

U.S. Department of the Interior
Bureau of Land Management
White River Field Office
73544 Hwy 64
Meeker, CO 81641

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-110-2006-231-EA

CASEFILE/PROJECT NUMBER COC70489

PROJECT NAME: Drip 4-1 Rangely to Vernal Pigging Project

LEGAL DESCRIPTION: Sixth Principal Meridian, Colorado
T. 2 N., R. 103 W.,
Sec. 22, NE $\frac{1}{4}$ NW $\frac{1}{4}$.

APPLICANT: Northwest Pipeline Corporation

ISSUES AND CONCERNS:

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background/Introduction: An application has been received for temporary work space in order to install a pigging station on the Ignacio/Sumas line (COC011243).

Proposed Action: The proposed action is for the modification of an existing drip facility on the main line facility to accommodate an integrity test or "pig run". The drip now in place will not allow the testing tool to pass. The sole intent of the integrity test is to identify any anomalies or situations with the pipe that may become safety issues at a later date. This work is mandated by the U.S. Department of Transportation. The extra work space will be 150 feet by 300 feet encompassing 1.03 acres, more or less.

Construction is estimated to take place in the fall of 2006 and be complete by December 1, 2006.

Northwest or its contactor will excavate around the existing block valves and drip at the location indicated on the map. The gas flow through the mainline will be interrupted and rerouted while the new ball valves are installed. The old equipment will be removed or modified and the new set in place. The existing disturbance of the original right-of-way and temporary work space will be restored, including reseeding, to its original contour.

All construction and maintenance activities will cease when soils or road surfaces become saturated to the extent that the construction equipment is unable to stay within the right-of-way and/or when activities cause irreparable harm to the roads or soils.

The disturbed area will be final graded, as close as possible to the original contours. The area will be reseeded upon completion with a seed mixture specified by BLM. No fences will be crossed.

The above ground appurtenances of the drip facilities will be painted with Carlsbad Canyon 2.5 & 6/2, or similar color to blend with the surroundings or as specified by BLM.

No Action Alternative: Under the no action alternative, the application would be denied and the situation would remain the same.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: None

NEED FOR THE ACTION: An application has been received which requires that the application be analyzed and authorized properly.

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: Pages 2-49 thru 2-52

Decision Language: “To make public lands available for the siting of public and private facilities through the issuance of applicable land use authorizations, in a manner that provides for reasonable protection of other resource values.”

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 located approximately 7.5 miles south of the Dinosaur National Monument Visitors Center. Dinosaur National Monument has been designated as a PSD class II airshed with special designations regarding visibility. 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 construction due to the combustion of fossil fuels associated with construction operations. Also, non-criteria pollutants such as visibility, nitric oxide, air toxics (e.g. benzene) and total suspended particulates (TSP) may also experience slight short term increases as a result of the proposed actions (no national ambient air quality standards have been set for non-criteria pollutants). Unfortunately, no 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: Cumulative impacts detrimental to air quality in the Coal Oil Basin north of Rangely, CO can be expected as carbon monoxide, ozone (secondary pollutant), nitrogen dioxide, particulate matter, and sulfur dioxide levels are elevated due to increased oil and gas development. Construction equipment producing elemental and organic carbon via fuel combustion combined with surface disturbing activities that leave soils exposed to eolian processes will both increase production of particulate matter (PM₁₀) during construction. Elemental and organic carbon existing in the air as PM₁₀ can reduce visibility and increase the potential of respiratory health problems to exposed parties. However, following initial construction, suggested mitigation, and successful interim reclamation, criteria pollutant levels should return to near pre-construction levels.

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 as well as providing documentation to the BLM that they have done so. To minimize production of fugitive particulate matter (fugitive dust), 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. Land clearing, grading, earth moving or excavation

activities will be suspended when wind speeds exceed a sustained velocity of 20 miles per hour. Disturbed areas will be restored to original contours, and revegetated with a BLM preferred seed mixture. Following seeding, woody debris cleared from the ROW will be pulled back over the pipeline to increase effective ground cover and help retain soil moisture.

Construction equipment will be maintained in good operating condition to ensure that engines are running efficiently. Vehicles and construction equipment with emission controls will also be maintained to ensure effective pollutant emission reductions.

CULTURAL RESOURCES

Affected Environment: The proposed construction area has been inventoried at the Class III (100% pedestrian) level (Fetterman 2005, Compliance Dated 5/15/2005) with no new cultural resources identified in the construction area. Additionally inventories for other, adjacent pipelines such as MAPL overlap the proposed line to some extent confirming that no cultural resources are visible on the surface.

Environmental Consequences of the Proposed Action: The proposed action will not impact any known cultural resources and none are known to exist within 308 meters of the action.

Environmental Consequences of the No Action Alternative: There would be no new impacts to cultural resources under the No Action Alternative.

Mitigation: 1. 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 historic or archaeological sites, or for collecting artifacts. 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.

2. 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: The proposed action is located within Clayey Saltdesert ecological site, which is dominated by salt tolerant vegetation. The dominate plant community for this site consists of greasewood, and various saltbushes such as shadscale, Gardner saltbush, mat saltbush, and fourwing saltbush. The understory of these shrubs is dominated by western wheatgrass, Colorado Wildrye, and squirreltail. Cheatgrass and halogeton are undesirable, invasive, and alien plant species that are present within the locality of the proposed action. Both of these species are highly adapted to disturbed soils.

The soil within the project area is principally Chipeta Killpack silty clay. This soil type has a high clay content that is moderate to highly erosive and receives low precipitation with rapid runoff, thus limiting forage production and hampering re-vegetation efforts.

Drought conditions are very prevalent within the Coal Oil Basin area, which has hampered the successful establishment of reclaimed plant species of other projects in this area. Therefore, undesirable and invasive annual plant species (i.e. halogeton, cheatgrass) have become prevalent in portions of previously disturbed areas which provide little resource value and hinder efforts to meet Public Land Health Standards.

Environmental Consequences of the Proposed Action: Weed species found in the area are effectively controlled by establishment of seeded species within disturbed areas. The proposed seed mix, which includes non-native species, is recommended because its associated plant species are highly adapted to this site (heavy clay soils) and offer the greatest opportunity to establish vegetation cover that will result in soil stabilization; thereby, providing a competitive interaction between seeded species and noxious and/or invasive weed species.

There is always the opportunity for other noxious weed species to be transported onto the proposed action locations by construction and/or support equipment.

