

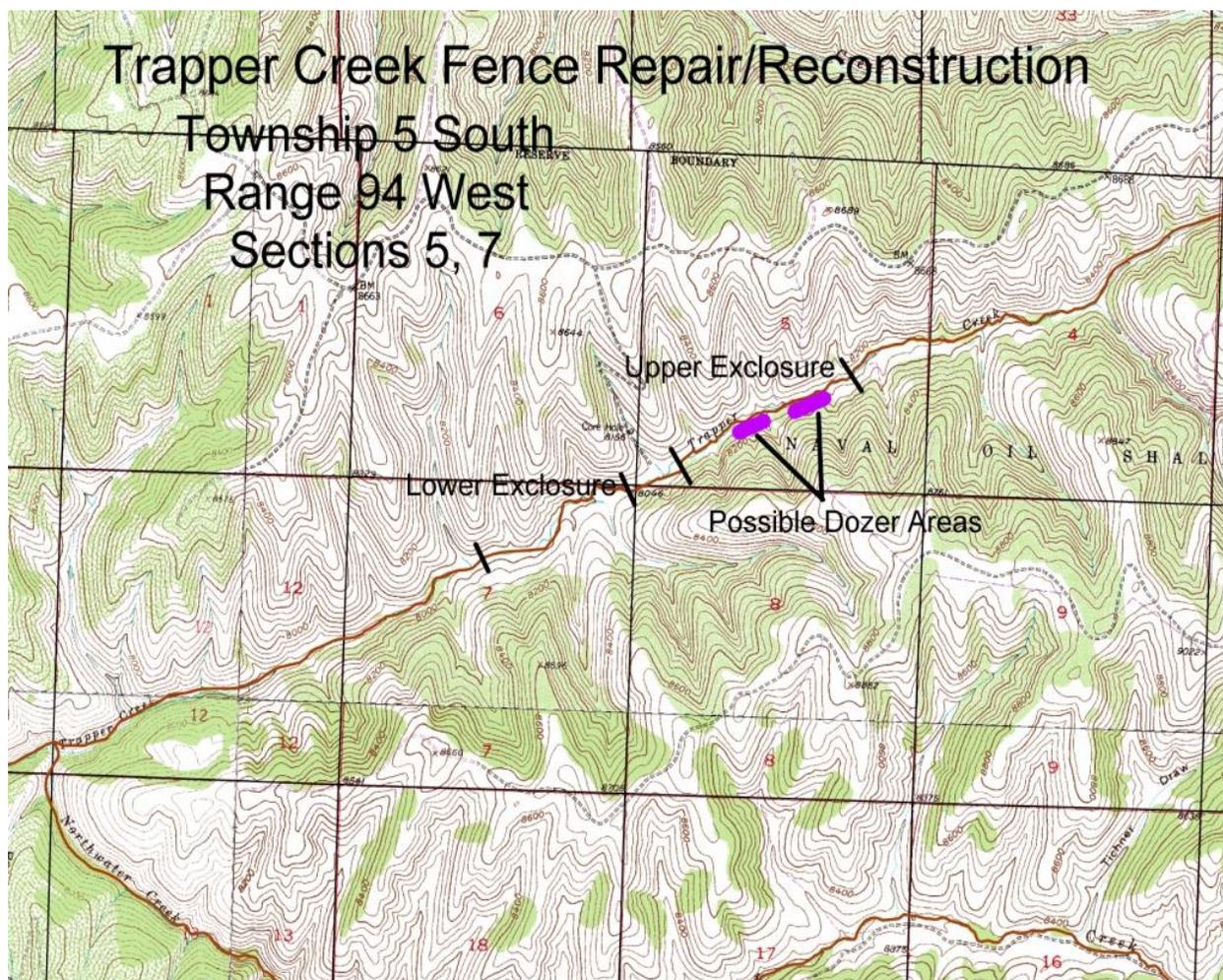
U.S. Department of the Interior
Bureau of Land Management
Glenwood Springs Field Office
50629 Highway 6 & 24
Glenwood Springs, CO 81602

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-140-2008-135EA

PROJECT NAME: Trapper Creek Exclosure Fence Replacement

LEGAL DESCRIPTION: T.5S. R.94W. Sections 5, 7 (see map)



APPLICANT: BLM

BACKGROUND, PURPOSE AND NEED:

Two livestock fencing exclosures were constructed back in the early 1980's to keep livestock out of approximately 1 mile total of Trapper Creek (each exclosure is ½ mile in length). Various fence repairs have been completed over the years in an attempt to maintain the fences. For the most part these repairs have been adequate to maintain exclosure integrity. However, in recent years cows have been getting into the exclosures and many portions of the fence are in very poor condition. The proposed action if implemented would help to keep livestock out of the creek and maintain and improve riparian and stream habitats important to resident Colorado River cutthroat trout.



Cows in the upper exclosure – note leaning fence

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Proposed Action Fence Replacement:

There is approximately 11,060 feet of fence that comprises the two Trapper Creek exclosures. Based on recent site visits, it is apparent that to increase life expectancy and project integrity, the entire length of fencing on both the upper and lower exclosures needs to be completely replaced.

Fence Replacement

Fence replacement would occur on both exclosures totaling 11,060 feet. All old fencing material would be bundled up and removed off site for disposal. To facilitate new fence construction, small dozer work would be required to clear an 8-10 foot wide “flat area” on which to place the new fence. This would result in total ground disturbance of approximately 2.65 acres. All work would be conducted within the original fence construction footprint that has revegetated since original fence construction. Vegetation clearing would occur primarily in mixed mountain shrub habitat dominated by sagebrush, serviceberry, snowberry, bitterbrush, and grasses and forbs. Approximately 1,500 feet of clearing in subalpine fir and aspen could remove up to 5 trees on the south side of the creek along the upper exclosure. Residual fill from ground clearing should be minimal and will be pulled pack onto the flat surface and lightly compacted on site and reseeded with an appropriate seed mix to facilitate timely revegetation. Clearing and post hole placement would be completed via a small skid-steer multi terrain loader with rock hammer and post auger.



