

**U.S. Department of the Interior
Bureau of Land Management
White River Field Office
220 East Market Street
Meeker, CO 81641**

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-110-2007-096-EA

PROJECT NAME: Re-route of two-track road segment on West Stewart Gulch allotment

LEGAL DESCRIPTION: T4S R97W Section 26 NENE

APPLICANT: Oldland Brothers Ranch (Authorization #0501409)

ISSUES AND CONCERNS: none

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background/Introduction: In recent dry years in order to provide adequate water to livestock it has been necessary to haul additional water to tanks out Bailey Ridge. The existing two-track road that is currently used for this purpose angles steeply up (16% grade) from a saddle at the head of the drainage as it continues up the ridgeline. This section of road can be slick and it is often difficult and unsafe for the truck hauling water to make it up the steep stretch of road.

Proposed Action: The proposed action is the construction of approximately 535 yards of road. The Oldland Brothers Ranch (Jerry Oldland) would like to re-route a stretch of two-track road to facilitate safely hauling water to livestock. This project is in support of an existing range improvement project. Approximately 425 yards of this re-route would occur on BLM lands resulting in .35 of an acre of new disturbance. The proposed road has been laid out so the average grade is approximately 8 percent across a hillside with an average slope of 10 percent, crossing a short area with a slope of 16 percent. Livestock enter this area early in June and Mr. Oldland would like to re-route the road before the end of April. The proposed project is located on Bailey Ridge (between West Stewart Gulch and Connley Gulch). Construction will be done using a bulldozer. Large woody debris, reclamation including (water-bars) and re-vegetation of all disturbed soils would be applied to the abandoned 650 yard stretch of road as well as another almost 450 yards of existing two-track roads adjacent to the project area to permanently close and restore them. Roadside berms and other disturbed soils associated with the new section of road as well as all reclaimed areas will be re-vegetated with the following seed mixture. After successful reclamation and re-vegetation of the existing stretches of road being abandoned, net surface disturbance would be less than it is currently.

Proposed Seed Mix		
Native Seed Mix #	Species (Variety)	Lbs. PLS per Acre
6	Bluebunch wheatgrass (Secar)	2
	Slender wheatgrass (Primar)	2
	Big bluegrass (Sherman)	1
	Canby bluegrass (Canbar)	1
	Mountain Brome (Bromar)	2

The applicant shall monitor all disturbed and reclaimed areas for the presence of invasive, non-native, and/or noxious plant species resulting from the proposed action. The applicant will be responsible for control of invasive weeds if they increase in density as a result of this proposed action. The applicant will be responsible for eradication of noxious weeds that occur as a result of the proposed action.

No Action Alternative: The proposed road re-route would not occur and Oldland's would continue using the steep and sometimes unsafe section of road when it is necessary to haul water to livestock in that area.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: none

NEED FOR THE ACTION: The proposed road re-route will facilitate providing adequate water on along the top of Bailey to improve livestock distribution as well as reduce the need for cattle to trail to ponds in the drainages of West Stewart Gulch and Connley Gulch, cumulatively assuring that Standards for Rangeland Health continue to be met in these areas.

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: White River Record of Decision and Approved Resource Management Plan (ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: Livestock Grazing page 2-25

Decision Language: Rangeland improvements will be identified in activity plans. Range improvements are necessary to control livestock use and improve rangeland condition.

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:

STANDARDS FOR PUBLIC LAND HEALTH: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered

species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in specific elements listed below:

CRITICAL ELEMENTS

AIR QUALITY

Affected Environment: The entire White River Resource area has been classified as either attainment or unclassified for all pollutants, and most of the area has been designated prevention of significant deterioration (PSD) class II. The proposed action is not located within a ten mile radius of any special designation air sheds or non-attainment areas. The air quality criteria pollutant likely to be most affected by the proposed actions is the level of inhalable particulate matter, specifically particles ten microns or less in diameter (PM₁₀) associated with fugitive dust. In addition, slight increases in the following criteria pollutants: carbon monoxide, ozone (secondary pollutant), nitrogen dioxide, and sulfur dioxide may also occur during pipeline construction due to combustion of fossil fuels. Also, non-criteria pollutants such as visibility, nitric oxide, air toxics (e.g. benzene) and total suspended particulates (TSP) may also experience slight, temporary increases as a result of the proposed action (no national ambient air quality standards have been set for non-criteria pollutants). Unfortunately, no air quality monitoring data is available for the survey area. However, it is apparent that current air quality near the proposed location is good because only one location on the western slope (Grand Junction, CO) is monitoring for criteria pollutants other than PM₁₀. Furthermore, the Colorado Air Pollution Control Division (APCD) estimates the maximum PM₁₀ levels (24-hour average) in rural portions of western Colorado to be near 50 micrograms per cubic meter (µg/m³). This estimate is well below the National Ambient Air Quality Standard (NAAQS) for PM₁₀ (24-hour average) of 150 µg/m³.

Environmental Consequences of the Proposed Action: Implementation of the proposed action may temporarily increase fugitive dust production during construction of the proposed access road and reclamation of portions of the existing roads. The proposed road re-route is located on a ridge top which may enable fugitive dust (PM₁₀) to drift over greater distances decreasing visibility. However, access to the proposed road re-route is limited by private land access to the northeast and southwest and use of the proposed road re-route is expected to be minimal as its primary use will be to haul water to livestock. Thus, adverse impacts to air quality are not anticipated.

Environmental Consequences of the No Action Alternative: None

Mitigation: The operator will be responsible for complying with all local, state, and federal air quality regulations. To minimize production of fugitive particulate matter (fugitive dust) from associated access roads, vehicle speeds must not exceed 15 mph *or* dust plume must not be visible at appropriate designated speeds for road design. In addition, the application of a BLM approved dust suppressant (e.g. water or chemical stabilization methods) will be required

during dry periods when dust plumes are visible at speeds less than or equal to 15 mph. Surfacing access roads with gravels will also help mitigate production of fugitive particulate matter. Land clearing, grading, earth moving or excavation activities will be suspended when wind speeds exceed a sustained velocity of 20 miles per hour. Revegetate cut and fill slopes with a BLM preferred seed mixture.