Prompt reclamation with successful establishment would prevent cheatgrass and halogeton from establishing on disturbed sites. If other noxious weeds were to invade the site, prompt control would prevent movement to the adjacent plant communities.

Environmental Consequences of the No Action Alternative: None

Mitigation: The applicant will be responsible for managing cheatgrass, noxious weeds, and/or problem weeds should they occur and/or increase in density as a result of the proposed action. The applicant will use materials and methods as outlined in the RMP and/or authorized

in advance by the White River Field Office Manager. Application of herbicides must be under field supervision of an EPA certified pesticide applicator. Herbicides must be registered by the EPA and application proposals must be approved by the BLM.

MIGRATORY BIRDS

Affected Environment: The project area is encompassed by arid salt desert shrublands consisting principally of basin big sagebrush, shadscale and Gardner saltbush. Ground cover in the vicinity of the project area is dominated by annual, invasive species, namely cheatgrass and halogeton. These salt desert communities typically support species such as horned lark and western meadowlark.

Environmental Consequences of the Proposed Action: Earthwork associated with this project is expected to be completed by early-December 2006 and as such, would have no potential to directly interfere with migratory bird nesting activities. Any involvement with suitable nest habitat would be minor (~ 1 ac) and would occur in a previously disturbed area.

Environmental Consequences of the No Action Alternative: There would be no action authorized that would have potential to influence the reproductive activities or habitat of migratory birds.

Mitigation: See mitigation in TES section below.

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

Affected Environment: The area surrounding the proposed action is broadly encompassed by white-tailed prairie dog (WTPD) habitat. Prairie dogs and their burrow systems are important components of burrowing owl habitat, as well as potential habitat for reintroduced populations of black-footed ferret. Burrowing owls, a State threatened species are uncommon in this Resource Area. These birds return to occupy a maintained burrow system in early April and begin nesting soon after. Most birds have left the area by September. While burrowing owls have been documented in Chevron Field, no burrowing owl nesting activity has been recorded in the immediate vicinity of the project area.

Under the auspices of a non-essential, experimental population rule, black-footed ferrets have been released annually in Coyote Basin (eight miles southwest) and Wolf Creek (13 miles northeast) of Chevron Field since 1999 and 2001, respectively. This rule applies to any ferrets that may occupy or eventually be released in northwest Colorado and northeast Utah. Although there is no direct continuity between Coyote Basin or Wolf Creek and the project site, there is a strong likelihood that ferrets have colonized and successfully breed in Chevron Field. Ferrets are wholly reliant on prairie dogs for food and shelter. Ferret breeding activities begin in early March, with birthing beginning in early May. Young ferrets generally begin to emerge by mid-

July. There have been no verified sightings of ferrets, nor any known reproduction occurring in Chevron Field.

Environmental Consequences of the Proposed Action: With regards to burrowing owl, prairie dog and ferret breeding issues — all earthwork will be completed outside the period between 1 April and 15 July. Avoiding this timeframe would provide sufficient time for the rearing, emergence, and dispersal of young from natal burrows and effectively eliminate the likelihood of adversely affecting these animals' reproductive efforts. The proposed action would have no direct affect on the reproductive success of black-footed ferrets as the probability of any subsurface disturbance intersecting a prairie dog burrow system occupied by a ferret would be extremely remote.

Environmental Consequences of the No Action Alternative: There would be no potential influence on prairie dogs as habitat for burrowing owl and black-footed ferret in the case of a no action alternative.

Mitigation: Earthwork involving prairie dog burrow systems would be conducted outside the period of April 1 to July 15 to avoid the remote chance of disrupting the reproductive activities of ferrets, burrowing owl, and prairie dogs. Any surface disturbance associated with the proposed action should be revegetated and rehabilitated with the appropriated seed mixture and reclamation technique(s) as is required by the Authorized Officer.

Finding on the Public Land Health Standard for Threatened & Endangered species: Public Land Health Standards for those special status species associated with white-tailed prairie dogs, including black-footed ferret and burrowing owl, in Chevron Field are currently met. As conditioned, this project would have no adverse influence on populations, available extent of suitable habitat, or the reproductive activities of these three species. Thus, there would be no influence on meeting the land health standard. Small incremental gains in perennial grass cover associated with successful reclamation associated with injection line installation may be expected to bolster local populations of prairie dogs and potentially benefit individual burrowing owl and black-footed ferret—effects consistent with continued meeting of the Land Health Standards.

WASTES, HAZARDOUS OR SOLID

Affected Environment: There are no known hazardous or other solid 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.

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 properly disposed of.

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

Mitigation: The applicant shall be required to collect and properly dispose of any wastes generated by the allowed action.

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

Affected Environment: Surface Water: The proposed action is situated entirely within the White River near Rangely, CO fifth field watershed. Stinking Water Creek is the lone 6th/7th level watershed directly impacted by the proposed actions. Stinking Water Creek is a tributary to the White River below Rangely, CO. The White River is a tributary to the Green River in Utah which is a tributary to the Colorado River.

The “Status of Water Quality in Colorado – 2004” plus the 2006 update (CDPHE, 2006b) were reviewed for information related to the proposed actions. The proposed project area is located entirely within stream segment 22 of the White River basin. Stream segment 22 is defined as all tributaries to the White River including all wetlands, lakes, and reservoirs, from a point immediately above the confluence with Douglas Creek to the Colorado/Utah boarder, except for specific listings in segment 23. The State has classified stream segment 22 as "Use Protected". 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. Stream segment 22 has been further designated by the state as being beneficial for the following uses: Warm Aquatic Life 2, Recreation 1b, and Agriculture. For stream segment 22, minimum standards for four parameters have been listed. These parameters are: dissolved oxygen = 5.0 mg/l, pH = 6.5 - 9.0, Fecal Coliform = 325/100 ml, and 205/100 ml E. coli. (CDPHE, 2006b).

Stinking Water Creek flows primarily in response to snow melt, groundwater discharge and precipitation events (see Table 1). Table 1 contains historic water quality and flow data for Stinking Water Creek near Rangely, CO. Note that high values for specific conductance (SC) correspond with low flow periods (ground water discharge [base flow]) while lower SC values are associated with periods of higher flow. This correlation indicates that normal surface runoff is of fair water quality while SC readings taken during low flows are skewed by the geology and soil chemistry of the channel bottom at the point of measurement. Stinking Water Creek has been identified as an “F” type Rosgen stream channel. “F” type Rosgen stream channels can develop very high bank erosion rates, lateral extension rates, significant bar deposition and accelerated channel aggradation and/or degradation while providing for very high sediment supply and storage capacities (Rosgen, 1996).