Sub-alpine fir/aspen section

Fencing would be woven wire mesh with barbed wire on top as currently exists (See Attached Fencing Specifications). Posts would be 6 inch diameter 8 foot tall treated wood to be placed 3 feet deep into the ground. Six foot steel posts would be placed at intervals in between the wooden posts for support. Placement of steel posts, stays, and wire would be done by hand. A gate would be incorporated into both the upper and lower enclosure along the fenceline at the eastern end of each enclosure. These gates would be locked and used only to facilitate removal of livestock in the event any portions of the enclosure should be compromised.



Fence leaning

All work associated with the project would be completed by a fence contractor via a construction contract administered by the BLM's Engineering Field Office located in Grand Junction, CO. All fencing would be built to BLM specifications (see Appendix 1). If approved, work would be completed during the fall of 2008 or early summer of 2009. Depending on funding availability, the project may be split up into two separate contracts, one for the upper and one for the lower enclosure. It is anticipated that work could take up to 3 weeks to complete. All work would be done during daylight hours.

No Action Alternative:

No fence replacement would take place. Under this alternative only continued maintenance of the existing fence would be authorized.



ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: No other alternatives have been identified. The proposed action was designed with assistance from the Engineering Field Office staff as the best course of action to maintain the integrity of the two livestock enclosures.

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; and amended in September 2002 – Fire Management Plan for Wildland Fire Management and Prescriptive Vegetation Treatment Guidance.

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

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

Standards for Public Land Health:

The five Land Health Standards cover 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 BLM is in the process of completing land health assessments on a landscape basis.

The proposed action would occur within the Roan Cliffs Landscape Unit, which had a land health assessment conducted in 1999. The assessment found that this portion of the landscape was meeting the standards and guidelines for public land health.

The proposed action is in conformance with Colorado Livestock Grazing Management Guidelines by implementing the following: grazing management practices that address rest and recovery periods (Guideline No. 1), distribution (Guideline No. 2), and range improvements are designed consistent with overall ecological functions and processes with minimal adverse impacts to other resources or uses of riparian/wetland and upland sites (Guideline No. 5).

Because a standard exists for these five categories, the impact analysis must address whether the proposed action or any alternatives being analyzed would result in impacts that would maintain, improve, or deteriorate land health conditions for that specific parameter.

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:

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

A variety of laws, regulations, and policy directives mandate the evaluation of the effects of a proposed action and alternative(s) on certain critical environmental elements. Not all of the critical elements that require inclusion in this EA are present, or if they are present, may not be affected by the proposed action and alternative (Table 2). Only mandatory critical elements that are present are described in the following narrative.

Table 2. Critical Elements of the Human Environment									
<i>Critical Element</i>	<i>Present</i>		<i>Affected</i>		<i>Critical Element</i>	<i>Present</i>		<i>Affected</i>	
	Yes	No	Yes	No		Yes	No	Yes	No
Air Quality	X		X		Prime or Unique Farmlands		X		X
ACECs	X			X	Special Status Species*	X		X	
Cultural Resources	X			X	Wastes, Hazardous or Solid	X		X	
Environmental Justice	X			X	Water Quality, Surface and Ground*	X		X	
Floodplains		X		X	Wetlands and Riparian Zones*		X	X	
Invasive, Non-native Species	X		X		Wild and Scenic Rivers	X			X
Migratory Birds	X		X		Wilderness/WSAs		X		X
Native American Religious Concerns		X		X					

* Public Land Health Standard

CRITICAL ELEMENTS

AIR QUALITY

Affected Environment:

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

Environmental Consequences/Mitigation:

Proposed Action:

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

No Action:

The no action alternative would have no effect on air quality.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment:

The proposed action is within the Trapper Creek ACEC. The ACEC was designated to provide special management for the identified Relative and Important (R&I) Values: fisheries (core conservation population of Colorado River cutthroat trout), and natural processes or systems containing the Colorado endemic plant, Hanging garden sullivania (*Sullivantia hapemani*).

Environmental Consequences/Mitigation:

Proposed Action:

The proposed action is to replace the existing fence to prevent ongoing impacts to riparian and stream habitats from livestock grazing. The project area does not contain the “Hanging garden sullivania” (system and plant values are located downstream on East Middle Fork and along the lower portion of Northwater). The fish residing in Trapper Creek are identified as an R & I value. Short-term negative impacts to fish habitat may result from erosion and sedimentation following project construction. However, seeding of the project site with native grasses combined with herbaceous vegetation re-establishing from adjacent seed sources is expected to revegetate the project area with herbaceous vegetation within one to two growing seasons. After the surface disturbance is revegetated, erosion and sedimentation should be minimal.

This project would enhance the R & I fish value for which the ACEC has been designated by improving vegetative cover along the creek and reducing livestock trampling of the streambank. The project would have no effect on the Hanging garden sullivania. Therefore, no negative impacts to ACEC values are expected that would conflict with the ROD for ACEC’s, and no mitigation is proposed.

No Action:

Under the no action alternative, the existing fence would not be replaced within the ACEC. Livestock would likely continue to gain access to the creek negatively impacting important riparian vegetation, and stream habitats that would result in negative impacts (reduced productivity) of the identified Relevant and Important Value of the ACEC.

CULTURAL RESOURCES

Affected Environment:

A Class III cultural resource inventory (GSFO#’s 786 and 8396-1a & b) were conducted encompassing the proposed fence replacement. The proposed project is with a High Sensitivity area as described in the Roan Plateau planning document (2007). While no historic properties were identified within the proposed fence replacement they have been identified in the area.

Environmental Consequences:

Proposed Action:

The proposed action is within a High Sensitivity area which may have significant historic properties obscured by vegetation. As such a determination of **may adversely affect** was made in accordance with the BLM/National SHPO Agreement (1997), the Colorado BLM/SHPO Protocol (1998), and the Roan Plateau Planning Area Record of Decision (2007). In addition indirect and cumulative effects could result if an unidentified resource is encountered and not reported or if the vegetation clearing creates a trail which results in additional people increasing the possibility for illicit collection and/or vandalism.