CULTURAL RESOURCES

Affected Environment: A pre-field search conducted in the White River Field Office showed no Cultural Resource Sites in the project area. A Class III pedestrian survey was conducted on April 13, 2007 on the proposed project route. No Cultural Resource Sites were found.

Environmental Consequences of the Proposed Action: There will be no impact on Cultural Resources resulting from completion of this project

Environmental Consequences of the No Action Alternative: None.

Mitigation: If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
- a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: There are no known noxious weeds in the proposed project area. Primary weeds of concern on public lands in the general area associated with this proposed action are musk thistle (*Carduus nutans*), bull thistle (*Cirsium vulgare*), and houndstongue (*Cynoglossum officinale*).

Environmental Consequences of the Proposed Action: The project will initially create 0.35 acre of new soil disturbance. The actual disturbance after reclamation and revegetation will be less than what currently exists. Newly disturbed/reclaimed areas could provide sites for establishment of noxious weeds and invasive species. With prompt revegetation and monitoring it is unlikely that the project will promote the spread of noxious weeds or invasive species.

Environmental Consequences of the No Action Alternative: There will be no change from the present situation. Beneficial effects attributable to reclaiming existing roadbeds would be foregone.

Mitigation: As stated in the proposed action and Water Quality section of this document.

MIGRATORY BIRDS

Affected Environment: A number of migratory birds fulfill nesting functions in these sagebrush and mountain shrub habitats during the months of May, June, and July, including Brewer's sparrow and green-tailed towhee, which are recognized as having higher conservation interest by the Rocky Mountain Bird Observatory, Partners in Flight program. These and other species associated with these shrublands are common and widely represented in extensive like-habitats throughout the Resource Area and region.

Environmental Consequences of the Proposed Action: Proposed road construction involves an intergrade of serviceberry and sagebrush—a type generally precluding full representation by either bird community. In this case, it is unlikely that Brewer's sparrow would be affected by the reroute, and likely that more generalized species, such as green-tailed towhee, would continue to occupy this slope at near full capacity. Alternately, recent studies in the Wyoming Basin indicate that sagebrush obligates nest at reduced (~50%) density within 100 meters of roads. Relative to the respective length of roadbed intersecting nesting habitat, created versus reclaimed, the proposed action's overall influence on birds of higher conservation interest would likely be beneficial. Although the absolute affect on breeding bird populations in Piceance Basin would be negligible in either case, the proposed action would be capable of reducing localized disruption of nesting activity by at least 50% in the near and long term.

Environmental Consequences of the No Action Alternative: Beneficial effects attributable to moving the roadbed to the edge of the habitat parcel (see above and T&E and Terrestrial Animal sections below), although incremental, would be foregone.

Mitigation: None.

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL SPECIES (includes a finding on Standard 4)

Affected Environment: There are no animals listed, proposed, or candidate to the Endangered Species Act that are known to inhabit or derive important benefit from the project area. The only special status species occupying these sagebrush dominated habitats is the greater sage-grouse, a BLM-sensitive species. The project area represents potential nesting habitat, in that it is composed of suitable sagebrush habitat on appropriate slopes within 4 miles of an active lek (closest lek about 2.5 miles to the southeast). The potential of this site to harbor nesting functions in the future is indicated further by the presence of an inactive lek about 0.5 miles north of the project site.

Environmental Consequences of the Proposed Action: The current road location bisects a 32-acre sagebrush knob that is available for (likely) low-density sage-grouse nesting functions. The proposed location would not only shift the road to the east onto a slope that is situated on the edge of the habitat parcel and in a position that is largely unsuited for nesting (i.e., steep slopes with dominant serviceberry character), but would tend to attenuate road-related influences from adjacent suitable nesting habitat (i.e., road below line-of-sight and masked by a serviceberry stand). This move would, by removing disturbance and occupation from the central portions of this habitat parcel, also increase the effective extent and enhance the continuity of this habitat patch (i.e., increasing patch size from 17 acres to 32 acres). Too, and although only incremental in scale, the proposed reclamation of road segments would directly increase the future availability of nest habitat by about 1-acre.

Environmental Consequences of the No Action Alternative: Beneficial effects attributable to moving the roadbed to the edge of the habitat parcel (see above), although incremental, would be foregone.

Mitigation: Reclamation of existing road segments as integrated into the proposed action.

Finding on the Public Land Health Standard for Threatened & Endangered species: The project area, as part of a larger landscape, currently meets the land health standards. However, this area is being subjected to heavy and escalating industrial activity associated with natural gas development. Small gains in habitat function and utility associated with the proposed action may become cumulatively important in retaining viable populations of sage-grouse in these increasingly altered landscapes. These attempts at retaining viable animal populations and habitat matrices are consistent with continued meeting of the land health standards.

WASTES, HAZARDOUS OR SOLID

Affected Environment: There are no known hazardous wastes on the subject lands. No hazardous materials are known to have been used, stored or disposed of at sites included in the project area. There are no known solid waste dump sites within the project area.

Environmental Consequences of the Proposed Action: No listed or extremely hazardous materials in excess of threshold quantities are proposed for use in this project. While commercial preparations of fuels and lubricants proposed for use may contain some hazardous constituents, they would be stored, used and transported in a manner consistent with applicable laws, and the generation of hazardous wastes would not be anticipated. Solid wastes would be disposed of properly.

Environmental Consequences of the Continuation of Current Management Alternative: Impacts under this alternative would be the same as under the proposed action.

Environmental Consequences of the No Action Alternative: No hazardous or other solid wastes would be generated under the no-action alternative.

Mitigation: The applicant shall be required to collect and properly dispose of any solid wastes generated by the proposed actions.

A release of any chemical, oil, petroleum product, or sewage, etc, (regardless of quantity) must be reported to the Bureau of Land Management – WRFO Hazardous Materials Coordinator at (970) 878-3800. The Colorado Department of Public Health and Environment (CDPHE) should be notified, if applicable, through the 24-hour spill reporting line at 1 (877) 518-5608.

