

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

ENVIRONMENTAL ASSESSMENT

NUMBER: DOI-BLM-CO-N040-2011-0027-EA

CASEFILE NUMBER: 272154

PROJECT NAME: Abrams Creek Fence Extension

LOCATION: T5S R84W Sec 16, 17, 19, 20. Refer to attached map.

APPLICANT: Bureau of Land Management (BLM) and Grazing Permittees

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Proposed Action: The proposed action is to extend an existing boundary fence between the East and West Hardscrabble allotments. This would require construction of approx 1.5 mile of new 4-strand barbed wire fence. Most of the fence (1.2 miles) would be located within the same route as an existing natural gas pipeline in order to minimize new disturbance to soil and vegetation. The northern and southern ends of the fence (0.1 and 0.2 mile respectively) would be outside the area previously disturbed by the pipeline. The fence would be constructed as described on the attached drawing and construction specifications. Construction is anticipated to begin anytime from April 1 to November 30, 2011.

The BLM would provide materials required for fence construction. There may be other funding sources for the fence including the Habitat Partnership Program (HPP) and Grand Junction District Grazing Board of Advisors. Construction and future maintenance of the fence will be the responsibility of the grazing permittees as authorized under cooperative agreement as per 43 CFR 4120.3-2. In accordance with 43 CFR 4120.3-2(b), title of the range improvement shall be in the name of the United States.

Maintenance would be performed annually and would involve the following:

- Visual inspection
- Straightening posts that are off plumb
- Replacement of wood and/or steel posts as necessary
- Splicing and tightening of wire
- Re-attaching wire to posts with staples and/or wire clips, and
- Occasional clearing of shrub or tree re-growth that impairs fence maintenance using hand tools (chainsaw, brush cutter, axe, etc.).

Project Design Features:

- Disturbed areas will be reseeded with a certified weed-free seed mixture of native species adapted to the site.
- The BLM will monitor the fenceline disturbance to detect the presence of any noxious weeds and will be responsible for promptly controlling any state-listed noxious weeds within the area disturbed from construction.
- The grazing permittees will 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.
- 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. Any person who, without a permit, injures, destroys, excavates, appropriates or removes any historic or prehistoric ruin, artifact, object of antiquity, Native American remains, Native American cultural item, or archaeological resources on public lands is subject to arrest and penalty of law (16 USC 433, 16 USC 470, 18 USC 641, 18 USC 1170, and 18 USC 1361). Non-compliance could result in fines up to \$500,000 and imprisonment of up to six years or both.
- Any fenceline clearing would be accomplished by a brushbeater (rotary mower) pulled by a rubber tire tractor. Some of the clearing would be accomplished with hand tools (e.g. chainsaw) as well. The width of clearing will not exceed 15 feet. Clearing of riparian vegetation, where the fence crosses Abrams Creek, will be accomplished by hand tools only.
- A 16' steel frame gate would be installed where the fence crosses the Abrams Creek road. There would be a mountain bike cattle guard installed adjacent to the gate. One to two barbed wire gates would also be installed along the fenceline.
- The natural gas line must be located and marked by a locator company prior to construction. The fence will have a minimum five feet offset from the natural gas pipeline except where the fence crosses the pipeline. A gate will be installed where the fence crosses the pipeline.
- All vegetation clearing methods should be monitored to avoid the creation or enhancement of linear features within the landscape.
- The clearing boundary shall be flagged by the CRVFO's visual resource specialist prior to any ground disturbing activities to ensure that a natural appearance will be created. Irregular edges should be incorporated into areas being cleared of vegetation. Islands or pockets of vegetation should be left intermittently and in irregular patterns throughout the project area.

No Action Alternative: Fence construction would not occur.

ALTERNATIVES CONSIDERED BUT ELIMINATED: None

PURPOSE AND NEED FOR THE ACTION: The existing allotment boundary fence was constructed in 1963 and tied to a natural boundary (steep hillside) at the fence's northern terminus. Since that time, several trails (mountain bike/hiking) have been created that traverse this natural barrier which is the result of increased recreational use in the Hardscrabble area. Livestock have begun to use these trails as well, causing unauthorized grazing use (livestock drift between the East and West Hardscrabble allotments). Consequently, extension of the existing fence is required in order to effectively control livestock. Grazing trespass often results in improper management (e.g. over-utilization of forage, increased duration and frequency of grazing use, reduced opportunity for grazing rest or deferment, and reduced recovery and re-growth periods). This jeopardizes conformance with Colorado Livestock Grazing Management Guidelines and achievement of Colorado Public Land Health Standards 1 (upland soils), 2 (riparian systems), 3 (plant and animal communities), 4 (T&E species), and 5 (water quality). Extension of the fence would reduce the likelihood of livestock grazing trespass and help maintain/achieve Public Land Health Standards.

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

Name of Plan: Glenwood Springs Resource Management Plan.

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

Decision Number/Page: The proposal implements land use plan decision LGM2 page 20.

Decision Language: LGM2 states "construct facilities such as springs, reservoirs, fences, corrals, and livestock trails where necessary to control and distribute livestock."

STANDARDS FOR PUBLIC LAND HEALTH:

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

The proposed action would construct a fence between the East and West Hardscrabble allotments. These allotments are part of the Eagle River South watershed which was the subject of a formal Land Health Assessment in 2002. The Determination Document for this assessment was signed on December 9, 2003.

The lower elevations of East Hardscrabble allotment were not meeting Standard 2 or 3. Third Gulch riparian zone and adjacent uplands were not meeting Standard 2 due to bank trampling damage, heavy browsing of riparian shrubs, and infestations of noxious weeds. Problems related to Standard 3 occurred most often in lower elevation sagebrush parks. Fewer grasses and forbs than expected and lack of biological crust cover and encroachment of Utah juniper trees into sagebrush habitat all contributed to the failure to meet Standard 3. Causal factors included heavy big game winter use, poor livestock distribution, and fire suppression.

West Hardscrabble allotment did not meet Standard 2 (for upper Alkali Creek and McHatten Creek) or Standard 4 for sage grouse and Harrington’s penstemon populations. Problems were related primarily to livestock concentration in riparian areas and extensive OHV use degrading and fragmenting habitat for sage grouse and Harrington’s penstemon.

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

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

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

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

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

Critical Elements

Critical Elements of the Human Environment									
Critical Element	Present		Affected		Critical Element	Present		Affected	
	Yes	No	Yes	No		Yes	No	Yes	No

Air Quality	X			X	Prime or Unique Farmlands		X		X
ACECs		X		X	Special Status Species*	X		X	
Cultural Resources	X			X	Wastes, Hazardous or Solid		X		X
Environmental Justice	X			X	Water Quality, Surface and Ground*	X		X	
Floodplains	X			X	Wetlands and Riparian Zones*	X		X	
Invasive, Non-native Species	X		X		Wild and Scenic Rivers	X			X
Migratory Birds	X				Wilderness/ WSAs		X		X
Native American Religious Concerns		X		X					

* Public Land Health Standard

Air Quality and Climate

Affected Environment: Air quality in the project area is typical of undeveloped regions in the western United States. The closest Class I airshed is the Holy Cross Wilderness Area located approximately 16 air miles to the southwest.

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

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

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

Cultural Resources and Native American Religious Concerns

Affected Environment: Two Class III inventories (CRVFO#s 9481 and 5407-4) have been conducted which encompass the proposed fence alignment. No historic properties have been identified on or near the alignment. Additionally, no areas of Native American Religious concerns or sensitivity were identified.

Environmental Consequences/Mitigation:

Proposed Action: No direct effects to cultural resources are anticipated as a result of this action, although the potential for indirect impacts might increase during construction due to access. As no Historic Properties were identified a determination of No Effect was made in accordance with the National Historic Preservation Act (16 U.S.C. 470f), the National BLM/SHPO (State Historic Preservation Office) Programmatic Agreement (1997), and Colorado Protocol (1998).

No Action Alternative: This alternative would be neither beneficial nor detrimental to cultural resources.

Invasive, Non-native Species

Affected Environment: A landscape wide inventory has not been completed on the proposed project site. However, given the widespread nature of noxious weed infestations throughout the Hardscrabble area, it is assumed that some level of infestation does exist in the project area.

Environmental Consequences/Mitigation:

Proposed Action: All surface disturbing activities provide a niche for invasion by noxious weeds and increase the potential for weeds to become established in an area. The Project Design Features of the Proposed Action (pg 1-2) has supplied adequate measures for the control of potential weed infestations at the project area; therefore, no other mitigation measures are needed. The Proposed Action will not significantly impact invasive, non-native species within the project area if project design features are followed.

No Action Alternative: Under the no action alternative no fence construction would take place. Livestock would likely continue to have unauthorized use. This will negatively impact current weed management actions. Over-utilization causes disturbances that would increase the likelihood of further noxious weed establishment.

Migratory Birds

Affected Environment: BLM Instruction Memorandum No. 2008-050 provides guidance toward meeting the Bureau of Land Management's (BLM) responsibilities under the Migratory Bird Treaty Act (MBTA) and the Executive Order (EO) 13186. The guidance directs Field Offices to

promote the maintenance and improvement of habitat quantity and quality. To avoid, reduce or mitigate adverse impacts on the habitats of migratory bird species of conservation concern to the extent feasible, and in a manner consistent with regional or statewide bird conservation priorities.

The 1988 amendment to the Fish and Wildlife Conservation Act mandates the U.S. Fish and Wildlife Service (USFWS) to “identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act (ESA) of 1973.” The “*BIRDS OF CONSERVATION CONCERN 2008*” (U.S. Fish and Wildlife Service 2009) is the most recent effort to carry out this mandate.

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

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

The Colorado River Valley Field Office (CRVFO) is within the Southern Rockies/Colorado Plateau Bird Conservation Region (BCR). The 2008 list of Birds of Conservation Concern (USFWS 2008) include the following:

2008 List of Birds of Conservation Concern within the CRVFO

Species	Habitat Description	Potential Occurrences in Project Area	Potentially Impacted by the Proposed Action or Alternatives
Gunnison Sage-Grouse (<i>Centrocercus minimus</i>)	Sagebrush communities for hiding and thermal cover, food, and nesting; open areas with sagebrush stands for leks; sagebrush-grass-forb mix for nesting; wet meadows for rearing chicks. Year-round resident, breeding	Not Present	No
American Bittern (<i>Botaurus lentiginosus</i>)	Marshes and wetlands; ground nester. Summer resident.	Not Present	No
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	Nests in forested rivers and lakes; winters in upland areas, often with rivers or lakes nearby. Generally	Unlikely	No

Species	Habitat Description	Potential Occurrences in Project Area	Potentially Impacted by the Proposed Action or Alternatives
	winter resident, occasional breeding.		
Ferruginous Hawk (<i>Buteo regalis</i>)	Open, rolling and/or rugged terrain in grasslands and shrubsteppe communities; also grasslands and cultivated fields; nests on cliffs and rocky outcrops. Fall/ winter resident, non-breeding.	Unlikely	No
Golden Eagle (<i>Aquila chrysaetos</i>)	Open country, grasslands, woodlands, and barren areas in hilly or mountainous terrain; nests on rocky outcrops or large trees. Year-round resident, breeding.	Present	No
Peregrine Falcon (<i>Falco peregrines</i>)	Open country near cliff habitat, often near water such as rivers, lakes, and marshes; nests on ledges or holes on cliff faces and crags. Spring/summer resident, breeding.	Not Present	No
Prairie Falcon (<i>Falco mexicanus</i>)	Open country in mountains, steppe, or prairie; winters in cultivated fields; nests in holes or on ledges on rocky cliffs or embankments. Spring/summer resident, breeding.	Unlikely	No
Snowy Plover (<i>Charadrius alexandrinus nivosus/tenuirostris</i>)	Sparsely vegetated sand flats associated with pickleweed, greasewood, and saltgrass. Spring migrant, non-breeding. Spring migrant, non-breeding.	Not Present	No
Mountain Plover (<i>Charadrius montanus</i>)	High plain, cultivated fields, desert scrublands, and sagebrush habitats, often in association with heavy grazing, sometimes in association with prairie dog colonies; short vegetation.	Not Present	No
Long-billed Curlew (<i>Numenius americanus</i>)	Lakes and wetlands and adjacent grassland and shrub communities. Spring/ fall migrant, non-breeding.	Not Present	No
Yellow-billed Cuckoo (<i>Coccyzus americanus</i>)	Riparian, deciduous woodlands with dense undergrowth; nests in tall cottonwood, mature willow riparian, moist thickets, orchards, abandoned pastures. Summer resident, breeding.	Not Present	No
Burrowing Owl (<i>Athene cunicularia</i>)	Open grasslands and low shrublands often in association with prairie dog colonies; nests in abandoned burrows created by mammals; short vegetation.	Not Present	No
Lewis's Woodpecker (<i>Melanerpes lewis</i>)	Open woodland, often logged or burned, including oak, coniferous forest (often ponderosa), riparian woodland, and orchards, less often in pinyon-juniper.	Possibly Present	Yes
Willow Flycatcher (<i>Empidonax traillii</i>)	Riparian and moist, shrubby areas; winters in shrubby openings with short vegetation. Summer resident, breeding.	Not Present	No
Gray Vireo (<i>Vireo vicinior</i>)	Open pinyon-juniper woodlands. Uncommon summer resident, breeding.	Possibly Present	Yes
Pinyon Jay (<i>Gymnorhinus cyanocephalus</i>)	Pinyon-juniper woodland. Year-round resident, breeding.	Present	Yes
Juniper Titmouse (<i>Baeolophus ridgwayi</i>)	Pinyon-juniper woodlands, especially juniper; nests in tree cavities. Year-round resident, breeding.	Present	Yes
Veery (<i>Catharus fuscescens</i>)	Dense riparian thickets and hillside brush near streams. Uncommon spring/fall migrant in Eastern Colorado.	Not Present	No
Bendire's Thrasher	Desert, especially areas of tall vegetation, cholla cactus,	Unlikely	No