Table 1: Stinking Water Creek-Near Rangely, CO (T2N, R102W, Sect. 32 SENE)						
Date	Temp. °C	SC	pH	Type of Meas.	Discharge (cfs)	Comments
4/9/1981	--	--	--	OBS	0.000	Dry
5/4/1981	20	1,890	7.6	Rod	5.99	

Table 1: Stinking Water Creek-Near Rangely, CO (T2N, R102W, Sect. 32 SENE)						
Date	Temp. ©	SC	pH	Type of Meas.	Discharge (cfs)	Comments
10/13/1981	7.9	1,120	7.9	Rod	31.9	~100-200' above bridge
4/12/1982	16	30,700	--	Rod	0.020	~100-200' above bridge
5/11/1982	21.5	31,890	--	Rod	0.100	~100-200' above bridge
11/4/1982	8	16,500	--	Volumetric	0.005	~100-200' above bridge
4/6/1983	5.3	20,000	7.9	Rod	0.032	SC pegged meter
5/4/1983	12.8	7,940	8.3	Rod	0.425	
6/1/1983	23.8	27,000	8.3	Volumetric	0.008	Lab SC
7/11/1983	--	--	--	OBS	0.000	Dry
4/6/1984	8.5	9,430	8.2	Rod	0.600	
5/11/1984	21.4	3,430	8.3	Rod	2.14	
6/30/1984	26.9	20,000	8.2	Volumetric	0.004	SC pegged meter
7/24/1984	32.6	7,560	7.8	Volumetric	0.011	
9/5/1984	--	--	--	OBS	0.000	Dry
4/16/1985	10.1	7,580	8.2	Volumetric	0.004	
5/17/1985	22.3	12,520	8.2	Volumetric	0.005	
6/7/1985	21.1	2,140	8.4	Rod	8.33	
7/26/1985	--	--	--	OBS	0.000	Dry
4/10/1986	12.8	2,830	8.3	Rod	3.15	
5/29/1986	25.1	14,430	8	Volumetric	0.040	
7/2/1986	--	--	--	OBS	0.000	Dry
5/9/1988	22	4,920	7.9	Volumetric	0.002	
6/8/1988	--	--	--	OBS	0.000	Dry

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 list of water-quality-limited segments requiring Total Maximum Daily Loads (TMDLs). The 2006 list of segments needing development of TMDLs includes two segments within the White River - segment 9b, White River tributaries North & South Forks to Piceance Creek, specifically the Flag Creek portion (for impairment from selenium with a low priority for TMDL development) and segment 22, tributaries to the White River, Douglas Creek to the Colorado/Utah boarder, specifically West Evacuation Creek, and Douglas Creek (sediment impairments). Regulation 94 is the State's list of water bodies identified for monitoring and evaluation, to assess water quality and determine if a need for TMDLs exists. The list includes two White River segments that are potentially impaired – 9 and 22. The proposed actions will occur to the north of the White River while all listed portions of stream segment 22 are found south of the White River. Thus, no impacts to any 303(d) or M&E listed streams will occur as a result of the proposed actions.

Ground Water: 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 actions. Information presented in Topper et al. (2003) indicates the extent of the Mesaverde aquifer encompasses the area know as the “Coal Oil Basin” north of Rangely, CO. The proposed project area is situated on the southern limb of the Rangely Anticline which surface geologic formation is the Cretaceous aged Mancos Shale (Tweto, 1979). The Mancos Shale (confining unit) has an approximate thickness of 7,000' feet. This unit is comprised primarily of shale

however within the unit, the Frontier Sandstone may occur as a local aquifer which is of poor water quality (highly saline). Quaternary Alluvium in Stinking Water Creek and the White River (White River Alluvial Aquifer) is located down gradient the proposed actions.

Environmental Consequences of the Proposed Action: Surface Water: Clearing, grading, and soil stockpiling activities may temporarily alter overland flow and natural groundwater recharge patterns. Near-surface soil compaction caused by construction equipment and vehicles could reduce the soil's ability to absorb water and could increase surface runoff, sedimentation and salt loading to surface waters in of the Colorado River System. The magnitude and duration of potential impacts to surface runoff and groundwater recharge would depend on soil depth, soil type, vegetation type and density, slope, aspect, erosive force of rainfall or surface runoff, and duration and extent of construction activities. Impacts would likely be greatest immediately following completion of construction activities and would likely decrease thereafter due to reclamation procedures.

Ground Water: In the event of any leaks or spills, local ground water may be adversely impacted as runoff could carry contaminants down gradient to alluvial aquifers such as the White River Alluvial Aquifer which is situated hydrologically down gradient from proposed project area. Potential for ground water contamination in bedrock aquifers increases if fractures in confining units are formed. Hydraulic conductivity increases exponentially along fracture zones resulting in rapid transport of fluids/contaminants in these areas.

Environmental Consequences of the No Action Alternative: Modification of the existing drip system would not occur and the integrity of the pipeline would not be tested. Failure to properly test the pipeline for anomalies may result in undetected pipe ruptures or leaks which could severely compromising water quality in the White River Basin.

Mitigation: Surface Water: The operator will consult with the State of Colorado Water Quality Control Division regarding Stormwater Discharge Permits prior to commencing construction activities. Construction activities that disturb one acre or greater require a Stormwater Discharge Permit. Written documentation to the BLM Authorized Officer is required within 30 days of the APD approval date to indicate that appropriate permits have been obtained. Written documentation may be a copy of the Stormwater Discharge Permit or an official verification letter from the State Water Quality Control Division to the operator that includes the Permit Certification Number. The operator will be required to have a State of Colorado approved storm water management plan on file with the White River Field Office BLM. For further information contact Nate Dieterich, WRFO Hydrologist at 970-878-3831 or Nathan_Dieterich@blm.gov. Appropriate documents may be sent via electronic mail, faxed (970-878-3805), or mailed to Nate Dieterich at the above address.

