

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

## ENVIRONMENTAL ASSESSMENT

**NUMBER:** DOI-BLM-CO-110-2010-0080-EA

**CASEFILE/PROJECT NUMBER:** COC 74270 - proposed gas pipelines and proposed Fence Yard Compressor Station;  
COC74270-01 - proposed temporary work areas;  
COC74318 - proposed water lines

**PROJECT NAME:** Ryan Gulch Gathering Project-Water Fork Project

**LEGAL DESCRIPTION:** Sixth Principal Meridian, Colorado

### T2S, R98W

Fence Yard Compressor Station site in Sections 4, 5, 8, 9  
Water Fork Parcel in Sec. 8  
Fence Yard Parcel in Section 9  
Mile Post 5.31 Parcel in Sec. 29

} Above-grade pipeline facilities

2,599' Section 4: Lots 14, 15, 17, and 18 (Corridor 6A-1a)  
Section 5: SESE (Fence Yard Compressor Station site)  
3,181' Section 8: S2NE, NENE (Corridor 6A-1b)  
2,355' Section 8: W/2SE (Corridor 6A-2)  
257' Section 9: NWNW (Corridor 6A-1a)  
1,006' Section 9: NWNW (Corridor 6A-1b)  
6,957' Section 17: W2NE, SENW, N2SW, SWSW (Corridor 6A-2)  
763' Section 18: SESE (Corridor 6A-2)  
1,295' Section 19: SWSE  
1,201' Section 29: Lot 12  
3,695' Section 30: S2NE, NWNE,  
2,431' Section 30: E2SE, SWSE  
5,270' Section 31: Lots 6, 7, 9, 10, 16, and 17

} Corridor 6A-4

### T2S, R99W

1,755' Section 36: E2SE

### T3S, R99W

320' Section 1: Lot 1

**APPLICANT:** Bargath Inc.

## **DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:**

*Background/Introduction:* Bargath Inc. (Bargath) will require two new Federal rights-of-way (ROWs) and a temporary use permit in order to construct a proposed compressor site and pipelines that will transport natural gas and produced water throughout the Ryan Gulch Unit. If granted, these pipelines will transport gas from El Paso Junction and the proposed compressor site located in Section 4, T2S, R98W to Water Fork, an above ground facility, located in Section 8, T2S, R98W. Water would then be transported from various gathering and delivery points within the Ryan Gulch Unit to and from the Ryan Gulch Water Management Facility.

*Proposed Action:* Bargath is requesting ROWs to construct various pipelines, water lines, above-grade pipeline facilities, and the Fence Yard compressor station. The pipelines and water lines would connect El Paso Junction to the yet to be constructed Ryan Gulch water management facility (located on private land). Bargath is proposing to install approximately 6.27 miles (approximately 33,085 total feet) of buried natural gas gathering pipelines and produced water pipelines on public land. In addition, approximately 6,340 feet will cross fee surface. Bargath also requests a 16.9 acre site for the Fence Yard compressor station. A general location map of the project area (Figure 1) and a map of specific project components (Figure 2) are attached. The estimated construction time would be 90 to 120 days for construction of the pipelines and 60 to 120 days for construction of the compressor station (weather dependent).

**Pipelines:** Bargath's proposal is described as Corridor 6A, which is broken into five separate sub-corridors, shown in Figure 2, and described as:

### Corridor 6A-1a

El Paso Junction to Fence Yard compressor station: beginning at El Paso Junction in Section 4, T2S, R98W, four natural gas pipelines (a 16-inch high-pressure pipeline, a 20-inch high-pressure pipeline, a 16-inch low pressure pipeline, and a 20-inch low pressure pipeline) and two water lines would travel southwest parallel to an existing gas pipeline and County Road (CR) 68 to the proposed Fence Yard compressor station. Bargath requests a temporary construction ROW width of 100 ft (50 ft permanent ROW width) for this portion.

### Corridor 6A-1b

Fence Yard compressor station to Water Fork: beginning at the Fence Yard compressor station in Section 4, T2S, R98W, a single 16-inch high-pressure natural gas pipeline, a single 16-inch low-pressure natural gas pipeline, and two water lines would travel southwest parallel to an existing gas pipeline and County Road 68. Corridor 6A-1b ends at an area known as Water Fork. Bargath requests a temporary construction corridor width of 85 feet (50 feet permanent ROW width) for this portion.

### Corridor 6A-2

Water Fork to Ryan Ranch: beginning at Water Fork, located in Section 8, T2S, R98W, three water lines (and no gas lines) would travel south and southwesterly, alternating between traveling cross country and then parallel with intermittent two tracks, existing roads, and existing pipelines. This segment terminates at a site known as Ryan Ranch, located on surface owned by Williams. Bargath requests a temporary construction ROW width of 75 feet (50 feet permanent ROW width) for this portion.

### Corridor 6A-3

Ryan Ranch to County Road 86 Crossing Junction: proposed entirely on surface owned by Williams. This portion is located in Section 19, T2S, R98W. Two gas lines and three water lines are proposed for this sub-corridor.

### Corridor 6A-4

County Road 86 to Ryan Gulch water management facility: beginning at County Road 86 in Section 19, T2S, R98W. This portion travels south, southeasterly, and then southwesterly, alternating between traveling cross country and parallel with intermittent two tracks, existing roads, and existing pipelines. Corridor 6A-4 would be comprised of three water lines. Bargath requests a temporary construction corridor width of 75 feet (50 feet permanent ROW width) for this portion.

Gas pipelines will be both high and low pressure, 16 and 20 inches in diameter. They will be buried with a minimum cover of 46 inches (buried 60 inches when utilizing the same trench as the water lines) and will transport only natural gas. Where subsurface rock is encountered, some blasting may be required to excavate the pipeline trench.

The water lines will utilize the same trench that will be dug for the natural gas pipelines. All water lines will be buried to a minimum of 60-inch depth of cover. The water lines will range in size from four to ten inches in diameter and will only be used to transport produced water. All water lines will be FlexSteel polyethylene lined and polyethylene coated flexible steel reinforced pipe suitable for oil and gas gathering lines, water and gas injection pipelines, brine disposal lines, products with high vapor pressure, etc. (FlexSteel 2010). Service life, similar to polyethylene pipe, should be 50 to 100 years (Plastics Pipe Institute 2010). During operation, inlet and outlet water volumes will be metered and monitored to detect leaks. Annual ground patrols of water lines parallel to gas lines are typically conducted to inspect for leakage and other system problems.

Pressure testing of pipelines would utilize nitrogen, fresh water, or produced water. During construction an estimated 0.18 acre-feet of fresh water would be utilized for dust abatement activities. An estimated maximum of 2.13 acre-feet of fresh water could be used for pressure-testing of gas and water pipelines. The maximum total fresh water usage would be 2.32 acre-feet.

**Fence Yard Compressor Station:** The proposed 16.9 acre Fence Yard compressor station site would be leveled, fenced, and gated. Three roads would be built to access the compressor station disturbing an additional 0.3 acres of public land. Facilities on the site would include: eight natural gas-powered compressor/engine units (ranging from 8,000 to 25,000 horsepower), enclosed buildings, gas discharge and radiator cooling units, waste gas flare/discharge stacks, product inlet filters, separators, scrubber tanks and towers, fuel gas filter and/or separator units, dehydration units and contractor towers, gas metering and quality monitoring facilities, communication facilities and towers, electric generators and transformers, liquid storage tanks, dry bulk storage vessels, and liquid service pumps and compressors.

**Above-Grade Pipeline Facilities:** Along the pipeline ROW, Bargath would locate above-grade pipeline facilities at three sites. Two additional above-grade pipeline facilities would be located on fee land. Above-grade facilities include: pig receivers and launchers, terminal valves, blow

off valves, water tanks, water valves and water pumps, and by-pass piping systems for metering, gas analysis, and flow control purposes. The five above grade pipeline facility sites are:

- 1) Fence Yard Compressor Pig Farm, a 100 ft x 200 ft area, located in Section 9, T2S, R98W;
- 2) The Water Fork Site, a 100 ft x 200 ft area, located in Section 8, T2S, R98W;
- 3) Ryan Ranch Junction, a 100 ft x 200 ft area, is located in Section 19, T2S, and R98W (located on private land);
- 4) CR #86 Junction, a 100 ft x 200 ft area, is located in Section 19, T2S, R98W (located on private land);
- 5) The Mile Post 5.31 Site, a 100 ft x 200 ft area, is located Section 29, T2S, R98W.

**Temporary Use Areas:** Bargath requests a temporary use permit of 75 to 100-foot working area for the initial construction phase on all proposed corridors. They also request several areas for extra workspace along the ROW. A description of the extra workspace areas is included in the plan of development (POD), which is available for review in the case file located at WRFO. Bargath requests a 50-foot permanent ROW width once installation and reclamation are completed.

Table 1 describes permanent and temporary acreages that would be disturbed on Federal lands for the proposed project.

**Table 1. Permanent and temporary acreage disturbance for the Water Fork project on public land**

Project Component		Temporary Use Areas (acres)	Permanent ROW (acres)	Total Disturbance (acres)
Pipeline Corridors on Federal Lands		29.0	38.0	67.0
<i>Corridors</i>	<i>Length</i>			
<i>Corridor 6A-1a (gas &amp; water lines)</i>	<i>2,856</i>	<i>4.4</i>	<i>3.3</i>	<i>7.7</i>
<i>Corridor 6A-1b (gas &amp; water lines)</i>	<i>4,187</i>	<i>4.3</i>	<i>4.8</i>	<i>9.1</i>
<i>Corridor 6A-2 (water lines)</i>	<i>10,075</i>	<i>8.6</i>	<i>11.6</i>	<i>20.2</i>
<i>Corridaor 6A-3 (gas &amp; water lines)</i>	<i>6,340</i>			
<i>Corridor 6A-4 (water lines)</i>	<i>15,967</i>	<i>11.7</i>	<i>18.3</i>	<i>30.0</i>
Fence Yard Compressor Station		N/A	16.9	16.9
Three access roads to the Fence Yard Compressor Station		N/A	0.3	0.3
Above-Grade Pipeline Facilities		N/A	1.4	1.4
<b>Total acreage disturbance</b>				<b>85.6</b>

**Stabilization/Rehabilitation Measures Common to All Sites:** On fragile soils, identified by the BLM (generally slopes exceeding 35%), Best Management Practices (BMPs) to be employed during reclamation include: water bars at intervals of 25 feet, the use of erosion control blankets for site stabilization, and seeding to Authorized Officer's (AO) specifications. Stormwater-management inspections would be conducted as required to insure compliance with construction

standards. Erosion control practices would be inspected to evaluate their effectiveness and document any maintenance needed. Table 4 gives guidelines for subsequent water bar spacing.

**Table 4. Waterbar Spacing Guidelines from the Plan of Development**

<b>PRIVATE &amp; STATE LANDS</b>		<b>FEDERAL LANDS</b>	
<b>Slope (%)</b>	<b>Spacing (ft)</b>	<b>Slope (%)</b>	<b>Spacing (ft)</b>
<5	None	0-2	400
5-15	300	3-5	300
16-30	200	6-10	200
>30	100	11-20	100
		>20	50

Topsoil would be removed for storage from all sites at a minimum depth of 6 inches for storage along the ROW and left undisturbed until being re-spread for reclamation.

Soil storage areas would be clearly marked to restrict vehicle/equipment use to only what is necessary to move the soil. Metal fence posts, construction fencing, construction barriers, or other physical barriers would be placed at regular intervals between the working surfaces and soil storage areas. Storing soil on the non-working side of the trench may be adequate if it is signed or given some type of visual indicator to limit physical impacts.

To protect the productivity and structure of soils, under no circumstances will topsoil or subsoil excavated from the trench down to the effective rooting depth (ERD) for the reclamation plants be used as padding in the trench, to fill sacks for trench breakers, or for any other use as construction material. Reclamation ERD would be a minimum of 16 inches and a maximum of 24 inches below the ground surface for all soils.

Prior to seed application, the seedbed shall be prepared via tilling the soil to a minimum depth of four inches by utilizing a disk or harrow. In all accessible areas, seeding will be accomplished using a rangeland drill. Seed shall be drilled to a depth of ¼-inch to ½-inch. In areas where a rangeland drill cannot access, seed will be hand broadcast at twice the drill rate, and harrowed to provide an adequate degree of soil to seed contact.