Mitigation:

To comply with the Roan Plateau Cultural Resource Plan in the ROD, an archaeological monitor is required of the fence construction by an archaeologist qualified to do such archaeological work within the Glenwood Springs Field Office Area.

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

Education/Discovery/NAGPRA Stipulation

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

No Action:

Under this alternative the potential for erosion and livestock disturbance uncovering buried cultural deposits would continue and possibly significant information about aboriginal use of the area would be lost.

ENVIRONMENTAL JUSTICE

Affected Environment:

Review of 2004 data from US Census Bureau indicates the median annual income of Garfield County averages \$50,119 and is neither an impoverished or wealthy county. U.S. Census Bureau data from 2006 shows the minority population of Garfield County comprises less than 0.3 % of the total population of Colorado¹.

Garfield County
Median Household Income (2004)
Estimate
\$50,119

Environmental Consequences/Mitigation:**Proposed Action:**

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

No Action:**Environmental Consequences/Mitigation:**

Under the no action alternative, no fence repair would be conducted. No disproportionately high and adverse human health impact or environmental effect on minority or low-income populations within the area would result.

INVASIVE, NON-NATIVE SPECIES**Affected Environment:**

The riparian corridor adjacent to the project area is heavily infested with houndstongue and Canada thistle.

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.

Mitigation:

To reduce the opportunities for weeds to become established, the disturbed areas particularly where dozing is proposed would be reseeded with a mixture of native grasses and possibly forbs (native or non-aggressive, exotic forbs) adapted to the site. All seed to be applied on public land must have a valid seed test, within one year of the acceptance

¹ Source U.S. Census Bureau: State and County QuickFacts. Data derived from Population Estimates, Census of Population and Housing, Small Area Income and Poverty Estimates, State and County Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits, Consolidated Federal Funds Report
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date. The seed will be accepted if accompanied by an official seed analysis report that provides documentation to show no noxious, prohibited or restricted weed seed per CO, UT and WY(s) weed law and no more than 0.5% by weight of other weed seeds.

Noxious weed seed and vegetative material could be transported to uninfested areas on the tracks and undercarriage of dozers and other equipment. To mitigate against the introduction of new noxious weeds to the project site, the contractor will be required to wash the tracks and undercarriage of the dozer before delivering the equipment to the project site.

No Action:

Under the no action alternative, no fencing repair would take place, only continued fence maintenance. Livestock would likely continue to gain access to the creek negatively impacting important riparian vegetation and stream habitats. Disturbance to streamside vegetation would increase the likelihood of further noxious weed establishment.

MIGRATORY BIRDS

Affected Environment:

The fence project will be located primarily in mixed mountain shrub habitat with a 1,500 foot section of sub-alpine fir and aspen. Given these habitat types it is possible that a few migratory bird species found on the U.S. Fish and Wildlife Service's Birds of Conservation Concern list may be present, including: flammulated owl, Williamson's sapsucker, and Lewis's woodpecker. Raptors known to reside in the area include red-tailed hawks.

Environmental Consequences/Mitigation:

Proposed Action:

A total of approximately 2.65-acres of vegetation will be removed to accommodate the new fence. Potential nest and roost trees will be removed to accommodate the fence. In addition, it is possible that some occupied nest trees may be removed; however, no intentional take of native bird species is anticipated. Fence construction will increase the risk of short-term displacement due to noise and human presence in the area during construction, and will result in a small amount of fragmentation in the area. No impacts to raptors should occur as the fence is small and will only disturb a small amount of vegetation. The opening of the dense forest canopy may improve habitat for some raptor forage species.

No Action:

Under the no action alternative, no fencing repair would take place, only continued fence maintenance. Livestock would likely continue to gain access to the creek negatively impacting important riparian vegetation and stream habitats that many migratory birds depend on.

NATIVE AMERICAN RELIGIOUS CONCERNS

Affected Environment:

This area is considered the ancestral homeland of the Ute Tribes. At present no Native American concerns are known by the GSFO within the project area and none were identified during the surveys. Therefore, formal consultation was not conducted in accordance with the Ute Tribe's wishes that consultation is not necessary for small projects and no Native American areas of concern were identified.

Environmental Consequences:

Proposed Action:

Given the project is within a High Sensitivity area the potential for undiscovered areas of Native American concern are possible. If new data is disclosed, new terms and conditions may have to be negotiated to accommodate their concerns. In addition indirect and cumulative effects could result if an unidentified resource is encountered and not reported or if the vegetation clearing creates a trail which results in additional people increasing the possibility for illicit collection and/or vandalism. Indirect and cumulative effects could result if an unidentified resource is encountered and not reported or if the vegetation clearing creates a trail which results in additional people increasing the possibility for illicit collection and/or vandalism.

Mitigation:

Same as Cultural Resource Section.

No Action:

Same as Cultural Resource Section.

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

Affected Environment:

According to the latest species list from the U. S. Fish and Wildlife Service, the following Federally listed and candidate species may reside or be impacted by actions occurring in Garfield County: Canada lynx, Mexican spotted owl, western yellow-billed cuckoo, razorback sucker, Colorado pikeminnow, bonytail chub, humpback chub, Uinta Basin hookless cactus, Ute Ladies' Tresses, Parachute beardtongue, and DeBeque phacelia.

No Federally listed, proposed, or candidate wildlife or plant species or their habitat occur within the proposed action area. The Federally-listed threatened plant, Ute Ladies' Tresses, is found in sub-irrigated alluvial soils along streams and in open meadows in floodplains. However, this plant has not been found above 6,800 feet elevation and the project area has an elevation range of 7,800 ft to 8,200 ft which is well above the known range of this plant.

There is no sensitive plant habitat within the project area. BLM sensitive wildlife species with habitat or occurrence records in the vicinity include a core conservation population of Colorado River cutthroat trout (*Oncorhynchus clarkii pleuriticus*), which is found in Trapper Creek located directly adjacent to the project site.