To mitigate additional soil erosion and potential increased sediment and salt loading to nearby surface waters, all disturbed areas affected by pipeline construction or subsequent operations, except areas reasonably needed for maintenance operations, shall be reclaimed as early and as nearly as practicable to their original condition and shall be maintained to control dust and minimize erosion. Reclamation efforts on all pipelines will be final. Final reclamation of pipeline right of ways (ROW) will commence as follows:

- Debris and waste materials other than de minimus amounts, including, but not limited to, concrete, sand, plastic, pipe and cable, as well as equipment associated with the pipeline construction and maintenance operations shall be removed.
- Stockpiled topsoil and spoil piles will be separated and clearly labeled to prevent mixing during reclamation efforts.
- Stockpiled topsoil segregated from spoil piles will be replaced during reclamation in its respective original position (last out, first in) to minimize mixing of soil horizons.
- Stockpiled soils (spoil and topsoil) will be pulled back over all disturbed surfaces affected by pipeline construction or subsequent operations, except areas reasonably needed for maintenance operations. Pipelines will be recontoured to pre-construction contours as soon as construction activities cease.
- The operator will ensure stockpiled topsoil is evenly distributed over the **top** of spoil used in recontouring efforts.
- Recontoured areas will be seeded with a BLM approved seed mixture, and all slopes exceeding 5 % will be covered with wildlife friendly biodegradable fabrics (such as but not limited to Jute blankets, Curlex...) to provide additional protection to topsoil, retain soil moisture, and help promote desired vegetative growth.
- Following seeding and placement of biodegradable fabrics, woody debris cleared during initial construction will be pulled back over the recontoured areas to act as flow deflectors and sediment traps. Available woody debris will be evenly distributed over the entire portion of the reclaimed area and will not account for more than 20% of total ground cover.
- The operator will be responsible for achieving a reclamation success rate (on all disturbed areas associated pipeline construction/repair) 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 operators expense if: after the first growing season there is 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.

Upon final abandonment of the pipeline, 100% of all disturbed surfaces will be restored to pre-construction contours, and revegetated with a BLM preferred seed mixture. Natural drainage patterns will be restored and stabilized with a combination of vegetative (seeding) and non-vegetative (straw bails, woody debris, straw waddles, biodegradable fabrics...) techniques. Berming of pipelines will NOT inhibit natural drainage patterns. All available woody debris will be pulled back over recontoured areas (woody debris will not account for more that 20% of total surface cover) to help stabilize soils, trap moisture, and provide cover for vegetation.

Monitoring and additional reclamation efforts will persist until reclamation is proven successful (as determined by the BLM).

Ground Water: Environmentally unfriendly substances (e.g. diesel) must not be allowed to contact soils. The use of spill-guards (or equivalent spill prevention equipment) under and around pumping equipment shall be used to intercept such contaminants prior to infiltrating soils and contaminating ground water.

Finding on the Public Land Health Standard for water quality: The affected watershed is not currently listed on the State's M&E or 303(d) lists of impaired (or potentially impaired) streams and currently meets standards. However, many of the upper tributaries to Stinking Water Creek are ephemeral in nature and will not meet standards during peak flows. Implementation of the proposed actions should not change this status so long as suggested mitigation is carried forward.

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

Affected Environment: There are no wetlands or riparian areas within five miles of the project area.

Environmental Consequences of the Proposed Action: The proposed action would have no conceivable influence on wetland or riparian habitat.

Environmental Consequences of the No Action Alternative: There would be no action authorized that would have any direct or indirect influence on downstream riparian communities.

Mitigation: None

Finding on the Public Land Health Standard for riparian systems: This project would have no conceivable potential for influencing riparian attributes addressed in the Standards.

CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED:

No ACEC's, WSA'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: The following data is a product of an order III soil survey conducted by the Natural Resources Conservation Service (NRCS) in Rio Blanco County, CO. Table 1 highlights important soil characteristics. A complete summary of this information can be found at the White River Field Office. CSU-1 “saline soils” will be encountered throughout the entire work area. Generally, all surface disturbing activities occurring on CSU-1 soils would require an engineered construction/reclamation plan to be submitted and approved by the Area Manager prior to construction. However, nearly all of the proposed actions will occur on previously disturbed surfaces and with suggested mitigation, an engineered construction/reclamation plan will not be necessary.

Table 1:

Soil Number	Soil Name	Acres w/in 30 meters	Slope	Ecological site	Salinity	Run Off	Erosion Potential	Bedrock
7	Billings silty clay loam	0.52	0-5%	Alkaline Slopes	2-8	Rapid	Moderate to high	>60
18	Chipeta-Killpack silty clay loam	2.86	3-15%	Clayey Saltdesert	4-16	Rapid	High	10-20

7-Billings silty clay loam (0 to 5 percent slopes) is a deep, well drained soil located on alluvial valley floors, flood plains, narrow valley floors, and terraces. It formed in *calcareous*, silty alluvium derived dominantly from shale. The native vegetation is mainly desert shrubs and grasses. The average annual precipitation is 6 to 8 inches, the average annual air temperature is 47 to 49 degrees F, and the average frost-free period is 105 to 135 days. Typically, the upper part of the surface layer is light gray silty clay loam about 2 inches thick. The lower part is pale brown silty clay loam about 4 inches thick. The underlying material to a depth of 60 inches or more is silty clay loam that has a few fine *gypsum crystals*. Permeability of this Billings soil is slow. Available water capacity is high. Effective rooting depth is 60 inches or more. Runoff is rapid, and the hazard of water erosion is moderate to high. If this unit is used for urban development, the main limitations are the shrink-swell potential, frost action potential, and slow permeability. The effects of shrinking and swelling can be reduced by maintaining a constant moisture content around the foundation and by backfilling excavations with material that has low shrink-swell potential.

18-Chipeta-Killpack silty clay loams (3 to 15 percent slopes) is located on low, rolling hills and on ridges, toe slopes, and the sides of narrow valleys. The native vegetation is mainly salt-tolerant desert shrubs and some grasses. The average annual precipitation is 7 to 9 inches, the average annual air temperature is 47 to 49 degrees F, and the average frost-free period is 105 to

135 days. This unit is 60 percent Chipeta silty clay loam that has slopes of 3 to 15 percent and 30 percent Killpack silty clay loam that has slopes of 3 to 8 percent. The Chipeta soil is shallow and well drained. It formed in residuum derived dominantly from *calcareous gypsiferous shale*. Typically, the surface layer is light brownish gray silty clay loam about 3 inches thick. The next layer is silty clay about 6 inches thick. The underlying material is silty clay that has fine shale chips and seams of crystalline gypsum and is about 9 inches thick. Platy shale is at a depth of 18 inches. Depth to shale ranges from 10 to 20 inches. Permeability of the Chipeta soil is slow. Available water capacity is low. Effective rooting depth is 10 to 20 inches. Runoff is rapid, and the hazard of water erosion is high.