Species	Habitat Description	Potential Occurrences in Project Area	Potentially Impacted by the Proposed Action or Alternatives
<i>(Toxostoma bendirei)</i>	creosote bush and yucca, and in juniper woodland Possible summer resident.		
Grace's Warbler <i>(Dendroica graciae)</i>	Breeds in ponderosa pine forests. Uncommon summer resident in southwest Colorado.	Not Present	No
Brewer's Sparrow <i>(Spizella breweri)</i>	Summer resident that primarily breeds in sagebrush-grass stands and shrublands. Migrant at low elevations.	Present in Summer	Yes
Grasshopper Sparrow <i>(Ammodramus savannarum)</i>	Open grasslands and cultivated fields. Spring migrant, non-breeding.	Not Present	No
Chestnut-collared Longspur <i>(Calcarius ornatus)</i>	Open grasslands and cultivated fields. Spring migrant, non-breeding.	Not Present	No
Black Rosy-Finch <i>(Leucosticte atrata)</i>	Open country including mountain meadows, high deserts, valleys, and plains; breeds/ nests in alpine areas near rock piles and cliffs. Winter resident, non-breeding.	Not Present	No
Brown-capped Rosy-Finch <i>(Leucosticte australis)</i>	Alpine meadows, cliffs, and talus and high-elevation parks and valleys. Summer residents, breeding.	Not Present	No
Cassin's Finch <i>(Carpodacus cassinii)</i>	Open montane coniferous forests; breeds/ nests in coniferous forests. Year-round resident, breeding.	Possibly Present	Yes

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

Bald eagle (*Haliaeetus leucocephalus*). Bald eagles are increasing in numbers throughout their range and were removed from the federal threatened and endangered species list in 2007 however bald eagles are still protected under the Migratory Bird Treaty Act. Bald eagles are known to winter along portions of the Colorado, Eagle and Roaring Fork Rivers and its major tributaries. The project area is considered bald eagle winter range and winter foraging area (see map below). Wintering bald eagles are generally present from mid-November to mid-April. Large mature cottonwood trees along the rivers and their major tributaries are used as roosting and perching sites, and these waterways provide the main food sources of fish and waterfowl. Upland habitats adjacent to these waterways are used as scavenging areas primarily for winter killed animals. Major threats include habitat loss, human disturbance and illegal shooting.

Environmental Consequences/Mitigation:

Proposed Action: Effects on migratory birds are dependent on the species of interest. Impacts may be adverse or beneficial. Aerial, bark and canopy insectivores may be less influenced by the construction of the fence and grazing trespass than species feeding on nectar, insects, or seeds in the understory or on the ground. Grazing trespass that results in improper management can have local negative impacts on species that depend (i.e. nest or feed) on ground, shrub or riparian vegetation. Overgrazing caused by grazing trespass can reduce vegetative structure and complexity causing bird species numbers and richness to be lower. Birds may be temporarily and locally displaced as a result of fence construction or maintenance however the potential impacts to populations would be negligible. In summary, migratory birds would benefit in the long-term from a reduction in livestock grazing trespass and maintenance of public land health standards. Also see the vegetation and riparian sections.

No Action Alternative: Under the no action alternative, no fence construction would take place. Livestock would continue to drift between the two allotments resulting in grazing trespass. Livestock use above the permitted numbers and season of use could result in overgrazing. Overgrazing can reduce vegetative structure and complexity causing local migratory bird numbers and richness to be lower.

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

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

Special Status Plant Species in Eagle County

Federally Listed, Proposed or Candidate Plant Species		
Species	Habitat	Habitat Potential Present / Absent
Ute ladies'-tresses orchid (<i>Spiranthes diluvialis</i>)	Habitat for this threatened species is found below 6,500 feet along streams, lakes or in wetland areas with seasonally saturated or subirrigated soils.	Absent
BLM Sensitive Plant Species		
Species	Habitat	Habitat Potential Present/Absent
Harrington's penstemon (<i>Penstemon harringtonii</i>)	Open sagebrush communities on rocky loam or rocky clay loam soils between the elevations of 6,200 to 10,000 feet.	Present

Environmental Consequences/Mitigation:

Proposed Action:
Ute Ladies'-tresses.

The proposed fence line crosses Abrams Creek once at the northern end of the project area. The fence line crossing is at an elevation of 7,000 feet which is above the known elevational range for Ute ladies' tresses. In addition, the riparian area consists of narrowleaf cottonwood and shrubby riparian species which do not appear suitable for supporting Ute ladies' tresses. There is no habitat suitable for the Ute ladies' tresses within the project area and the proposed action would have "No Effect" on this species.

Harrington's penstemon.

Harrington's penstemon is found in sagebrush and sagebrush/mixed mountain shrub habitat on rocky loam or rocky clay loam soils. A population of Harrington's penstemon was previously documented along the middle portion of the proposed Abrams Creek Fence extension. Roughly 1.2 miles of the 1.5 mile proposed fence line would be constructed within an old gas pipeline right-of-way. The pipeline disturbance removed most of the existing vegetation and the route was seeded to crested wheatgrass. Harrington's penstemon plants have begun to colonize small portions of the old gas pipeline disturbance from the adjacent undisturbed shrublands. Where seeded grasses are thickest or where soils are more alkaline, few or no Harrington's penstemon plants are found. However, where habitat is more suitable, Harrington's penstemon is present in relatively dense patches. It is estimated that between 900 and 1,000 Harrington's penstemon plants may occur along the proposed fence line. An additional 1,000-1,500 plants may occur in the adjacent undisturbed sagebrush habitat.

Given the minimal amount of surface disturbance required for the fence construction, less than 100 penstemon plants are likely to be damaged or lost during construction activities. Livestock tend to travel along fence lines, creating narrow corridors of bare ground. Another 100 plants may be lost due to livestock trailing after the fence is constructed. The loss of approximately 200 Harrington's penstemon plants represents less than 8% of the local population and would not result in a loss of long-term viability of the population.

No Action Alternative:

Under the no action alternative, no fence construction would take place. Livestock would likely continue to drift between the two allotments, resulting in unauthorized use. Livestock use above the permitted numbers and season of use would result in areas of excessive grazing and trampling which may result in direct losses of special status plants or increases in noxious weeds that compete with special status plants for available moisture and nutrients.

Analysis on the Public Land Health Standard 4 for Special Status Plant Species (partial, see also Special Status Terrestrial and Aquatic Wildlife Species): The Eagle River South Watershed Land Health Assessment encompassed East and West Hardscrabble allotments where the proposed action would occur. East Hardscrabble allotment was meeting Standard 4, but West Hardscrabble allotment did not meet Standard 4 for sage grouse and Harrington's penstemon populations. Problems were related primarily to livestock concentration in riparian areas and extensive OHV use degrading and fragmenting habitat for sage grouse and Harrington's penstemon. The proposed fence construction would result in the loss of a small percentage of the local population of Harrington's penstemon but would improve habitat conditions overall for

Harrington’s penstemon. The fence would provide better control of livestock distribution and reduce areas of concentrated livestock grazing and trampling. The proposed action would be expected to move land health conditions towards meeting the Standard for special status plants.

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

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

Special Status Terrestrial Wildlife Species

Federally Listed, Proposed or Candidate Terrestrial Wildlife Species			
Species	Habitat/Range	Occurrence	Potentially Impacted by the Proposed Action or Alternatives
Black-footed Ferret (<i>Mustela nigripes</i>)	Federally listed as endangered. Black-footed ferrets have ranged statewide but never have been abundant in Colorado. Their habitat included the eastern plains, the mountain parks and the western valleys – grasslands or shrub lands that supported some species of prairie dog, the ferret’s primary prey. State and federal biologists have established two major black-footed ferret colonies: one at Coyote Basin (Colorado-Utah border west of Rangely) and another at the BLM’s Wolf Creek Management Area southeast of Dinosaur National Monument .	Absent	No
Canada lynx (<i>Lynx Canadensis</i>)	Federally listed as threatened. Canada lynx occupy high-latitude or high-elevation coniferous forests characterized by cold, snowy winters and an adequate prey base. In the western US, lynx are associated with mesic forests of lodgepole pine, subalpine fir, Engelmann spruce, and quaking aspen in the upper montane and subalpine zones, generally between 8,000 and 12,000 feet in elevation. Although snowshoe hares (<i>Lepus americanus</i>) are the preferred prey, lynx in also feed on mountain cottontails (<i>Sylvilagus nuttallii</i>), pine squirrels (<i>Tamiasciurus hudsonicus</i>), and blue grouse (<i>Dendragapus obscurus</i>). The Forest Service has mapped suitable denning, winter, and other habitat for lynx within the White River and Routt National Forests. The mapped suitable habitat comprises areas known as Lynx Analysis Units (LAUs) that are the approximate the size of a female’s home range. Several LAUs border BLM lands however no areas large enough to be considered LAUs occur within the CRVFO. BLM lands within the project area generally support the movement of lynx dispersing to a new areas or moving to lower elevations during severe winter weather in search of prey.	Absent	No

Mexican spotted owl (<i>Strix occidentalis lucida</i>)	Federally listed as endangered. This owl nests, roosts, and hunts in mature coniferous forests in canyons and foothills. The key habitat components are old-growth forests with uneven-age stands, high canopy closure, high tree density, fallen logs and snags. The only extant populations in Colorado are in the Pikes Peak and Wet Mountain areas of south-central Colorado and the Mesa Verde area of southwestern Colorado.	Absent	No
Greater Sage-grouse (<i>Centrocercus urophasianus</i>)	Candidate for Federal listing. Sage-grouse, as the name implies, are found only in areas where sagebrush is abundant, providing both food and cover. Sage-grouse prefer relatively open sagebrush flats or rolling sagebrush hills. In winter, sagebrush accounts for 100% of the diet for these birds. In addition, it provides important escape cover and protection from the elements. In late winter, males begin to concentrate on traditional strutting grounds or leks. Females arrive at the leks 1-2 weeks later. Leks can occur on a variety of land types or formations (windswept ridges, knolls, areas of flat sagebrush, flat bare openings in the sagebrush. Breeding occurs on the leks and in the adjacent sagebrush, typically from March through May. Females and their chicks remain largely dependent on forbs and insects for food well into early fall. Within the CRVFO sage-grouse are still present in the northeast part of the Field Office in the Northern Eagle/Southern Routt population, while small (<500 birds), probably has, or had, a relationship with the larger population in Moffat, Rio Blanco and western Routt counties, and probably with the Middle Park population to the east.	Absent	No
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	Candidate for Federal listing. This secretive species occurs in mature riparian forests of cottonwoods and other large deciduous trees with a well-developed understory of tall riparian shrubs. Western cuckoos breed in large blocks of riparian habitats, particularly woodlands with cottonwoods (<i>Populus fremontii</i>) and willows (<i>Salix</i> sp.). A few sightings of yellow-billed cuckoo have occurred in western Colorado along the Colorado River near Grand Junction however it is an uncommon summer resident of Colorado.	Absent	No
Uncompahgre fritillary butterfly (<i>Boloria acrocneuma</i>)	Federally listed as endangered. The butterfly has been verified at only two areas in the San Juan Mountains in Colorado. There is anecdotal evidence of other colonies in the San Juans and southern Sawatch ranges in Colorado. The butterfly exists above treeline in patches of its larval host plant, snow willow. The butterfly is most often found on north and east facing slopes, which provide a moist, cool, microclimate. The greatest known controllable threat is butterfly collecting. Climatological patterns, disease, parasitism, predation, and trampling of larvae by humans and livestock might pose additional threats.	Absent	No
Colorado BLM Sensitive Terrestrial Wildlife Species			

