of a few inconspicuous structures, particularly those of historic or cultural value, is acceptable.
- A limited amount of domestic livestock grazing or hay production is acceptable
- Little or no evidence of past timber harvest. No ongoing timber harvest.”

Environmental Consequences/Mitigation:

Proposed Action:

The proposed action would protect and potentially enhance the identified ORV’s, the core population of Colorado River cutthroat trout (CRCT) and the Hanging Garden Sullivantia from impacts related to grazing within the stream corridor. Construction of the proposed fence would facilitate rest rotation within the allotment. This would provide for adequate growing season rest, plant recovery periods, would maintain adequate vegetative cover across the allotment and reduce the risk of bare ground and potential offsite soil movement. In addition, impacts to riparian and stream habitats would be reduced as livestock would not be allowed to concentrate along the stream during the entire grazing season as is currently the case. The proposed action with the built in mitigation measures described in the proposed action and all mitigation measures brought forward for CRCT and for the Hanging Garden Sullivantia, would protect the identified ORV’s and would protect the corridors primitive character and preserve its classification of this segment as “Wild”.

No Action:

The no action alternative would continue to allow livestock use along and within Northwater Creek throughout the grazing season. As is currently the case, the creek would not receive adequate growing season rest. This would continue to result in impacts to stream and riparian habitats as livestock trample vegetation and banks, reduce streamside cover, and add excessive sediment to the creek. If the fence is not constructed negative impacts could occur to the streams identified ORV’s. Under the Wild and Scenic Rivers Act, managing agencies must afford/provide administrative protection for all identified ORV’s on streams that were found to be eligible until a suitability study is completed. After suitability, a stream may be released for other values if not found suitable, or under if determined to be suitable afforded protection until legislative action occurs.

OTHER AFFECTED RESOURCES

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

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

RANGE MANAGEMENT

Affected Environment: The Clough-Alber allotment (#18909) consisting of 5323 public acres and 643 private acres is located about 15 miles northwest of Rifle, CO. It is permitted for 134 cattle from 6/16 to 10/15 for a total of 537 public land AUMs and for 1000 sheep 5/16 to 7/6 and 1000 sheep 9/10 to 10/31 for a total of 548 public land AUMs.

Environmental Consequences/Mitigation: A significant amount of use by cattle currently occurs on private land. The private land is planned to be fenced off excluding the cattle use. The proposed action would create a pasture boundary in Raspberry Creek and Yellow Jacket Creek drainages. Period of use would be initially estimated at about 40 days but will be adjusted based on utilization levels. Isolating this area as a pasture will allow better control and distribution of cattle. The development of this pasture will also allow for periodic rest from grazing pressure.

No Action Alternative: If the allotment is not divided up into pastures then the permittee may not be able to meet the current guidelines for livestock grazing management. Rest during critical growing periods may not be achieved and residual vegetation in riparian areas may not be sufficient. Additional stipulations may need to be added to the permit to prevent excessive use or action may need to be taken on the permit in the future reducing either numbers of livestock or season-of-use.

SOILS (includes a analysis on Standard 1)

Affected Environment: According to the *Soil Survey of Rifle Area, Colorado: Parts of Garfield and Mesa Counties* (USDA 1985), the proposed action would be located on the soil map units Parachute

loam, Parachute-Rhone loams, and Silas loam. Following is a brief description of the three soil map units encountered in the project area.

- Parachute loam – 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 – 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.
- Silas loam – This deep, moderately well drained soil is found at the bottom of mountain valleys at elevations ranging from 7,600 to 8,300 feet and on slopes of 3 to 12 percent. This soil is derived from sandstone and marlstone alluvium. Surface runoff for this soil is slow and the erosion hazard is slight. Primary uses for this soil include grazing, wildlife habitat, and irrigated hay.

Proposed Action

Environmental Consequences/Mitigation: The proposed activities would result in the removal of vegetation, soil compaction, and soil displacement in close proximity to major perennial drainages. The removal of vegetation and soil displacement would occur where ground clearing activities are necessary to install the fence and during post hole augering operations. The amount of exposed soil would be minimal and it is likely that existing vegetation and prompt revegetation of disturbed areas would further minimize the likelihood of sediment transport to the nearby streams. Some soil compaction would result from the rubber tired vehicle, but it is expected to be minimal due to sufficient vegetated groundcover. To further minimize the likelihood of soil compaction and displacement, mechanical activities would occur during dry conditions. Due to existing good vegetative cover, the scale of the proposed activities, and existing slope angles; no mitigation is being proposed at this time.