The Killpack soil is moderately deep and well drained. It formed in residuum and colluvium derived dominantly from *calcareous, gypsiferous shale*. Typically, the surface layer is light gray and light brownish gray silty clay loam 4 inches thick. The underlying material is silty clay loam that has some fine shale chips and seams of *crystalline gypsum* and is 26 inches thick. Platy shale is at a depth of 30 inches. Depth to shale ranges from 20 to 40 inches. Permeability of the Killpack soil is slow. Available water capacity is moderately low. Effective rooting depth is 20 to 40 inches. Runoff is rapid, and the hazard of water erosion is high. If this unit is used for urban development, the main limitations are shallow soil depth, slow permeability, and rapid runoff.

Environmental Consequences of the Proposed Action: Given the high alkalinity of the majority of the affected acreage, soil piping and gully formation may result if soils are further exposed to erosional processes. Construction activities may result in increased soil compaction which will reduce infiltration and permeability rates increasing the erosive potential of overland flows. Any leaks or spills of environmentally unfriendly substances (e.g. diesel fuel) could compromise the productivity of affected soils.

Environmental Consequences of the No Action Alternative: Modification of the existing drip system would not occur and the integrity of the pipeline would not be tested. Failure to properly test the pipeline for anomalies may result in undetected pipe ruptures or leaks which could severely compromise soil health and productivity at the construction site.

Mitigation: Given the salt concentration of the impacted soils, the operator will be responsible for monitoring salts leaching from soils. If large salt deposits begin to appear, the operator will notify BLM, together they will coordinate the application of best management practices to help mitigate the problem. The operator will be responsible for segregating topsoil material and backfilling of topsoil in its respective original position (last out, first in) to assist in the reestablishment of soil health and productivity. All disturbed surfaces will be restored to natural contours and revegetated with a BLM approved seed mixture as outlined in the Vegetation section of this EA. Erosion and sediment control measures will be installed on all slopes exceeding five percent to mitigate soil loss. Erosion and sediment control measures will be maintained until stream banks and adjacent upland areas are stabilized. For additional mitigation concur with mitigation outlined in the Water Quality portion of this document.

Finding on the Public Land Health Standard for upland soils: Undesirable and invasive annual plant species (i.e. halogeton, cheatgrass) have become dominant in previously disturbed

areas of the Coal Oil Basin located north of Rangely, CO. Areas dominated by undesirable vegetative species such as halogeton and cheatgrass lack desired soil stabilization properties and exhibit lower infiltration and permeability rates. These areas are classified as early-seral ecological sites which provide little resource value and do not meet Public Land Health Standards for upland soils. At locations defined as mid-seral ecological sites (see vegetation portion of this document), acceptable components within the plant community provide sufficient soil stabilization as well as appropriate infiltration and permeability rates. These areas are meeting standards for public land health. With successful reclamation no deterioration in soil health is anticipated.

VEGETATION (includes a finding on Standard 3)

Affected Environment: The proposed action is located within the Clayey Saltdesert ecological site, which is dominated by salt tolerant vegetation. The dominant plant community for this site consists of greasewood (*Sarcobatus vermiculatus*) and various saltbushes such as shadscale (*Atriplex confertifolia*), Gardner saltbrush (*Atriplex gardneri*), mat saltbush (*Atriplex corrugate*), and fourwing saltbrush (*Atriplex canescens*). Other brushes intermixed in the area are rabbitbrush (*Chrysothamnus viscidiflorus*) and big sagebrush (*Artemisia tridentata*). The understory of these shrubs is dominated by western wheatgrass (*Agropyron smithii*), Colorado wildrye (*Elymus salinus*), and squirreltail (*Sitanion hystrix*). Cheatgrass (*Bromus tectorum*) is an undesirable, invasive, and alien plant species that is present within the locality of the proposed action.

The soil within the project area is Chipeta Killpack silty clay. These soil types have a high clay content that are moderate to highly erosive and receives low precipitation with rapid runoff, thus limiting forage production and hampering re-vegetation efforts.

Drought conditions are very prevalent within the Coal Oil Basin area, which has hampered the successful establishment of reclaimed plant species of other projects in this area. Therefore, undesirable and invasive annual plant species (i.e. halogeton (*Halogeton glomeratus*), cheatgrass (*Bromus tectorum*)) have become dominant in portions of previously disturbed areas which provide little resource value and hinder efforts to meet Public Land Health Standards.

Environmental Consequences of the Proposed Action: The proposed action would cause a short-term disturbance on mid to low seral class of desert shrub community for a total of 1.03 acres. Short-term soil and vegetation disturbances would be offset in the long-term by successfully reclaiming the disturbed area with a seed mix that is suited for this ecological site. As this area has a component of cheatgrass and halogeton within the plant community, successful re-vegetation efforts would slightly increase desirable plant species within the rangelands.

Previously this area has entailed considerable impacts from oil and gas activities from a network of well pads, pipeline corridors, and access roads, which have resulted in a fragmentation and reduction of available/productive ecological sites.

Environmental Consequences of the No Action Alternative: None

Mitigation: Promptly revegetate all disturbed areas associated with the proposed action, including all cut and fill slopes and topsoil stockpiles, with Standard Seed Mix #1 of the White River Resource Area Resource Management Plan (RMP) (B-19, Appendix B). Seeding rates in the White River ROD/RMP are shown as pounds of Pure Live Seed (PLS) per acre and apply to drill seeding. For broadcast application, double the seeding rate and then harrow to insure seed coverage. Applied seed must be certified and free of noxious weeds and seed certification tags must be submitted to the Field Manager within 30 days of seeding. The applicant will be responsible for managing cheatgrass, noxious weeds, and/or problem weeds should they occur and/or increase in density as a result of the proposed action. The applicant will use materials and methods as outlined in the White River ROD/RMP or authorized in advance by the White River Field Office manager.