Species	Habitat/Range	Occurrence	Potentially Impacted by the Proposed Action or Alternatives
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>) and Fringed myotis (<i>Myotis thysanodes</i>)	Occur as scattered populations at moderate elevations on the western slope of Colorado. Habitat associations are not well defined. Both of these bats will forage over water and along the edge of vegetation for aerial insects. Although they commonly roost in caves, rock crevices, mines, or buildings, they also may roost in tree cavities. Both species are widely distributed and usually occur in small groups. Townsend's big-eared bat is not very abundant anywhere in its range and this is attributed to patchy distribution and limited availability of suitable roosting habitat (Gruver, J.C. and D.A. Keinath 2006).	Present	No
Northern goshawk (<i>Accipiter gentilis</i>)	The goshawk is an uncommon resident in foothills and mountains and occasional in migration and winter at lower elevations. Predominantly uses mature stands of aspen, and pines (ponderosa and lodgepole). Goshawks prey on small-medium sized birds and mammals. It breeds in coniferous deciduous and mixed forests. The nest is typically located on a northerly aspect in a drainage or canyon and is often near a stream. Nest areas contain one or more stands of large, old trees with a dense canopy cover. A goshawk pair occupies its nest area from March until late September. The nest area is the center of all movements and behaviors associated with breeding from courtship through fledging.	Absent	No
Goldeneye, Barrow's (<i>Bucephala islandica</i>)	This bird is an uncommon winter resident and spring/fall migrant in lowlands and mountains. A few may breed in the northern mountains such as the Flat Tops Wilderness Area. Goldeneye's prefer alkaline-freshwater lakes in parkland areas and to a lesser extent subalpine/alpine lakes/beaver ponds for breeding.	Absent	No
Ibis, white-faced (<i>Plegadis chihi</i>)	This bird is a very rare, non-breeding, summer migrant to western Colorado valleys and mountain lakes. This species is commonly found on the eastern slope of Colorado (e.g. San Luis valley). The species inhabits primarily freshwater wetlands, especially cattail (<i>Typha</i> spp.) and bulrush (<i>Scirpus</i> spp.) marshes. This species feeds in flooded hay meadows, agricultural fields, and estuarine wetlands. This species breeds in isolated colonies in mainly shallow marshes with "islands" of emergent vegetation.	Absent	No

Environmental Consequences/Mitigation:

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

Fringed Myotis and Townsend's Big-eared Bats. Healthy functioning riparian ecosystems and uplands provide habitat for a diverse and abundant plant community and in turn insect

populations that attract numerous foraging bat species. Properly managed livestock grazing (i.e. meeting land health standards) is generally compatible with bat species. The fence would provide better control of livestock distribution and reduce areas of concentrated livestock grazing. In summary, all bat species would benefit in the long-term from a reduction in livestock grazing trespass and maintenance of public land health standards. Also see the vegetation and riparian sections.

No Action Alternative: Under the no action alternative, no fence construction would take place. Livestock would continue to drift between the two allotments resulting in grazing trespass. Livestock use above the permitted numbers and season of use could result in overgrazing. Overgrazing can reduce vegetative structure and complexity causing local terrestrial wildlife numbers and richness to be lower.

Analysis on the Public Land Health Standard 4 for Special Status Terrestrial Wildlife Species: (partial, see also Special Status Plants and Aquatic Wildlife): The proposed action would help improve grazing management through reduced trespass. The improvement in the condition of upland and riparian areas would in turn help maintain Colorado public land health standard 4 for bat species. The no action alternative may result in a slight deterioration of land health standard 4 for bat species.

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

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

Special Status Aquatic Wildlife Species

Federally Listed, Proposed or Candidate Aquatic Wildlife Species			
Species	Habitat/Range	Occurrence	Potentially Impacted by the Proposed Action or Alternatives
Greenback cutthroat trout (<i>Oncorhynchus clarki stomias</i>)	Federally listed as threatened. The greenback is the subspecies of cutthroat trout native to the Platte River drainage on the Eastern Slope of Colorado, while the Colorado River cutthroat trout is the subspecies native to the Western Slope of Colorado. Historically found in cold, clear, gravely headwater streams and mountain lakes of the Arkansas and South Platte River systems in Colorado and part of Wyoming. The greenback cutthroat trout was not identified on the USFWS list for Garfield County; however, recent surveys have identified a population in Cache Creek.	Absent	No

Bonytail (<i>Gila elegans</i>)	Federally listed as endangered. This large chub is a member of the minnow family found in large, fast-flowing waterways of the Colorado River system. Their current distribution and habitat status are largely unknown due to its rapid decline prior to research into its natural history. The bonytail is extremely rare in Colorado and no self-sustaining population exists. Only one has been captured in the state since 1980.	Absent	No
Colorado pikeminnow (formerly Colorado squawfish) (<i>Ptychocheilus lucius</i>)	Federally listed as endangered. The Colorado pikeminnow exists primarily in the Green River below the confluence with the Yampa River, the lower Duchesne River in Utah, the Yampa River below Craig, Colo., the White River from Taylor Draw Dam near Rangely downstream to the confluence with the Green River, the Gunnison River in Colorado, and the Colorado River from Palisade, Colo., downstream to Lake Powell. Biologists believe Colorado pikeminnow populations in the upper Colorado River basin are now relatively stable and in some areas may even be growing. Designated Critical Habitat for the Colorado pikeminnow includes the Colorado River and its 100-year floodplain west (downstream) from the town of Rifle.	Absent	No
Humpback chub (<i>Gila cypha</i>)	Federally listed as endangered. Found in deep, clear to turbid waters of large rivers and reservoirs over mud, sand or gravel. The nearest known habitat for the humpback chub is within the Colorado River approximately 70 miles downstream from the project area. Only one population of humpback chub, at Black Rocks west of Grand Junction, is known to exist in Colorado.	Absent	No
Razorback sucker (<i>Xyrauchen texanus</i>)	Federally listed as endangered. The razorback sucker was once widespread throughout most of the Colorado River Basin from Wyoming to Mexico. In the upper Colorado River Basin, they are now found only in the upper Green River in Utah, the lower Yampa River in Colorado and occasionally in the Colorado River near Grand Junction. Because so few of these fish remain in the wild, biologists have been actively raising them in hatcheries in Utah and Colorado and stocking them in the Colorado River. Designated Critical Habitat for the razorback sucker includes the Colorado River and its 100-year floodplain west (downstream) from the town of Rifle.	Absent	No
Colorado BLM Sensitive Aquatic Species			
Species	Habitat/Range	Occurrence	Potentially Impacted by the Proposed Action or Alternatives

Northern leopard frog (<i>Rana pipiens</i>)	Generally found between 3,500 to 11,000 feet, in wet meadows and in shallow lentic habitats. They require year-round water sources, deep enough to provide ice free refugia in the winter. Within the CRVFO, this species has been documented in locales where quality riparian vegetation exists in conjunction with perennial water sources. Larger populations of this species have been documented northwest of King Mountain within the small drainage that feeds King Mountain (Ligon) Reservoir, June Creek and East Divide Creek south of Silt, Colorado, and in portions of the Rifle Creek watershed north of Rifle, Colorado.	Absent	No
Bluehead sucker (<i>Catostomus discobolus</i>), Flannelmouth sucker (<i>Catostomus latipinnis</i>), and Roundtail chub (<i>Gila robusta</i>)	Primarily found in larger rivers but may also be found in smaller tributaries with good connectivity to larger river systems. These fish are endemic to the Colorado River basin and reside within the mainstem Colorado River and its major tributary streams. Given their biology, feeding habits, habitat needs, and niche in the ecosystem, these species can persist in the face of actions that increase sediments to streams and rivers containing these species.	Absent	No
Mountain sucker (<i>Catostomus platyrhynchus</i>)	The mountain sucker is found primarily in small, low- mid elevation streams in northwestern Colorado with gravel, sand or mud bottoms. They inhabit undercut banks, eddies, small pools, and areas of moderate current. Young fish prefer backwaters and eddies. A population of mature adults is found in Steamboat Lake. Within the CRVFO, only known occurrence is in Piceance Creek.	Absent	No
Colorado River cutthroat trout (CRCT) (<i>Oncorhynchus clarkii pleuriticus</i>)	CRCT are one of three subspecies of native trout found in Colorado. CRCT prefer clear, cool headwaters streams with coarse substrates, well-distributed pools, stable streambanks, and abundant stream cover. CRCT have been documented as occurring in streams such as Parachute Creek, Abrams Creek, Battlement Creek, Mitchell Creek, North Thompson Creek and Red Dirt Creek. It is likely that all of the perennial waters capable of harboring fish historically contained this native trout species. CRCT have hybridized with non-native salmonids in many areas, reducing the genetic integrity of this subspecies. Rainbow trout hybridize with cutthroat trout. Brook and brown trout tend to replace them in streams and rivers.	Present	Yes

Environmental Consequences/Mitigation:

Proposed Action: Abrams Creek contains a Core Conservation Population of pure CRCT. There are four general components of an aquatic system that can be affected by livestock grazing; streamside vegetation, stream channel morphology, shape and quality of the water column and the structure of the soil portion of the streambank (Behnke, R. J., and R. F. Raleigh 1979). The

reduction of streamside riparian vegetation by improper grazing can alter the dynamics of aquatic habitat. In areas where riparian vegetation is overgrazed, increased solar radiation from lack of vegetation can cause 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 affects food availability for resident fish. Increased stream temperatures affect cutthroat by reducing their growth efficiency and increasing their likelihood of succumbing to disease.

Properly managed livestock grazing (i.e. meeting land health standards) is generally compatible with all aquatic species. The fence would provide better control of livestock distribution and reduce areas of concentrated livestock grazing. In summary, all aquatic species would benefit in the long-term from a reduction in livestock grazing trespass and maintenance of public land health standards. Also see the vegetation and riparian sections.

No Action Alternative: Under the no action alternative, no fence construction would take place. Livestock would continue to drift between the two allotments resulting in grazing trespass. Livestock use above the permitted numbers and season of use could result in overgrazing. Overgrazing can reduce vegetative structure and complexity causing local terrestrial wildlife numbers and richness to be lower.

Analysis on the Public Land Health Standard 4 for Special Status Aquatic Wildlife Species: (partial, see also Special Status Plants and Terrestrial Wildlife): The proposed action would help improve grazing management through reduced grazing trespass. The improvement in the condition of riparian areas would in turn help maintain Colorado public land health standard 3 for aquatic wildlife species. The no action alternative may result in a slight deterioration of land health standard 3 for aquatic wildlife species in Abrams Creek.

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

Affected Environment:

Surface Water: The proposed action is located within water quality stream segment 10b of the Upper Colorado River Basin. Stream Segment 10b of the Upper Colorado River Basin is defined as “Abrams Creek, including all tributaries and wetlands, from the source to the eastern boundary of the United States Bureau of Land Management lands” (CDPHE–WQCC. 2010a). More specifically, the proposed action would occur entirely within the 9,748 acre Abrams Creek 6th field sub-watershed that contains the perennial Abrams Creek. Abrams Creek is tributary to the perennial Brush Creek which is in turn tributary to the Eagle River approximately 1 mile downstream of Eagle, CO. The Eagle River is tributary to the Colorado River near Dotsero, CO.