Monitoring of the reclaimed ROWs will be performed to document site stability, desired vegetative establishment, and noxious weed occurrence. Reclamation monitoring efforts will be performed biannually and the results of the respective monitoring program will be provided to the BLM in the form of a reclamation report that is submitted to the BLM by September 30<sup>th</sup> of each year. The purpose of this report will be to provide a description and photo-documentation of the project(s), to provide information such as reclamation status, date reseeded, acres reseeded, percent re-vegetated, noxious weed presence, and other applicable comments. Bargath will employ any necessary additional reclamation and/or weed management efforts based on the results of the biannual reclamation monitoring, and will ensure that the BLM is notified prior to the respective activities.

Bargath has submitted a blasting plan with the POD if blasting is necessary along the Torriorthents-Rock outcrop complex.

**Ryan Gulch Water Management Facility:** The Ryan Gulch water management facility would be located on private land owned by Williams Production RMT Company (Williams), on a dry mesa to the east of Ryan Gulch called Wagon Road Ridge. The facility would be operated to receive produced water from well pads and collection points throughout the Ryan Gulch area. Water would be received via truck or pipeline. The water would be treated on the site for re-use as drilling fluids for production cases and excess waters or those that cannot be recycled will be disposed of in injection wells. The facility would be located in Section 36, T2S, R99W and Section 1, T3S, R99W. Currently, produced water that cannot be recycled is transported from the Ryan Gulch area to Meeker or Rifle for disposal.

Water treatment would occur in several stages within enclosed vessels. Fluids brought via pipeline or truck will be unloaded into the inlet tank for stabilization and then run through “heater/treaters” that are designed to remove 85 percent of the suspended and dissolved hydrocarbons present. These hydrocarbons would be moved to storage tanks to be trucked off-site. These storage tanks will utilize a vapor recovery unit or flare for volatile organic compounds (VOCs). Dissolved gas floatation units will be used to separate suspended hydrocarbons and some of his flow will go back to the heater/treaters until most of the hydrocarbons are removed. There will also be a process for treating water with heavy methanol concentrations using a boiler. Since not all the water will have methanol, it would be used mainly to treat water produced in the winter. In summary, the treatment and clarification process is a multi-phase separation process and all within enclosed vessels to remove hydrocarbons and methanol until it is released in the storage ponds.

After treatment the water will go to injection or to storage ponds. Water going to storage ponds is not expected to contain or accumulate harmful amounts of hydrocarbons due to the treatments. However, the two ponds would be continuously monitored for evidence of hydrocarbons. If observed, absorbent booms would be deployed on the ponds and additional mitigation measures would be evaluated. Four compliance wells will be installed at the perimeter of the facility to monitor groundwater (one up gradient and three down gradient) and the facility will have two Caterpillar generators for electricity production.

A 0.5-acre land farm would be used to process solids removed from tank bottoms. The land-farm area would be lined with a 6-inch bentonite liner. Solids would be placed within the lined area and biologically treated using standard land farm practices including tilling and biological soil amendments. Treated water would then be piped to the #299-27-5 disposal well located in Section 27, T2S, R99W. State and county permits have been submitted for the water management facility and are pending approval. Bargath will obtain all necessary permits and comply with all required regulations associated with the facility.

**No Action Alternative:** The application would be denied. No pipeline or associated facilities would be constructed on public land. If the water lines are not constructed, water would continue to be hauled by truck to Williams’ disposal well.

**ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD:**

- An alternate pipeline route from Ryan Ranch to the Ryan Gulch water management facility was proposed by BLM. The route would have been oriented in a southwesterly direction, partially across private land. The route was proposed in order to reduce potential impacts to

pinyon/juniper communities. The alternative was abandoned when negotiations with the private landowner failed.

- The Fence Yard compressor station location originally proposed by Bargath was located immediately north of the current site location. The site was situated within a Shell Frontier Oil Shale Research Development & Demonstration Lease (RD&D) and was dropped from further consideration in order to avoid surface disturbance within the RD&D lease.
- Two additional alternative sites were evaluated for the Fence Yard compressor station and both were dropped from consideration due to site conditions that were unfavorable. The alternative sites were located near or at the head of unnamed drainages with topographical constraints and within mature pinyon/juniper woodlands.

**NEED FOR THE ACTION:** The purpose of the action is to provide access for natural gas and water pipelines across public land managed by the BLM. The need for the action is established by the BLM's responsibility under Federal Land Policy and Management Act of 1976 (FLPMA) and Minerals Leasing Act (MLA) to respond to a request for a ROW grant for legal access. The BLM will decide whether to grant the ROW or not, and if so, under what terms and conditions.

**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: Page 2-49

Decision Language: "To make public lands available for the sitting 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 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:

### **NATURAL, BIOLOGICAL, AND CULTURAL RESOURCES**

#### **AIR QUALITY**

*Affected Environment:* The entire White River Resource Area has been classified as either attainment or unclassified for all criteria pollutants, and most of the resource area has been designated for the prevention of significant deterioration (PSD) class II. The Proposed Action is

not located within a thirty-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 Action is the level of inhalable particulate matter, specifically particulate matter ten microns or less in diameter (PM<sub>10</sub>) associated with fugitive dust. Although no air-quality monitoring data is available for the project area, the Colorado Air Pollution Control Division (APCD) estimates the PM<sub>10</sub> levels (24-hour maximum) in rural portions of western Colorado to be generally less than 50 micrograms per cubic meter (µg/m<sup>3</sup>). This estimate is well below the National Ambient Air Quality Standard (NAAQS) for PM<sub>10</sub> (24-hour average) of 150 µg/m<sup>3</sup> (CDPHE-APCD 2006). Compressor station emission requirements for compressor units exceeding 500 horsepower are currently 2 g/hp-hr for nitrous oxides (NO<sub>x</sub>), 4 g/hp-hr for carbon monoxide (CO), and 1 g/hp-hr for non-methane hydrocarbons (NMHC) (CDPHE-APCD 2009).

*Environmental Consequences of the Proposed Action:* The construction of the proposed pipelines would result in short-term, local impacts on air quality during and after construction due to dust created by excavation, vehicle traffic, wind erosion, and potential blasting. However, airborne particulate matter is not likely to exceed Colorado air quality standards on an hourly or daily basis. Following successful revegetation of the pipeline alignment, airborne particulate matter should return to near pre-construction levels. The use of water lines to transport water to the water management facility would result in less truck traffic to dispose of water near Meeker and/or Rifle. This reduction would likely reduce dust and other pollutant emissions resulting in better air quality after construction of the water lines has been completed.

Emissions estimates for the compressor station would include eight compression units. Assuming the compressor units exceed 500 horsepower emissions each, they must comply with 1 g/hp-hr standard for nitrous oxides (NO<sub>x</sub>), 2 g/hp-hr for carbon monoxide (CO), and 0.7 g/hp-hr for non-methane hydrocarbons (NMHC) (CDPHE-APCD 2009). The water treatment facility would result in volatile organic compounds (VOCs) being released, the amount and type depend on the methods used for treating and storing the produced water and tank sludge. As described in the Proposed Action, equipment will be utilized to remove VOCs in an enclosed system because VOCs can contain benzene and other hydrocarbons that contribute to ozone levels as they break down. An enclosed system would reduce VOCs that could be released otherwise. Ozone is a secondary pollutant, formed photochemically (by the sun) by combining volatile organic compounds (VOCs) and NO<sub>x</sub> emissions, and is classified as a primary pollutant due to impacts on human health.

Due to emissions generated by internal combustion engines used to power the facility, the proposed Fence Yard compressor station would result in both short-term and long-term, local impacts on air quality for the lifetime of the facility. The water treatment and land-farm facility is likely to be a longer term emission source for air pollutants for as long as the facility is in operation. This facility will have two generators for electrical power.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* During construction activities, the pipeline ROW and access roads would be treated with water or a BLM approved chemical dust suppressant, so that there is not a visible dust trail behind vehicles and/or construction equipment. If water is used, only the water needed for abating dust should be applied, and the water should be fresh water free of chemicals, oils, or solvents.

New roads built around the Fence Yard compressor station would be built according to BLM Manual Section 9113 standards for road shape and drainage features.

**SOILS** (includes a finding on Standard 1)

*Affected Environment:* The proposed project’s soil disturbances would occur between the elevations of 6,600 feet and 7,230 feet. The soils occur in a location that, on average, annually receives 14 to 18 inches of precipitation and has between 80 and 105 frost-free days. Within the project’s disturbance area, nine soil types have been classified by the National Resource Conservation Service (Tripp et al. 1979). Table 2 identifies the soil types and some of their key characteristics.

Approximately 0.4 acres of fragile soils would be crossed by the Water Fork project. These soils have poor reclamation potential and erosion and slumping potentials greater than similar soils on shallower slopes. Based on the Soil Conservation Service soil mapping data (Tripp et al. 1979) and BLM’s fragile soils mapping, soil map unit 73 (Rentsac-Channery loam) and 91 (Torriorthents-Rock outcrop complex) are located on the fragile soil area.

Characteristics of these soils are summarized in Table 2.

**Table 2: Soil Types within the Water Fork Project Area**

Soil Map Unit	Soil Type*	Slope %	Drainage Class	Available Water Capacity	Depth to Bedrock (inches)	Soil Erodibility
6	Barcus channery loamy sand	2-8	Excessively Drained	Low	>80	Moderate
33	Forelle loam	3-8	Well Drained	High	>60	Moderate
36	Glendive fine sandy loam	2-4	Well Drained	Very High	>80	Slight
64	Piceance fine sandy loam	5-15	Well Drained	Moderately Low	20-40	Moderate to High
70	Redcreek-Rentsac complex	5-30	Well Drained	Very Low	10-20	Moderate
73	Rentsac channery loam	5 - 50	Well Drained	Very High	10 - 20	Moderate
75	Rentsac-Piceance complex	2-30	Well Drained	Low	10-20	Moderate
91	Torriorthents-Rock outcrop complex	15-90	Well Drained	Very Low	16	Very High
104	Yamac loam	2-15	Well Drained	Very High	>80	Moderate

\* From U.S. Department of Agriculture, Rio Blanco Soil Survey (Tripp et al. 1979)

*Environmental Consequences of the Proposed Action:* Construction of the pipeline and the Fence Yard compressor station would require removal of vegetation, disturbance of soils, grading practices resulting in cut-and-fill slopes, and disturbance of soil parent material. These construction activities have the potential to increase soil erosion, decrease soil health, initiate

mass wasting, and deplete the ROW of productive soils capable of supporting native vegetation on a maximum of 86 acres.

The impacts described above would be higher, and potentially longer term, on the 0.4 acres of fragile soil area located on pipeline alignment. Table 3 shows the approximate acreage of each soil type proposed to be disturbed on BLM land.

**Table 3: Water Fork Pipeline Project Soil Disturbance by Soil Type**

Soil Map Unit	Soil Types	Approximate Acreage of Soil Disturbance
6	Barcus channery loamy sand	6.4
33	Forelle loam	0.9
36	Glendive fine sandy loam	4.3
64	Piceance fine sandy loam	6.3
70	Redcreek-Rentsac complex	16.9
73	Rentsac channery loam	23.6
75	Rentsac-Piceance complex	11.6
91	Torriorthents-Rock outcrop complex	0.9
104	Yamac loam	14.9

Access for pipeline construction would be developed within the project’s ROW. No new roads outside of the project ROW would need to be developed and no improvements are anticipated to be needed on existing roads. However, three access roads would be constructed to the Fence Yard compressor station. The majority of traffic associated with pipeline construction would access the site from Rio Blanco County Roads 24, 86, 68, and 144 and various developed private oil and gas roads throughout the project area; no road improvements are necessary for pipeline construction and are not anticipated on any of the above listed roads.

After pipeline construction activities have been completed and the pipeline has become operable, 1.4 acres would remain as pipeline end facilities for the life of the pipeline and 17.2 acres would remain for the Fence Yard compressor station and the adjoining access roads. No other roads would remain after pipeline construction activities are complete along portions of the pipeline passing through public lands. There is the potential for unintended vehicle use along the pipeline ROW, resulting in a long-term two-track road.

There is the potential for blasting along the 0.9 acres of pipeline disturbance that would be located on the Torriorthents-Rock outcrop complex.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* See mitigation recommended in the *Water Quality* and *Vegetation* sections.

During pipeline construction, the ROW should remain undisturbed to the maximum extent possible. That is, only the minimum necessary disturbance is approved for making the working surface safe and passable. Do not remove topsoil under areas used for the storage of soils and if

possible do not remove topsoil from working surfaces. Do not use material below or adjacent to the trench spoils to feed pipeline padding machines.