Seed Mix #	Species (Variety)	Lbs PLS/ Acre	Ecological Sites
1	Siberian wheatgrass (P27) Russian wildrye (Bozoisky) Crested wheatgrass (Hycrest) Alternates: Yellow sweetclover, Fourwing saltbush, Nuttall saltbush, Winterfat, Annual Sunflower, Western wheatgrass	3 2 3	Alkaline Uplands, Badlands, Clayey 7"-9", Clayey Salt Desert, Cold Desert Breaks, Cold Desert Overflow, Gravelly 7"-9", Limey Cold Desert, Loamy 7"-9", Loamy Cold Desert, Loamy Salt Desert, Saline Lowland, Salt Desert Breaks, Salt Flats, Salt Meadow Sands 7"-9", Sandy 7"-9", Sandy Cold Desert, Sandy Salt Desert, Shale 7"-9", Shale/Sands Complex, Shallow Loamy, Shallow Sandy, Shallow Slopes, Silty Salt Desert, Silty Swale, Steep Slopes

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): Early seral ecological sites associated with the proposed action lacks desirable plant species at an appreciable density and frequency level, thus are not meeting standards. This is due to the prevalence of cheatgrass and halogeton within the vegetative understory. A slight positive benefit would be received through a successful re-vegetation effort, thus increasing preferred plant species within this low producing rangeland. Mid seral ecological sites at the proposed action locality have acceptable components within the plant community and are meeting standards.

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: The project area is separated from the nearest aquatic habitat by over five miles of ephemeral channel.

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

Environmental Consequences of the No Action Alternative: There would be no action authorized that would have any direct or indirect influence on downstream aquatic communities.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): Neither the proposed or no-action alternative would have any reasonable potential to influence the function or condition of aquatic habitat values.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: The project area is inhabited year-round by a small resident herd of pronghorn. These animals are acclimated to routine oil and gas production activities. A number of raptors forage opportunistically during the winter, the most common being rough-legged hawks, red-tailed hawks, and golden eagle. The project area and the surrounding area provide no special or unique habitat features (e.g., nesting substrate) for these birds.

Non-game wildlife 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: This project, as mitigated, would have no conceivable adverse consequences on big game distribution or habitat quality. Right-of-way reclamation normally provides herbaceous forage opportunity in excess of that previously existing and in many cases will replace halogeton-dominated understories almost immediately after construction is complete. Standard reclamation procedures would provide the opportunity to increase the perennial grass component on these corridors in the longer term, increasing ground cover and seed production and prolonging the availability of green herbaceous forage for resident big and non-game animals.

Environmental Consequences of the No Action Alternative: Post-construction reclamation normally provides herbaceous forage opportunity in excess of that previously existing, and in many cases will replace halogeton-dominated understories. There would be no opportunity under the no-action alternative to improve herbaceous ground cover and composition along the existing right-of-way as cover and/or forage for resident wildlife in the long term.

Mitigation: See mitigation in TES section above.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): Much of the ground cover near the project area is dominated by annual weeds. Although these sites in and of themselves cannot be considered meeting the definition of the land health standard, the majority of the shrubland communities comprising this landscape likely retain sufficient character to support viable populations of resident wildlife, although likely at populations reduced from potential. Subsequent reclamation offers an opportunity to reestablish herbaceous forage and cover conditions (i.e., redevelopment of a perennial bunchgrass component) more consistent with the proper functioning of these arid salt desert communities as wildlife habitat, thus better opportunity to meet the land health standard.

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		
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 action is situated entirely within the White River near Rangely, CO fifth field watershed. Stinking Water Creek is the lone 6th/7th level watershed directly impacted by the proposed actions. Stinking Water Creek is a tributary to the White River below Rangely, CO. The White River is a tributary to the Green River in Utah which is a tributary to the Colorado River. Onsite evaluation of Stinking Water Creek (August 2006) revealed a severely entrenched, sediment rich, “F” type Rosgen stream channel. “F” type Rosgen stream channels are defined as entrenched, meandering channels that are observed to be working towards re-establishing functional floodplains within the confines of a channel that is consistently increasing in width within the valley. The “F” stream systems are characterized as having high channel width/depth ratios at the bankfull stage, and bedform features occurring as a moderated riffle/pool sequence. “F” stream channels can develop very high bank erosion rates, lateral extension rates, significant bar deposition and accelerated channel aggradation and/or degradation while providing for very high sediment supply and storage capacities (Rosgen, 1996).

A search of water rights through Colorado’s Decision Support Systems web site (CDSS, 2006) and the BLM-WRFO water rights database was done to identify any water rights in T2N, R103W, Section 22. No water rights were identified in section 22.

Environmental Consequences of the Proposed Action: Improper drainage from the pipeline ROW will elevate sediment production from disturbed areas. Increased sediment loads to local surface water drainages may result in a sediment rich system. Sediment rich systems are characterized by deposition and high width to depth ratios (W/D ratio). As the W/D ratio increases (wide shallow channels) 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, and the cycle continues (Rosgen, 1996).

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.

Environmental Consequences of the No Action Alternative: None

Mitigation: Concur with mitigation outlined in the Water Quality portion of this document.

PALEONTOLOGY

Affected Environment: The proposed action is located in an are generally mapped as the Mancos Shales (Tweto 1979) which the BLM, SRFO has classified as a Condition II formation meaning it may, on rare occasions produce scientifically important fossil resources.

Environmental Consequences of the Proposed Action: Unless it becomes necessary to excavate into the underlying rock formation there is no potential to impact scientifically important fossil resources. If, for some reason, it becomes necessary to excavate into the underlying rock there is a small potential or impact scientifically important fossil resources.

Environmental Consequences of the No Action Alternative: There would be no new impacts to fossil resources under the No Action Alternative.

Mitigation: 1. 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 action is located in the Artesia allotment (06308), which is authorized for sheep use by Morapos Sheep Company. Grazing use by sheep in the allotment can be authorized from December 1st through April 20th.

Soils within the project area are principally Chipeta Killpack silty clay (Clayey Saltdesert ecological site) which are dominated by a salt tolerant desert shrub and grass communities. These brush/grass communities are utilized by sheep for meeting forage requirements, particularly during winter months. This soil type has a high clay content that is moderately to highly erosive and receives low precipitation with rapid runoff, thus limiting forage production and hampering re-vegetation efforts.

Drought conditions are very prevalent within the Coal Oil Basin area, which has hampered the successful establishment of reclaimed plant species of other projects in this area. Therefore, undesirable and invasive annual plant species (i.e. halogeton, cheatgrass) have become dominate in a portion of these disturbed areas which provide little forage value for livestock.

Environmental Consequences of the Proposed Action: The individual proposed action would have minimal impacts on the authorized grazing use because the amount of new surface disturbance (1.03 acres) is nominal in regards to the scale of the allotment (43,347 total acres), and it is a short-term disturbance.

Short-term soil and vegetation disturbances (1.03 acres) would be offset in the long-term by successfully reclaiming the disturbed area with a seed mix that is suited for this ecological site. As this area has a component of cheatgrass and halogeton within the plant community, successful re-vegetation efforts would slightly increase desirable forage species within the rangelands.