Abrams Creek has a relatively small watershed with its headwaters originating on the north slope of the approximately 10,500 foot southeast-northwest trending Hardscrabble Mountain. In the vicinity of the project area, Abrams Creek is a step-pool channel that could be classified as a Rosgen A-type channel. The channel is entrenched, width to depth ratios are low, and sinuosity

is low. Gradient is high approaching 6% and bankfull widths range from approximately 4 to 6 feet (this is characteristic of morphologic conditions near the proposed stream crossing as well). Substrate consists of material ranging in size from silt sized particles to small boulders with an average particle size closer to gravel.

The table below identifies stream classifications and water quality standards for Upper Colorado River Basin stream segment 10b as outlined in CDPHE, Regulation No. 33.

Stream Segment	Classifications	Numeric Standards					
		Physical and Biological	Inorganic (mg/l)		Metals (µg/l)		
COUCEA10b	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-1) _c C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH3(ac/ch)=TVS Cl2(ac)=0.019 Cl2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO2=0.05 NO3=10 Cl=250 SO4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=WS Mn(ac/ch)=TVS Hg(ch)=0.01(tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS

CDPHE–WQCC. 2010a

Based on evidence that shows that water quality meets the requirements of 31.8(2)a and the presence of Colorado River cutthroat trout (a State species of special concern), the Outstanding Water (OW) designation was added to the new Eagle River segment 10b: The Commission understands that existing land uses are in place in this watershed. The evidence demonstrates that these existing land uses are compatible with the OW 108 designation since the current high level of water quality has been attained with these uses in place. It is the Commission’s intent that this OW designation should not be used to establish additional permit requirements for existing uses within this area (CDPHE–WQCC. 2010a).

The CDPHE —Integrated Water Quality Monitoring and Assessment Report-2010 update to the 2008 305(b) Report (CDPHE-WQCC. 2010c) was reviewed to determine the current status of assessment and determination of water quality within the project area. The Colorado Integrated Reporting Category (IR) value assigned to the assessment units in the —Status of Water Quality in Colorado – 2010 document was IR=2. Stream segment 10b is described as fully supporting agriculture, water supply and primary contact recreation while insufficient information was available for making a determination on aquatic life cold 1. However, selenium from unknown sources may be impacting this segments ability to fully support cold aquatic life 1. In Colorado, the majority of the assessed surface water bodies fall into IR Categories 1, 2, and 3. Category 1 indicates waters attaining water quality standards. Colorado has elected to place segments where not all uses have been assessed in IR Category 2. In some cases, a complete assessment of all uses cannot be completed do to the lack of data, but the data that is available indicates that at least some of the uses that were assessed are fully supporting. IR Category 3 indicates that insufficient data is available to determine whether or not the classified uses are being attained. Category 4 indicates waters which are not supporting a standard for 1 or more classified uses, but a TMDL is not needed. IR Category 5 indicates that available data and/or information indicate that at least one classified use is not being supported or is threatened, and a TMDL is needed.

Segments must be placed in Category 5 when, based on existing and readily available data and/or information, technology-based effluent limitations required by the Clean Water Act (CWA), more stringent effluent limitations, and other pollution control requirements are not sufficient to implement an applicable water quality standard and a TMDL is needed. This category constitutes the Section 303(d) list of waters impaired by a pollutant (CDPHE-WQCC. 20010c).

The 2010 CDPHE-WQCC Regulation No. 93 Section 303d List of Impaired Waters and Monitoring and Evaluation List, was reviewed to determine if Upper Colorado River stream segment 10b was listed. The affected portion of stream segment 10b was not identified on the 303(d) or Monitoring and Evaluation list (CDPHE-WQCC. 2010b).

Groundwater: The primary source of groundwater within the allotment boundaries is located in shallow alluvial/colluvial deposits adjacent to Abrams Creek. No domestic or stock wells were identified on public land within the allotment boundary.

Water Rights: Near the upstream end of the proposed fence line is the Gulch diversion which takes water directly from Abrams Creek. According to the Colorado Decision Support Systems (CDSS) map viewer, which is a water management system being developed by the Colorado Water Conservation Board and the Colorado Division of Water Resources; this diversion is for the Gulch Ditch which is currently being used for agricultural and domestic purposes downstream. On July 10, 2009 discharge measurements were taken above and below this diversion. The result was approximately 1.63 cubic feet per second above the diversion and 1.2 cubic feet per second above the culvert. Essentially the ditch was diverting approximately 0.5 cfs or one third of flows at the time measurements were taken. Currently the BLM is working with the State of Colorado and the Gulch Ditch users to change the point of diversion to benefit native cutthroat trout throughout this crucial stretch of Abrams Creek.

Environmental Consequences/Mitigation:

Proposed Action:

Surface Water: Under the proposed action the existing fence line will be extended to enable proper grazing management on the East and West Hardscrabble allotments. Nearly all of the proposed fence will be situated on previously disturbed areas with the exception of approximately 0.3 miles situated on the northern and southern extremities of the line. One stream crossing will be required in order to adequately prevent grazing trespass in the riparian zone of Abrams Creek (part of the East Hardscrabble allotment). As identified under the proposed action, fence construction within the bankfull area (approximately the area inundated by the 1.5 year flood interval) will be designed to allow passage of normal bankfull flows and break-away under larger flooding events. As a result, no negative impacts to water quality or stream channel stability are anticipated to occur from fence construction. Proper grazing management in the East and West Hardscrabble allotments ensure Public Land Health Standards are being met. Mitigated potential water quality deterioration and stream channel instability by regularly inspecting (e.g. after flooding events) and routinely maintaining the stream crossing.

Debris created from the break-away fence should be removed from the flood-prone area and properly disposed of.

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

Water Rights: Construction of the proposed fence will have no impacts to water rights.

No Action Alternative: The no action alternative would have no effect on water resources in the area.

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

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

Affected Environment: The proposed fence would cross a riparian area along Abrams Creek. A 2002 Proper Functioning Condition (PFC) assessment rated the riparian area as proper functioning condition. Riparian vegetation along this reach includes narrowleaf cottonwood, alder, willow, chokecherry and Woods' rose.

Environmental Consequences/Mitigation:

Proposed Action: There may some destruction and temporary loss of riparian vegetation at the above sites due to construction activities; however, the proposed action would require clearing of riparian vegetation 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 (approximately 0.01 acre) of loss of riparian vegetation. Extension of the fence would reduce the likelihood of livestock grazing trespass. Grazing trespass often results in improper management (e.g. over-utilization of forage, increased duration and frequency of grazing use, reduced opportunity for grazing rest or deferment, and reduced recovery and re-growth periods). All of the above can cause a decline in the condition and health of the riparian area. Construction of the fence would improve grazing management and help maintain the condition/health of the riparian area. 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. This alternative would not result in improved grazing management or help to maintain the condition of the riparian area.

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). The no action alternative may result in a deterioration of this land health standard.

Wild and Scenic River

Affected Environment: The proposed action is within the 0.5 mile river corridor of Abrams Creek, which was found to be eligible under a Wild and Scenic Eligibility Study in 2007. Abrams Creek will be managed to preserve the identified Outstanding Remarkable Values (ORV’s) until such a time as a suitability study is completed. The ORV identified for Abrams Creek was a core conservation population of Colorado River cutthroat trout. The overall objective is to not allow surface disturbing activities that might impair the identified ORV or its preliminary classification, which was classified as recreational. (*see Threatened, Endangered and Sensitive section; Fish*).

Environmental Consequences/Mitigation:

Proposed Action: The proposed action will improve livestock management and limit impacts to Abrams Creek, which should have a small beneficial impact to the Colorado River cutthroat trout and thus would enhance, and not negatively impact, the stream’s identified ORV or preliminary classification.

No Action Alternative: This alternative would not have any impacts to Abrams Creek’s ORV or preliminary classification. This alternative would not result in any benefits to the Colorado River cutthroat trout.

Other Affected Resources

In addition to the critical elements, the resources presented in the table below 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.

Other Resources Considered in the Analysis.			
<i>Resource</i>	<i>NA or Not Present</i>	<i>Present and Not Affected</i>	<i>Present and Affected</i>
Access and Transportation		X	
Cadastral Survey	X		
Fire/Fuels Management	X		
Forest Management	X		
Geology and Minerals	X		
Law Enforcement	X		
Paleontology	X		
Noise	X		
Range Management			X

Realty Authorizations			X
Recreation			X
Socio-Economics	X		
Soils*			X
Vegetation*			X
Visual Resources			X
Wildlife, Aquatic*			X
Wildlife, Terrestrial*			X

*Public Land Health Standard

Range Management

Affected Environment: The proposed fence extension is the boundary between the West Hardscrabble and East Hardscrabble Allotments. Permitted grazing use is as follows:

Allotment Name/No.	Livestock No./Kind	Period of Use	% PL	AUMS
West Hardscrabble 08659	623 Cattle	05/16 – 06/30	100	942
	10 Cattle	05/16 – 06/30	100	15
East Hardscrabble 08668	581 Cattle	05/06 – 06/20	100	879

The existing allotment boundary fence was constructed in 1963 and tied to a natural boundary (steep hillside) at the fence's northern terminus. Since that time, several trails (mountain bike/hiking) have been created that traverse this natural barrier which is the result of increased recreational use in the Hardscrabble area. Livestock have begun to use these trails as well causing unauthorized grazing use (livestock drift between the East and West Hardscrabble allotments).

Environmental Consequences/Mitigation:

Proposed Action: Extension of the fence will make it more effective in controlling livestock, reduce the potential for grazing trespass, improve grazing management, and improve conformance with Colorado Livestock Grazing Management Guidelines. Grazing trespass often results in improper management (e.g. over-utilization of forage, increased duration and frequency of grazing use, reduced opportunity for grazing rest or deferment, and reduced recovery and re-growth periods). This jeopardizes conformance with Colorado Livestock Grazing Management Guidelines and achievement of Colorado Public Land Health Standards 1 (upland soils), 2 (riparian systems), 3 (plant and animal communities), 4 (T&E species), and 5 (water quality). Extension of the fence would reduce the likelihood of livestock grazing trespass, improve conformance with Colorado Livestock Management Guidelines, and help maintain/achieve Public Land Health Standards.

No Action Alternative: The fence extension would not be constructed. Livestock would continue to use trails that cross natural barriers causing unauthorized grazing use (livestock drift between the East and West Hardscrabble allotments). Grazing management would not be improved. This jeopardizes conformance with Colorado Livestock Grazing Management

Guidelines and achievement of Colorado Public Land Health Standards 1 (upland soils), 2 (riparian systems), 3 (plant and animal communities), 4 (T&E species), and 5 (water quality).

Realty Authorizations

Affected Environment: The proposed action would parallel a natural gas pipeline owned by the Public Service Company of Colorado (PSCCO) and cross the pipeline in Sections 19 and 20.

Environmental Consequences/Mitigation:

Proposed Action: The proposed action will include a gate that allows motorized access for PSCCO to conduct their regular maintenance activities of the pipeline. Before installation of the fence, a locator company (such as 811) would be notified and the posts shall be installed a minimum of five feet on either side of the pipeline. The requirements above have been incorporated into proposed action (project design features) and would result in no impacts to the natural gas pipeline.

No Action Alternative: This alternative will have no affect on realty authorizations.

Recreation

Affected Environment: The proposed action is within the Hardscrabble area within the Glenwood Springs Field Office Extensive Recreation Management Area (GSFO ERMA). ERMA's are areas where recreation is planned for and actively managed on an interdisciplinary-basis in concert with other resources/resource programs.

Hardscrabble recreation management may change in the CRVFO Resource Management Plan Revision. Under Alternative A, it would remain under the GSFO ERMA. Under Alternative B and C, Hardscrabble would be incorporated in the Hardscrabble/East Eagle ERMA to offer visitors the freedom to participate in a variety of close-to-town day-use recreation activities in a relatively unchanged, natural-appearing landscape which lead to a variety of recreation experiences and benefits. Under Alternative D, a Hardscrabble/East Eagle Special Recreation Management Area (SRMA) would be formed to offer challenging, close-to-town, easy to access recreational opportunities of single-track mountain biking and off-highway vehicle riding.