All areas where the topsoil has been removed and soils have become compacted will be ripped to a depth of 18 inches below the finished grade or to bedrock. Another suitable method of de-compaction may be used before topsoil is re-spread with approval of the BLM Authorized Officer (AO). Areas where the topsoil has not been removed, but have been compacted, must be de-compacted by disking or other methods to prepare the soils for reclamation.

After initial construction activities are completed and if soil productivity is diminished from its pre-disturbance condition, then reseeded, hydro-mulching, or other efforts will be initiated to re-establish soil productivity during reclamation activities.

In order to protect public land health standards, erosion features such as riling, gullying, piping and mass wasting on the ROW or adjacent to the ROW as a result of this action will be addressed immediately after observation by contacting the AO and by submitting a plan to assure successful soil stabilization with BMPs to address erosion problems.

After pipeline construction activities are completed, Bargath will be responsible for taking measures to prevent off-road vehicle use along the pipeline ROW until reclamation has been successful or as directed by the AO.

All activity shall cease when soils or road surfaces become saturated to a depth of three inches unless otherwise approved by the AO.

*Finding on the Public Land Health Standard for upland soils:* Soils within the area of the Proposed Action meet the criteria established in the standard for upland soils. With successful reclamation, the Proposed Action would not change this status.

## **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:* The proposed activities will use regulated materials and will generate some solid and sanitary wastes. The potential for harm to the environment is presented by risks associated with spills of fuel, oil, and/or hazardous substances during oil and gas operations. Accidents and mechanical breakdown of machinery are also possible.

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

*Mitigation:* The right-of-way holder shall comply with all Federal, State, and/or local laws, rules, and regulations addressing the emission of and/or the handling, use, and release of any substance that poses a risk of harm to human health or the environment.

The holder shall employ, maintain, and periodically update to the best available technology(s) aimed at reducing emissions, fresh water use and hazardous material utilization, production and releases.

All substances that pose a risk of harm to human health or the environment shall be stored in appropriate containers. Fluids that pose a risk of harm to human health or the environment, including but not limited to produced water, shall be stored in appropriate containers and in secondary containment systems at 110% of the largest vessel's capacity. Secondary fluid containment systems, including but not limited to tank batteries shall be lined with a minimum 24 mil impermeable liner.

Where required by law or regulation to develop a plan for the prevention of releases or the recovery of a release of any substance that poses a risk of harm to human health or the environment, provide a current copy of said plan to the Bureau of Land Management's White River Field Office.

Construction sites and all facilities shall be maintained in a sanitary condition at all times; waste materials shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

As a reasonable and prudent right-of-way holder, acting in good faith, the holder will report all emissions or releases that may pose a risk of harm to human health or the environment, regardless of a substance's status as exempt or nonexempt and regardless of fault, to the Bureau of Land Management's White River Field Office at (970) 878-3800.

As a reasonable and prudent right-of-way holder, acting in good faith, the holder will provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any substance that may pose a risk of harm to human health or the environment, regardless of that substance's status as exempt or non-exempt. Where the holder fails, refuses or neglects to provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any quantity of a substance that poses a risk of harm to human health or the environment, the Bureau of Land Management's White River Field Office may take measures to clean-up and test air, water (surface and/or ground) and soils at the lessee/operator's expense. Such action will not relieve the holder of any liability or responsibility.

With the acceptance of this authorization, the commencement of development under this authorization, or the running of thirty calendar days from the issuance of this authorization, whichever occurs first, and during the life of the pipeline, the holder, and through the holder, its agents, employees, subcontractors, successors and assigns, stipulates and agrees to indemnify, defend and hold harmless the United States Government, its agencies, and employees from all liability associated with the emission or release of substances that pose a risk of harm to human health or the environment.

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

*Affected Environment:* Surface Water: The Proposed Actions are located within the Ryan Gulch and Black Sulphur Creek catchment areas. No perennial streams would be crossed by this project (WWE 2009a and WWE 2010). The project would cross Ryan Gulch in Section 19, T2S, R98W. Ryan Gulch is an intermittent stream, and water is not present in the channel at the proposed crossing. Ponds are located on private land.

The Proposed Actions are located in the White River watershed. The White River is a tributary to the Green River (in Utah), which is a tributary to the Colorado River. Ryan Gulch is located within stream segment 16 of the White River Basin. Black Sulphur Creek and its tributaries are situated in stream segment 20 of the White River Basin. The project area generally drains into Ryan Gulch and Black Sulphur Creek and eventually stream segments 14b and 15 of Piceance Creek, east of the project area (CDPHE-WQCC 2010a). The Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Commission (WQCC) Regulation No. 37, Classifications and Standards for the Lower Colorado River Basin, includes water quality standards and guidance for the surface waters of the project area. Stream segment 14b has been classified by the State as being beneficial for the following uses: Cold Aquatic Life 1, Recreational Potential Primary Contact Use (P) and Agriculture. Physical and biological standards for these segments are: dissolved oxygen = 6 mg/l except where salmonid fish are present then the standard is 7 mg/l, a pH of 6.5 to 9, and E. coli = 205/100ml. Stream segment 15 has been classified by the State as being beneficial for the following uses: Warm Aquatic Life 2, Recreational Potential Primary Contact Use (P) and Agriculture. Physical and biological standards for this stream segment are: dissolved oxygen=5.0 mg/L, pH=6.5 – 9, and E. coli=205/100mL. Stream segment 16 has been classified by the State as being beneficial for the following uses: Warm Aquatic Life 2, Potential Primary Contact Use (P), and Agriculture. Physical and biological standards are: dissolved oxygen = 5 mg/l, pH = 6.5 to 9, and E. coli = 205/100ml. Segment 20 has been designated by the State as beneficial for the following uses: Cold Aquatic Life 1, Recreation N, and Agriculture. Physical and biological standards are as follows: dissolved oxygen = 6.0 mg/l except where salmonid fish are present then the standard is 7 mg/l, pH = 6.5 - 9.0, and 630/100 ml E. coli.

The 305(b) report (CDPHE-WQCC 2008), the 303(d) list (CDPHE-WQCC 20010b), and the White River ROD/RMP (BLM 1997) were reviewed to see if any water quality concerns have been identified for the above mentioned stream segments. All stream segments that would be impacted by the proposed project are listed by the State as currently meeting water quality standards.

**Ground Water:** A review of the US Geological Survey (USGS) Ground Water Atlas of the United States (HA 730-C) was done to assess ground water resources at the location of the Proposed Action. The shallowest aquifer underlying the Proposed Action is the Uinta-Animas aquifer, which in this area consists of the Uinta Formation and the Parachute Creek member of the Green River Formation. Colorado has not set site-specific standards for ground water quality for the proposed project area (CDPHE – WQCC 2006).

*Environmental Consequences of the Proposed Action:* Construction of pipelines would result in temporary exposure of soils to erosional processes. Heavy equipment used during construction combined with the removal of groundcover would increase erosive potential due to

runoff (overland flows) and raindrop impact during storm events. This increase in erosion potential would be greatest in areas with steep slopes/fragile soils.

Construction of the Fence Yard compressor station would result in exposure of soils to erosional processes until the site has been stabilized. Increase in erosion from this site could impact water quality downstream of Ryan Gulch at Piceance Creek and stream channel/bank stability for Ryan Gulch. However, using Best Management Practices (BMPs) and proper storm-water management there should be no adverse effects to the nearby channels.

Increased erosion from upland sites would, in the short term, adversely impact water quality. After successful reclamation, erosion rates should be similar to preconstruction conditions.

Excavation within the ephemeral and intermittent channels throughout the project area would result in some temporary instability in the channel bottoms and banks leading to short term sediment increases downstream of the crossing locations.

Local groundwater may be contaminated if leaks or spills associated with construction operations are allowed to infiltrate soils. Contaminants impacting local ground water would also adversely impact surface waters as contaminated local groundwater recharges nearby segments. Adverse impacts on deeper groundwater are not anticipated.

Most of the water treatments will be fully contained in tanks and ponds will be used only for storage of treated water. Leaks or spills from these contained facilities could contribute to pollutants into ground and surface waters should they occur. BMPs for stormwater and early detection of leaks should significantly reduce this potential, but if they were to occur both ground and surface waters could be impacted by spills or leaks from the water treatment facility and/or pipelines.

The water treatment facility will have a bentonite liner at the bottom of the ponds and landfarm that could fail at some point in the future. Groundwater monitoring wells around the perimeter of this facility would likely show impacts, if they were to occur. There are BLM administered lands downstream from the treatment facility that could be impacted if there is a failure in the pond liner. Water quality in shallow groundwater within Ryan Gulch and in formations within the Uinta could be impacted if the pond liner failed at some point in the future. Spills of produced water and other fluids from the site could impact water quality, shallow groundwaters, and water resources. Water in the Uinta formation may be used as a drinking source and feeds contact springs and streams.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* No operations using chemical processes or other pollutants in their activities will be allowed to occur within 200 ft of any water bodies (BLM 1997).

If there is the release of produced water during pipeline testing, any leaks from ponds located at the water treatment facility, the monitoring wells pick up any changes in water quality around the water treatment facility, spills of substances during pipeline construction or the operation of the water treatment facility or the compressor site that could contaminate shallow groundwaters,

Bargath will notify the BLM immediately to protect BLM administered lands and water quality resources.

All waterbars are to be constructed with the berm on the downhill side to prevent the soft material from silting in the trench. The initial waterbar should be constructed at the top of the backslope. Table 4 gives guidelines for subsequent water bar spacing as provided by Bargath.

To improve the success of reclamation some type of weed-free mulch will be used during reclamation activities to improve soil moisture conditions and improve germination success. A plan will be submitted to the AO for approval for mulch use with types and methods by slope.

For slopes greater than 40% the operator will place waterbars at least every 25 feet and use erosion fabric. For slopes less than 10% the operator may use straw wattles or other means placed at the manufacturer's recommended spacing.

*Finding on the Public Land Health Standard for water quality:* It is unlikely that construction of this project would result in an exceedence of state water quality standards. Cumulative impacts from this activity and others may eventually impact sediment yields to the degree that they impact listing of Black Sulphur Creek and Piceance Creek and/or its tributaries.

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

*Affected Environment:* The proposed pipeline alignments would cross Ryan Gulch, which is an intermittent drainage at the proposed crossing (WWE 2010).

*Environmental Consequences of the Proposed Action:* The Proposed Action would not impact any wetlands or riparian zones on public lands. Indirect impacts would be avoided or minimized by implementation of BMPs as defined in the Water Fork Storm Management Plan and the Ryan Gulch Field Wide Storm Water Management Plan (SWMP).

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* Bargath would notify the U.S. Army Corps of Engineers (USACE) of any ephemeral, intermittent, perennial channels and wetlands that would be crossed or otherwise impacted by the Proposed Action. Copies of all correspondence with USACE will be submitted to BLM WRFO. The crossings are expected to be completed under an USACE Nationwide #12 permit (USACE 2007).

For additional mitigation that would benefit downstream riparian and wetland areas, see the *Vegetation* and *Soils* sections.

*Finding on the Public Land Health Standard for riparian systems:* The Water Fork project would not directly impact riparian areas and wetlands. With the implementation of BMPs and a storm water management plan the project would not contribute measurable amounts of sediment to Black Sulphur or Piceance Creeks. Therefore the Proposed Action would not result in a failure to meet Land Health Standards for downstream riparian or wetland areas.

**VEGETATION** (includes a finding on Standard 3)

*Affected Environment:* The Water Fork project area would be located in vegetation communities predominately composed of sagebrush shrublands and mixed age class pinyon/juniper woodlands. Portions of the proposed project area would be located in previously disturbed pipeline ROWs. Mixed grass/forb communities dominate the previously disturbed areas.

*Environmental Consequences of the Proposed Action:* Corridor 6A for most of its length parallels CR 68, CR 86, CR 144, and existing pipeline ROW's. The pipeline corridor would travel cross country through pinyon/juniper woodlands in Sections 8, 17, 19, and 30, T2S, R98W. The Fence Yard compressor station would be located in undisturbed big sagebrush shrublands with encroaching pinyon/juniper woodlands. Approximately 85.6 acres would be disturbed for construction of this project of which approximately 62.1 acres would be new disturbance. Approximate acreage that would be removed as a result of this project is as follows: 38.6 acres of pinyon/juniper woodlands and 23.5 acres of big sagebrush shrublands. The Fence Yard compressor station (including access roads) and above-grade pipeline facilities would remove approximately 12.9 acres of sagebrush shrublands and 5.6 acres of pinyon/juniper woodlands for the life of the facilities.