If the proposed action was authorized during the grazing period, it would have some limited impacts while sheep are grazing. This is in part due to the increased activity associated with the development of the proposed action and decrease in rangelands available for grazing. Also, BLM grazing permit holders have experienced injury and losses of livestock due to inadequate fencing of disposal pits at the pads. Other impacts to livestock grazing may include such influences as a modification in sheep distribution, reduction in available forage, injury to livestock, and impediments to livestock grazing and movement.

Overall, this individual proposed action would have no significant direct impact on the authorized AUMs in the allotments. A slight positive benefit would be received through successful re-vegetation efforts on the project area, thus increasing preferred forage plants within this mid to low producing rangeland. However, the cumulative impacts from past, present, and

possible future oil and gas activities may have a long-term effect on the native range's carrying capacity, thus influencing the authorized AUMs. This possible affect would be determined during the grazing permit renewal process which includes an evaluation of forage capacity available for livestock. It is foreseeable that the grazing permit holder could lose a portion of permitted active AUMs due to a loss of forage associated with oil and gas development within the authorized BLM grazing allotment.

Environmental Consequences of the No Action Alternative: None

Mitigation: Any livestock control facilities and/or rangeland improvements impacted during this operation will be replaced or repaired to their prior condition. The applicant will install a cattleguard to BLM specifications in any fences which they encounter. Also, the applicant will be held responsible for maintenance of livestock control facilities, such as cattleguards, in a proper functioning condition which they encounter or affect during operation.

CUMULATIVE IMPACTS SUMMARY: This action is consistent with the scope of impacts addressed in the White River ROD/RMP. The cumulative impacts of energy related development are addressed in the White River ROD/RMP for each resource value that would be affected by the proposed action.

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.

Fetterman, Jerry

2005 Cultural Resource Inventory of Vernal 2005 Recoat Locations for Williams Gas pipelines West, Rio Blanco County, Colorado. Woods Canyon Archaeological Consultants, Inc., Yellow Jacket, Colorado.

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

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.

Tweto, Ogden

1979 Geologic Map of Colorado. United States Geologic Survey, Department of the Interior, Reston, Virginia.

PERSONS / AGENCIES CONSULTED: None

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility
Nate Dieterich	Hydrologist	Air Quality
Tamara Meagley	Natural Resource Specialist	Areas of Critical Environmental Concern
Tamara Meagley	Natural Resource Specialist	Threatened and Endangered Plant Species
Michael Selle	Archeologist	Cultural Resources Paleontological Resources
Matt Dupire	Rangeland Management Specialist	Invasive, Non-Native Species
Lisa Belmonte	Wildlife Biologist	Migratory Birds
Lisa Belmonte	Wildlife Biologist	Threatened, Endangered and Sensitive Animal Species, Wildlife
Melissa J. Kindall	Hazmat Collateral; Range Technician	Wastes, Hazardous or Solid; Wild Horses
Nate Dieterich	Hydrologist	Water Quality, Surface and Ground Hydrology and Water Rights
Lisa Belmonte	Wildlife Biologist	Wetlands and Riparian Zones
Chris Ham	Outdoor Recreation Planner	Wilderness
Nate Dieterich	Hydrologist	Soils
Matt Dupire	Rangeland Management Specialist	Vegetation
Lisa Belmonte	Wildlife Biologist	Wildlife Terrestrial and Aquatic
Chris Ham	Outdoor Recreation Planner	Access and Transportation
Ken Holsinger	Natural Resource Specialist	Fire Management
Robert Fowler	Forester	Forest Management
Paul Daggett	Mining Engineer	Geology and Minerals
Matt Dupire	Rangeland Management Specialist	Rangeland Management
Penny Brown	Realty Specialist	Realty Authorizations
Chris Ham	Outdoor Recreation Planner	Recreation
Keith Whitaker	Natural Resource Specialist	Visual Resources

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

CO-110-2006-231-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 with the following mitigation measures.

MITIGATION MEASURES:

1. The operator will be responsible for complying with all local, state, and federal air quality regulations as well as providing documentation to the BLM that they have done so. To minimize production of fugitive particulate matter (fugitive dust), 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. Land clearing, grading, earth moving or excavation activities will be suspended when wind speeds exceed a sustained velocity of 20 miles per hour. Disturbed areas will be restored to original contours, and revegetated with a BLM preferred seed mixture. Following seeding, woody debris cleared from the ROW will be pulled back over the pipeline to increase effective ground cover and help retain soil moisture.
2. Construction equipment will be maintained in good operating condition to ensure that engines are running efficiently. Vehicles and construction equipment with emission controls will also be maintained to ensure effective pollutant emission reductions.
3. 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 historic or archaeological sites, or for collecting artifacts. 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.

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. The applicant will be responsible for managing cheatgrass, noxious weeds, and/or problem weeds should they occur and/or increase in density as a result of the proposed action. The applicant will use materials and methods as outlined in the RMP and/or authorized in advance by the White River Field Office Manager. Application of herbicides must be under field supervision of an EPA certified pesticide applicator. Herbicides must be registered by the EPA and application proposals must be approved by the BLM.

6. Earthwork involving prairie dog burrow systems would be conducted outside the period of April 1 to July 15 to avoid the remote chance of disrupting the reproductive activities of ferrets, burrowing owl, and prairie dogs. Any surface disturbance associated with the proposed action should be revegetated and rehabilitated with the appropriated seed mixture and reclamation technique(s) as is required by the Authorized Officer.

7. Surface Water: The operator will consult with the State of Colorado Water Quality Control Division regarding Stormwater Discharge Permits prior to commencing construction activities. Construction activities that disturb one acre or greater require a Stormwater Discharge Permit. Written documentation to the BLM Authorized Officer is required within 30 days of the APD approval date to indicate that appropriate permits have been obtained. Written documentation may be a copy of the Stormwater Discharge Permit or an official verification letter from the State Water Quality Control Division to the operator that includes the Permit Certification Number. The operator will be required to have a State of Colorado approved storm water management plan on file with the White River Field Office BLM. For further information contact Nate Dieterich, WRFO Hydrologist at 970-878-3831 or Nathan_Dieterich@blm.gov. Appropriate documents may be sent via electronic mail, faxed (970-878-3805), or mailed to Nate Dieterich at the above address.