Environmental Consequences/Mitigation:

Proposed Action:

Due to the lack of potential habitat or known occurrences of listed, proposed or candidate wildlife and plants and the absence of any BLM sensitive plants in the project area, the proposed action should have no impact on these special status species.

Colorado River cutthroat trout

The livestock enclosures already exist but would be replaced. Ground disturbance would be limited to 2.65 acres in the project area. The proposal is to pull back fill to the flat surface and lightly compact the soils in place next to the fence. Some site-specific soil compaction and displacement may occur. Soil compaction and displacement would increase the likelihood of erosional processes such as soil detachment and sediment transport on steeper slopes and areas devoid of vegetation. Soil detachment and sediment transport are likely to occur during runoff events associated with spring snowmelt and short-duration high intensity thunderstorms until adequate revegetation occurs.

Due to the close proximity of the proposed activities to area drainages, there is a potential that sediment associated with proposed ground disturbance could be transported to Trapper Creek. Sediment can impact trout species by silting in spawning substrates and limited pool habitats. Fine sediments can smother eggs and reduce recruitment. Sediment can also impede aquatic insect productivity which can reduce food sources for resident fishes and for certain birds, bats, and mammals. To minimize impacts, mitigation is proposed.

Mitigation:

To reduce the opportunities for sediment transport, the lightly compacted fill area would be bordered by a constructed 6 inch berm and reseeded with a mixture of native grasses and possibly forbs (native or non-aggressive, exotic forbs) adapted to the site. All seed to be applied on public land must have a valid seed test, within one year of the acceptance date. The seed will be accepted if accompanied by an official seed analysis report that provides documentation to show no noxious, prohibited or restricted weed seed per CO, UT and WY(s) weed law and no more than 0.5% by weight of other weed seeds.

No Action:

Colorado River cutthroat trout

Under the no action alternative, no fencing replacement would take place, only continued fence maintenance. Livestock would likely continue to gain access to the creek

negatively impacting important riparian vegetation, and stream habitats resulting in reduced productivity of the native cutthroat trout population.

Analysis of the Public Land Health for threatened, endangered and sensitive species: A formal Land Health Assessment was completed for the GSFO in 1999. At that time the riparian area and fish habitats within the exclosures were meeting Standard 4 for Special Status Species. Portions outside of the exclosures were functioning at risk. The proposed action should help to maintain the meeting of the Standard with the project area.

WASTES, HAZARDOUS OR SOLID

Affected Environment: Proposed activities would occur in close proximity to Trapper Creek. Vehicle and equipment fuel and lubricants would be used for mechanical operations during ground clearing and fence installation activities.

Environmental Consequences/Mitigation:

Proposed Action:

Fuels and lubricants would be stored in appropriate containers and refueling would occur in designated areas. While no spills are anticipated, there is potential for hazardous materials to be transported to Trapper Creek in the event of a spill. To mitigate potential negative impacts to Trapper Creek, proper BMPs would be followed during the proposed activities and a sufficient vegetative buffer would be maintained between operations and Trapper Creek. Existing vegetative cover and low slope angles in the vicinity would further decrease the delivery potential of hazardous materials to Trapper Creek.

No Action:

Environmental Consequences/Mitigation: Under the no action alternative there would be no fuel or lubricants present.

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

Affected Environment:

Proposed activities would occur on the Roan Plateau adjacent to the perennial Trapper Creek within a 21,862 acre unnamed 6th field watershed. Trapper Creek has a moderate gradient, moderate sinuosity, and is vertically controlled by shale bedrock from the Parachute Creek Member of the Green River Formation. This bedrock controlled channel is characterized by riffle reaches and marginal pool development. The majority of flow in Trapper Creek is from snowmelt and short-duration high intensity precipitation events.

According to the State of Colorado's *Stream Classifications and Water Quality Standards* (CDPHE, Water Quality Control Commission, Regulation No. 37) list, Trapper Creek is within the Lower Colorado River Basin segment 8 that includes the mainstem of Northwater and Trapper Creeks, including all tributaries, wetlands, lakes

and reservoirs from their sources to the confluence with the East Middle Fork of Parachute Creek. This segment has been classified aquatic life cold 1, recreation 2, water supply, and agriculture. These classifications indicate that this segment is capable of sustaining a wide variety of cold water biota, not suitable or intended for primary contact recreation, and suitable or intended to become suitable for potable water supplies and agricultural purposes that include irrigation and livestock use.

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

Environmental Consequences/Mitigation:

Proposed Action:

Proposed activities would result in some soil compaction and displacement that increase the likelihood of erosional processes, especially on steep slopes and areas devoid of vegetation. Soil detachment and sediment transport are likely to occur in disturbed areas adjacent to Trapper Creek during runoff events associated with spring snowmelt and short-duration high intensity thunderstorms. In addition, the vehicle used for fence installation would cross Trapper Creek a minimum of two times.

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

As mentioned above, hazardous materials would be used for mechanical operations. While no spills are anticipated, there is potential for hazardous materials to be transported to Trapper Creek in the event of a spill. To mitigate potential negative impacts to Trapper Creek, proper BMPs would be followed during the proposed activities and a sufficient vegetative buffer would be maintained between operations and Trapper Creek. Existing vegetative cover and low slope angles in the vicinity would further decrease the delivery potential of hazardous materials to Trapper Creek.

No Action:

The no action alternative would exacerbate the current situation resulting in continued negative impacts to water quality. Livestock would continue to access the exclusion zone

through the degrading fence resulting in bank trampling and sediment delivery to Trapper Creek which could in turn result in increases in water temperature and decreases in dissolved oxygen levels. In addition, fecal coliform and nutrient levels would likely increase from the presence of livestock and may result in algal blooms.

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

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

Affected Environment:

The two exclosures addressed in the proposed action are located on Trapper Creek. A 1994 Proper Functioning Condition (PFC) assessment conducted in the upper exclosure rated the riparian area as functioning at risk and trend was not apparent. Photo point monitoring of the riparian area was established in 1990 and photos were again retaken in 1998. An assessment of trend is difficult to determine because some of the baseline photos established in 1990 were taken in upland vegetation adjacent to the riparian zone compared to photos retaken in 1998 which showed a better view of the riparian area. Despite these limitations, it appears there was some improvement of the riparian area (e.g., increase vegetation coverage and widening of the riparian zone). In August 2006, it was documented that cattle were inside and trapped in the exclosure. A photo taken of the riparian zone showed heavy trampling and utilization.