Direct impacts of vegetation removal include short-term loss of vegetation, modification of vegetation structure and plant species composition, and temporary reduction of basal and aerial vegetative cover. Removal of vegetation also results in increased soil exposure, loss of wildlife habitat, reduced plant diversity, and loss of livestock forage. Indirect impacts include the increased potential for non-native/noxious plant establishment and introduction, accelerated wind and water erosion, changes in water runoff due to road/facility construction, soil impacts that affect plant growth (soil erosion or siltation), shifts in species composition and/or changes in vegetative density away from desirable conditions, and changes in visual aesthetics.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* Bargath will promptly revegetate all areas of earthen disturbance not necessary for production, with the following seed mix (BLM 1997):

**White River Field Office Native Seed Mix #3**

Species	Seeding Rate Pure Live Seed (PLS)*
Western Wheatgrass (Rosanna)	2 lb/ac. PLS
Indian ricegrass (Nezpar)	2 lb/ac. PLS
Bluebunch wheatgrass (Whitmar)	2 lb/ac. PLS
Thickspike wheatgrass (Critana)	1 lb/ac. PLS
Fourwing Saltbush (Wytana)	1 lb/ac. PLS
Utah Sweetvetch	1lb/ac. PLS
Alternates: Needle and Thread Grass and Globemallow	

\* Seeding rate is for drilled seed; for broadcast seeding the rate should be doubled.

Stockpiled topsoil and spoil piles will be separated and clearly labeled to prevent mixing during reclamation efforts.

Upon reseeded activities, certified, weed-free straw mulch will be crimped into the surface of the disturbed ROWs to provide for additional site stability, and to enhance soil/seedbed moisture retention.

In accordance with the 1997 White River RMP/ROD, all trees removed in the process of construction shall be purchased from BLM.

Trees or shrubs that must be removed for construction or ROW preparation shall be cut to a stump height of 6 inches or less prior to heavy equipment operation.

Woody material required for reclamation shall be stockpiled along the margins of the authorized use area, separate from the topsoil piles. Once the disturbance has been recontoured and reseeded, stockpiled woody material shall be scattered across the reclaimed area in the same area where the material originated. Redistribution of woody material will not exceed 20 percent ground cover. Woody material will be distributed in such a way as to avoid large concentrations of heavy fuels and in a manner that will effectively deter vehicle use.

Revegetation will commence immediately after construction and will not be delayed until the following fall. Drill seeding is the preferred method of application.

Woody material removed for construction that is not needed for reclamation shall be cut into 4-foot sections down to a diameter of 4 inches and placed in manageable stacks immediately adjacent to a public road to facilitate removal for company use or removal by the public.

Bargath will be responsible for achieving a reclamation success rate equal to a minimum cover and composition of 80 percent of the Desired Plant Community (as defined by the ecological site) or in relation to the seed mix applied within three growing seasons after the application of seed. This community must be capable of persisting on the site without intervention and allow for successional processes consistent with achieving the seral stage on the site prior to surface disturbance.

Additional reclamation efforts will be undertaken at Bargath's expense. 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.

*Finding on the Public Land Health Standard for Plant and Animal Communities* (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): Standard 3 states that plant and animal communities of native and desirable species should be maintained at viable population levels to sustain public land health. With implementation of mitigation measures and successful revegetation, the Proposed Action would have no effect on this public land health standard in regards to vegetation.

## INVASIVE, NON-NATIVE SPECIES

*Affected Environment:* The proposed pipeline ROW (6.27 miles) was inventoried 50 meters from the proposed centerline and edge of disturbance at the compressor station site for the presence of any noxious or invasive weeds during May 2009 and May 2010 (WWE 2009a and WWE 2010). Colorado State Listed weeds found within the proposed project area were: cheatgrass (*Bromus tectorum*), common mullein (*Verbascum thapsus*), spotted knapweed (*Centaurea maculosa*), houndstongue (*Cynoglossum officinale*), bull thistle (*Cirsium vulgare*), and an isolated area of black henbane (*Hyoscyamus niger*). Of these state listed weeds, spotted knapweed, common mullein, black henbane, and houndstongue are on the Rio Blanco County weed list.

Occurrences of cheatgrass were observed on disturbed areas scattered along the length of the project. Spotted knapweed was observed along the northern portion of the proposed pipeline corridor. Common mullein was observed as scattered to dense infestations along the entire proposed alignment. Bull thistle and houndstongue were observed thinly scattered along the proposed pipeline alignment. Black henbane was observed in an isolated area near the proposed pipeline alignment. Other common weeds identified along the proposed pipeline route were kochia (*Kochia scoparia*) and Russian thistle (*Salsola australis*); these species were observed thinly scattered along areas of recent disturbance.

*Environmental Consequences of the Proposed Action:* The disturbance associated with the Proposed Action could create a noxious weed problem by importing weed seed on vehicles and equipment or by having suitable conditions present (non-vegetated disturbed areas) for introduction of noxious weeds by other vectors. Construction activities could spread these weed species to other areas of the project by carrying seed or plant parts (rhizomes) on construction equipment. Cheatgrass occurrences are scattered throughout the understory of the proposed route for most of its length. Cheatgrass invasion is very likely if the surface is not reclaimed immediately following the disturbance.

Establishment of noxious or invasive weeds would create problems through seed production in proportion to the number of plants and the duration they are reproducing. Increased seed production of noxious or invasive plants could aggressively compete with or exclude desired vegetation during reclamation. The noxious or invasive species seed production could also encourage the spread of these unwanted plants into the adjacent native plant communities.

*Environmental Consequences of the No Action Alternative:* Under the No Action Alternative, there would be no new disturbance created as a result of pipeline construction. Invasive/nonnative species would continue to exist within the project area; however opportunity would not be generated for these species to invade and possibly exclude desired vegetation within disturbed areas associated with pipeline construction on approximately 86 acres of public land.

*Mitigation:* The operator will implement an integrated weed management plan according to BLM manual 9015-Integrated Weed Management (BLM 1992; available at <http://www.blm.gov/ca/st/en/prog/weeds/9015.html>). Prior to the season of construction, the applicant will submit Pesticide Use Proposals for the use of herbicides appropriate for control/eradication of the noxious weed species along the proposed pipeline ROW and

compressor station site including: cheatgrass, houndstongue, common mullein, bull thistle, spotted knapweed, and black henbane.

The operator will eliminate any noxious plants before any seed production has occurred. Application of pesticides and herbicides on public lands will conform to BLM manual 9015 and the BLM White River Resource Management Plan, Appendix B, Management of Noxious Weeds (BLM 1997). Eradication should make use of materials and methods approved in advance by the AO. The operator will clean all off-road equipment to remove seed and soil prior to commencing operations on public lands within the project area.

Long term weed control on above-grade pipeline facilities and the Fence Yard compressor station site will utilize methods and materials approved by BLM as directed by the AO.

Other mitigation is included in the *Vegetation* section.

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

*Affected Environment:* Special status species of plants (SSS) with the potential to occur in the BLM’s WRFO are listed below in Table 5 as, federally-listed threatened, endangered, and candidate plant species (USDI, USFWS 2008b) and BLM sensitive species (BLM 2009, Culver et al. 2008, BLM 1994). The state of Colorado does not maintain a list of threatened & endangered (T&E) plants.

**Table 5: U.S. Fish and Wildlife Service Threatened, Endangered, and Candidate Plant Species with Potential to Occur in Rio Blanco County, Colorado, and WRFO BLM Sensitive Plant Species**

Species	Status <sup>1</sup>	Habitat Description	Potential To Occur In The Project Area
Dudley Bluffs bladderpod ( <i>Physaria (Physaria) congesta</i> )	<u>T</u>	Exposures of white shale of the Thirteen Mile Tongue of the Green River Formation	No individuals found during field surveys and no suitable habitat present along proposed corridors or facility locations
Dudley Bluffs (Piceance) twinpod ( <i>Physaria obcordata</i> )	<u>T</u>	Exposures of white shale of the the Green River Formation	No individuals found during field surveys and no suitable habitat present along proposed corridors or facility locations
Ute Ladies’-Tresses ( <i>Spiranthes diluvialis</i> )	<u>T</u>	Sub-irrigated alluvial soils, open meadows and along streams.	Not known to occur in the White River Field Office management area. Suitable habitat is not found on the proposed project disturbance area.

**Table 5: U.S. Fish and Wildlife Service Threatened, Endangered, and Candidate Plant Species with Potential to Occur in Rio Blanco County, Colorado, and WRFO BLM Sensitive Plant Species**

<b>Species</b>	<b>Status<sup>1</sup></b>	<b>Habitat Description</b>	<b>Potential To Occur In The Project Area</b>
White River beardtongue ( <i>Penstemon scariosus</i> var. <i>albifluvis</i> )	<u>C</u>	Desert shrub and pinyon/juniper communities on the Green River shales.	Individual plants and suitable habitat were not found on the proposed project disturbance area.
Narrow-stem gilia ( <i>Aliciella stenothyrsa</i> )	<u>BLMS</u>	Silty to gravelly loam soils derived from the Green River or Uinta Formations. Grassland, shrubland, and P/J communities. Elev. 5000-6000ft. Occurs in Mesa and Rio Blanco counties.	Not known to occur in the project area, and not found during field surveys.
Debris milkvetch ( <i>Astragalus detritalis</i> )	<u>BLMS</u>	Pinyon/juniper and desert shrub communities with rocky soils.	Not known to occur in the project area, and not found during field surveys.
Duchesne milkvetch ( <i>Astragalus duchesnensis</i> )	<u>BLMS</u>	Pinyon/juniper and desert shrub communities; around sandstone or shale outcrops.	Not known to occur in the project area, and not found during field surveys.
Park rockcress ( <i>Arabis fernaldiana</i> var. <i>fernalidiana</i> )	<u>BLMS</u>	Desert shrub and pinyon/juniper on sandstone and limestone outcrops.	Not known to occur in the project area, and not found during field surveys.
Ephedra buckwheat ( <i>Eriogonum ephedroides</i> )	<u>BLMS</u>	Juniper and sagebrush-grass communities on white shale of the Green River Shale Formation.	Not known to occur in the project area, and not found during field surveys.
Cathedral Bluff dwarf gentian ( <i>Gentianella tortuosa</i> )	<u>BLMS</u>	Sagebrush up to spruce-fir forests (8,500 to 10,800 ft.) on shale outcrops of the Green River Formation.	Not known to occur in the project area, and not found during field surveys.
Narrow-stem gilia ( <i>Gilia stenothyrsa</i> )	<u>BLMS</u>	Pinyon/juniper, sagebrush, mountain shrub, on Green River and Uinta Formation soils.	Not known to occur in the project area, and not found during field surveys.
Piceance bladderpod ( <i>Lesquerella parviflora</i> )	<u>BLMS</u>	Green River Shale outcrops on ledges and slopes.	Species and suitable habitat not found within project area.
Flaming Gorge evening primrose ( <i>Oenothera acutissima</i> )	<u>BLMS</u>	Sandy, gravelly or rocky soil in seasonally wet areas, mixed conifer and sagebrush.	Species and suitable habitat not found within project area.
Rollins cryptanth ( <i>Oreocarya [Cryptantha] rollinsii</i> )	<u>BLMS</u>	Pinyon/juniper and cold desert shrub habitats on Green River shales.	Species and suitable habitat not found within project area.

**Table 5: U.S. Fish and Wildlife Service Threatened, Endangered, and Candidate Plant Species with Potential to Occur in Rio Blanco County, Colorado, and WRFO BLM Sensitive Plant Species**

Species	Status <sup>1</sup>	Habitat Description	Potential To Occur In The Project Area
Colorado feverfew ( <i>Parthenium ligulatum</i> )	<u>BLMS</u>	Barren shale knolls.	Not known to occur in the project area, and not found during field surveys.
Graham's beardtongue ( <i>Penstemon grahamii</i> )	<u>BLMS</u>	Decomposed oil shale and talus on the Green River Formation, Evacuation Creek and Parachute Creek Members.	Species and suitable habitat not found within project area.
Cathedral Bluff meadow-rue ( <i>Thalictrum heliophilum</i> )	<u>BLMS</u>	Sparsely vegetated, steep shale talus slopes of the Green River Formation. Elev. 6300-8800ft. Occurs in Garfield, Mesa and Rio Blanco counties.	Not known to occur in the project area, and not found during field surveys.