If the permittee encounters any waste dump sites, on or adjacent to the project area, they must be reported to the BLM.

WATER QUALITY, SURFACE AND GROUND (includes a finding on Standard 5)

Affected Environment: Surface Water: The proposed road re-route and reclamation is located entirely within the Middle Piceance Creek watershed (fifth level watershed). Sixth and seventh level watersheds to be impacted by the proposed actions are Connley Gulch and West Fork Stewart Gulch. No stream crossings will be necessary with the proposed road re-route. Connley Gulch and West Fork Stewart Gulch are both listed as perennial streams in the WRFO stream database. However, near the proposed project area no perennial water exists. Connley Gulch is a tributary to West Fork Stewart Gulch which is a tributary to perennial Stewart Gulch. Stewart Gulch is a perennial tributary to Piceance Creek which is a perennial tributary to the White River. The White River is a tributary to the Green River in Utah which is a tributary to the Colorado River.

Surface water quality in Piceance Creek is described as mixed bicarbonate in the upper drainages and as sodium bicarbonate in the lower drainages (BLM, 2003). Chemical components found in

surface waters are attributed to the weathering of surficial materials in the area. The principal ionic constituents include sodium, calcium, magnesium, bicarbonate, sulfate, chloride, potassium, and fluoride (Tobin 1987). Sodium, bicarbonate, and sulfate levels generally decrease during the spring snowmelt runoff because of the increased amount of water, while chloride and fluoride remain essentially constant. Calcium and magnesium concentrations show small decreases, and potassium increases during the snowmelt. During the irrigation season, sodium becomes concentrated, and calcium and magnesium concentrations increase. Approximately eighty percent of annual flows in Piceance Creek originates as discharge from alluvial and bedrock aquifers (Tobin, 1987).

The “Status of Water Quality in Colorado –2006” (CDPHE 2006b) and Regulation No. 37 Classifications and Numeric Standards for Lower Colorado River Basin (CDPHE 2005a) were reviewed for information relating to drainages impacted by the proposed action. Stream segment 17 of the White River Basin is defined as Stewart Gulch from the sources of the East, Middle, and West Forks to the Confluence with Piceance Creek. Mainstem of Willow Creek from the source to the confluence with Piceance Creek. Mainstem of Dry Fork of the Piceance including all tributaries, wetlands, lakes and reservoirs from the source to the confluence with Piceance Creek. The State has classified stream segment 17 of the White River Basin as “Use Protected” and further designated as beneficial for the following uses: Cold Aquatic Life 2, Recreation 2, and Agriculture. The antidegradation review requirements in the Antidegradation Rule are not applicable to waters designated use-protected. For those waters, only the protection specified in each reach will apply. For this reach, minimum standards for four parameters have been listed. These parameters are: dissolved oxygen = 6.0 milligrams per liter (mg/l), pH = 6.5 - 9.0, and Fecal Coliform = 2000/100 milliliters (ml) and 630/100 ml E. coli. Numeric standards for inorganic compounds and metals can be found within Regulation No. 37 Classifications and Numeric Standards for Lower Colorado River Basin (CDPHE 2005a).

Newly promulgated Colorado Regulations Nos. 93 and 94 (CDPHE 2006c and 2006d, respectively) were also reviewed for information related to the proposed project area drainages. Regulation No. 93 is the State’s Section 303(d) list of water-quality-limited segments requiring Total Maximum Daily Loads (TMDLs). The 2006 303(d) list of segments needing development of TMDLs (CDPHE 2006c) includes two segments within the White River - segment 9b, specifically the Flag Creek portion (for impairment from selenium with a low priority for TMDL development) and segment 22, specifically West Evacuation Wash, and Douglas Creek (sediment impairments with a low priority for TMDL development). Regulation 94 is the State’s list of water bodies identified for monitoring and evaluation (CDPHE 2006d), to assess water quality and determine if a need for TMDLs exists. The list includes two White River segments that are potentially impaired – 9 (Flag Creek-pH) and 22 (Soldier Creek- sediment). Segment 17 was not identified.

Ground Water: Surface geologic formation at the proposed locations is Tertiary in age (Uinta Formation) and consists primarily of interbedded sandstone and siltstone. A review of the US Geological Survey Ground Water Atlas of the United States (Topper et al., 2003) was done to assess ground water resources at the location of the proposed action. The proposed action is located in the Piceance Creek structural basin. Primary bedrock aquifers within the Piceance Basin are listed in table 2.

Table 2:

Summary of Hydrogeologic Units						
Hydrogeologic Unit	Stratigraphic Unit	Physical Description	Thickness	Hydraulic Conductivity	Yield	TDS
			(ft)	(ft/day)	(gpm)	mg/L
Upper Piceance Basin aquifer	Uinta Formation	sandstone, fractured siltstone, fractured marlstone	0 – 1,400	<0.2 to >1.6	1- 900	500-1,000
Mahogany confining unit	Green River Formation	dolomitic marlstone and shale	500-1,800	<0.01	<25	NL
Lower Piceance Basin aquifer	Green River Formation	shale, fine-grained sandstone, fractured marlstone	0 – 1,870	<0.1 to >1.2	1-1,000	1,000-10,000
Basal confining unit	Green River Formation, Wasatch Formation	claystone, siltstone, clay rich oil shale, marlstone, channel sandstone	0-6,800	<0.01	<10-100	NL
Fort Union aquifer	Fort Union Formation	Coarse-grained sandstone	Very thin	NL	NL	NL
Mesaverde aquifer	Mesaverde Group	sandstone interbedded shale and coal	Averages 3,000	0.0001-1.0	NL	NL
Mancos confining unit	Mancos Shale	mostly shale but Frontier Sandstone may be local aquifer	>7,000	NL	NL	NL
Abbreviations: ft = feet, approx = approximate, avg = average, gpm = gallons per minute, mg = milligrams, L = liters, and NL = not listed.						

Table information from Topper et al. (2003).