No Action Alternative

Environmental Consequences: The no action alternative would exacerbate the current situation resulting in continued negative impacts to soils in the riparian zone. Livestock would continue to occupy the drainages resulting in bank trampling, soil compaction, soil displacement, bank failures, and sediment delivery to Northwater, Raspberry, and Yellowjacket Creeks.

Analysis on the Public Land Health Standard for Upland Soils: In 1999 the BLM Glenwood Springs Field Office completed the Roan Cliffs Land Health Assessment in which very few soil problems were found at any of the sites and these were minor and confined to very small areas. Upland soils on the remainder of the sites were in excellent condition with good vegetative cover and no signs of soil movement, soil pedestaling, flow patterns or rills. It is not likely that the proposed action would prevent Standard 1 from being met. The proposed action would minimize soil displacement, compaction, and transport by limiting livestock use in close proximity to major perennial drainages. The no action alternative would exacerbate the current situation resulting in continued negative impacts to soils in the riparian zone.

VEGETATION (includes an analysis on Standard 3)

Affected Environment: The proposed fenceline runs roughly parallel to Northwater Creek. Vegetation in the project area is primarily mountain big sagebrush with an understory of native perennial grasses and forbs. A few aspen trees are found along the western end of the proposed fence alignment.

Significant Natural Plant Communities:

The hanging garden sullivania (*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.

Environmental Consequences/Mitigation:

Heavy equipment will not be used to remove brush along the proposed fenceline but may be used to set posts for the fence. Brush along the fenceline would be cleared by chainsaws and other hand-operated equipment. On-going maintenance of the fence would result in continued cutting of brush which may eventually result in mortality of shrubs close to the fence. A small amount of brush and herbaceous vegetation would be removed during post-hole augering operations. In addition, the livestock trailing that typically occurs along fence lines would cause the reduction or loss of vegetation in a swath approximately 10 feet wide on either side of the fenceline. The amount of sagebrush and herbaceous vegetation lost would be minimal compared to the amount of these vegetation types within the vicinity.

Mitigation:

Immediately following fence construction, all areas of soil disturbance will be reseeded with a mixture of native grasses adapted to the site. The seed mixture will be certified weed-seed free and will be approved by BLM prior to application.

No Action Alternative:

Under the No Action alternative, there would be no loss or destruction of upland vegetation from construction activities or from livestock trailing along the fence line. No pastures would be created within the Clough-Alber allotment to provide improved livestock distribution. Some loss of vegetation or reduction in species diversity would continue to occur where livestock currently concentrate.

Analysis on the Public Land Health Standard for Plant and Animal Communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): In 1999 the BLM Glenwood Springs Field Office completed the Roan Cliffs Land Health Assessment. At that time, the Clough-Alber allotment, which encompasses the proposed action area, was generally meeting the standard for plant communities. Most upland sites had excellent vegetative cover and fairly good species diversity. The proposed action would result in minimal loss of vegetation and would help improve livestock distribution within the allotment which should result in some improvement in overall vegetative conditions. The proposed action would likely maintain or improve land health conditions relative to Standard 3.

WILDLIFE AQUATIC (includes an analysis on Standard 3)

Affected Environment:

Northwater Creek only contains native Colorado River cutthroat trout addressed above in the THREATENED, ENDANGERED, AND SENSITIVE SPECIES section. Northwater Creek joins with Trapper Creek to form East Middle Fork Parachute Creek. All of these streams contain only pure Colorado River cutthroat trout. In addition, all of these streams contain a diverse assemblage of aquatic invertebrates.

Environmental Consequences/Mitigation:

Same as addressed in the THREATENED, ENDANGERED, AND SENSITIVE SPECIES section above.

No Action Alternative

Same as addressed in the THREATENED, ENDANGERED, AND SENSITIVE SPECIES section above.

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 this area back in 1999. At that time, the project area was generally meeting the standard. However, since that time stream and riparian habitats across portions of the Clough-Alber allotment appear to have declined in condition due at least in part to improper livestock grazing. The proposed action should help to move the allotment towards meeting this standard as pasture rotation is incorporated which would provide growing season rest and improved riparian and stream habitat condition along Northwater and Raspberry Creeks.