<sup>1</sup> E = Federally Endangered, T = Federally Threatened, C = Federal Candidate species, BLMS = BLM Sensitive species

A survey of SSS plants was conducted on the proposed pipeline routes, proposed compressor station, above-grade pipeline facilities, and temporary work areas by SWCA on July 28, 2008 (SWCA 2008c). In compliance with the recent WRFO survey protocol for special status plant species and noxious weeds, WestWater Engineering (WWE) conducted additional surveys during May 2009 and May 2010 (WWE 2009a and WWE 2010).

Two federally-threatened species are known to occur near the project area: Dudley Bluffs bladderpod and Dudley Bluffs twinpod. These species are found on exposures of white shale of the Green River Formation. The nearest known population of both species occurs in the Ryan Gulch Areas of Critical Environmental Concern (ACEC), which is located approximately 4.37 miles from the project area. Suitable habitat for the Dudley Bluffs bladderpod and the Dudley Bluffs twinpod was not observed along the proposed pipeline alignment or at the proposed compressor station site. However, several white shale outcrops of the Black Sulphur Tongue occur on the slopes of Ryan Gulch within 600 meters of the proposed project. The Black Sulphur Tongue is considered potential habitat for the two species, and neither species has been found on outcrops of the Black Sulphur Tongue (Roberts 2009). The water management facility owned and operated by Williams is located on a broad ridgetop with vegetation dominated by sagebrush shrublands. There is no suitable habitat for threatened and endangered plant species at the water management facility located on privately owned land.

Ute ladies'-tresses are not known to occur in the WRFO, but potential habitat may exist along the White River and perhaps in smaller drainages. The candidate White River beardtongue and suitable habitat for the species were not found in the survey area. No BLM sensitive plants and/or suitable habitat were observed during the SSS plant surveys within 100 meters of the project area (SWCA 2008c, WWE 2009a and 2010).

*Environmental Consequences of the Proposed Action:* The disturbances that would occur from the Proposed Action are not located within or near suitable habitat for any SSS plants; therefore, there would be no direct effects on SSS plants. Due to the distance from the proposed pipeline and compressor station to the nearest known populations, the short term increase in fugitive dust generated by vehicle traffic, construction equipment, and blasting is unlikely to have any detectable effect on any SSS plants (see also *Air Quality*). Operation of project facilities for the long term should not result in dust levels that would be above ambient levels associated with vehicle traffic on county, BLM, and private roads. However, traffic associated with construction of the project would access the area from CR 24, which is located in the Ryan Gulch ACEC where the Dudley Bluffs bladderpod and Dudley Bluffs twinpod are known to occur.

*Endangered Species Effect Finding:* Subsequent to the SSS plant survey findings there would be “no affect” on the Dudley Bluffs bladderpod, the Dudley Bluffs twinpod, or the candidate White River beardtongue.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* In the future, if new information reveals project related impacts to any plant species listed as endangered or threatened which exceed the impacts described in this document, Section 7 consultation with U.S. Fish and Wildlife Service (FWS) must be initiated.

*Finding on the Public Land Health Standard for Threatened & Endangered species:* Field surveys of areas proposed for disturbance by the project did not locate any occurrences of threatened, endangered, or BLM sensitive plant species. Therefore, the proposed project would not change the current land health conditions for Standard 4.

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

*Affected Environment:* Table 6 lists the FWS threatened, endangered, and candidate fauna species with potential to occur in Rio Blanco County, Colorado (USDI, USFWS 2009) and Colorado endangered and threatened species likely to occur in the project area (CDOW 2009). Pertinent BLM sensitive species (BLM 2009) are also listed in Table 6.

**Table 6: U.S. Fish and Wildlife Service Threatened, Endangered, and Candidate fauna Species with Potential to Occur in Rio Blanco County, Colorado; Colorado State Endangered and Threatened Species and BLM Sensitive Species Likely to Occur in the Project Area**

Species	Status <sup>1</sup>	Habitat Description	Potential To Occur in the Project Area
<b>MAMMALS</b>			
Black-footed ferret ( <i>Mustela nigripes</i> )	E, SE	Open grasslands with prairie dog colonies.	No grassland habitats or prairie dog colonies occur in the project area or vicinity.

**Table 6: U.S. Fish and Wildlife Service Threatened, Endangered, and Candidate fauna Species with Potential to Occur in Rio Blanco County, Colorado; Colorado State Endangered and Threatened Species and BLM Sensitive Species Likely to Occur in the Project Area**

Species	Status <sup>1</sup>	Habitat Description	Potential To Occur in the Project Area
Canada lynx ( <i>Lynx canadensis</i> )	T, SE	Mixed conifer forest, generally above 8,000 feet.	No mixed conifer forest occurs in the project area or vicinity.
Townsend's big-eared bat ( <i>Corynorhinus townsendii</i> )	BLMS	Mines, caves, and structures in woodlands	No suitable hibernacula or nursery habitat available within project vicinity.
White-tailed prairie dog ( <i>Cynomys leucurus</i> )	BLMS	Open shrublands, semi-desert grasslands, and mountain valleys.	Does not occur in the project area
Spotted bat ( <i>Euderma maculatum</i> )	BLMS	Rocky cliffs, caves, crevices, or mines near coniferous woodlands or open semi-desert shrublands accessible to water.	Not known to occur in the project vicinity.
Fringed myotis ( <i>Myotis thysanodes</i> )	BLMS	Pinyon/juniper, greasewood, saltbrush and oakbrush	No suitable hibernaculum or nursery habitat available within project vicinity.
<b>BIRDS</b>			
Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	ST, BLMS	Winters in river bottom areas, especially within big game winter concentration areas.	Not currently mapped as bald eagle winter range by CDOW (CDOW 2009). However, bald eagles have been observed nesting and hunting along Piceance Creek.
Yellow-billed Cuckoo ( <i>Coccyzus americanus</i> )	C	Breeds in riparian gallery forests with dense, understory vegetation.	No riparian gallery forests occur in the project area or vicinity.
Northern Goshawk ( <i>Accipiter gentilis</i> )	BLMS	Primarily in conifer forests; known to utilize large trees in pinyon/juniper woodlands in NW Colorado	Known to occur in the project area.
Burrowing Owl ( <i>Athene cunicularia</i> )	ST, BLMS	Breeding habitat is associated with colonies of prairie dogs or other burrowing rodents.	Documented near the project area, but there is no known suitable breeding habitat near the project location.
Ferruginous Hawk ( <i>Buteo regalis</i> )	BLMS	Large grassland/shrublands with good numbers of rodents and lagomorphs in low to mid elevations.	Not known to occur within the project area, no nests were observed during surveys.
Greater Sage-grouse ( <i>Centrocercus urophasianus</i> )	C	Continuous big sagebrush habitat on flat or gently rolling terrain.	May occur in the project area.

**Table 6: U.S. Fish and Wildlife Service Threatened, Endangered, and Candidate fauna Species with Potential to Occur in Rio Blanco County, Colorado; Colorado State Endangered and Threatened Species and BLM Sensitive Species Likely to Occur in the Project Area**

Species	Status <sup>1</sup>	Habitat Description	Potential To Occur in the Project Area
Mountain Plover ( <i>Charadrius montanus</i> )	BLMS	Shortgrass prairies and mountain parks with similar vegetation structure.	Suitable nesting and breeding habitat is not present at or in the vicinity of the project area.
American Peregrine Falcon ( <i>Falco peregrines anatum</i> )	BLMS	High cliffs near pinyon-juniper, ponderosa, or spruce-fir forests. Elevations from 4,500 to over 9,000 ft.	Suitable nesting and breeding habitat is not present at or in the vicinity of the project area. However, species may forage within project area.
Long-billed Curlew ( <i>Numenius americanus</i> )	BLMS	Grasslands and Shortgrass prairies near ponds and lakes. Generally found at lower elevations.	Suitable nesting and breeding habitat is not present at or in the vicinity of the project area.
White-faced Ibis ( <i>Plegadis chihi</i> )	BLMS	Marshes and shallow water habitats including lake edges and flooded agriculture. Nesting birds prefer tall emergent wetland plant species.	Suitable nesting and breeding habitat is not present at or in the vicinity of the project area.
American White Pelican ( <i>Pelecanus erythrorhynchos</i> )	BLMS	Occur on or near large bodies of water, nesting on islands.	Suitable nesting and breeding habitat is not present at or in the vicinity of the project area.
Brewer's Sparrow ( <i>Spizella berweri</i> )	BLMS	Sagebrush shrublands	Observed throughout the sagebrush shrublands of the project area.
Columbian Sharp-tailed Grouse ( <i>Tympanuchus phasianellus columbian</i> )	BLMS	Sagebrush and mountain shrublands at mid elevation.	Potential to occur in the project area. None were observed during surveys.
<b>FISH</b>			
Bonytail ( <i>Gila elegans</i> )	E, SE	Large rivers with fast, flowing waters.	No perennial water sources exist within the project area or vicinity, and the species is not known to occur in the White River basin. <sup>2</sup>
Colorado pikeminnow ( <i>Ptychocheilus lucius</i> )	E, ST	Large rivers strong currents and deep pools.	No perennial water sources exist within the project area or vicinity and the species is not known to occur above Taylor Draw Dam. <sup>2</sup>
Humpback chub ( <i>Gila cypha</i> )	E, ST	Rivers with sand, gravel or boulder bedrock stream beds; prefers deep eddies and pools.	No perennial water sources exist within the project area or vicinity and the species is not known to occur in the White River basin. <sup>2</sup>

**Table 6: U.S. Fish and Wildlife Service Threatened, Endangered, and Candidate fauna Species with Potential to Occur in Rio Blanco County, Colorado; Colorado State Endangered and Threatened Species and BLM Sensitive Species Likely to Occur in the Project Area**

Species	Status <sup>1</sup>	Habitat Description	Potential To Occur in the Project Area
Razorback sucker ( <i>Xyrauchen texanus</i> )	E, SE	Rivers with strong currents and deep pools with sandy or rocky bottoms.	No perennial water sources exist within the project area or vicinity, and the species is not known to occur in the White River basin. <sup>2</sup>
Bluehead sucker ( <i>Catostomus discobolus</i> )	BLMS	Small to mid-size tributaries in the Upper Colorado River Basin with rocky or gravelly substrate and suitable habitat in larger main-stem streams, tributaries in CO.	No perennial water sources exist within the project area or vicinity. Downstream water sources may be impacted by sediment runoff from the project where the species may occur.
Flannelmouth Sucker ( <i>Catostomas latipinnis</i> )	BLMS	Medium to large streams, occurs in the White River Basin.	No perennial water sources exist within the project area or vicinity. Downstream water sources may be impacted by sediment runoff from the project where the species may occur.
Mountain Sucker ( <i>Catostomas platyrhynchus</i> )	BLMS	Small rivers and streams, occurs in the White River Basin.	No perennial water sources exist within the project area or vicinity. Downstream water sources may be impacted by sediment runoff from the project where the species may occur.
Roundtail chub ( <i>Gila robusta</i> )	BLMS	Medium and large streams with pool and riffle habitats, often occupying deep, slow areas with debris and cover on a rocky, gravel, silt, or sandy substrate.	No perennial water sources exist within the project area or vicinity. Downstream water sources may be impacted by sediment runoff from the project where the species may occur.
Colorado River cutthroat trout ( <i>Oncorhynchus clarki pleuriticus</i> )	BLMS	Cold to Cool water portions of the Upper Colorado River system, including the smallest tributaries. Complex streams with sinuosity and a variety of substrates provide the best habitat.	No perennial water sources exist within the project area or vicinity. Suitable habitat for this species does not occur near the project area.
<b>Reptiles/Amphibians</b>			
Boreal toad ( <i>Anaxyrus boreas boreas</i> )	BLMS	Lakes, ponds, wet meadows, and wetlands in subalpine forests. Adults may venture into drier forest habitats outside of mating seasons.	Suitable habitat for this species is not present in the project area or within the vicinity of the project.