The water chemistry of the upper bedrock aquifers is dominated by dissolved calcium, magnesium, and bicarbonate along the rim of the basin; and by sodium, magnesium, bicarbonate, and sulfate in the central part of the basin. These constituents are characteristic of water in the upper aquifers, principally the Uinta Formation. Sodium and bicarbonate are the dominant dissolved constituents in the upper aquifers generally are lower than 1,000 milligrams per liter. Characteristic trace elements include strontium in concentrations of several milligrams per liter in the Uinta Formation, and fluoride in concentrations of greater than 1 milligram per liter in water samples from the lower part of the upper aquifers (Tobin, 1987).

Salinity has been noted as a key factor that limits water use and is a concern relative to downstream water uses. Salinity has become a major concern within the Colorado River drainage basin. The 1972 CWA required the establishment of numeric criteria for salinity for the Colorado River. In 1973, seven Colorado River basin states created the Colorado River Basin Salinity Control Forum. The Forum developed water quality standards for salinity including numeric criteria and a basin-wide plan of implementation. The plan consists of a number of control measures to be implemented by state and federal agencies. In 1974, Congress enacted the Colorado River Basin Salinity Control Act. The Act was amended in 1984. The amendments required the Secretary of the Interior to develop a comprehensive program to minimize contributions from lands administered by the BLM.

Moderately erosive and saline soils naturally occur within and around (down stream) the Project Area. Once the soil is disturbed (i.e., from construction of a road), the potential for the release of residual soil sediment is increased. It is possible that historic and current grazing operations in the general area have contributed to both sedimentation and salinity levels presently being experienced in the Colorado River and would continue to do so. All of the soils within the Project Area have the potential to create water quality-related sediment and/or salinity problems when disturbed.

Environmental Consequences of the Proposed Action: Surface disturbing activities associated with road construction may alter overland flow and natural groundwater recharge patterns. Poorly designed and constructed drainage relief structures on the proposed road re-route would also alter overland flow and natural groundwater recharge patterns. Additionally, surface disturbance combined with poor road design and lack of road maintenance may incrementally add to sedimentation in the Colorado River System deteriorating water quality. However, the existing road to be reclaimed is steeper than the proposed re-route (15% slope vs. 8%), and actively channels run-off water over the road surface which increases sedimentation to surface water drainages in the proposed project area. Thus, without reclamation the existing road represents a greater potential negative impact to water quality within the affected watershed in comparison to the proposed re-route. With successful reclamation/abandonment of the identified portion of existing roads, it is anticipated that hill-slope soil erosion and sedimentation to surface water drainages would be reduced therefore benefiting water quality in the affected watersheds.

Environmental Consequences of the No Action Alternative: The identified portion of the existing road would continue to be used to transport water to livestock. Surface water runoff would continue to be channeled down the existing road during snowmelt and following precipitation events. Hill-slope soil erosion and sedimentation rates from the existing road would persist, deteriorating water quality. Beneficial effects attributable to reclamation of existing two-tracks in the area would be foregone.

Mitigation: All road construction and maintenance will comply with conditions of approval outlined in appendix B (COAs 13-62) of the WRFO RMP/ROD (1997) and BLM 9113-Roads Manual. The operator is expected to understand and correctly implement these COAs. For further guidance on road construction and maintenance it is recommended that the operator refer to the “Gold Book” (fourth edition) surface operating standards for oil and gas exploration and development (copies of the “Gold Book” can be obtained at the WRFO). For new construction, corrugated metal pipes (CMPs) and drainage dips shall be located in such a manner as to avoid discharge onto unstable terrain such as headwalls or slumps. CMPs are not recommended on roads that have gradients less than 10 percent. Based on the nature of the affected soils, drain dips will be utilized in place of CMPs in these locations. The use of drain dips on road gradients greater than 10 percent should be avoided. Energy dissipaters such as large gravels/small cobbles will be used at culvert and drainage dip inlets/outlets to minimize additional erosion. To mitigate rut development and reduce water being channelized down the roadway, vehicle access will be restricted when road surfaces become saturated to a depth of three inches. Mud blading will be prohibited in attempts to reduce further soil displacement (unless otherwise approved by the BLM).

Reclamation of the existing road will commence as follows:

- The permittee will construct water bars along the abandoned portion of the existing access road. Water bars will be constructed at an interval of 240 feet on road grades of 2-4%, 180 feet on road grades of 5-8%, and 140 feet on road grades of 9-12%. The operator will be required to install energy dissipation devices at the outlet end of all water bars to prevent soil erosion and trap sediment.
- The permittee will be required to rip the surface of the access road to be abandoned perpendicular to the road gradient.
- As outlined in the proposed action, the permittee will apply large wood debris (LWD) to the abandoned portion of the existing road. LWD will not account for more than 20% surface cover.
- Other than constructed water bars, all unnecessary berms that retard normal surface runoff will be eliminated.
- All disturbed areas associated with abandonment of the existing portion of access road will be revegetated with the BLM seed mixture as outlined in the proposed action portion of this document.
- The permittee will be responsible for achieving a reclamation success rate on the abandoned portion of the existing road of sufficient vegetative ground cover from reclaimed plant species within three growing seasons after the application of seed. Additional reclamation efforts will be undertaken at the permittee expense if: after the first growing season there are no positive indicators of successful establishment of seeded species (e.g. germination); after the second year seeded species are not yet established (e.g. producing seed); and after the third growing season seeded vegetative communities lack persistence (e.g. reproductively capable of enduring drought conditions and sustaining the seeded community). Following the third growing season, ground cover of reclaimed seed species shall be at a Desired Plant Community (DPC) in relation to the seed mix as deemed appropriate by the BLM. Reclamation achievement will be evaluated using the Public Land Health Standards that include indicators of rangeland health. Rehabilitation efforts must be repeated if it is concluded that the success rate is below an acceptable level as determined by the BLM.