Environmental Consequences/Mitigation:

Proposed Action: The proposed action would allow for visitors to cross through the fence on a trail via gates. The mountain biking visitors and single-track users will be able to cross through the mountain bike cattle guard installed adjacent to the gate. Other users (horseback riders, hikers, dog walkers, etc.) will be able to cross the fence through the main gate, which will remain unlocked. The proposed action will have negligible impact to the visitors.

No Action Alternative: This alternative will have no affect on recreation visitors.

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

Affected Environment: According to the *Soil Survey of Aspen-Gypsum Area, Colorado: Parts of Eagle, Garfield, and Pitkin Counties* (USDA 1992), the proposed activities would be located on the soil map units Almy loam and Gypsum land-Gypsiorthids complex. Following is a brief description of the two soil map units encountered in the project area.

Map unit: 6 - Almy loam, 1 to 12 percent slopes. The *Almy* component makes up 80 percent of the map unit. This component is situated on alluvial fans and hills. The parent material consists of alluvium derived from calcareous sandstone and/or alluvium derived from calcareous shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded or ponded. There is no zone of water saturation within a depth of 72 inches. Surface runoff for this soil is medium and the water erosion hazard is moderate. Organic matter content in the surface horizon is about 2 percent. This component is in the R048AY298CO Rolling Loam ecological site. Nonirrigated land capability classification is 4e. Irrigated land capability classification is 4e. This soil does not meet hydric criteria.

Map unit: 55 - Gypsum land-Gypsiorthids complex, 12 to 65 percent slopes
Gypsum land (65%) Generated brief soil descriptions are created for major soil components. The Gypsum land is a miscellaneous area.

The *Gypsiorthids* component makes up 20 percent of the map unit. Slopes are 12 to 50 percent. This component is situated on mountains, drainageways, and hills. The parent material consists of mixed colluvium and/or mixed residuum. Depth to a root restrictive layer, bedrock, paralithic, is 10 to 40 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded or ponded. There is no zone of water saturation within a depth of 72 inches. Surface runoff for this unit is very rapid and the water erosion hazard is slight to severe. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 8s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 5 percent. The soil has a slightly saline horizon within 30 inches of the soil surface.

Environmental Consequences/Mitigation:

Proposed Action: The proposed activities would result in minimal removal of vegetation, and slight soil compaction at the stream crossing of Abrams Creek. Limited quantities of sediment may be available for transport to Abrams Creek during fence construction. However, given the nature and scale of the project no measurable impacts to soil health should occur if the crossing is maintained in functional condition.

No Action Alternative: The No-Action alternative would have no impact on soil resources in the area.

Analysis on the Public Land Health Standard 1 for Upland Soils: In 2002 the BLM Glenwood Springs Field Office assessed area soil conditions as part of the Eagle River South Watershed Land Health Assessment. Portions of two allotments, the 8,018 acre East Hardscrabble and the 16,300 acre West Hardscrabble is within the project area and were assessed at that time. The results of the assessment suggested that the East Hardscrabble Allotment was achieving standards with problems that included more bare ground than expected, less litter than expected, and pedestalling and water flow patterns at lower elevations. The West Hardscrabble Allotment was also achieving with similar problems that BLM staff attributed primarily to unregulated OHV use in the area. Given the scale and duration of the proposed action it is not likely that the proposed activities or the no action alternative would prevent Standard 1 for Upland Soils from being met.

Vegetation (includes an analysis of Public Land Health Standard 3; partial see also Aquatic Wildlife, Terrestrial Wildlife):

Affected Environment: The northern terminus of the proposed fence extension would cross Abrams Creek. Riparian vegetation along the creek consists of narrowleaf cottonwood (*Populus angustifolia*), thinleaf alder (*Alnus incana*), willows (*Salix* spp), and chokecherry (*Prunus virginiana*). The remainder of the fence line traverses sagebrush steppe habitat. Most of the fenceline is within an old gas pipeline disturbance which is presently dominated by big sagebrush (*Artemisia tridentata*), rubber rabbitbrush (*Chrysothamnus nauseosus*), crested wheatgrass (*Agropyron cristata*), western wheatgrass (*Pascopyrum smithii*), 4-wing saltbush (*Atriplex canescens*), mat penstemon (*Penstemon caespitosa*), Indian ricegrass (*Achnatherum hymenoides*), and Cryptantha (*Cryptantha* spp).

Environmental Consequences/Mitigation:

Proposed Action: Some vegetation would be damaged or destroyed during fence construction activities; however, any fence line clearing would be accomplished via a brushbeater or with hand tools (chainsaws) which would minimize the destruction or loss of vegetation. Post hole digging activities may disrupt or destroy several acres of vegetation. In addition, the livestock trailing that typically occurs along fence lines would cause a loss of less than 1.0 acre of vegetation.

Extension of the fence would reduce the occurrence of livestock grazing trespass. Grazing trespass often results in improper management (e.g. over-utilization of forage, increased duration and frequency of grazing use, reduced opportunity for grazing rest or deferment, and reduced recovery and re-growth periods). All of the above can cause a decline in the condition and health of the vegetation in the area and may create soil disturbances that promote noxious weed invasions. Construction of the fence would improve grazing management and help maintain or improve the condition of the vegetation. This would result in benefits to vegetation across a

broad area and offset any negative impacts to riparian areas from construction activities or livestock trailing along the fence line.

No Action Alternative: Livestock would likely continue to drift between the two allotments, resulting in unauthorized use. Livestock use above the permitted numbers and season of use would result in areas of excessive grazing and trampling which may result in direct losses of special status plants or increases in noxious weeds that compete with special status plants for available moisture and nutrients.

Analysis on the Public Land Health Standard 3 for Plant and Animal Communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): A formal Land Health Assessment was conducted on the project area in 2002. The lower elevations of East Hardscrabble allotment were not meeting Standard 3 for plant communities. The lower elevation sagebrush parks had fewer grasses, forbs, and biological soil crust cover than expected. Encroachment of Utah juniper trees into sagebrush habitat was also contributing to the failure to meet Standard 3. Causal factors included heavy big game winter use, poor livestock distribution, and fire suppression. The proposed action would provide for better livestock distribution which may help maintain or improve vegetative conditions and move towards meeting Standard 3.

Wildlife, Aquatic (includes an analysis of Public Land Health Standard 3; partial, see also Vegetation, Terrestrial Wildlife):

Affected Environment: *Fish.* Based on several sampling events by BLM and CDOW personnel, Abrams Creek is only known to contain Colorado River cutthroat trout. This species is addressed in detail above in special status aquatic wildlife species.

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

Environmental Consequences/Mitigation:

Proposed Action: There are four general components of an aquatic system that can be affected by livestock grazing; streamside vegetation, stream channel morphology, shape and quality of the water column and the structure of the soil portion of the streambank (Behnke, R. J., and R. F. Raleigh 1979). The reduction of streamside riparian vegetation by improper grazing can alter the dynamics of aquatic habitat. In areas where riparian vegetation is overgrazed, increased solar radiation from lack of vegetation can cause 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 aquatic wildlife and invertebrates. Terrestrial insect diversity and productivity also decreases with reductions in streamside vegetation, which also affects food availability for resident fish. Increased stream temperatures affect aquatic species by reducing their growth efficiency and increasing their likelihood of succumbing to disease. Increased suspension of sediments from offsite soil movement can increase sedimentation. Increases in sediments entering the stream can impact aquatic species by smothering egg masses.

Properly managed livestock grazing (i.e. meeting land health standards) is generally compatible with all aquatic species. The fence would provide better control of livestock distribution and reduce areas of concentrated livestock grazing. In summary, all aquatic species would benefit in the long-term from a reduction in livestock grazing trespass and maintenance of public land health standards. Also see the vegetation and riparian sections.

No Action Alternative: Under the no action alternative, no fence construction would take place. Livestock would continue to drift between the two allotments resulting in grazing trespass. Livestock use above the permitted numbers and season of use could result in overgrazing. Overgrazing can reduce vegetative structure and complexity causing local terrestrial wildlife numbers and richness to be lower.

Analysis on the Public Land Health Standard 4 for Special Status Aquatic Wildlife Species: (partial, see also Special Status Plants and Terrestrial Wildlife): The proposed action would help improve grazing management through reduced grazing trespass. The improvement in the condition of riparian areas would in turn help maintain Colorado public land health standard 3 for aquatic wildlife species. The no action alternative may result in a slight deterioration of land health standard 3 for aquatic wildlife species in Abrams Creek.

Wildlife, Terrestrial (includes an analysis of Public Land Health Standard 3; partial, see also Vegetation, Aquatic Wildlife):

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

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

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

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

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

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

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

Environmental Consequences/Mitigation:

Proposed Action: Livestock grazing can alter vegetation structure, composition, and function. On the other hand, livestock grazing can have a beneficial effect on forage quality by removing the rough or dried seedheads and stems, while leaving or creating the more palatable leaves for deer or elk to graze later in the season. Effects on terrestrial wildlife are dependent on the species of interest and may be adverse or beneficial depending on grazing numbers, timing, frequency, and intensity. Since the livestock AUMs authorized are estimated to remove 50% or less of the annual vegetative component - thereby leaving no less than 50% of the vegetative resource for

use by wildlife, well managed livestock grazing is generally compatible with meeting the needs of terrestrial wildlife. The fence would provide better control of livestock distribution and reduce areas of concentrated livestock grazing. In summary, all terrestrial wildlife species would benefit in the long-term from a reduction in livestock grazing trespass and maintenance of public land health standards. Also see the vegetation and riparian sections. Fence design meets BLM standards and land use plan requirements for wildlife that allows for passage without entanglement.

No Action Alternative: Under the no action alternative, no fence construction would take place. Livestock would continue to drift between the two allotments resulting in grazing trespass. Livestock use above the permitted numbers and season of use could result in overgrazing. Overgrazing can reduce vegetative structure and complexity causing local terrestrial wildlife numbers and richness to be lower.

Analysis on the Public Land Health Standard for Terrestrial Animal Communities (partial, see also Vegetation and Wildlife, Aquatic): The proposed action would help improve grazing management through reduced grazing trespass. The improvement in the condition of riparian areas would in turn help maintain Colorado public land health standard 3 for aquatic wildlife species. The no action alternative may result in a slight deterioration of land health standard 3 for aquatic wildlife species in Abrams Creek.

Visual Resources

Affected Environment: The proposed project area is located in an area classified as Visual Resource Management (VRM) Class III. The objective of VRM Class III is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Environmental Consequences/Mitigation:

Proposed Action: The majority of the fence will be located in an area that has already been disturbed by a pipeline and would not introduce any new contrasts. In areas where vegetation would need to be mowed outside of the existing pipeline, the proposed action would make contrasts to the existing landscape's form, line, color and texture. With the inclusion of project design features to clear vegetation for the fence, the level of change to the characteristic landscape would be moderate. Therefore the proposed action meets the objective of VRM Class.

No Action Alternative: The existing natural landscape would be maintained and VRM Class III objectives would be met.