**Table 6: U.S. Fish and Wildlife Service Threatened, Endangered, and Candidate fauna Species with Potential to Occur in Rio Blanco County, Colorado; Colorado State Endangered and Threatened Species and BLM Sensitive Species Likely to Occur in the Project Area**

Species	Status <sup>1</sup>	Habitat Description	Potential To Occur in the Project Area
Northern leopard frogs ( <i>Rana pipiens</i> )	BLMS	Wet meadows, ponds, streams, irrigation canals. Known to occur in Rio Blanco County.	No suitable habitat on BLM land in the project area.
Great Basin spadefoot toad ( <i>Spea intermontana</i> )	BLMS	Pinyon/juniper woodlands, sagebrush, semi-desert shrub, canyon bottoms, and floodplains.	No suitable habitat in the project area. The species is known to occur in Rio Blanco County.

<sup>1</sup> E = Federally Endangered, T = Federally Threatened, C = federal candidate species; SE = Colorado State Endangered, ST = Colorado State Threatened; BLMS= BLM Sensitive Species

<sup>2</sup> Water depletions in the Upper Colorado River system may affect these species or their designated critical habitat located downstream in the Green and Colorado Rivers.

Due to the lack of suitable habitat, none of the above federally or State-listed animal species are known to breed in the project area or utilize the area for other crucial life functions. However, the Colorado pikeminnow, razorback sucker, bonytail chub, and humpback chub, and their designated critical habitats (USDI, USFWS 1994, USDI, USFWS 2009, BLM 2008) located downstream on the White, Green, and Colorado Rivers could be impacted by offsite effects resulting from project related water use (BLM 2008).

It is possible, though unlikely, that small numbers of individual Townsend’s big-eared bats or fringed myotis could use mature pinyon/juniper trees or rock outcrops in the project vicinity as temporary diurnal roosts during the summer months. No habitat capable of supporting concentrated reproductive or overwintering functions is known to exist within 10 miles of the project area. No bats were observed during field surveys for this project.

There is no nesting habitat for bald eagles in the project area and no wintering habitat (CDOW 2009). However, bald eagles were observed nesting during the spring of 2010 along Piceance Creek, near Stewart and Jessup Gulches which are approximately 13 miles upstream of the project area. The eagles were observed foraging and hunting in the Piceance Creek area during the spring of 2010 (Gray 2010).

Previous survey work in the area has not identified burrowing owls as being present (SWCA 2008a, Kingery 1998); however, one burrowing owl, located outside this project area, was found during the spring of 2009 (WWE 2009b). In western Colorado burrowing owls nest in burrows made by prairie dogs, Wyoming ground squirrels, rock squirrels, and other ground squirrels (Kingery 1998). There are no concentrations of rodent burrows present near the project area.

Northern goshawks (*Accipiter gentilis*) are present in low densities throughout the Piceance Basin. Northwest of the project area, several active goshawk nests are known to occur in the vicinity of Ryan Gulch. These nests are located in pinyon pines at elevations around 7,000 feet. Surveys have been conducted over the past three breeding seasons for raptor species in the project area, and no active goshawk nests were found in the proposed Water Fork project area (SWCA 2008a, WWE 2009a, and WWE 2010).

Brewer's sparrows were observed in the sagebrush shrublands throughout the project area (WWE 2009a and WWE 2010). Several nests have been observed in the surrounding area, and it is likely that they nest and forage within the project boundaries.

The project area is located within four-mile buffers of two inactive lek sites for greater sage-grouse (*Centrocercus urophasianus*) (CDOW 2009). The proposed Fence Yard compressor station is located within the four-mile buffer for the 84 Mesa inactive lek site. Sagebrush shrublands with encroaching pinyon/juniper woodlands are present at the Fence Yard compressor station, which is marginal habitat for sage-grouse. A portion of the pipeline in Section 19 is also located within a four-mile buffer for the Bar D #2 inactive lek site. The portion of the pipeline that is located in Section 19 is located in a valley bottom and is not considered suitable habitat for sage-grouse. The proposed project area traverses two ridgelines composed of mixed sagebrush shrublands and mature pinyon/juniper woodlands; sage-grouse prefer broad relatively flat areas dominated by sagebrush shrublands. No sage-grouse and/or sage-grouse sign (i.e., fecal pellets, cecal cast, and feathers) were observed during field surveys for this project (WWE 2009a, WWE 2010).

Piceance Creek is located approximately 5.6 miles downstream of the project area and provides habitat for bluehead suckers (*Catostomus discobolus*), flannelmouth suckers (*Catostomus latipinnis*), and mountain suckers (*Catostomus platyrhynchus*). Black Sulphur Creek also provides habitat for these fish species and is located approximately 1.3 miles from the project area. Also refer to the *Aquatic Wildlife* section of this document.

Intermittent and perennial streams may provide suitable habitat for northern leopard frogs (*Rana pipiens*), however, there is no suitable habitat for leopard frogs on BLM land within the project area.

Great Basin spadefoot toads (*Spea intermontana*) are known to occur in northwestern Colorado in pinyon/juniper, sagebrush, rocky canyons, broad dry basins, and floodplains (Hammerson 1999). There are no documented occurrences of this species in the project area, and there are no temporary water sources within the project area to provide suitable habitat for reproduction.

*Environmental Consequences of the Proposed Action:* In May 2008, BLM prepared a Programmatic Biological Assessment (PBA) that addresses water depleting activities associated with BLM's fluid minerals program in the Colorado River Basin within Colorado. On December 19, 2008, in response to BLM's PBA, the FWS issued a Programmatic Biological Opinion (PBO) (ES/GJ-6-CO-08-F-0006) (USDI, FWS 2008c), which determined that BLM water depletions from the Colorado River Basin are not likely to jeopardize the continued existence of the Colorado pikeminnow, humpback chub, bonytail, or razorback sucker, and that BLM water depletions are not likely to destroy or adversely modify designated critical habitat.

A Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin was initiated in January 1988. The Recovery Program serves as the reasonable and prudent alternative to avoid jeopardy and provide recovery to the endangered fishes by depletions from the Colorado River Basin. The PBO addresses water depletions associated with fluid minerals development on BLM lands, including water used for well drilling, hydrostatic testing of pipelines, and dust abatement on roads. The PBO includes reasonable and prudent alternatives developed by the FWS which allow BLM to authorize oil and gas wells that result in water depletion while avoiding the likelihood of jeopardy to the endangered fishes and avoiding destruction or adverse modification of their critical habitat. As a reasonable and prudent alternative in the PBO, FWS authorized BLM to solicit a one-time contribution to the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (Recovery Program) in the amount equal to the average annual acre-feet depleted by fluid minerals activities on BLM lands.

This project has been entered into the WRFO fluid minerals water depletion log, which will be submitted to the Colorado State Office at the end of the fiscal year. Water consumption associated with the installation of gas field gathering systems (i.e., pressure testing and dust abatement) was analyzed as an integral component of natural gas development in BLM's PBA and, as such, the 2.32 acre-feet of depletions attributable to the Proposed Action are covered by the FWS's PBO and BLM's Recovery Program contribution.

As a result of the removal of woodland habitat, especially along temporary use areas that were not previously disturbed, there would be a long term loss of approximately 38.6 acres of potential woodland nesting habitat for northern goshawks. Approximately 20.4 acres or 52 percent of pinyon/juniper trees removed due to project construction would be located within 328 feet of existing roads. Woodlands adjacent to existing roads or other regular disturbance would be less important to nesting goshawks which tend to nest in stand interiors and avoid human activity. Development and construction of the project is not expected to result in any detectable impact to northern goshawk populations in the project area.

If construction were to begin during the spring of 2011 or a later year, combining a survey for northern goshawks with surveys recommended for other raptor species would provide an added level of certainty that no direct impacts would occur as a result of disturbance during the nesting season.

There is an expected loss of 23.5 acres of sagebrush shrublands as a result of this project. Data shows that 85 percent of sage-grouse nests occur within four miles of active lek sites (Colorado Greater Sage-grouse Steering Committee 2008). Sage-grouse and/or their sign (i.e., fecal pellets, cecal casts, and feathers) were not observed within the proposed project area (WWE 2009a and 2010). It is unlikely that the sage-grouse would nest and/or occupy the sagebrush shrublands of the project area due to lack of suitable habitat. The sagebrush shrublands present in the project area are not continuous and broken up by encroaching pinyon/juniper trees and mature stands of pinyon/juniper woodlands. Sage-grouse prefer continuous ridgetops with dense sagebrush shrublands. Because the pipeline would parallel existing county roads and previously disturbed habitats for the majority of its alignment, the project would not compromise the long term character of habitat for future use.

Until functional sagebrush canopies reestablish along the pipeline corridors, approximately 23.5 acres of sagebrush shrublands would be removed and may result in a loss of nesting habitat for Brewer's sparrows. Approximately 23.3 acres or 98 percent of the sagebrush shrublands that would be removed as a result of this project would broaden corridors along existing roads that tend to be avoided as nest sites. Research shows that along rural dirt roads densities of Brewer's sparrows are reduced by 39 percent to 60 percent (Ingelfinger 2004). In the context of habitat available in the project locale and Piceance Basin, development and construction of the project is not expected to result in any detectable impact to Brewer's sparrow populations at local or regional scales.

Considering the relatively abundant and widespread availability of rock outcrops and mature woodlands in the project vicinity and throughout Piceance Basin, the direct and long-term removal of approximately 38.6 acres of pinyon-juniper woodlands (half of which located along existing roads or pipeline right-of-ways) would be unlikely to adversely influence the availability of suitable roost habitat for BLM-sensitive bats.

With the application of mitigating measures, the expected small amount of sediment increase anticipated from this project is unlikely result in any detectable impact on the bluehead sucker, flannelmouth sucker, mountain sucker, or roundtail chub (see the *Aquatic Wildlife* section of this document for additional details on aquatic habitat). Increased sediment loading is expected to be short term (see also the *Aquatic Wildlife* and *Water Quality* sections of this document).

*Endangered Species Effect Finding:* BLM's programmatic biological assessment for water depletions associated with fluid mineral development in the upper Colorado River Basin of Colorado established a "may affect, likely to adversely affect" for the endangered Colorado River fish. The FWS's analysis and subsequent biological opinion determined that, with the application of reasonable and prudent alternatives, BLM water depletions from the Colorado River Basin are not likely to jeopardize the continued existence of these fish and that BLM water depletions are not likely to destroy or adversely modify designated critical habitat. Because the Proposed Action is consistent with the programmatic consultation's assumptions and analyses, no further consultation is necessary.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* Goshawks would be included in the raptor nest surveys identified in the *Migratory Bird* section. Raptor nest surveys are to be completed prior to any development activity during the raptor nesting season (April 1 to August 15).

Nests found during these surveys would be subject to conditions of approval as stipulated in the White River Resource Management Plan (1997) (see the *Migratory Bird* section for specific raptor mitigation.)

In the future, if new information reveals impacts to any animal species listed as federally endangered or threatened, which exceed the impacts described in this document, Section 7 consultation with FWS must be initiated.

*Finding on Public Land Health Standard for Threatened and Endangered Species*

(Standard 4): Due to the fact that there are no occupied habitats for threatened and endangered species and limited potential for BLM Sensitive Species or their habitats to be impacted in a long term way, the proposed project is not likely to result in any detectable change in the current land health conditions for Standard 4.

## MIGRATORY BIRDS

*Affected Environment:* The pipeline corridor traverses several vegetation communities including pinyon/juniper woodlands, Wyoming sagebrush uplands, and sagebrush bottomlands. The compressor station would be located on a ridgeline dominated by a mixed community of sagebrush shrublands and pinyon/juniper woodlands. There are a number of migratory and non-migratory bird species that nest in the pinyon/juniper and sagebrush/mixed shrub communities from April through July.

The FWS (USDI, USFWS 2008a) has compiled a list of Birds of Conservation Concern (BCC). The 1973 Endangered Species Act (ESA) charged FWS to “identify species, subspecies, and populations of all migratory non-game birds that, without additional conservation actions, are likely to become candidates for listing under ESA.” Table 7 includes species for Bird Conservation Region (BCR) 16, which includes western Colorado.