A PFC assessment was conducted in the lower exclosure in 1994 and was reassessed in 1999. The 1994 assessment rated the riparian area as functioning at risk with an upward trend. The 1999 assessment rated the riparian zone as proper functioning condition suggesting conditions had improved since 1994.

Environmental Consequences/Mitigation:

Proposed Action:

Replacement and repair of the exclosure fencing would help ensure there is an effective barrier for livestock from entering the riparian areas. This would allow for complete grazing rest of the riparian zone and a corresponding improvement of conditions (e.g., increased vegetation coverage/composition, widening of the riparian zone, etc.).

No Action:

The current condition of the exclosure fencing does not provide a sufficient barrier for livestock. This is particularly true for the upper exclosure. Under the no action

alternative, no fence replacement and repair would take place. Only continued fence maintenance would occur which is not sufficient to bring the fence to a satisfactory (i.e., functional) condition. Once livestock breach the fence, they become trapped which can result in heavy trampling and utilization of the riparian vegetation. If this occurs for a long duration or repeatedly during the course of the growing season, grazing rest and recovery time for riparian plant species is diminished. This would result in a decline in condition (i.e. a reduction in coverage and a decrease in species composition) of the riparian zone.

Analysis on the Public Land Health Standard for riparian systems: The proposed action, would improve land health conditions for riparian systems. The no action alternative would likely lead to a deterioration of land health conditions.

WILD AND SCENIC RIVERS

Affected Environment:

Trapper Creek was found to Eligible under the “Roan Plateau, Eligibility Report for the National Wild and Scenic River System, May 2002.” The stream segment was found to meet the Outstandingly Remarkable Value (ORV) criteria for its core conservation population of Colorado River cutthroat trout. The Trapper Creek segment is under current study and public comment for the next part of the study phase for “suitability” under the Glenwood Springs Resource Management Plan revision. However, until the suitability is completed all stream segments found to be “eligible” must be managed to protect those streams identified ORV’s and the preliminary classification identified in the report. The proposed action is within a segment identified as “Recreational”.

Environmental Consequences/Mitigation:

Proposed Action:

The proposed action is being done to protect and enhance the identified ORV, the Colorado River cutthroat trout (CRCT). The action would not change the preliminary classification of this segment as “Recreational”. Recreational segments allow for man made modifications within the corridor. No mitigation has been brought forward as the WSR values are being protected and/or enhanced.

No Action:

If the fence is left in disrepair, negative impacts could occur to the streams identified ORV’s (CRCT). Under the Wild and Scenic Rivers Act, managing agencies must afford/provide administrative protection for all identified ORV’s on streams that were found to eligible until a suitability study is completed. After suitability, a stream may be released for other values if not found suitable, or under if determined to be suitable afforded protection until legislative action occurs. Under the no action alternative, mitigation would be brought forward to repair/replace the fence to protect the CRCT, or cease all grazing activities in the stream corridor in order to protect the CRCT.

WILDERNESS

Affected Environment:

There are no designated wilderness areas or wilderness study areas within the proposed action area. The Trapper Creek area was inventoried for wilderness characteristics under the general planning authority of Sections 201 and 202 of FLPMA in 1999 and 2000. Wilderness character and roadless findings for the Trapper Creek area showed the following results. 11,373 acres were inventoried in the Trapper Creek unit, 9,073 acres were found to be roadless, 0 acres were found to contain wilderness character due to the collective impacts from numerous human-related developments within the unit. The Roan Plateau plan did not prescribe management for any lands within the Trapper Creek unit specifically to protect wilderness characteristics. However, these lands are currently being proposed as wilderness areas by citizens groups.

Environmental Consequences/Mitigation:

Proposed Action:

The proposed action to replace the existing enclosure fence would not create any “new” man made disturbance within the landscape. The proposed action contains measures to reduce impacts and not create any unnecessary new disturbance within the riparian area.

The citizen’s wilderness proposal found the Trapper Creek unit to contain wilderness characteristics with the existing enclosure fence in place. Therefore maintaining that enclosure fence and/or replacing the fence should not preclude any legislative actions for the unit. Thus, there are no anticipated impacts and no proposed mitigation to the proposed action.

No Action:

While there could be additional damage taking place to the riparian area, the area was found not to contain wilderness characteristics and has no current management prescriptions specific to maintaining, protecting or enhancing wilderness characteristics. Therefore the no action alternative would not have any effect to wilderness characteristics and no mitigation would be brought forward.

NON-CRITICAL ELEMENTS

The following elements **must** be addressed due to the involvement of Standards for Public Land Health:

SOILS (includes a analysis on Standard 1)

Affected Environment:

According to the *Soil Survey of Rifle Area, Colorado: Parts of Garfield and Mesa Counties* (USDA 1985), the proposed action would be located on the soil map units Irigul-Starman channery loams, Parachute-Rhone loams, Rhone loam, and Rock outcrop-

Torriorthents complex. Irigul-Starman channery loams and Rock outcrop-Torriorthents complex occur along the north bank of Trapper Creek while Parachute-Rhone loams and Rhone loam occur along the south bank of Trapper Creek. In addition, some areas, primarily adjacent to the south bank of Trapper Creek, are mapped NSO 15 for slopes greater than 50%. Following is a brief description of the four soil map units encountered in the project area.