SUMMARY OF CUMULATIVE IMPACTS

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

PERSONS AND AGENCIES CONSULTED:

Grazing Permittees

INTERDISCIPLINARY REVIEW:

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

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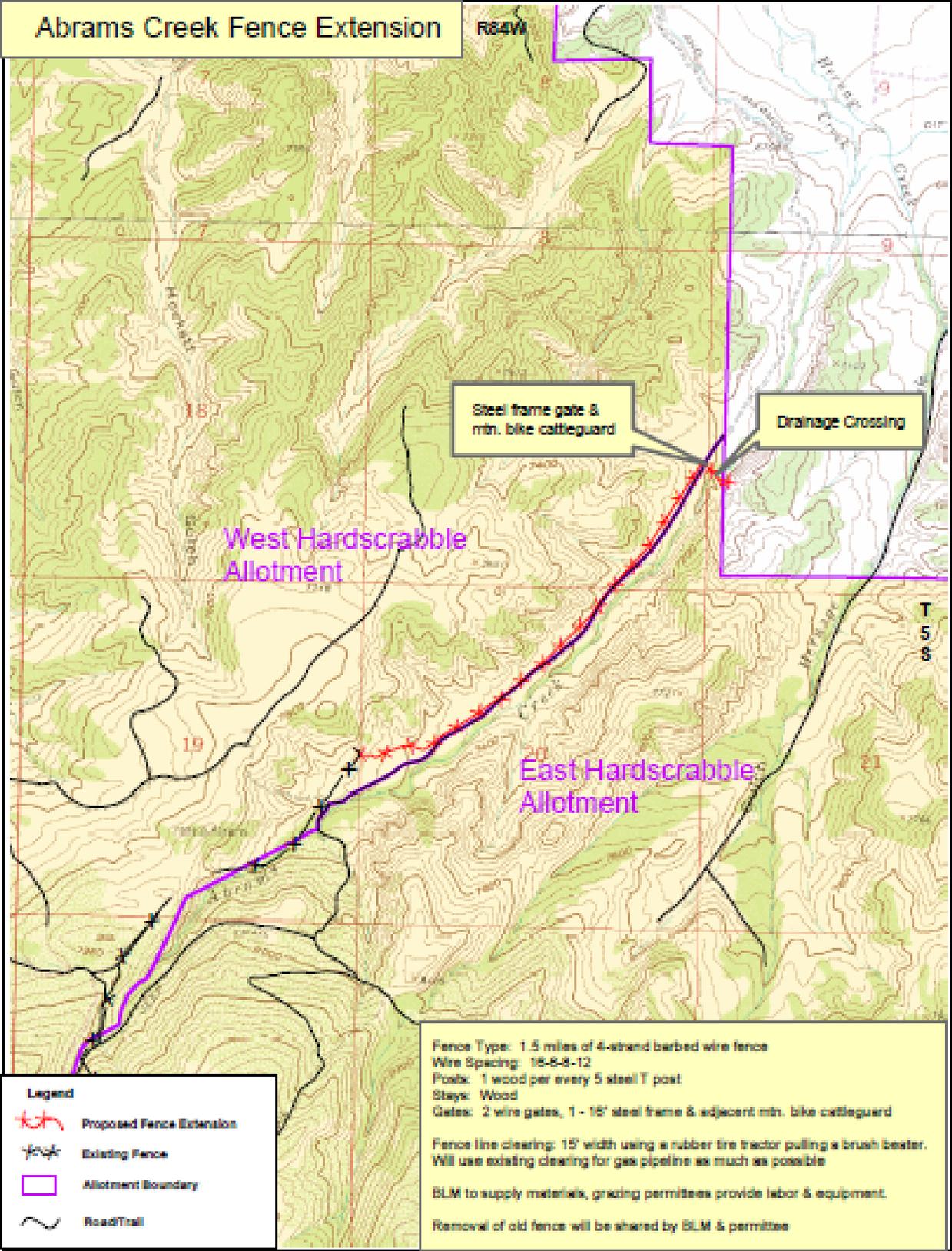
Management, Arlington, Virginia. 85 pp. [Online version available at <<http://www.fws.gov/migratorybirds/>>].

APPENDICES: None

ATTACHMENTS: Project Location Map, Project Specifications and Drawings

PREPARER: Michael R. Kinser

DATE: February 25, 2011



Project Specifications

02834
WORK DATA SHEET
for
SECTION 02834 - 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):

F: _____

E:

D: _____ 12

C: _____ 8

B: _____ 6

A: _____ 16

Line post spacing (L): 16 ft 6 inches

Type of Stays: Wood

Stay spacing (l): 0 to 1 stay per rod (16.5')

Length of wood posts (H_1): 8 or 7 ft _____ inches

Depth of wood posts in ground (h_1): 3 ft _____ inches

Length of steel posts (H_2): 5 ft 6 inches

Depth of steel posts in ground (h_2): To top of anchor plate

Ratio of Wood to Steel Line Posts: 1:5

Fence Drainage Crossing: Type A

Number of mechanical gate closers: None

PART 1: GENERAL

1.01 SUMMARY:

- A. Section Includes: Furnishing and installing wire fences.

PART 2: PRODUCTS

2.01 MATERIALS:

- A. Barbed Wire: A strand of two 12-1/2-ga galvanized wires twisted together with 2-point barbs of 14-ga wire spaced 4 inches apart. Wire and barbs shall be zinc-coated steel, with a zinc coating of at least 0.3 oz/ft² of coated surface area. The minimum breaking strength of each wire shall be 950 lb-force. The barbed wire shall conform to ASTM A 121.
- B. Wire Fence Stays shall be twisted wire fence stays manufactured from smooth galvanized 9-ga wire.
- C. Wood Fence Stays: Shall be sound and straight pieces, 2-1/2- to 3-1/2-inch diameter or 2x2-inch rough sawn of the species listed under wood posts and braces. Stays shall be of uniform length sufficient to extend a minimum of 3 inches above the top fence wire and touch the ground. Total length shall be 4 ft-0 inches.
- D. Staples: Shall be 9-ga, bright-finish or galvanized 1-1/2 inches long.
- E. Nails: Shall be 40d
- F. Steel Fence Posts: Shall be painted green with white or silver tops "T" or "U" (channel) bar type, with a welded or riveted anchor plate and shall be furnished with clip-type wire fasteners (punched tabs for fastening wires are not acceptable). Steel posts shall be manufactured from wrought, rail, or new billet steel, and shall have a minimum weight of 1.33 lb/lin ft exclusive of the anchor plate, which shall weigh a minimum of 0.67 lb \pm 5%, and shall be a minimum of 18 inch² in area. Steel fence posts and fasteners shall be according to ASTM A 702.
- G. Wood Posts and Braces:
1. Acceptable Wood Posts and Braces: Shall be sound single-stem members. A slight bend in one plane is acceptable. Posts and brace rails may be full stem members, sawed members of square cross section, or split members (western redcedar only). Line posts and brace rails shall be 4 inches minimum diameter at the small end. Sawed members shall be 4 x 4 rough sawn. Minimum cross sectional area at the small end for split members shall be 10 in². Honey locust, western redcedar (full stem with bark removed), juniper, osage orange, and white oak are acceptable without treatment.
 2. Basis for Rejection: Posts are not acceptable when sweep causes a straight line joining the center of the top to the center of the butt to fall outside the body of the post, or at a point 2 inches or more from the center of the post. Posts that are charred, twisted, rotted, or excessively bent are not acceptable. Seasoning checks, single or

opposite each other with a sum total equal to or more than 1/2 the thickness of the post are not acceptable.

- H. Steel Gates: Shall be steel frame and shall be fabricated according to the drawings. Fasteners, bolts, nuts and other accessories shall be galvanized or cadmium-plated.
- I. Wire Gates: Shall have the same type wire and wire spacing as the fence. Wood stays for wire gates shall be sound and straight pieces, 3-inch minimum diameter, and of the species listed under posts and braces.
- J. Mechanical Gate Closers: Assembly must include the following salient features:
 - 1. A rigid steel strap or 9-ga smooth wire loop 6 inches from the ground securely connected to the gate post and shaped so the gate stay shall be securely held in place.
 - 2. An adjustable cable or chain, or rigid steel strap fastened to a cam lever device located 6 inches from the top of the gate post. The closer shall be capable of securely holding the gate stay in place.
- K. Brace Wires: Shall be 4 wires of 9-ga smooth, galvanized wire or 2 wires of galvanized, 12-1/2-ga barbless wire. The minimum weight of zinc coating for 9-ga wire shall be at least 0.4 oz of zinc/ft² of coated surface area; for 12-1/2-ga wire at least 0.3 oz of zinc/ft² of coated surface area.
- L. Miscellaneous Wire: Wire for ties, gate loops and fastening wood stays shall be 9 or 12-1/2-ga galvanized wire.

PART 3: EXECUTION

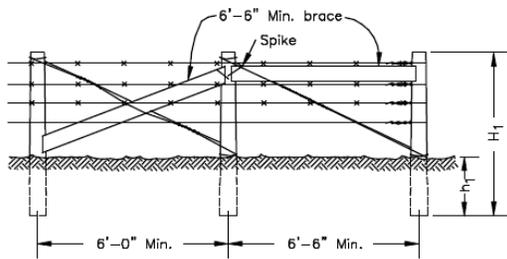
3.01 PREPARATION:

- A. Clearing: Maximum clearing width is 15 feet. Provide minimum disturbance to existing grass and sod.

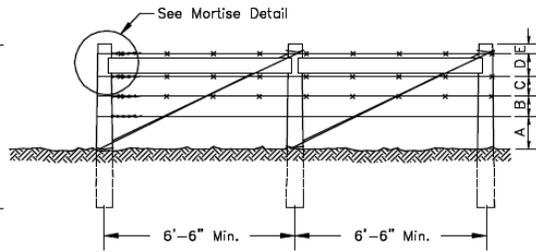
3.02 INSTALLATION:

- A. General: Steel posts shall not be used for end-panel, corner-panel, gate-panel, or stress-panel posts. Set wood posts in dug or drilled holes unless written authorization is obtained for driving line posts. Drive steel posts. When treated members must be bored or cut during construction, thoroughly swab untreated surfaces with approved preservative.
- B. Ratio of Wood to Steel Line Posts: 1:5
- C. Setting Posts: Dig holes for setting wood posts to the depth as shown on the Work Data Sheet. Set posts plumb and to the spacing and grades as shown on the drawings, unless staked otherwise. Space within 6 inches of that dimension shown on the drawings or in the Work Data Sheet. Holes shall provide adequate open space around the post so backfill can be tamped the full depth around the post. Backfill gradually and uniformly with soil around each post. Compact backfill firmly from the bottom of the hole to the ground surface.
- D. Driving Posts:

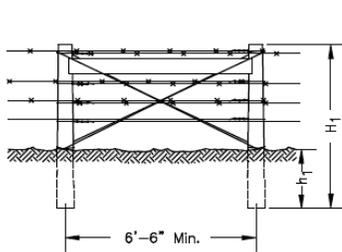
1. Wood Posts: Drive only when approved by the Contracting Officer. Wood posts to be driven shall be machine-pointed or have a tapered end driven into ground. Posts shall be driven plumb. Posts that are split, bent or broomed, will not be accepted.
 2. Steel Posts: Drive into the ground to the depth shown on the drawings or until the anchor plate is slightly below the ground surface. Posts shall be driven plumb. When rock formations prevent driving remove anchor plate and excavate or drill holes a minimum of 18 inches deep and slightly larger than the diameter of the post. Place posts in the holes and grout the post solidly in position with cement grout or mortar.
- E. Corner Post, Gate Post, Corner Panel, Brace, and End Panel (Stress Panel) Assemblies: Construct as shown on the drawings or as staked in the field. Rock jacks shall not be substituted for these items. Construct stress panels on crests of hills, a maximum of 660 ft center-to-center for woven wire fence sections, and a maximum of 1320 ft center-to-center for barbed wire sections. In addition, stress panels are required at points between which wire is to be stretched. Construct end panels at the end of fence runs unless shown otherwise on the drawings. When rock or unusual conditions make the construction of wood-post panels impractical, steel pipe panel may be constructed according to Drawing No. 02834-13 or Steel panels (tubular) may be constructed according to manufacturer's recommendations and Drawing No. 02834-14.
- F. Figure Fours and Rock Jacks: N/A
- G. Wire: Stretch tightly and staple to wood posts or securely attach to steel posts with standard wire clips or tie wire twisted tight. Wire is properly stretched when it is springy to the touch. Drive staples into wood until the staple comes in contact with the wire against the post, but not so tight as to crimp the wire or prevent movement of the wire. Do not drive staples parallel to the grain of the wood. Terminate wire at each end post, gate post, corner post, or stress panel. Wrap wire around the post two times and tie off by wrapping around the incoming wire a minimum of four times.
- H. Brace Wire: Shall be double-looped and twisted tight with a stick. For steel pipe panels, each wrap shall be looped once around the post. Leave one end of the stick long enough to fasten behind the horizontal brace to prevent wire from unwinding.
- I. Gates: Installed according to the Work Data Sheet, the drawings, and as recommended by the manufacturer when applicable.
- J. Mechanical Gate Closers: N/A
- K. Spiking: For spikes larger than 40d, predrilled lead holes shall be used. The hole diameter shall be three-fourths the diameter of the spike and drilled to a depth no greater than 1/2 the length of the spike.
- L. Drainage Crossing: Construct Type A drainage crossings as shown on the drawings, with an auxiliary fence of wire, rock weights, and posts constructed under and independent of the main fence, so that when the crossing washes out, the main fence will not be damaged.