The permittee will consult with the State of Colorado Water Quality Control Division (contact Matt Czahor at: 303-692-3575 or matthew.czahor@state.co.us) regarding Stormwater Discharge Permits prior to commencing construction activities. All construction activities that disturb *one acre* or greater require a Stormwater Discharge Permit. Written documentation to the BLM Authorized Officer is required prior to the start of construction to indicate that appropriate permits have been obtained. For further information contact the WRFO Hydrologist at 970-878-3800. Appropriate documents may be faxed (970-878-3805), or mailed to the WRFO Hydrologist at the White River Field Office.

Finding on the Public Land Health Standard for water quality: Stream segment 17 of the White River Basin currently meets water quality standards set by the state. However, many of the upper tributaries are ephemeral, flow only in direct response to storm events/snowmelt and do not meet the standards during periods of flow. By following all suggested mitigation measures, water quality in the affected stream segment should continue to meet standards.

WETLANDS AND RIPARIAN ZONES (includes a finding on Standard 2)

Affected Environment: The general vicinity around the proposed project area does not support riparian or wetland communities. Upland drainages and gullies near the project area are ephemeral and only have flow resulting from overland flow events from rain and/or snow melt. These drainages lack sufficient moisture to support riparian communities. No riparian or wetland communities will be directly involved or potentially affected by the proposed action.

Environmental Consequences of the Proposed Action: The proposed action would have no direct influence on riparian or wetland communities. However the overall effect of the proposed action will result in improved ability to provide reliable water sources for livestock up on ridge-tops, reducing the need for livestock to trail to ponds in the drainage bottoms.

Environmental Consequences of the No Action Alternative: There will be no change from the present situation. Beneficial effects attributable to reclamation or existing two-track roads would be foregone.

Mitigation: None

Finding on the Public Land Health Standard for riparian systems: This action would have no effective influence on riparian or wetland communities in the allotment and would have no bearing on the status of Standard 2.

CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED:

No ACEC's, flood plains, prime and unique farmlands, or Wild and Scenic Rivers, threatened, endangered or sensitive plants exist within the area affected by the proposed action. For threatened, endangered and sensitive plant species Public Land Health Standard is not applicable since neither the proposed nor the no-action alternative would have any influence on populations of, or habitats potentially occupied by, special status plants. There are also no Native American religious or environmental justice concerns associated with the proposed action.

NON-CRITICAL ELEMENTS

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

SOILS (includes a finding on Standard 1)

Affected Environment: Soil types associated with the proposed action have been inventoried and compiled in the Rio Blanco County Soil Survey (1982) Soil map units and associated ecological sites are listed in the table below:

SOIL UNIT NAME	ECOLOGICAL SITE	Distance (ft)
Irigul-Starman channery loam, 5-35% slopes	Loamy Slopes/Dry Exposure	540 ft
Parachute-Irigul complex, 5-30% slopes	Mountain Loam/Loamy slopes	955 ft
	Total	1495 ft

Generally soils at the project site are occupied by late seral or PNC plant communities (see *Vegetation* section) and have sufficient cover of native plant species producing sufficient litter and ground cover to minimize runoff and provide for site conservation. These soils meet the Colorado Standard for upland soils.

Environmental Consequences of the Proposed Action: In the short term, immediately after project construction and reclamation of abandoned sections of road, disturbed soils would be susceptible to erosion or invasion by noxious weeds. After successful re-seeding and reclamation the net effect of the new disturbance would be offset by the abandoned and reclaimed areas.

Environmental Consequences of the No Action Alternative: Impacts from the no-action alternative would be similar to what is discussed in the Water Quality section of this document.

Mitigation: As stated in the proposed action and Water Quality section of this document.

Finding on the Public Land Health Standard for upland soils: Soils in the project area are currently meeting the Standards for Public Land Health. After successful re-vegetation and reclamation this action would have negligible impacts on upland soils and would have no bearing on the status of Standard 1.

VEGETATION (includes a finding on Standard 3)

Affected Environment: Ecological sites associated with the proposed action are mountain loam, loamy slopes, and dry exposure. About 50 percent of the disturbance will occur on a late seral mountain loam ecological site. The other 50 percent of the disturbance will occur on relatively even proportions of loamy slopes and dry exposure ecological sites, both of which are late seral. Predominant plant community composition for these sites is listed in the table below.

Piceance Mountain Allotment (Oldland Use area)		
Ecological Site / Woodland Type	Plant Community Appearance	Predominant Plant Species in the Plant Community
Dry Exposure	Grassland	Beardless bluebunch wheatgrass, needle-and-thread, June grass, Indian rice grass, fringed sage, buckwheats
Loamy Slopes	Mix Shrub / Grass Shrubland	Mountain mahogany, bitterbrush, serviceberry, mountain big sagebrush, beardless bluebunch wheatgrass, western wheatgrass, June grass, Indian rice grass
Mountain Loam	Grass / Open Shrub Shrubland	Mountain brome, slender wheatgrass, western wheatgrass, Letterman and Columbia needle grasses, mountain big sagebrush, bitterbrush, low rabbitbrush, snowberry, serviceberry

Environmental Consequences of the Proposed Action: Implementation of the proposed action will disturb/destroy some of the existing vegetation. The vegetation destroyed will be primarily serviceberry, snowberry, and some mountain sage brush. With the proposed reclamation and revegetation of existing roads and newly disturbed roadside berms, the net effect of the new disturbance will be negligible.

Environmental Consequences of the No Action Alternative: There will be no change from the present situation. Beneficial effects attributable to reclamation of existing two-track roads would be foregone.

Mitigation: As stated in the proposed action and Water Quality section of this document.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): The plant communities in the area associated with the proposed disturbance currently are meeting Standard 3 for plant community composition. It is likely that with successful reclamation and re-vegetation of these areas, they will continue to meet Standard 3. On a watershed, pasture, and allotment basis, implementation of this project will result in continued ability to meet this Standard both in the short and long term.

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: The nearest perennial reach which is capable of support higher-order aquatic wildlife is East Willow Creek which is located several miles from the project area.

Environmental Consequences of the Proposed Action: The proposed action would have no conceivable influence on aquatic wildlife or associated habitats.