- Irigul-Starman channery loams – This soil map unit is found on ridges and mountainsides at elevations ranging from 7,800 to 9,000 feet and on slopes of 5 to 50 percent. These soils are derived from sandstone and marlstone parent rocks. Approximately 55 percent of this unit is composed of the Irigul soil and approximately 30 percent the Starman soil. Both of these soils are shallow, well drained, and have slight erosion hazards with medium surface runoff. These soils are used primarily for grazing and wildlife habitat.
- Parachute-Rhone loams – These gently sloping to steep soils are found on ridges and mountainsides at elevations ranging from 7,600 to 8,600 feet and on slopes of 5 to 30 percent. The Parachute soil is derived from sandstone and or marlstone while the Rhone soil is derived from fine-grained sandstone. Approximately 55 percent of this unit consists of the Parachute soil while approximately 30 percent is the Rhone soil. The Parachute soil is moderately deep, well drained, and has a moderate erosion hazard with medium surface runoff. The Rhone soil is deep, well drained, and has a slight erosion hazard with slow surface runoff. Primary uses for these soils include grazing and wildlife habitat.
- Rhone loam – This deep, well drained, gently sloping to steep soil is found on ridges and mountainsides at elevations ranging from 7,600 to 8,600 feet and on slopes of 5 to 30 percent. This soil is derived from sandstone and marlstone. Surface runoff for this soil is slow and the erosion hazard is slight. Primary uses for this soil include wildlife habitat and limited grazing.
- Rock outcrop-Torriorthents complex – This soil map unit consists of bedrock and soils of variable depth occurring on slopes of 50 to 80 percent. The majority of the complex is rock outcrop which consists primarily of Green River shale. The remainder of the complex is Torriorthents which are shallow to moderately deep, clayey to loamy soils containing gravel, cobbles, and stones. Surface runoff is rapid to very rapid and erosion hazard is moderate to severe. This complex is used primarily for limited grazing.

Environmental Consequences/Mitigation:

Proposed Action:

As mentioned above, the proposed activities would occur primarily on soils with slight erosion hazards and on slopes less than 30% (17°). The proposed activities would however result in the removal of vegetation, soil compaction, and soil displacement in close proximity to Trapper Creek. The removal of vegetation and soil displacement would occur where ground clearing activities are necessary to install the fence and during

post hole augering operations. The amount of exposed soil would be minimal and it is likely that existing vegetation and prompt revegetation of disturbed areas would further minimize the likelihood of sediment transport to Trapper Creek. Some soil compaction would result from the rubber tired vehicle, but it is expected to be minimal due to sufficient vegetated groundcover. To further minimize the likelihood of soil compaction and displacement, mechanical activities would occur during dry conditions.

No Action:

The no action alternative would exacerbate the current situation resulting in continued negative impacts to soils in the riparian zone. Livestock would continue to access the exclusion zone through the degrading fence resulting in bank trampling, soil compaction, soil displacement, bank failures, and sediment delivery to Trapper Creek.

Analysis on the Public Land Health Standard for Upland Soils:

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

VEGETATION (includes an analysis on Standard 3)

Affected Environment:

The fence project is located primarily within mixed mountain shrub and sub-alpine fir and aspen vegetation.

Environmental Consequences/Mitigation:

Proposed Action:

The proposed action would result in the temporary loss of approximately 2.65 acres of vegetation. Most of the vegetation lost would be mountain shrubs (mountain big sagebrush, snowberry, etc) and herbaceous vegetation such as mountain brome, Kentucky bluegrass and various forbs. The project would also result in the removal of approximately 0.34-acres of predominately sub-alpine fir/aspen vegetation. Tree removal would occur as a linear clearcut 10-foot wide for 1,500 feet to accommodate the new fence. The area is already disturbed due to the existing fence and a large cattle trail on the south side of the fence. It is anticipated that no more than 10 trees total would be removed.

The disturbed area will create a niche for the invasion of noxious weeds, such as houndstongue and Canada thistle, which are already present in the project area. To

minimize the risk of noxious weeds invading and dominating the disturbed areas, the following mitigation is proposed.

Mitigation:

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

With prompt seeding of the area and with establishment of grasses and forbs from adjacent seed sources, it is anticipated that herbaceous vegetation would become established and occupy the site within two growing seasons.

No Action:

Under the no action alternative, no fencing repair would take place, only continued fence maintenance. Fence maintenance alone is unlikely to be adequate to prevent livestock from gaining access to the enclosure. Prolonged or repeated grazing of the riparian vegetation during the growing season would result in a reduction in the cover and diversity of perennial vegetation. The decline in vegetative cover would also likely promote the expansion of noxious weeds within the project area.

Analysis on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial):

A formal land health assessment was completed for this area in 1999. Assuming proper revegetation and weed control, the action should result in the maintenance of or increase in native herbaceous species and an improvement in the overall diversity of native plant communities in the project area. Also, the construction of a fence should allow better livestock management which should maintain and improve riparian vegetation. The project should help maintain the achievement of Standard 3 for healthy plant communities.

WILDLIFE, AQUATIC (includes an analysis on Standard 3)

Affected Environment:

The proposed action is located in upland vegetation directly adjacent to Trapper Creek. Trapper Creek contains a core conservation population of Colorado River cutthroat trout. In addition, aquatic insects are abundant.

Environmental Consequences/Mitigation:

Proposed Action:

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

Mitigation:

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

No Action:

Under the no action alternative, no fencing repair would take place, only continued fence maintenance. Livestock would likely continue to gain access to the creek negatively impacting important riparian vegetation and stream habitats resulting in reduced fish productivity.

Analysis on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial):

A formal Land Health Assessment was completed in the project area in 1999. At that time the project area was meeting Land Health Standard 3 for aquatic wildlife – partially due to the presence of the livestock exclosures that were harboring excellent riparian habitat. The proposed action with mitigation should help to ensure the maintenance of riparian and stream habitats for fish and continue the meeting of the standard. The no action alternative would likely result in the continued entrance of the exclosures by livestock and move site specific areas that are currently meeting away from meeting the standard.

WILDLIFE, TERRESTRIAL (includes an analysis on Standard 3)**Affected Environment:**

A variety of wildlife species may be found near the proposed fence project. These areas contain habitat for many species of big game, small game, and nongame mammals and birds. Common species include mule deer, elk, blue grouse, black bear, pine squirrel, and coyotes among others.