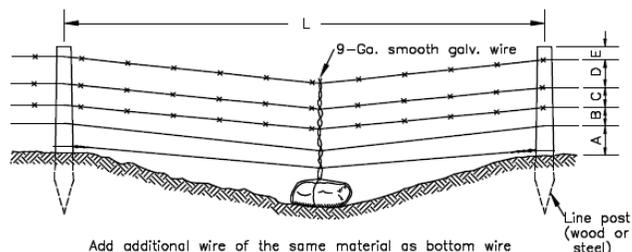
END PANEL-TYPE I



END PANEL-TYPE II

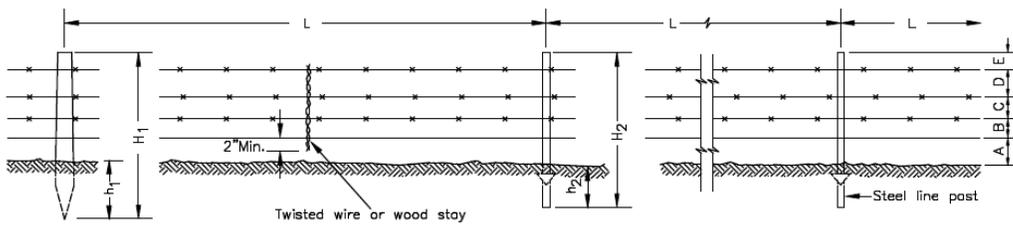


STRESS PANEL



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.

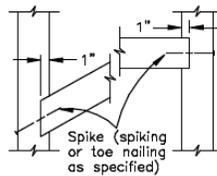
PANEL AT MINOR DEPRESSION



LINE PANELS

NOTE:

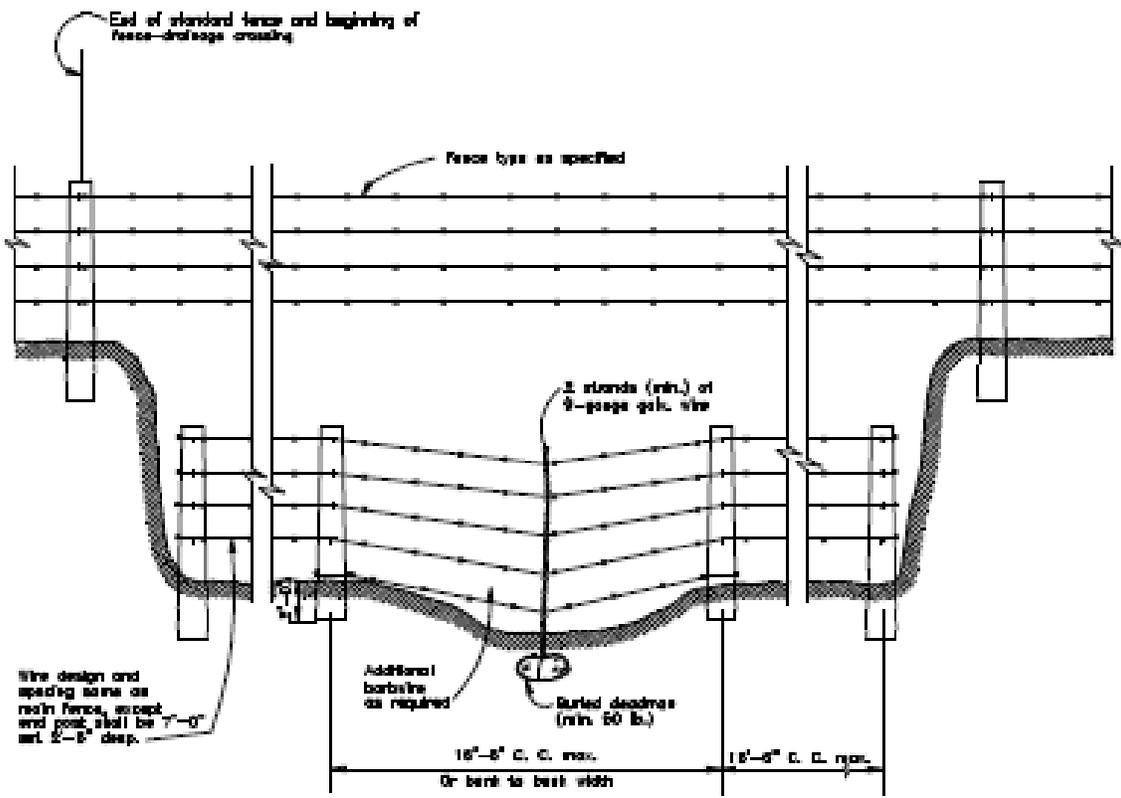
1. See specifications for the following:
 - a. Ratio of steel to wood line posts.
 - b. Post spacing, length and depth in ground.
 - c. Type of end panel to be used.
 - d. Type of wire to be used.
 - e. Spacing between wires.
 - f. Number of stays per span (L).



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	

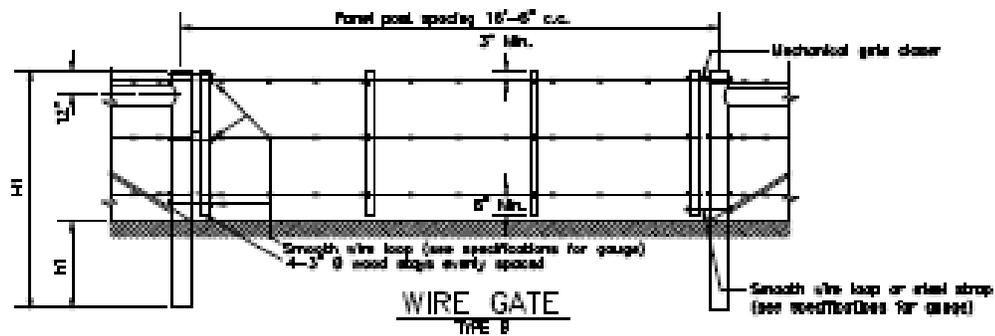
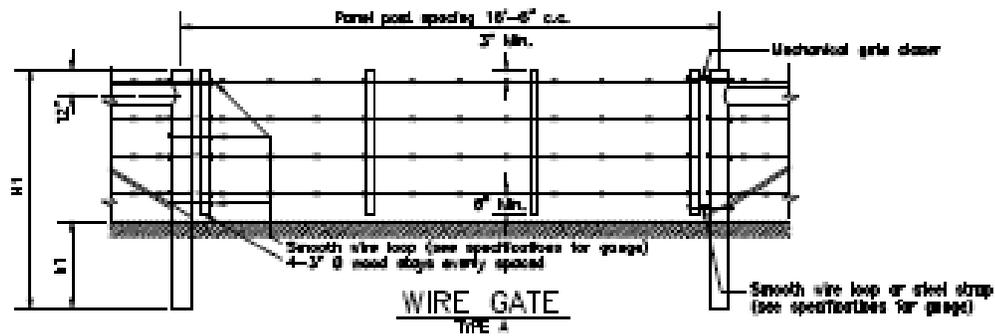
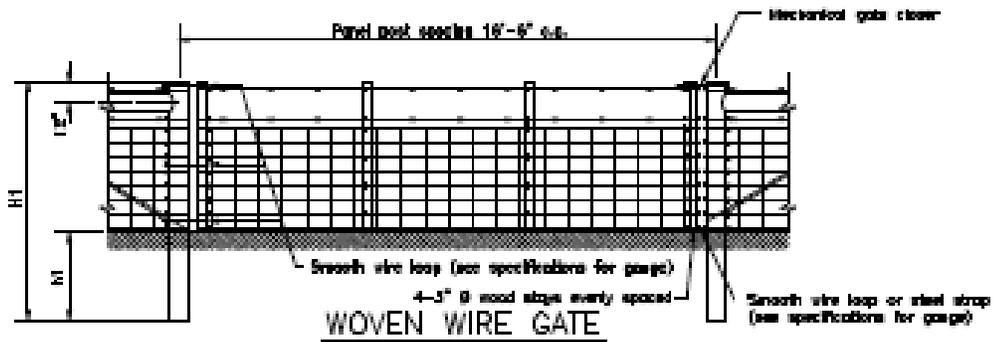


NOTE:

1. Slope wire on downstream side of channel posts.

ALWAYS THINK SAFETY

UNITED STATES DEPARTMENT OF THE INTERIOR	
BUREAU OF LAND MANAGEMENT	
DIVISION OF TECHNICAL SERVICES	SERVICE CENTER
FENCE-DRAINAGE CROSSING	
TYPE-A	
DESIGNED	by others
REVIEWED	
APPROVED	
DRAWN	SCALE NONE
DATE AUGUST 7, 1980	SHEET OF
DRAWING NO. 00000-1	

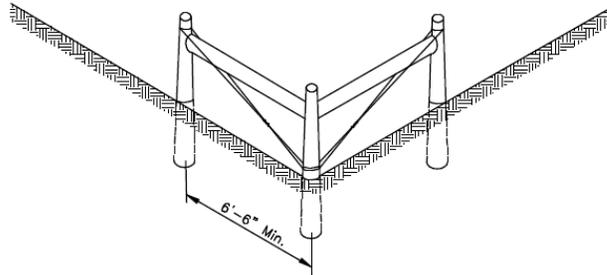


NOTES:

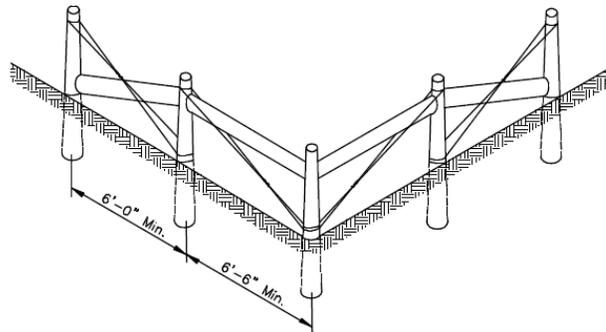
1. The opening end of gate shall be provided with smooth wire loop at bottom of end stags as is common practice for fastening wire gap gates or as modified for gates with mechanical gate closers.
2. Construct an end or stress post on each side of type required in the specifications.

ALWAYS THINK SAFETY

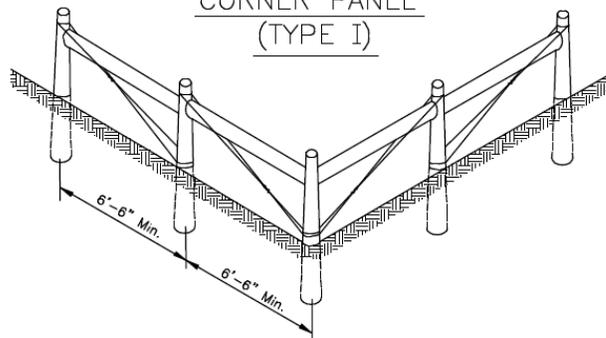
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF TECHNICAL SERVICES SERVICE CENTER	
TYPICAL WIRE GATES	
DESIGNED <u>by others</u>	
REVIEWED _____	
APPROVED _____	
DRAWN _____	SCALE NONE
DATE FEBRUARY 22, 1981	SHEET OF
DRAWING NO. 00001-2	



3-POST
CORNER PANEL



5-POST
CORNER PANEL
(TYPE I)



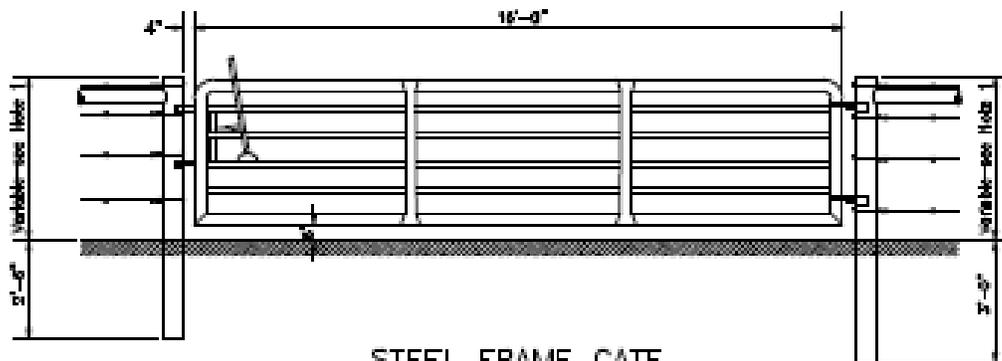
5-POST
CORNER PANEL
(TYPE II)

NOTES:

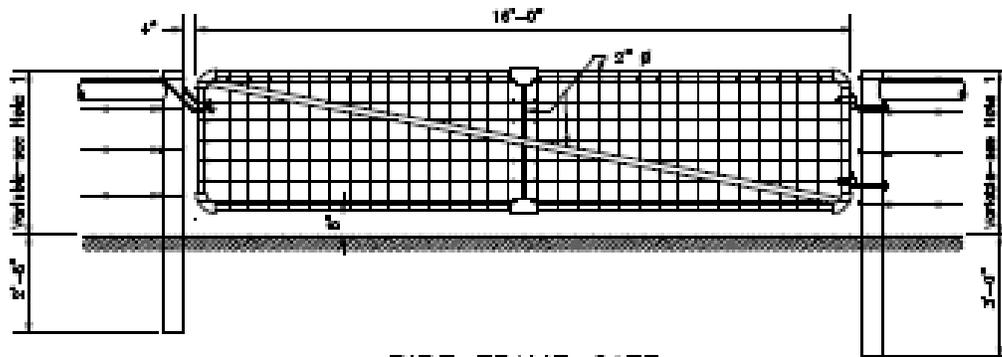
1. Refer to the specifications for type of corner panels to use.
2. Number of wires, type of wire, and wire spacing same as for fence. Posts shall be set 6 inches deeper than line posts.
3. Use spikes at junctures and mortise 1" deep at junctures of posts and braces.
4. Maximum spacing between posts shall be 8'-3" c.c.