WILDLIFE TERRESTRIAL (includes an analysis on Standard 3)

Affected Environment:

Public lands sustain an abundance and diversity of wildlife populations and wildlife habitat. Wildlife populations are found in areas where their basic needs—food, shelter, water, reproduction, and movement—are met. The area in which the needs of a particular population are met is its habitat. Many animals have special behaviors and physical traits that allow them to successfully compete with other animals in only one or a few habitats; many threatened and endangered species fall into this category. Other animals, such as mule deer, coyote, and American robin are less specialized and can use a wider range of habitats.

Riparian corridors are particularly valuable habitats for wildlife. This includes many of what are ordinarily thought of as "upland" species as well as wetland species. The high value of riparian areas as wildlife habitat is due to the abundance of water combined with the convergence of many species along the edges and ecological transition zones. Degraded riparian areas are viewed as one of the most important factors in the decline of western land bird species (<ftp://ftp-fc.sc.gov.usda.gov/WHMI/WEB/46.pdf>).

Another characteristic of naturally vegetated riparian areas of particular value to wildlife is their connectivity function. Riparian corridors serve as connective lifelines that enable wildlife movement necessary to maintain healthy wildlife populations. Loss of these connective corridors results in habitat fragmentation, a major cause of wildlife decline.

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/

The combination of structural vegetation diversity, fruit-bearing shrubs, and abundant grass seeds in the riparian area and shrub-dominated slopes do provide an abundance of food, cover, and denning sites for terrestrial wildlife. However, the removal of brush would have a negligible and short-term negative effect (e.g. disturbance, loss of habitat) on terrestrial wildlife species. The ability to maintain/improve livestock management may maintain/improve habitat conditions for all terrestrial wildlife.

The height of the fence and spacing of the top two wires are primary considerations for terrestrial wildlife (elk and deer). To keep big game from being entangled in the fence, it is recommended to keep the height of the fence under 42 inches with at least 12 inch spacing between the top two wires. (Deer and elk jump with their hind legs forward, so if the top strands are too close together or are loose, they'll often get hung up, resulting in injury or death). In high use or in big game migration corridors it is recommended that the top wire be a 12 ½ gauge twisted barbless type. However in this location barbed wire at 42 inches in height, although not preferred, will be acceptable.

No Action Alternative

The continued decline in riparian and upland habitat conditions within the allotment would make the allotment less suitable to meeting the life history requirements of terrestrial wildlife species.

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 this area in 1999. In 1999, the allotment was generally meeting the standard. However, since that time stream and riparian habitats across portions of the Clough-Alber allotment appear to have declined in condition due at least in part to improper livestock grazing. The ability to improve livestock management through the development of a rotational system will allow planned rest during the critical growing season which would improve habitat conditions along Northwater and Raspberry Creeks for terrestrial wildlife.

CUMULATIVE IMPACTS SUMMARY:

No Cumulative impacts have been identified.

MITIGATION:

1. In order to mitigate the potential adverse direct effects and comply with the Roan Cultural Resource Management Plan ground disturbing activity for the cattleguard should be monitored by a qualified archaeologist. No monitor is necessary for the fence as long as large the vegetation is removed by hand. If it becomes necessary to use heavy equipment to clear the brush a monitor will be required. This monitor will be limited to the top of the ridge fingers and on slopes of less than 30%. No monitoring is necessary in the Yellowjacket Creek drainage and the unnamed drainage to the west.

- No ground disturbing construction activities will begin prior to the archaeologist’s arrival. The proponent is responsible for notifying the archaeologist at least 72 hours in advance of any proposed ground disturbance.
 - If cultural resources are discovered, all ground disturbing activities in the vicinity of identified find(s) will be halted and a buffer area at least 100 ft on each side of the find(s) will be protected from any additional disturbance until which time as the find(s) is mitigated via data recovery. Appropriate samples for analysis will be collected, a stratigraphic profile will be drawn, and samples for paleoenvironmental reconstructions will be taken as appropriate.
2. The Discovery/Education stipulation: The National Historic Preservation Act (NHPA) requires that if newly discovered cultural resources are identified during project implementation, work in that area must stop and the agency Authorized Officer notified immediately (36 CFR 800.13). The Native American Graves Protection and Repatriation Act (NAGPRA), requires that if inadvertent discovery of Native American Remains or Objects occurs, activity must cease in the area of discovery, a reasonable effort made to protect the item(s) discovered, and immediate notice made to the BLM Authorized Officer, as well as the appropriate Native American group(s) (IV.C.2). Notice may be followed by a 30-day delay (NAGPRA Section 3(d)). Further actions also require compliance under the provisions of NHPA and the Archaeological Resource Protection Act.
 3. To reduce the opportunities for weeds to become established and to reduce the opportunities for offsite sediment transport, the disturbed areas will be reseeded with a certified weed-seed free mixture of native grasses adapted to the site. The permittee will monitor the disturbance to detect the presence of any noxious weeds and will be responsible for promptly controlling any noxious weeds on the Colorado State List A or B (except redstem filaree) within the area disturbed from construction. If the permittee chooses to use herbicides as the control method on public lands, a Pesticide Use Proposal shall be submitted to the BLM and approved prior to initiating any herbicide spraying. The operator is to ensure equipment involved in land disturbing actions be clean of noxious weed seeds or propagative parts prior to entry on site. When working in areas with noxious weeds, equipment should be cleaned prior to moving off site.