Environmental Consequences of the No Action Alternative: The no action alternative would not have any conceivable influence on aquatic wildlife or associated habitats.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): There are no aquatic communities within the immediate vicinity of the project area and as such, the standards would not apply.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: These mountain shrub and sagebrush habitats are categorized by the Colorado Division of Wildlife as big game summer range. These ranges are generally occupied from May through October.

While raptors may opportunistically forage across the project area, these sagebrush and mountain shrub communities do not provide adequate nesting substrate for woodland raptors. Migratory birds and non-game mammals using this area are typical and widely distributed in extensive like habitats across the Resource Area and northwest Colorado; there are no narrowly endemic or highly specialized species known to inhabit those lands potentially influenced by this action.

Environmental Consequences of the Proposed Action: The proposed action would remove about 0.35 acre of a mountain big sagebrush stand with scattered mature serviceberry. This shrub base does not likely constitute a strong fall/winter forage base for big game due to its elevation and use as summer range. More important during the period of big game occupation are herbaceous sources of forage. The proposed action would, again, remove about 0.35 acre of forage substrate, but this loss would be more than offset by applicant-committed reclamation of about 1 acre attributable to 610 meters of bypassed road (4.5 meters wide), 300 meters of primitive road (2.8 meters wide) and 117 meters of two-track (2.1 meters wide). Although minor, the proposed action would also reduce the local road network by about 450 meters (0.25 mile) and largely remove traffic from view of animals using the adjacent 24-acre sagebrush knob. Similarly, small mammal and migratory bird habitat associated with new road construction would be more than offset by the future availability of reclaimed road segments. In addition, placing the road on the edge of a topographic/habitat parcel break would, in an incremental sense, remove disturbance and occupation from the central portions of this habitat parcel and enhance the continuity and extent of this habitat patch (i.e., increasing patch size from 17 acres to 32 acres).

Environmental Consequences of the No Action Alternative: Beneficial effects attributable to moving the roadbed to the edge of the habitat parcel (see above), although incremental, would be foregone.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): The project area, as part of a larger landscape, currently meets the land health standards. However, this area is being subjected to heavy and escalating industrial activity associated with natural gas development. Small gains in habitat function and utility associated with the proposed action may become cumulatively important in retaining viable populations of resident and migratory animals in these increasingly altered landscapes. These attempts at retaining viable animal populations and habitat matrices are consistent with continued meeting of the land health standards.

OTHER NON-CRITICAL ELEMENTS: For the following elements, only those brought forward for analysis will be addressed further.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Access and Transportation		X	
Cadastral Survey	X		

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Fire Management		X	
Forest Management		X	
Geology and Minerals	X		
Hydrology/Water Rights			X
Law Enforcement		X	
Noise		X	
Paleontology			X
Rangeland Management			X
Realty Authorizations	X		
Recreation		X	
Socio-Economics		X	
Visual Resources		X	
Wild Horses	X		

HYDROLOGY AND WATER RIGHTS

Affected Environment: The proposed roads re-route and reclamation is located entirely within the Middle Piceance Creek watershed (fifth level watershed). Sixth and seventh level watersheds to be impacted by the proposed actions are Connley Gulch and West Fork Stewart Gulch. No stream crossings will be necessary with the proposed road re-route. Connley Gulch and West Fork Stewart Gulch are both listed as perennial streams in the WRFO stream database. However, near the proposed project area no perennial water exists. Connley Gulch is a tributary to West Fork Stewart Gulch which is a tributary to perennial Stewart Gulch. Stewart Gulch is a perennial tributary to Piceance Creek which is a perennial tributary to the White River. The White River is a tributary to the Green River in Utah which is a tributary to the Colorado River.

Stream flows in Piceance and Yellow Creeks and their tributaries generally peak in mid spring as a result of high elevation snowmelt and periodically during late summer and early fall in response to high intensity precipitation events. Ephemeral drainages flow only in direct response to snowmelt and intense summer and early autumn storms. Approximately 98% of the precipitation in the Piceance Basin is lost to evapotranspiration. The remaining water runs off rapidly and replenishes streamflow or recharges bedrock and alluvial aquifers. Ground water recharge areas generally are located in higher parts of the drainage basin. The recharge moves slowly laterally and downward into the upper aquifer system, passes through the Mahogany zone (leaky confining unit) and enters the lower aquifer system through fractures and solution openings. The water in the upper and lower aquifers moves horizontally through the basin to the discharge areas. In the Piceance drainage basin, the water eventually moves upward back through the aquifer system where it discharges into the valley-fill alluvial aquifer or emerges as springs in the stream valleys (Taylor 1987).

The stream banks of the primary streams in the Piceance Basin are generally composed of sand, silt, and clay particles that are less than about one-tenth of an inch in diameter. The bank

materials erode easily when stream discharge increases during peak flow conditions. Bank erosion is probably most prominent during the spring snowmelt when high flows persist for several days. The bank material absorbs a large amount of water, becomes soft and easily removable, and sloughs into the stream in large clumps. The stream bed of Piceance Creek (and Yellow Creek per BLM observation) is composed of silt, sand, gravel, and occasional cobbles, with pockets of fine material where the velocity of the stream generally is slow. Coarse streambed materials normally move only under peak flow conditions (Norman 1987).

No BLM springs or water wells were identified within 400 meters of the project area.

Environmental Consequences of the Proposed Action: Improper drainage from the newly constructed access road would elevate sediment production from disturbed areas. Increased sediment loads to local surface water drainages will result in a sediment rich system. Sediment rich systems are characterized by deposition and high width to depth ratios (W/D ratio) (wide shallow channels). As the W/D ratio increases, the hydraulic stress against the banks also increases and bank erosion is accelerated. Increases in the sediment supply to the channel develop from bank erosion, reducing the systems capability to transport sediment. As a result, deposition occurs, further accelerating bank erosion (Rosgen, 1996). Additionally, construction activities may disrupt natural surface and ground water flow patterns. Altered flow patterns could disrupt natural surface and ground water recharge/discharge patterns. Changes to natural recharge/discharge patterns could have adverse impacts on stream channel morphology, riparian areas and aquatic life. However, successful abandonment of the identified portion of existing road would reduce sedimentation to surface water drainages helping stabilize stream banks and channels. Furthermore, successful abandonment of the identified portion of existing road would eliminate water being channelized down the roadway helping to restore natural drainage patterns.