**Table 7: Birds of Conservation Concern (BCC) Southern Rockies/Colorado Plateau**

<b>Migratory Bird Species</b>	<b>*Habitat Type</b>	<b>*Occurrence within Water Fork Project Area</b>
Ferruginous Hawk	Grassland/Shrublands with rolling hills and ridges	Not likely to occur
Bald Eagle	Large cottonwood stands near rivers and lakes.	Not likely to occur
Golden Eagle	Grasslands and sagebrush with nearby cliffs for nesting	Potential to occur
Peregrine Falcon	Areas with high cliff ledges, from elevations 4,500 to 9,000 ft	Potential to occur
Prairie Falcon	Areas with high cliff ledges	Potential to occur
Gunnison Sage-Grouse	Rolling sagebrush hills with nearly flat tops	Outside known range
American Bittern	Marshes, swamps, bogs, riparian areas	No habitat
Snowy Plover	Sandy beaches along rivers, lakes and oceans	No habitat
Mountain Plover	Grasslands and plowed fields	Outside known range
Long-billed Curlew	Grasslands with nearby bodies of water	No habitat.
Yellow-billed Cuckoo	In dense riparian woodlands and open woodlands with thick undergrowth	No habitat
Flammulated Owl	Old growth conifer and aspen woodlands with dense understory	No habitat
Burrowing Owl	Grasslands and shrublands with high densities of rodent burrows	Not likely to occur
Lewis’s Woodpecker	Pinyon/Juniper woodlands, riparian areas, open pine forests and cottonwoods	Not likely to occur
Willow Flycatcher	Riparian areas dominated by thick willow stands	No habitat
Gray Vireo	Utah juniper-dominated stands at less than 6100’ in western Rio Blanco County (west of Piceance Basin).	Not likely to occur
Pinyon Jay	Pinyon/Juniper woodlands	Observed throughout

**Table 7: Birds of Conservation Concern (BCC) Southern Rockies/Colorado Plateau**

Migratory Bird Species	*Habitat Type	*Occurrence within Water Fork Project Area
		project area
Juniper Titmouse	Pinyon/Juniper woodlands	Observed throughout project area
Veery	Dense riparian woodlands	No habitat
Bendire's Thrasher	Dry grasslands	Not likely to occur
Grace's Warbler	Ponderosa pine forests with scrub oak understory	No habitat
Brewer's Sparrow	Sagebrush shrublands	Observed throughout project area
Grasshopper Sparrow	Grasslands	Not likely to occur
Chestnut-collared longspur	Open grasslands	No habitat
Black Rosy-Finch	High elevation woodlands and shrublands	No habitat
Brown-capped Rosy-Finch	High elevation woodlands and shrublands	No habitat
Cassin's Finch	Maintains low-density presence in pinyon/juniper woodlands throughout WRFO.	Likely to occur

\*SWCA 2008a, and Kingery 1998, WWE 2009a, and WWE 2010

The Water Fork project area has had ongoing raptor inventories conducted during the past three nesting seasons, 2008, 2009, and 2010 (SWCA 2008a, WWE 2009a, WWE 2010). Various raptor species have been observed occupying the pinyon/juniper woodlands within 0.25 miles of the project area during the past nesting seasons including: long-eared owl, red-tailed hawk, and it is likely that Cooper's hawks have also used nests in the area due to the size and structure of many of the nests found. During 2010's nesting season, one active long-eared owl nest was observed and three unoccupied stick nests (Table 8).

**Table 8. Raptor Nests Observed within 0.25 Miles of Proposed Project Area**

Species	Distance from nest to pipeline centerline (feet)	Description of nest	Legal Description of Nest Buffers
Long-eared Owl	255	Active Long-eared Owl nest observed by WWE during 2010.	E1/2NE, Section 8, T2S, R98W
Unknown	720	Previously recorded unknown nest by SWCA in 2008. Nest was re-evaluated in 2009 and 2010 by WWE and was observed as unoccupied.	SESE, Section 18, SWSW, Section 17 T2S, R98W
Unknown	600	Previously recorded unoccupied nest by SWCA in 2008. The nest was re-evaluated in 2009 and 2010 by WWE and was unoccupied during both years.	SESE, Section 18, NENE, Section 19, T2S, R98W
Unknown	840	Previously recorded unoccupied nest by SWCA in 2008. Nest was unoccupied during 2010.	Lots 16,17, Section 31, T2S R98W. E1/2SE, Section 36, T2S R99W.

Species	Distance from nest to pipeline centerline (feet)	Description of nest	Legal Description of Nest Buffers
Long-eared Owl	138	Active during 2009; not checked during 2010.	Lot 18, Section 4, T2S, R98W
Unknown	357	Inactive during 2009; not checked during 2010.	Lot 18, Section 4, T2S, R98W
Unknown	750	Inactive during 2009; not checked during 2010.	Lot 18, Section 4, T2S, R98W

Brewer's sparrows occur throughout the project area in the sagebrush shrublands. It is likely that they nest within the project area. Pinyon jays and juniper titmouse are present in the pinyon/juniper woodlands located near the proposed pipeline corridors (WWE 2010).

Migratory birds that are also BLM Sensitive species are discussed in the *Threatened, Endangered and Sensitive Animal Species* section of this Environmental Assessment (EA).

*Environmental Consequences of the Proposed Action:* Pipeline installation is scheduled to take place immediately upon grant of ROW (summer or fall of 2011) and should be completed within approximately 90 to 120 days and 60 to 120 days for construction of the compressor station (weather dependant). Under this timeframe, the Proposed Action would have potential to directly influence migratory bird nesting activities throughout the nesting/brood rearing season. Activities may directly impact nests and young due to loss of nest tree or shrub by clearing of vegetation or abandonment by adult birds due to increased human activity.

A long term loss of approximately 38.6 acres of pinyon/juniper woodlands and 23.5 acres of sagebrush shrublands would be removed as a result of this project; and of these totals approximately 23.3 acres of sagebrush shrublands and 20.4 acres of pinyon/juniper woodlands are located near existing county roads. The disturbance associated with this project would broaden existing disturbance corridors which tend to be avoided by some species of nesting birds.

It has been shown that the effect of noise from compressor stations is species dependent, but generally the number of birds per species was lower where sound levels are 50 decibels (dB) or more (LaGory et al. 2001). Therefore, it is possible that, where compressor station noise exceeds 50 dB, noise sensitive migratory bird density and nest success could be negatively impacted in an area surrounding the compressor facility. It has also been shown that noise negatively affects breeding bird communities through a reduction in species richness, but the noise does not affect the density of nests within the breeding community (Francis 2009). In some instances data shows that nest success for birds nesting near anthropogenic noises may have higher success rates than nests away from noise; this is associated with lower predation rates on nests (Francis 2009).

Due to the amount of available habitat surrounding the project area, any unintentional take of migratory birds that may occur as a consequence of the Proposed Action would not result in a measurable effect on migratory bird populations. The requirements of Executive Order 13186 would be met (Code of Federal Regulations 2001).

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* Where raptor nests are located within the buffer zones shown in Table 8, the timing limitations shown in Table 9 would apply to project related construction activities.

**Table 9: Timing Limitations and Recommended Buffers**

Species	Buffer Zone (miles)	Seasonal Restriction
Candidate, Threatened and endangered species, and BLM sensitive species	0.5	Feb. 1 <sup>st</sup> to Aug. 15 <sup>th</sup>
Other Raptors	0.25	Feb. 1 <sup>st</sup> to Aug. 15 <sup>th</sup>

No Surface Occupancy (NSO) stipulations of up to 0.25 mile radius would be applied to any endangered, threatened, candidate, or BLM sensitive raptor nests found during field surveys and up to 0.125 mile buffer applied to the nests of other raptor species (BLM 1997). Table 8 details the location of timing limitation buffers associated with each known nest location. In the event of reproductive activity at these nest sites, timing limitations would be applied to coincident project-related activities within those buffers.

Noise abatement measures should be taken at the Fence Yard compressor station to reduce sound levels to at least the light industrial standards as defined by the Colorado Oil and Gas Conservation Commission 800 Series Aesthetic and Noise Control Regulations (Colorado Oil and Gas Commission 2009). Construction guidelines in the “Gold Book” should also be followed for compressor station noise abatement. These mitigation measures include: mufflers installed on internal combustion engines (hospital grade) and compressor components, enclosing compressors and engines in sound insulated buildings, and installing sound barriers (USDI, USDA 2007). The Fence Yard compressor station should be designed so that sound emissions would be emitted to the northeast toward the access road and the RD&D lease.

**WILDLIFE, TERRESTRIAL** (includes a finding on Standard 3)

*Affected Environment:* The project area traverses the hill slopes and ridge tops near Ryan Gulch at an elevation range from approximately 6,700 to 7,230 feet. The dominant vegetation types within the project area are pinyon/juniper woodlands, Wyoming sagebrush uplands, and sagebrush bottomlands. Previously disturbed areas are primarily grass/forb communities. The proposed Fence Yard compressor station would be located in sagebrush dominated shrublands with encroaching pinyon/juniper trees. The entire project area is located within an American elk (*Cervus canadensis*) production area as mapped by the Colorado Division of Wildlife (CDOW); with the exception of the northern portion of the pipeline alignment and the northeastern half of the compressor station in Sections 4 and 9, T2S, R98W (CDOW 2009). Due to the proximity to county roads along most of the project routes and lack of nearby water sources, it is unlikely that there would be substantial elk calving use of the project area. The project area lies within overall ranges and overall winter ranges for mule deer and elk as mapped by the White River ROD/RMP (BLM 1997 and CDOW 2009).

Suitable raptor-nesting habitat is found along the route of the proposed pipeline in the pinyon/juniper woodlands. Please refer to the *Migratory Birds* section for more details on migratory raptors.

The small mammal species that are likely to occur in the project area display a broad ecological tolerance and are widely distributed throughout the region. No narrowly-distributed or highly-specialized species or sub-specific populations are known to inhabit this area.

*Environmental Consequences of the Proposed Action:* Activities associated with construction and human activity associated with the compressor station may cause wildlife avoidance of nearby habitat for forage and cover.

The project may also directly contribute to habitat loss in the area for all wildlife species. Habitat loss along the proposed pipeline corridors is temporary until reclamation is successful. Approximately 38.6 acres of pinyon/juniper habitat and 23.5 acres of sagebrush shrublands will be removed during project development. Habitat loss at the proposed Fence Yard compressor station and three above-grade facilities would result in a loss of vegetation for the life of these facilities.

Overall, surface disturbance and vegetation modification associated with this project may contribute incrementally toward fragmented habitat configurations; however, at the present time, there are no indications that energy-related practices in the project area are imposing effective barriers to animal dispersal or reducing patch size sufficient to elicit adverse species-area effects in any but the most localized of instances.

Construction activity associated with the proposed pipeline alignments and compressor station could impact a portion of an elk production area causing added stress during a critical period of the year. As mapped by the CDOW (CDOW 2009) the elk production area is 281,983 acres and approximately 85.7 acres or 0.03 percent of the production area would be disturbed due to project development. Due to the small amount of the elk production area that would be temporarily disturbed, it is unlikely that project development would impact elk during the calving season.

Maintenance actions and noise associated with the compressor station and above-grade pipeline facilities could result in increased stress on wintering big game animals and some displacement from habitats immediately surrounding the facilities.

The proposed pipeline alignments would be following existing corridors and/or developed roads for portions of the alignments (approximately 4.6 miles on BLM lands), which minimizes consequences of habitat loss in the area. Restricting pipeline construction to avoid critical times of the year would minimize impact to deer and elk and critical nesting periods for raptor species.

Open trenches also pose a threat to wildlife. Movement along game trails is restricted when a trench intersects the trail. Wildlife may become entrapped and injured in the trench when trying to cross.

In the absence of management attention, persistent vehicle use along these pipeline corridors is inevitable, resulting in delayed restoration of the habitat, continued disturbance/displacement of wildlife populations, and further elevation of road density beyond the 1.5 miles per square mile objective for critical big game ranges established in the White River ROD/RMP (BLM 1997). Effectively redistributed, large woody material cleared from pipeline ROWs has not only been successful in deterring subsequent vehicle use of pipeline corridors in the WRFO but provides

important structural features for diversifying the reclaimed plant community and retaining sources of seed and ungrazed herbaceous cover for small mammals and birds.

If the water lines are granted there would be an 80 percent to 90 percent reduction in truck traffic along county roads that are hauling produced water to the water management facility. This reduction in truck traffic would remove trucks that are traveling these roads through elk production areas and big game winter ranges during periods of animal occupation. The behavioral consequences of human activity on big game (i.e., elevated metabolic demands and habitat disuse associated with avoidance), much of that associated with subsequent recreational vehicle use, is considered the most influential population-level impact attributable to natural gas development in Piceance Basin. There would also be fewer vehicle collisions with wildlife species along county roads if the pipeline were constructed.