PERSONS/AGENCIES CONSULTED:

Grazing Permittee

INTERDISCIPLINARY REVIEW:

<u>Name</u>	<u>Title</u>	<u>Area of Responsibility</u>
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, Recreation, WSR
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

FONSI

DOI-BLM-CO-N040-2009-0085-EA

The environmental assessment, analyzing the environmental effects of the proposed action, has been reviewed. The proposed action with mitigation measures result in a finding of no significant impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

DECISION RECORD

DECISION:

It is my decision to approve the proposal submitted and implemented by the grazing permittee on the Clough-Alber allotment. This decision will facilitate a rotational grazing system that will help in achieving land health standards by giving proper rest recovery time during the grazing season. The fence will also serve to keep livestock out of the lower end of Northwater Creek which has been found to be eligible for wild and scenic designation.

RATIONALE:

1. The construction of the Raspberry Creek Fence will allow for a pasture rotation system that will allow better control and distribution of cattle. The development of this pasture will also allow for periodic rest from grazing pressure and help to achieve land health standards and guidelines.
2. The environmental impacts have been mitigated with measures included in the attached Cooperative Range Improvement Permit.

MITIGATION MEASURES:

1. In order to mitigate the potential adverse direct effects and comply with the Roan Cultural Resource Management Plan ground disturbing activity for the cattleguard should be monitored by a qualified archaeologist. No monitor is necessary for the fence as long as large the vegetation is removed by hand. If it becomes necessary to use heavy equipment to clear the brush a monitor will be required. This monitor will be limited to the top of the ridge fingers and on slopes of less than 30%. No monitoring is necessary in the Yellowjacket Creek drainage and the unnamed drainage to the west.
 - No ground disturbing construction activities will begin prior to the archaeologist's arrival. The proponent is responsible for notifying the archaeologist at least 72 hours in advance of any proposed ground disturbance.
 - If cultural resources are discovered, all ground disturbing activities in the vicinity of identified find(s) will be halted and a buffer area at least 100 ft on each side of the find(s) will be protected from any additional disturbance until which time as the find(s) is mitigated via data recovery. Appropriate samples for analysis will be collected, a stratigraphic profile will be drawn, and samples for paleoenvironmental reconstructions will be taken as appropriate.
2. The Discovery/Education stipulation: The National Historic Preservation Act (NHPA) requires that if newly discovered cultural resources are identified during project implementation, work in that area must stop and the agency Authorized Officer notified immediately (36 CFR 800.13). The Native American Graves Protection and Repatriation Act (NAGPRA), requires that if inadvertent discovery of Native American Remains or Objects occurs, activity must cease in the area of discovery, a reasonable effort

made to protect the item(s) discovered, and immediate notice made to the BLM Authorized Officer, as well as the appropriate Native American group(s) (IV.C.2). Notice may be followed by a 30-day delay (NAGPRA Section 3(d)). Further actions also require compliance under the provisions of NHPA and the Archaeological Resource Protection Act.

3. To reduce the opportunities for weeds to become established and to reduce the opportunities for offsite sediment transport, the disturbed areas will be reseeded with a certified weed-seed free mixture of native grasses adapted to the site. The permittee will monitor the disturbance to detect the presence of any noxious weeds and will be responsible for promptly controlling any noxious weeds on the Colorado State List A or B (except redstem filaree) within the area disturbed from construction. If the permittee chooses to use herbicides as the control method on public lands, a Pesticide Use Proposal shall be submitted to the BLM and approved prior to initiating any herbicide spraying. The operator is to ensure equipment involved in land disturbing actions be clean of noxious weed seeds or propagative parts prior to entry on site. When working in areas with noxious weeds, equipment should be cleaned prior to moving off site.