Environmental Consequences/Mitigation:**Proposed Action:**

The fence would require the clearing of 2.65 acres of vegetation, including a few sub-alpine fir and aspen trees. A fence currently exists and the placement of a fence would create a slight to moderate barrier to movements of some species but will be designed to be big game friendly. Vegetation removal will be in a narrow (10-foot) linear strip that should have minimal effect to most terrestrial wildlife. The creation of openings within the densely treed, closed canopy will benefit many edge species and will provide a small amount of increased understory forage. In addition, better livestock control would result due to the fence which would improve livestock distribution and maintain/improve riparian vegetation conditions. Construction would increase the risk of short-term displacement of resident wildlife due to noise and human presence in the area.

No Action:

Under the no action alternative, no fencing repair would take place, only continued fence maintenance. Livestock would likely continue to gain access to the creek negatively impacting important riparian vegetation. This would impact a variety of wildlife that depends on riparian areas.

Analysis on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic):

A formal Land Health Assessment was completed for the project area in 1999. Overall, the project should help to improve livestock management and result in better distribution of livestock which will have some positive benefits with regard to Standard 3 for terrestrial wildlife.

OTHER NON-CRITICAL ELEMENTS: For the following elements, those brought forward for analysis will be formatted as shown above.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Travel/Access	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		
Transportation	X		
Visual Resources		X	

RANGE MANAGEMENT

Affected Environment:

The proposed project is located in the Clough/Alber Allotment on the south and the Cow Creek allotment to the north.

Environmental Consequences/Mitigation:

Proposed Action:

The proposed action would better keep livestock out of the two existing livestock enclosures. Since the enclosures have been in place for several years and the size and dimensions are not changing, the action would have no impact on either grazing permittees livestock grazing operations.

Mitigation:

To assist with easy removal of livestock that enter the enclosure, a hard wired gate will be placed along each of the two enclosures.

No Action:

Under the no action alternative, no fencing repair would take place, only continued fence maintenance. Livestock would likely continue to gain access to the creek negatively impacting important riparian vegetation and stream habitats.

REALTY AUTHORIZATIONS

Affected Environment:

The proposed project is located in the Public Water Reserve that has been reserved for public uses. This will be addressed in further detail below in the Water Rights section.

Environmental Consequences/Mitigation:

Proposed Action:

The proposed action would not provide public access to the water within the withdrawal which is mandatory. However, protection of the riparian area and the Colorado River cutthroat trout are beneficial to the public as well.

No mitigation is needed because the proposed action does not preclude access to other parts of Trapper Creek.

No Action:

Under the no action alternative, no fencing repair would take place, only continued fence maintenance. Public access to the water within the withdrawal would be available, however, there would be continued degradation to the riparian and stream habitats important to resident Colorado River cutthroat trout.

WATER RIGHTS

Affected Environment: While no water rights holders would be affected by the proposed activities, it is important to note that Public Water Reserve No. 107 occurs in the vicinity of the proposed activities in Section 5. The Order of Withdrawal of Public Water Reserve No. 107 signed April 17, 1926 states the following.

“Under and pursuant to the provisions of the act of Congress approved June 25, 1910 (36 Stat., 847), entitled “An act to authorize the President of the United States to make withdrawals of public lands in certain cases”, as amended by act

of Congress approved August 24, 1912 (37 Stat., 497), it is hereby ordered that every smallest legal subdivision of the public land surveys which is vacant unappropriated unreserved public land and contains a spring or water hole, and all land within one quarter of a mile of every spring or water hole located on unsurveyed public land be, and the same is hereby, withdrawn from settlement, location, sale, or entry, and reserved for public use in accordance with the provisions of Sec. 10 of the act of December 29, 1916 (39 Stat., 862), and in aid of pending legislation”.

CUMULATIVE IMPACTS SUMMARY:

No cumulative impacts have been identified. A fence is already in place and would be replaced with new materials; as such no additional cumulative impacts would result.

PERSONS / AGENCIES CONSULTED:

Jason and Susan Lynch – Grazing Permittees
 JT Romatzke, Colorado Division of Wildlife
 John Trammel, Trout Unlimited, Grand Valley Anglers Chapter
 Bruce Rosenlund, USFWS, WNTI Grant Coordinator
 Carol Hollowed, NEPA Coordinator, White River Field Office

INTERDISCIPLINARY REVIEW:

<u>Name</u>	<u>Title</u>	<u>Area of Responsibility</u>
Isaac Pittman	Rangeland Management Specialist	Range
Mike Kinser	Rangeland Management Specialist	Wetland & Riparian Zones
Jeff O’Connell	Hydrologist	Soil, Water, Air, Geology
Carla DeYoung	Ecologist	T/E/S Plant Species, Land Health Standards, Vegetation, ACECs
Kay Hopkins	Outdoor Recreation Planner	Wilderness, Wild & Scenic Rivers, Visual Resources
Cheryl Harrison	Archaeologist	Cultural Resources, Native American Concerns
Tom Fresques	Fisheries Biologist	NEPA Lead, T&E Aquatic Species, Aquatic Wildlife
Desa Ausmus	Wildlife Biologist	T&E Animal Species, Migratory Birds, Terrestrial Wildlife
Dereck Wilson	Rangeland Management Specialist Weed Specialist	Invasive species
Carole Huey	Realty Specialist	Lands & Realty Authorizations

FONSI

CO-140-2007-037 EA

The environmental assessment and analyzing the environmental effects of the proposed action have been reviewed. The proposed action with any approved mitigation measures result in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

DECISION RECORD

DECISION: It is my decision to implement the proposed action with disclosed mitigation.

RATIONALE: The project would have benefits to Aquatic Wildlife and Riparian resources by replacing the existing fencing, which is poor condition, in order to eliminate livestock grazing along 1.5 miles of Trapper Creek, and maintain important stream habitats.

MITIGATION MEASURES:

CULTURAL RESORUCES/NATIVE AMERICAN CONCERNS:

Mitigation:

To comply with the Roan Plateau Cultural Resource Plan in the ROD, an archaeological monitor is required of the fence construction by an archaeologist qualified to do such archaeological work within the Glenwood Springs Field Office Area.