Environmental Consequences of the No Action Alternative: The identified portion of the existing road would continue to be used to transport water to livestock. Surface water runoff would continue to be channeled down the existing road during snowmelt and following precipitation events. Hill-slope soil erosion and sedimentation rates from the existing road would persist, destabilizing stream channel morphology and altering natural drainage patterns.

Mitigation: As stated in the Water Quality section of this document.

PALEONTOLOGY

Affected Environment: West Stewart Gulch Allotment is in an area generally mapped as the Uinta Formation (Tweto 1979) which the BLM, WRFO, has classified as a Condition I, fossil bearing formation meaning that it is known to produce scientifically important fossil resources. A Condition I formation indicates a high probability of fossils such as titanotheres, uintatheres, myacid carnivores, possibly other mammals, turtles, crocodilians, small reptile bones, fish, vertebrae, spines and scales, snails, insect larvae, leaves, wood, and other plants (Duncan 1976c and 1976d; Lindsey 1987a; Lucas and Kihm 1982).

Environmental Consequences of the Proposed Action: Bulldozer work could possibly hit rock and uncover paleontological resources.

Environmental Consequences of the No Action Alternative: None.

Mitigation: The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing paleontological sites, or for collecting fossils. If fossil materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear to be of noteworthy scientific interest
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not feasible)

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

RANGELAND MANAGEMENT

Affected Environment: The proposed project is in Pasture 2 of the Stewart Gulch allotment, which is currently permitted to the Oldland Brothers ranch. Under the grazing system developed and analyzed in the recent grazing permit renewal process this pasture will be grazed for two weeks in June and again for approximately 4 weeks in October and November. This pasture and grazing system were analyzed in the Oldland Brothers Ranch Grazing permit Renewal environmental assessment document CO-110-06-163-EA in 2006.

Environmental Consequences of the Proposed Action: Implementation of the proposed action will aid in livestock management and distribution by facilitating the permittee's ability to provide dependable water sources during the period of scheduled livestock use. The net effect of implementation of this project will be improved ability to achieve vegetation management objectives on the Stewart Gulch allotment and of the WRFO RMP.

Environmental Consequences of the No Action Alternative: There will be essentially no change from the present situation. However, if the permittee were not able to navigate the steep section of road to replenish livestock water sources on the ridge top it is likely that cattle would congregate near water sources lower in the drainages, resulting in over-use of those areas.

Mitigation: As stated in proposed action and Water Quality section of this document.

CUMULATIVE IMPACTS SUMMARY: The direct cumulative impacts of this activity are addressed in the White River ROD/RMP for each resource value that would be affected by the proposed action. In addition, indirect cumulative impacts from Grazing were analyzed in the White River Resource Area PRMP/FEIS.

REFERENCES CITED:

Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Commission (WQCC), 2005a. Regulation No. 37 Classifications and Numeric Standards for Lower Colorado River Basin. Amended December 12, 2005 and Effective March 2, 2006.

CDPHE-WQCC, 2006b. "Status of Water Quality in Colorado – 2006, The Update to the 2002 and 2004 305(b) Report," April 2006.

CDPHE-WQCC, 2006c. "Regulation No. 93, 2006 Section 303(d) List Water-Quality-Limited Segments Requiring TMDLs," effective April 30.

CDPHE-WQCC, 2006d. "Regulation No. 94, Colorado's Monitoring and Evaluation List," effective April 30.

Norman, V. 1987. Suspended Sediment in the Piceance Basin, in Taylor, J., ed., Oil Shale, Water Resources, and Valuable Minerals of the Piceance Basin, Colorado: The Challenge and Choices of Development. US Geol. Surv. Prof. Paper 1310.

Rosgen, Dave. 1996. Applied River Morphology. Wildland Hydrology, Pagosa Springs, Colorado: 5-21 pp.

Taylor, J., ed., Oil Shale, Water Resources, and Valuable Minerals of the Piceance Basin, Colorado: The Challenge and Choices of Development. US Geol. Surv. Prof. Paper 1310.

Tobin, R. 1987. Water Quality in the Piceance Basin, in Taylor, J., ed., Oil Shale, Water Resources, and Valuable Minerals of the Piceance Basin, Colorado: The Challenge and Choices of Development. US Geol. Surv. Prof. Paper 1310.

Topper, R., K.L. Spray, W. H. Bellis, J.L. Hamilton, and P.E. Barkmann. 2003. Ground Water Atlas of Colorado. Colo. Geol. Surv. Special Pub. 53.

PERSONS / AGENCIES CONSULTED: Permittee

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility
Nate Dieterich	Hydrologist	Air Quality, Water Quality, Surface and Ground Hydrology and Water Rights
Tamara Meagley	Natural Resource Specialist	Areas of Critical Environmental Concern, Threatened and Endangered Plant Species
Gabrielle Elliott	Archeologist	Cultural Resources, Paleontological Resources
Mary Taylor	Rangeland Management Specialist	Invasive, Non-Native Species, Vegetation , Rangeland Management, Soils
Ed Hollowed	Wildlife Biologist	Migratory Birds, Threatened, Endangered and Sensitive Animal Species, Terrestrial and Aquatic Wildlife, Wetlands and Riparian Zones
Thomas Johnson	Hydrologist	Wastes, Hazardous or Solids
Chris Ham	Outdoor Recreation Planner	Wilderness, Access and Transportation, Recreation,
Ken Holsinger	Natural Resource Specialist	Fire Management
Robert Fowler	Forester	Forest Management
Pamela Leschak	Geologist	Geology and Minerals
Linda Jones	Realty Specialist	Realty Authorizations
Chris Ham	Outdoor Recreation Planner	Visual Resources
Melissa Kindall	Range Technician	Wild Horse

Finding of No Significant Impact/Decision Record (FONSI/DR)

CO-110-2007-096-EA

FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE: The environmental assessment and analyzing the environmental effects of the proposed action have been reviewed. The approved mitigation measures (listed below) 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/RATIONALE: It is my decision to approve the proposed action allowing relocation of the identified section of road and reclamation of existing two-track roads as identified, with the addition of the following mitigation measures.