NAME OF PREPARER: Isaac Pittman, Rangeland Management Specialist

SIGNATURE OF AUTHORIZED OFFICIAL:


Karl Mendonca
Supervisory Natural Resource Specialist

DATE SIGNED:

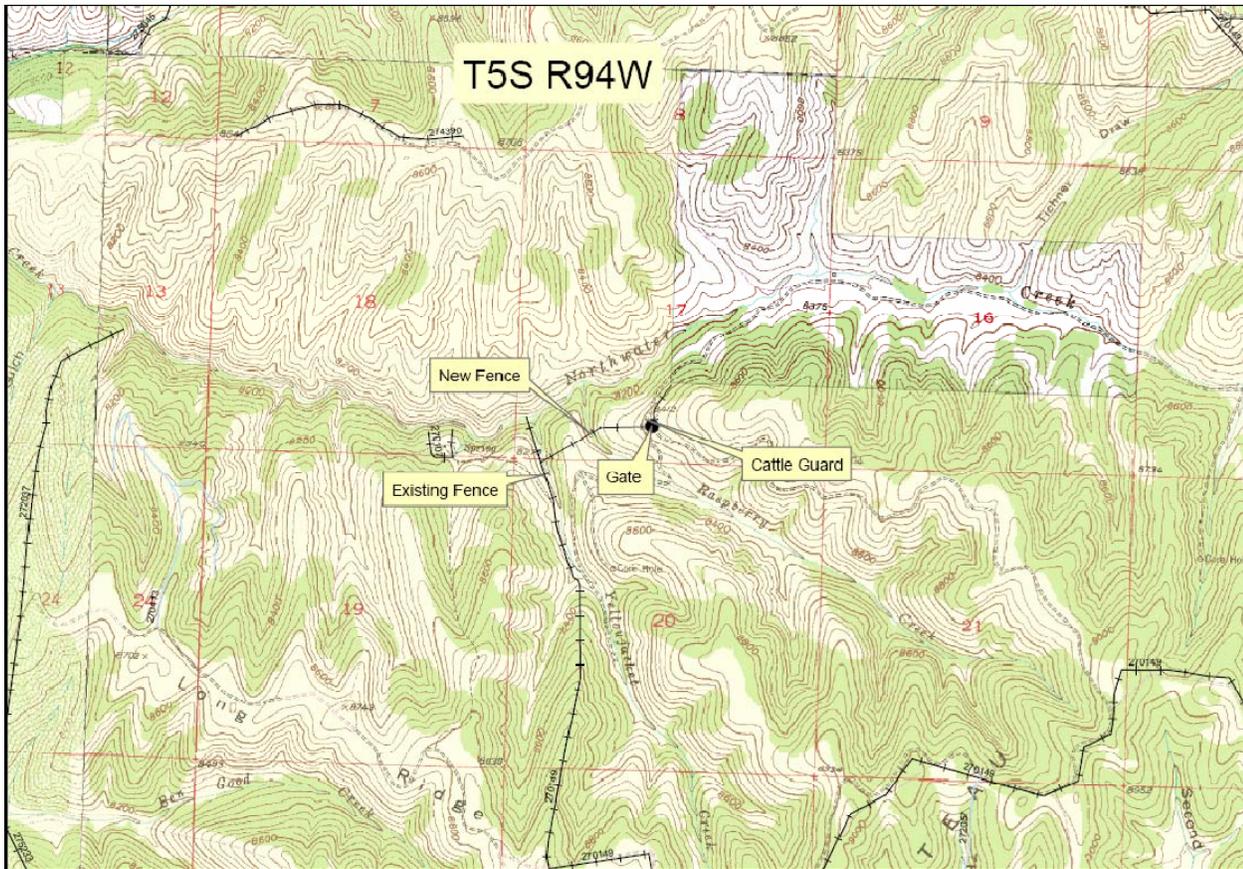
7/27/2009

- APPENDIX:
1. Project Maps
 2. Project Location Pictures
 3. Project Specifications

REFERENCES:

CDOW. 2009. Fencing With Wildlife in Mind. Website: <http://wildlife.state.co.us/NR/rdonlyres/B0D65D61-6CB0-4746-94F1-6EE194E1C230/0/fencing.pdf>. Accessed 6-19-2009.