ALWAYS THINK SAFETY

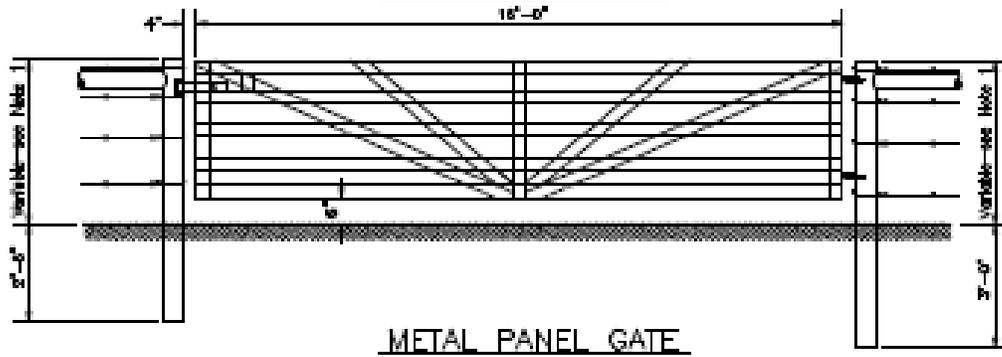
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF TECHNICAL SERVICES SERVICE CENTER	
CORNER PANELS	
DESIGNED	by others _____
REVIEWED	_____
APPROVED	_____
DRAWN	SCALE NONE
DATE FEBRUARY 25, 1991	SHEET OF
DRAWING NO. 02834-9	



STEEL FRAME GATE



PIPE FRAME GATE



METAL PANEL GATE

NOTES:

1. Post height dimension shall be the same as required for the adjacent fence.
2. Construct as end or stress panel, as required in the specifications, on each side of gate.
3. Hinges and locks shall be installed as specified by gate manufacturer.

ALWAYS THINK SAFETY

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF TECHNICAL SERVICES SERVICE CENTER	
TYPICAL STEEL GATES	
DESIGNED	by others
REVIEWED	
APPROVED	
DRAWN	SCALE NONE
DATE FEBRUARY 28, 1981	SHEET 01
DRAWING NO. D2034-7	



United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Colorado River Valley Field Office
2300 River Frontage Road
Silt, Colorado 81652



IN REPLY REFER TO:
ON 0507522
CON040

February 25, 2011

CERTIFIED MAIL 7010 2780 0001 3921 9112
RETURN RECEIPT REQUESTED

NOTICE OF PROPOSED DECISION

Dear _____:

Introduction:

Last summer the Bureau of Land Management (BLM) and grazing permittees indentified the need to extend an existing allotment boundary fence between the West and East Hardscrabble allotments. The existing allotment boundary fence was constructed in 1963 and tied to a natural boundary (steep hillside) at the fence's northern terminus. Since that time, several trails (mountain bike/hiking) have been created that traverse this natural barrier which is the result of increased recreational use in the Hardscrabble area. Livestock have begun to use these trails as well, causing unauthorized grazing use (livestock drift between the East and West Hardscrabble allotments). To help resolve this issue, the BLM and grazing permittees agreed to extend the existing fence by 1.5 miles.

The proposed project has undergone review for conformance with the land use plan and compliance with the National Environmental Policy Act (NEPA). The review and NEPA compliance has been completed as documented in Environmental Assessment (EA) No. CO-140-2011-0027.

In addition to construction of the new fence, the BLM and grazing permittees also agreed to designate maintenance responsibilities for all existing allotment boundary fences between the West and East Hardscrabble allotments.

Finding Of No Significant Impact (FONSI):

The environmental assessment, analyzing the environmental effects of the proposed action, has been reviewed. The proposed action including project design features 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.

Rationale: The analysis of the proposed action including project design features did not identify any impacts that would be significant in nature either in context or intensity. In addition, there is nothing to indicate the action is highly controversial or that it is related to other actions with individually insignificant but cumulatively significant actions.

Proposed Decision:

Under authority of 43 4120.3-1(f), 43 CFR 4120.3-2(a), 43 CFR 4120.3-4 and 43 CFR 4160.1(a), it is my proposed decision to adopt the "Proposed Action" of the EA which would authorize the construction 1.5 miles of barbed wire fence. The project will be authorized under the enclosed Cooperative Range Improvement Agreement. The agreement specifies how the costs for labor, equipment, and materials shall be divided between the United States and cooperator(s) as well as special conditions and specifications for construction. The agreement also specifies maintenance criteria and assignments for both the new fence and all other existing allotment boundary fences.

Rationale for the Proposed Decision

Construction and maintenance of range improvements is in conformance with the Glenwood Springs Resource Management Plan (RMP), approved January, 1984, revised 1988, amended in November 1991 - Oil and Gas Leasing and Development - Final Supplemental Environmental Impact Statement; amended Nov. 1996 - Colorado Standards and Guidelines; amended in August 1997 - Castle Peak Travel Management Plan; amended in March 1999 - Oil and Gas Leasing & Development Final Supplemental Environmental Impact Statement; amended in November 1999 - Red Hill Plan Amendment; amended in September 2002 - Fire Management Plan for Wildland Fire Management and Prescriptive Vegetation Treatment Guidance; amended in June 2007 - Record of Decision for the Approval of Portions of the Roan Plateau Resource Management Plan Amendment; and amended in March 2009 - Record of Decision for the Designation of Areas of Critical Environmental Concern for the Roan Plateau Resource Management Plan.

The proposed action is in conformance with Administrative Actions (pg. 5) and Livestock Grazing Management (pg. 20) of the Glenwood Springs RMP. Administrative actions states, "Various types of actions will require special attention beyond the scope of this plan. Administrative actions are the day-to-day transactions required to serve the public and to provide optimal use of the resources. They include...facility maintenance... These actions are in conformance with the plan". The livestock grazing management objective as amended states, "To provide 56,885 animal unit months of livestock forage commensurate with meeting public land health standards." Livestock Grazing Management, Planned Management Actions (pg. 20) of the RMP states, "construct facilities such as springs, reservoirs, fences, corrals, and livestock trails where necessary to control and distribute livestock."

An interdisciplinary team prepared an EA No. CO-140-2011-0027 for the proposed project. My proposed decision is based on the findings of the analyses contained in the EA. The analysis of the proposed action indicated that the proposed range improvement would provide better control of livestock, reduce the potential for grazing trespass, improve grazing management, improve conformance with Colorado Livestock Grazing Management Guidelines, and help maintain/achieve Public Land Health Standards 2 (riparian systems), 3 (plant and animal communities), and 4 (Special Status, T&E species).

Authority

43 4120.3-1(f) states: "Proposed range improvement projects shall be reviewed in accordance with the requirements of the National Environmental Policy Act

of 1969 (42 U.S.C. 4371 et seq.). The decision document following the environmental analysis shall be considered the proposed decision under subpart 4160 of this part."

43 CFR 4120.3-2(a) states: "The Bureau of Land Management may enter into a cooperative range improvement agreement with any person, organization, or other government entity for the installation, use, maintenance, and/or modification of permanent range improvements or rangeland developments to achieve management or resource condition objectives. The cooperative range improvement agreement shall specify how the costs or labor, or both, shall be divided between the United States and cooperator(s)."

43 CFR 4120.3-4 states: "Range improvement permits and cooperative range improvement agreements shall specify the standards, design, construction and maintenance criteria for the range improvements and other additional conditions and stipulations or modifications deemed necessary by the authorized officer."

43 CFR 4160.1(a) states: "Proposed decisions shall be served on any affected applicant, permittee or lessee and any agent and lien holder of record, who is affect by the proposed actions, terms or conditions, or modifications relating to applications, permits and agreements (including range improvement permits) or leases, by certified mail or personal delivery. Copies of the proposed decisions shall also be sent to the interested public".

Protest and/or Appeal

Any applicant, permittee, lessee or other interested publics may protest a proposed decision under Sec. 43 CFR 4160.1 and 4160.2, in person or in writing to Matthew G. Thorburn, Supervisory Natural Resource Specialist, Bureau of Land Management, 2300 River Frontage Road, Silt, Colorado 81652 within 15 days after receipt of such decision. The protest, if filed, should clearly and concisely state the reason(s) as to why the proposed decision is in error.

In accordance with 43 CFR 4160.3 (a), in the absence of a protest, the proposed decision will become the final decision of the authorized officer without further notice unless otherwise provided in the proposed decision.

In accordance with 43 CFR 4160.3 (b) upon a timely filing of a protest, after a review of protests received and other information pertinent to the case, the authorized officer shall issue a final decision.

Any applicant, permittee, lessee or other person whose interest is adversely affected by the final decision may file an appeal in accordance with 43 CFR 4.470 and 43 CFR 4160.3 and 4160 .4. The appeal must be filed within 30 days following receipt of the final decision, or within 30 days after the date the proposed decision becomes final. The appeal may be accompanied by a petition for a stay of the decision in accordance with 43 CFR 4.471 and 4.479, pending final determination on appeal. The appeal and petition for a stay must be filed in the office of the authorized officer, as noted above. The person/party must also serve a copy of the appeal on any person named [43 CFR 4.421(h)] in the decision and the Office of the Solicitor, United States Department of Interior, 755 Parfet Street, Suite 151, Lakewood, Colorado 80215.

The appeal shall state the reasons, clearly and concisely, why the appellant thinks the final decision is in error and otherwise complies with the provisions of 43 CFR 4.470.

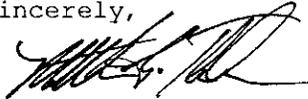
Should you wish to file a petition for a stay, see 43 CFR 4.471 (a) and (b). In accordance with 43 CFR 4.471(c), a petition for a stay must show sufficient justification based on the following standards:

- (1) The relative harm to the parties if the stay is granted or denied.
- (2) The likelihood of the appellant's success on the merits.
- (3) The likelihood of immediate and irreparable harm if the stay is not granted, and
- (4) Whether the public interest favors granting the stay.

As noted above, the petition for stay must be filed in the office of the authorized officer and serviced in accordance with 43 CFR 4.473. Any person named in the decision from which an appeal is taken (other than the appellant) who wishes to file a response to the petition for a stay may file with the Hearings division a motion to intervene in the appeal, together with the response, within 10 days after receiving the petition. Within 15 days after filing the motion to intervene and response, the person must serve copies on the appellant, the office of the Solicitor and any other person named in the decision (43 CFR 4.472(b)).

If you have any questions, feel free to contact either Mike Kinser of my range staff at (970)876-9074, or myself at (970)876-9003.

Sincerely,



Matthew G. Thorburn
Supervisory Natural Resource Specialist

Enclosure

Cooperative Range Improvement Agreement (BLM Form 4120-6)