8. To mitigate additional soil erosion and potential increased sediment and salt loading to nearby surface waters, all disturbed areas affected by pipeline construction or subsequent operations, except areas reasonably needed for maintenance operations, shall be reclaimed as early and as

nearly as practicable to their original condition and shall be maintained to control dust and minimize erosion. Reclamation efforts on all pipelines will be final. Final reclamation of pipeline right of ways (ROW) will commence as follows:

- Debris and waste materials other than de minimus amounts, including, but not limited to, concrete, sand, plastic, pipe and cable, as well as equipment associated with the pipeline construction and maintenance operations shall be removed.
- Stockpiled topsoil and spoil piles will be separated and clearly labeled to prevent mixing during reclamation efforts.
- Stockpiled topsoil segregated from spoil piles will be replaced during reclamation in its respective original position (last out, first in) to minimize mixing of soil horizons.
- Stockpiled soils (spoil and topsoil) will be pulled back over all disturbed surfaces affected by pipeline construction or subsequent operations, except areas reasonably needed for maintenance operations. Pipelines will be recontoured to pre-construction contours as soon as construction activities cease.
- The operator will ensure stockpiled topsoil is evenly distributed over the **top** of spoil used in recontouring efforts.
- Recontoured areas will be seeded with a BLM approved seed mixture, and all slopes exceeding 5 % will be covered with wildlife friendly biodegradable fabrics (such as but not limited to Jute blankets, Curlex...) to provide additional protection to topsoil, retain soil moisture, and help promote desired vegetative growth.
- Following seeding and placement of biodegradable fabrics, woody debris cleared during initial construction will be pulled back over the recontoured areas to act as flow deflectors and sediment traps. Available woody debris will be evenly distributed over the entire portion of the reclaimed area and will not account for more than 20% of total ground cover.
- The operator will be responsible for achieving a reclamation success rate (on all disturbed areas associated pipeline construction/repair) 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 operators expense if: after the first growing season there is 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.

9. Upon final abandonment of the pipeline, 100% of all disturbed surfaces will be restored to pre-construction contours, and revegetated with a BLM preferred seed mixture. Natural drainage patterns will be restored and stabilized with a combination of vegetative (seeding) and non-vegetative (straw bails, woody debris, straw waddles, biodegradable fabrics...) techniques. Berming of pipelines will NOT inhibit natural drainage patterns. All available woody debris will be pulled back over recontoured areas (woody debris will not account for more that 20% of total

surface cover) to help stabilize soils, trap moisture, and provide cover for vegetation. Monitoring and additional reclamation efforts will persist until reclamation is proven successful (as determined by the BLM).

10. Ground Water: Environmentally unfriendly substances (e.g. diesel) must not be allowed to contact soils. The use of spill-guards (or equivalent spill prevention equipment) under and around pumping equipment shall be used to intercept such contaminants prior to infiltrating soils and contaminating ground water.

11. Given the salt concentration of the impacted soils, the operator will be responsible for monitoring salts leaching from soils. If large salt deposits begin to appear, the operator will notify BLM, together they will coordinate the application of best management practices to help mitigate the problem. The operator will be responsible for segregating topsoil material and backfilling of topsoil in its respective original position (last out, first in) to assist in the reestablishment of soil health and productivity. All disturbed surfaces will be restored to natural contours and revegetated with a BLM approved seed mixture as outlined in the Vegetation section of this EA. Erosion and sediment control measures will be installed on all slopes exceeding five percent to mitigate soil loss. Erosion and sediment control measures will be maintained until stream banks and adjacent upland areas are stabilized. For additional mitigation concur with mitigation outlined in the Water Quality portion of this document.

12. Promptly revegetate all disturbed areas associated with the proposed action, including all cut and fill slopes and topsoil stockpiles, with Standard Seed Mix #1 of the White River Resource Area Resource Management Plan (RMP) (B-19, Appendix B). Seeding rates in the White River ROD/RMP are shown as pounds of Pure Live Seed (PLS) per acre and apply to drill seeding. For broadcast application, double the seeding rate and then harrow to insure seed coverage. Applied seed must be certified and free of noxious weeds and seed certification tags must be submitted to the Field Manager within 30 days of seeding. The applicant will be responsible for managing cheatgrass, noxious weeds, and/or problem weeds should they occur and/or increase in density as a result of the proposed action. The applicant will use materials and methods as outlined in the White River ROD/RMP or authorized in advance by the White River Field Office manager.

Seed Mix #	Species (Variety)	Lbs PLS/Acre	Ecological Sites
1	Siberian wheatgrass (P27)	3	Alkaline Uplands, Badlands, Clayey 7"-9", Clayey Salt Desert, Cold Desert Breaks, Cold Desert Overflow, Gravelly 7"-9", Limey Cold Desert, Loamy 7"-9", Loamy Cold Desert, Loamy Salt Desert, Saline Lowland, Salt Desert Breaks, Salt Flats, Salt Meadow Sands 7"-9", Sandy 7"-9", Sandy Cold Desert, Sandy Salt Desert, Shale 7"-9", Shale/Sands Complex, Shallow Loamy, Shallow Sandy, Shallow Slopes, Silty Salt Desert, Silty Swale, Steep Slopes
	Russian wildrye (Bozoisky)	2	
	Crested wheatgrass (Hycrest)	2	
	Alternates: Yellow sweetclover, Fourwing saltbush, Nuttall saltbush, Winterfat, Annual Sunflower, Western wheatgrass	3	

13. 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)

14. 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.

15. Any livestock control facilities and/or rangeland improvements impacted during this operation will be replaced or repaired to their prior condition. The applicant will install a cattleguard to BLM specifications in any fences which they encounter. Also, the applicant will be held responsible for maintenance of livestock control facilities, such as cattleguards, in a proper function condition which they encounter or affect during operation.

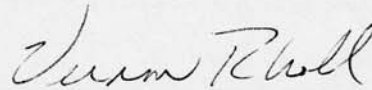
16. The applicant shall be required to collect and properly dispose of any wastes generated by the allowed action.

COMPLIANCE/MONITORING: Compliance will be conducted by the realty staff within three years before the temporary use permit expires.

NAME OF PREPARER: Penny Brown

NAME OF ENVIRONMENTAL COORDINATOR: Caroline Hollowed

SIGNATURE OF AUTHORIZED OFFICIAL:



Field Manager

DATE SIGNED:

11/14/06

ATTACHMENTS: General Location Map of the Proposed Action

Location of Proposed Action CO-110-2006-231-EA