MITIGATION MEASURES:

1. The operator will be responsible for complying with all local, state, and federal air quality regulations. To minimize production of fugitive particulate matter (fugitive dust) from associated access roads, vehicle speeds must not exceed 15 mph *or* dust plume must not be visible at appropriate designated speeds for road design. In addition, the application of a BLM approved dust suppressant (e.g. water or chemical stabilization methods) will be required during dry periods when dust plumes are visible at speeds less than or equal to 15 mph. Surfacing access roads with gravels will also help mitigate production of fugitive particulate matter. Land clearing, grading, earth moving or excavation activities will be suspended when wind speeds exceed a sustained velocity of 20 miles per hour. Re-vegetate cut and fill slopes with a BLM preferred seed mixture.

2. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO).

Within five working days the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
- a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

3. If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator

will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

4. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer

5. Reclamation of existing road segments as stated in the proposed action and water quality section.

6. The applicant shall be required to collect and properly dispose of any solid wastes generated by the proposed actions.

7. A release of any chemical, oil, petroleum product, or sewage, etc, (regardless of quantity) must be reported to the Bureau of Land Management – WRFO Hazardous Materials Coordinator at (970) 878-3800. The Colorado Department of Public Health and Environment (CDPHE) should be notified, if applicable, through the 24-hour spill reporting line at 1 (877) 518-5608.

8. If the permittee encounters any waste dump sites, on or adjacent to the project area, they must be reported to the BLM.

9. All road construction and maintenance will comply with conditions of approval outlined in appendix B (COAs 13-62) of the WRFO RMP/ROD (1997) and BLM 9113-Roads Manual. The operator is expected to understand and correctly implement these COAs. For further guidance on road construction and maintenance it is recommended that the operator refer to the “Gold Book” (fourth edition) surface operating standards for oil and gas exploration and development (copies of the “Gold Book” can be obtained at the WRFO). For new construction, corrugated metal pipes (CMPs) and drainage dips shall be located in such a manner as to avoid discharge onto unstable terrain such as headwalls or slumps. CMPs are not recommended on roads that have gradients less than 10 percent. Based on the nature of the affected soils, drain dips will be utilized in place of CMPs in these locations. The use of drain dips on road gradients greater than 10 percent should be avoided. Energy dissipaters such as large gravels/small cobbles will be used at culvert and drainage dip inlets/outlets to minimize additional erosion. To mitigate rut development and reduce water being channelized down the roadway, vehicle access will be restricted when road surfaces become saturated to a depth of three inches. Mud blading will be prohibited in attempts to reduce further soil displacement (unless otherwise approved by the BLM).

10. Reclamation of the existing road will commence as follows:

- The permittee will construct water bars along the abandoned portion of the existing access road. Water bars will be constructed at an interval of 240 feet on road grades of 2-4%, 180 feet on road grades of 5-8%, and 140 feet on road grades of 9-12%. The

operator will be required to install energy dissipation devices at the outlet end of all water bars to prevent soil erosion and trap sediment.

- The permittee will be required to rip the surface of the access road to be abandoned perpendicular to the road gradient.

11. As outlined in the proposed action, the permittee will apply large wood debris (LWD) to the abandoned portion of the existing road. LWD will not account for more than 20% surface cover.

12. Other than constructed water bars, all unnecessary berms that retard normal surface runoff will be eliminated.

13. All disturbed areas associated with abandonment of the existing portion of access road will be revegetated with the BLM seed mixture as outlined in the proposed action portion of this document.

14. The permittee will be responsible for achieving a reclamation success rate on the abandoned portion of the existing road of sufficient vegetative ground cover from reclaimed plant species within three growing seasons after the application of seed. Additional reclamation efforts will be undertaken at the permittee expense if: after the first growing season there are no positive indicators of successful establishment of seeded species (e.g. germination); after the second year seeded species are not yet established (e.g. producing seed); and after the third growing season seeded vegetative communities lack persistence (e.g. reproductively capable of enduring drought conditions and sustaining the seeded community). Following the third growing season, ground cover of reclaimed seed species shall be at a Desired Plant Community (DPC) in relation to the seed mix as deemed appropriate by the BLM. Reclamation achievement will be evaluated using the Public Land Health Standards that include indicators of rangeland health. Rehabilitation efforts must be repeated if it is concluded that the success rate is below an acceptable level as determined by the BLM.

15. The permittee will consult with the State of Colorado Water Quality Control Division (contact Matt Czahor at: 303-692-3575 or matthew.czahor@state.co.us) regarding Stormwater Discharge Permits prior to commencing construction activities. All construction activities that disturb *one acre* or greater require a Stormwater Discharge Permit. Written documentation to the BLM Authorized Officer is required prior to the start of construction to indicate that appropriate permits have been obtained. For further information contact the WRFO Hydrologist at 970-878-3800. Appropriate documents may be faxed (970-878-3805), or mailed to the WRFO Hydrologist at the White River Field Office.

16. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing paleontological sites, or for collecting fossils. If fossil materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

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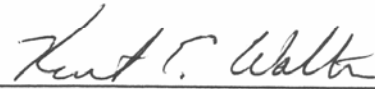
used (assuming in situ preservation is not feasible)

17. If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

NAME OF PREPARER: Mary Taylor, Rangeland Management Specialist

NAME OF ENVIRONMENTAL COORDINATOR: Caroline P. Hollowed

SIGNATURE OF AUTHORIZED OFFICIAL:



Field Manager

DATE SIGNED: 05/18/07

ATTACHMENTS: Map of proposed road re-route and two-tracks to be reclaimed

**Jerry Oldland - Proposed Road Revisions
T4S, R97W Sec 26 NENE**

Blue - existing road will become primary route out to NW
Red- existing roads to be abandoned and reclaimed
Green - proposed new road route