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

Education/Discovery/NAGPRA Stipulation

The National Historic Preservation Act (NHPA) requires that if newly discovered cultural resources are identified during project implementation, work in that area must stop and the agency Authorized Officer notified immediately (36 CFR 800.13). The Native American Graves Protection and Repatriation Act (NAGPRA), requires that if inadvertent discovery of Native American Remains or Objects occurs, activity must cease in the area of discovery, a reasonable effort made to protect the item(s) discovered, and

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

INVASIVE, NON-NATIVE SPECIES:

Mitigation:

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

Noxious weed seed and vegetative material could be transported to uninfested areas on the tracks and undercarriage of dozers and other equipment. To mitigate against the introduction of new noxious weeds to the project site, the contractor will be required to wash the tracks and undercarriage of the dozer before delivering the equipment to the project site.

NATIVE AMERICAN RELIGIOUS CONCERNS:

Mitigation:

Same as Cultural Resource section above.

THREATENED, ENDANGERED, AND SENSITIVE SPECIES:

Mitigation:

To reduce the opportunities for sediment transport, the lightly compacted fill area would be bordered by a constructed 6 inch berm and reseeded with a mixture of native grasses and possibly forbs (native or non-aggressive, exotic forbs) adapted to the site. All seed to be applied on public land must have a valid seed test, within one year of the acceptance date. The seed will be accepted if accompanied by an official seed analysis report that provides documentation to show no noxious, prohibited or restricted weed seed per CO, UT and WY(s) weed law and no more than 0.5% by weight of other weed seeds.

VEGETATION:

Mitigation:

Same as the INVASIVE, NON-NATIVE SPECIES section above.

WILDLIFE, AQUATIC:**Mitigation:**

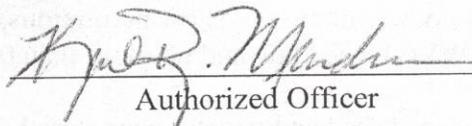
Same as the THREATENED, ENDANGERED, AND SENSITIVE SPECIES section above.

RANGE MANAGEMENT:**Mitigation:**

To assist with easy removal of livestock that enter the exclosure, a hard wired gate will be placed along each of the two exclosures.

NAME OF PREPARER: Tom Fresques

SIGNATURE OF AUTHORIZED OFFICIAL:


Authorized Officer

DATE SIGNED:

9/29/2008

APPENDICES:

1. Specifications and Drawings

ATTACHMENTS: None

Appendix 1Project Specifications and Drawings

SECTION 02834

WORK DATA SHEET FOR
WIRE FENCES AND GATES

Fence type: Woven Wire

Type of top wire: Barbed

Type of intermediate wires: Smooth mesh

Type of bottom wire: Smooth mesh

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

D: 12

C: 8

B: 6

A: 16

Line post spacing (L): 16 ft 6 inches

Type of Stays: Wood

Stay spacing (l): 5 ft 6 inches

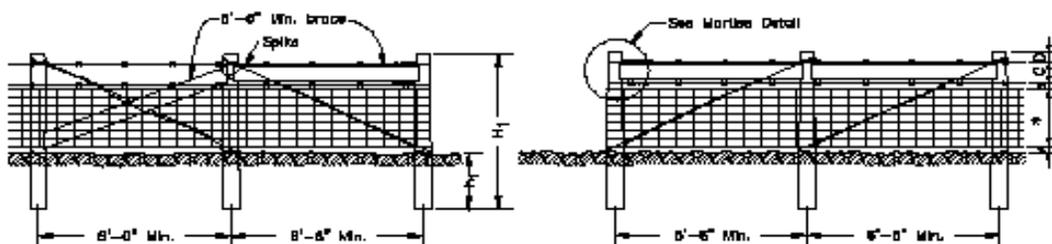
Length of wood posts (H₁): 8 ft

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

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

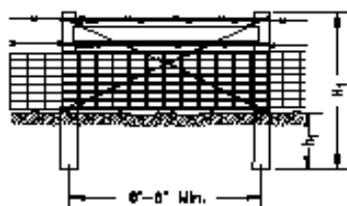
Depth of steel posts in ground (h₂): To top of anchor plate

End Panel: Type 1

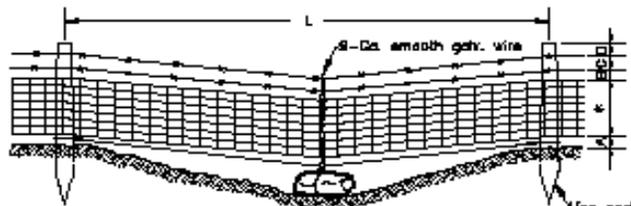


END PANEL-TYPE I

END PANEL-TYPE II

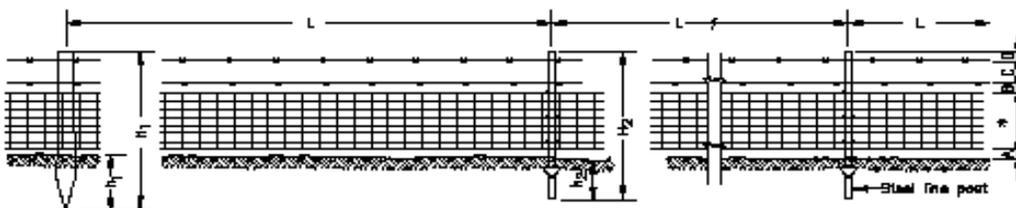


STRESS PANEL



PANEL AT MINOR DEPRESSION

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

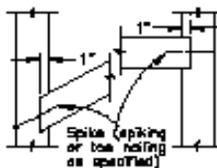


LINE PANELS

* See note 1a.

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 and design number of woven wire.



MORTISE DETAIL

ALWAYS THINK SAFETY

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF TECHNICAL SERVICES SERVICE CENTER	
TYPICAL WOVEN WIRE FENCE	
DESIGNED	by others
REVIEWED	
APPROVED	
DRAWN	SCALE NONE
DATE	AUGUST 7, 1980
DRAWING NO.	02634-4