Appendix 1



Appendix 2





Appendix 3

Project Specifications and Drawings

SECTION 02834 WORK DATA SHEET FOR WIRE FENCES AND GATES

Fence type: Four strand barbed

Type of top wire: Barbed

Type of intermediate wires: Barbed

Type of bottom wire: Barbed

Wire locations/dimensions in inches (spacing): Four Strand

D: 12

C: 8

B: 6

A: 16

Line post spacing (L): 16 ft 6 inches

Type of Stays: Wood

Stay spacing (l): 5 ft 6 inches

Length of wood posts (H₁): 8 or 7 ft

Depth of wood posts in ground (h₁): 3 ft

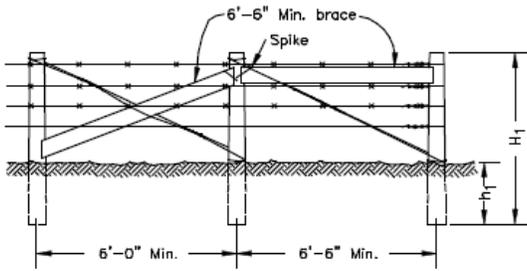
Length of steel posts (H₂): 5 ft 6 inches

Depth of steel posts in ground (h₂): To top of anchor plate

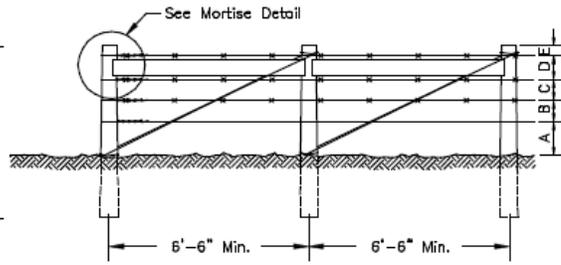
End Panel: Type II

Stress Panel: as needed (not more than 500 feet apart)

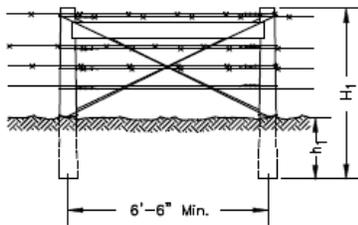
Corner Panel: as needed



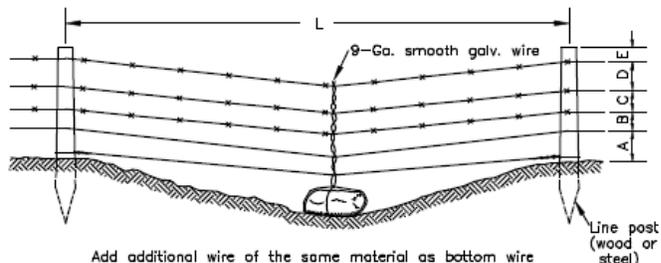
END PANEL-TYPE I



END PANEL-TYPE II

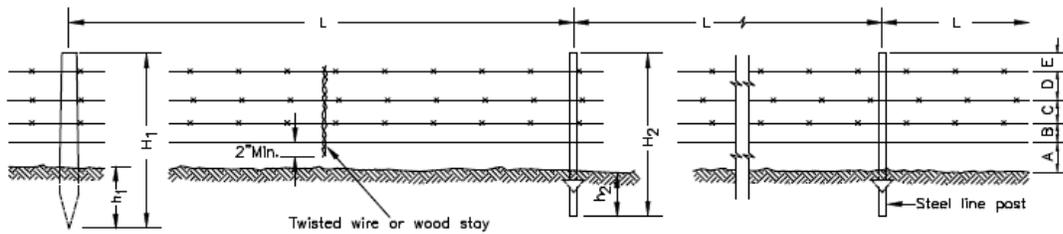


STRESS PANEL



Add additional wire of the same material as bottom wire of fence and a rock deadman (min. weight 50 lbs.) when space between bottom wire and ground exceed 20 inches.

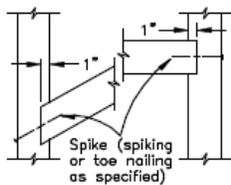
PANEL AT MINOR DEPRESSION



LINE PANELS

NOTE:

1. See specifications for the following:
 - a. Ratio of steel to wood line posts.
 - b. Post spacing, length and depth in ground.
 - c. Type of end panel to be used.
 - d. Type of wire to be used.
 - e. Spacing between wires.
 - f. Number of stays per span (L).



MORTISE DETAIL

ALWAYS THINK SAFETY

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF TECHNICAL SERVICES SERVICE CENTER	
TYPICAL BARBED WIRE FENCE (4-WIRE)	
DESIGNED	by others _____
REVIEWED	_____
APPROVED	_____
DRAWN	SCALE NONE
DATE FEBRUARY 25, 1991	SHEET OF
DRAWING NO. 02834-1	