*Environmental Consequences of the No Action Alternative:* As gas well development continues to expand in the Piceance Basin, wastewater production can be expected to also increase. This would result in increased truck traffic hauling produced water to the disposal well. Increased vehicle/wildlife collisions and wildlife mortality would be expected.

*Mitigation:* For mitigation measures related to noise abatement please refer to the *Migratory Birds* section of this document.

Seasonal raptor nesting restrictions and No Surface Occupancy restrictions will also be implemented when raptor nests are encountered within the recommended restriction buffer zones (BLM 1997) (see the *Migratory Bird* species section for specific timing restrictions).

The holder will place escape ramps at all livestock and wildlife trails intersected by the trench. Open trenches will be inspected regularly for injured or trapped wildlife. If injured and/or trapped animals are found in the trench, Bargath will contact the local CDOW District Wildlife Manager. Pipe placed in the trench will be capped overnight to prevent wildlife from entering the pipe and becoming trapped or injured.

Bargath will develop a plan with the AO to prevent vehicle traffic from using the ROW after final reclamation has been completed. Where the ROW deviates from an existing road and once the pipeline is installed, no residual access is authorized along the pipeline right-of-way. Bargath would remain responsible for employing methods (e.g., redistributing large woody debris across entire width of ROW) that effectively deters subsequent vehicle use of the right-of-way on BLM-administered lands through the life of the permit.

*Finding on the Public Land Health Standard for plant and animal communities* (partial, see also *Vegetation and Wildlife, Aquatic*): The project area currently meets the public land health standards for terrestrial animals. Since the pipelines would primarily be constructed within existing corridors and habitat loss would be short term, the project is not expected to compromise continued meeting of this standard at the landscape level.

## **WILDLIFE, AQUATIC** (includes a finding on Standard 3)

*Affected Environment:* The Water Fork project area would be located near dry washes that are tributaries to Black Sulphur Creek which provides aquatic wildlife habitat. The project

would eventually drain into Piceance Creek, a tributary to White River, which is located approximately five miles east of the project area. Fish species that may occur in Black Sulphur Creek and Piceance Creek are: bluehead sucker (*Catostomus discobolus*), mountain sucker (*Catostomous platyrhynchus*), speckled dace (*Rhinichthys osculus*), roundtail chub (*Gila robusta*), and flannelmouth sucker (*Catostomous latipinnis*). Several species of trout occur in Piceance Creek including: brook trout (*Salvelinus fontinalis*), brown trout (*Salmo trutta*), rainbow trout (*Oncorhynchus mykiss*), rainbow and cutthroat trout hybrids, and Snake River cutthroat trout (*Oncorhynchus clarki* spp.) (Elmblad 2010). Piceance Creek and its tributaries have been characterized as having limited sport fishing potential and low resource value (Prenzlow 2004, Elmblad 2005). Historic livestock use has influenced channels and floodplain characteristics in terms of in-stream structure, width/depth relationships, sinuosity, bank stability, and sediment capture (BLM 1994). Fish populations are poor due to marginal or fluctuating flows and/or degraded aquatic habitat conditions. Irrigation drawdown is a major factor limiting a suitable fishery in Piceance Creek. Irrigation withdrawals sometimes reduce discharge in Piceance Creek to very low levels. During drought years, surface flow sometimes disappears from segments of the creek. Nevertheless, water quality appears satisfactory based on aquatic invertebrate population information (BLM 1994).

Piceance Creek and Black Sulphur Creek also support macroinvertebrate populations that provide food sources for fish and serve important roles in the trophic dynamics of the stream environments. The major macroinvertebrate groups include a mixture of chironomid midges, oligochaete worms, and a variety of immature insect groups such as mayflies, caddisflies, and stoneflies (Gray et al. 1983). The lower reaches of the streams are dominated by macroinvertebrates that are herbivores, detritus feeders, and predators (Gray and Ward 1979; Gray et al. 1983).

*Environmental Consequences of the Proposed Action:* The proposed project may impact aquatic habitats within Black Sulphur Creek and eventually habitats downstream in Piceance Creek. Approximately 20 acres would be disturbed within the Black Sulphur watershed which would contribute to sediment loads carried by runoff into Black Sulphur Creek. During pipeline and compressor station construction, runoff and sediment load would increase. These effects are expected to be short term and would be highly unlikely to be detectable in Black Sulphur and Piceance Creek's aquatic species populations. BMPs and successful reclamation would essentially return the area to pre-project conditions over the long term.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* See *Water Quality* section.

*Finding on the Public Land Health Standard for plant and animal communities* (partial, see also *Vegetation*): With successful implementation of recommended mitigation, this project would not jeopardize the viability of any aquatic animal population. It would have no detectable impact on aquatic habitat condition, utility, or function, or any discernible effect on animal abundance or distribution at any landscape scale. This project, as conditioned, would not be expected to contribute measurably to sediment loads carried by Black Sulphur or Piceance Creeks and would therefore have no effective influence on the function or condition downstream aquatic habitats and would not modify the status of the Land Health Standards.

## WILD HORSES

*Affected Environment:* The Proposed Action is not located within a designated wild horse management area. A designated wild horse area is located approximately 1.75 miles northwest of the proposed project; however a band of horses was located near the project area in 2010.

*Environmental Consequences of the Proposed Action:* None.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* None.

## CULTURAL RESOURCES

*Affected Environment:* Portions of the proposed pipeline routes have been surveyed in the past for cultural resources (SWCA 2008b). Grand River Institute (GRI) performed a record search for all the proposed corridors and above ground facilities and a Class III (100 percent intensive) level survey of those project areas that had not been previously inventoried for cultural resources (GRI 2009a and GRI 2009b). Nine sites were identified to be within 100 meters of the Water Fork project area and are listed below in Table 10.

**Table 10. Sites Found within 100 Meters of the Water Fork Pipeline Edge of Disturbance**

Site no.	Site Type	Eligibility	Distance from Edge of Right-of-Way (ROW)
5RB2	Prehistoric open camp	Not eligible - officially	10 meters south of edge of ROW
5RB3	Prehistoric open camp	Eligible -officially	Along edge of ROW
5RB405	Prehistoric open lithic	Needs data - officially	11 meters west of edge of ROW
5RB2171	Prehistoric open camp	Needs data - officially	35 meters southeast of edge of ROW
5RB4809	Historic ranch	Not eligible - officially	Lies along eastern edge of ROW, but structures at this site would be avoided by project construction.
5RB5214	Prehistoric open lithic	Not eligible - officially	10 meters southeast of edge of ROW
5RB5445	Prehistoric open camp	Needs data - officially	91 meters north of edge of ROW
5RB5808	Prehistoric open lithic	Not eligible -	58 meters southeast of edge of

**Table 10. Sites Found within 100 Meters of the Water Fork Pipeline Edge of Disturbance**

Site no.	Site Type	Eligibility	Distance from Edge of Right-of-Way (ROW)
		officially	ROW
5RB5948	Prehistoric open lithic	Not eligible - officially	90 meters east of edge of ROW

(GRI 2009a, GRI 2009b, and GRI 2010)

*Environmental Consequences of the Proposed Action:* The proposed pipeline corridor’s edge of disturbance would be located near sites 5RB3 and 5RB4809. Site 5RB3 has been classified as *officially eligible for the National Register of Historic Places (NRHP)* and has the potential to be impacted by project construction. Site 5RB4809 is *officially not eligible* and all the historic structures at the site will be avoided by the proposed project.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* Bargath has arranged with Rio Blanco County to be allowed to use County Road 68 during construction for the piling of soil and as the working surface for approximately 750 feet in order to avoid direct impacts to the 5RB3 site. A barrier fence will be placed along the southeast edge of the 5RB3 site in order to restrict personnel and traffic from disturbing the site during construction of the pipelines. The site will also be monitored by an authorized contract archaeologist during construction for its protection.

All employees of the holder and any subcontractors must be informed by the holder before commencement of operations that any disturbance to, defacement of, or removal of archaeological, historical, or cultural material (including pot shards and arrowheads) would be treated as law enforcement/administrative issues. The holder would be held accountable for the conduct of its employees and subcontractors in this regard.

If subsurface cultural materials are discovered during operations, all work in the vicinity of the resource would cease, and the BLM AO would be notified immediately. The holder would take any additional measures requested by the AO, including the possibility of hiring a qualified archaeologist to carry out specific instructions. Within five working days of the reported discovery, the AO would inform the holder as to:

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

If the holder wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO would assume responsibility for whatever

recording and stabilization of the exposed materials may be required. Otherwise, the holder would be responsible for mitigation cost. The AO would provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the holder would then be allowed to resume construction.

Pursuant to 43 CFR 10.4(g), the holder of this authorization must immediately notify the AO by telephone and with written confirmation 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), the holder must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.

## **PALEONTOLOGY**

*Affected Environment:* The proposed pipeline alignment and compressor station are located in an area that includes the Uinta Formation, the Black Sulphur Tongue of the Green River Formations, and surficial deposits of Halocene alluvium (Hail and Smith 1994). Under the Potential Fossil Yield Classification (PFYC) (BLM 2007a) system, the BLM Colorado State Office has classified both the Uinta Formation and the Green River Formation as Class 5 with a very high probability of finding significant paleontological resources. The Halocene alluvium is classified as Class 2 with a low probability of containing significant fossils. The Fence Yard compressor station and the proposed pipeline alignments would be located on the Uinta Formation which has extensive soil and vegetative cover with no bedrock exposures. The proposed pipeline for a portion of its route would be located in the bottom of Ryan Gulch which is composed of deposits of Halocene alluvium.

*Environmental Consequences of the Proposed Action:* The majority of the Proposed Action would occur within the Uinta Formation where there is potential for impacting fossil resources if it is necessary to excavate into the underlying rock formation to construct the pipelines. Bargath anticipates blasting the underlying rock formation along portions of the proposed pipeline route which could potentially impact fossil resources found in both the Uinta and the Green River Formations.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* A paleontological monitor would be present at any time that it becomes necessary to excavate into the underlying rock formation during construction. If Bargath must blast the underlying rock formation, it will be necessary for the paleontological monitor to stop work on the trench and examine the rock ejected from the trench before work can continue. After the loose rock is removed from the trench, work on trench excavation will be stopped again to allow the paleontological monitor to evaluate the material for fossil resources.

The holder is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for disturbing or collecting vertebrate fossils, collecting large amounts of petrified wood, or collecting fossils for commercial purposes on public lands. If significant paleontological resources are discovered during surface disturbing actions or at any other time, the operator or any of his agents must stop work immediately at the site, immediately contact the appropriate BLM representative, and make every effort to protect the site from further impacts, including looting, erosion, or other human or natural damage.

The BLM or designated paleontologist will evaluate the discovery and take action to protect or remove the resource within 10 working days. Work may not resume at that location until approved by the official BLM representative.

If the holder 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, significant delays may occur while the AO enacts mitigation procedures. The operator may elect to contract an approved paleontologist to execute site mitigations in order to expedite proceedings. 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 holder will then be allowed to resume construction.

**ELEMENTS NOT PRESENT OR NOT AFFECTED:**

No flood plains or prime and unique farmlands exist within the area affected by the Proposed Action. No Native American Religious Concerns are known in the area, and none have been noted by Northern Ute tribal authorities. Should recommended inventories or future consultations with Tribal authorities reveal the existence of such sensitive properties, appropriate mitigation and/or protection measures may be undertaken. There are no environmental justice concerns associated with the Proposed Action.

**OTHER 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
Visual Resources			X
Fire Management			X
Forest Management			X
Hydrology/Water Rights			X
Rangeland Management			X
Realty Authorizations			X
Recreation			X
Access and Transportation			X
Geology and Minerals			X
Areas of Environmental Concern	X		
Wilderness	X		
Wild and Scenic Rivers	X		
Cadastral	X		
Socio-Economics			X
Law Enforcement	X		

## **VISUAL RESOURCES**

*Affected Environment:* The proposed Water Fork project is located within a visual resource management (VRM) class III area. The objective of this class is to allow significant impacts and changes to occur over the long term in a very sensitive and important landscape view shed. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape. Prior oil and gas activities in and around the project area have resulted readily visible disturbances related to pipeline, compressor stations, and related facilities.

*Environmental Consequences of the Proposed Action:* Due to prior pipeline construction in these areas and the presence of roads along many of the proposed pipeline segments, the proposed pipelines are unlikely to result in a substantially noticeable change in the visual character of the area. Within a few years after reclamation, vegetation recovery would also reduce the visual impact of this proposed project.

The proposed compressor station would be located on a ridgeline in a mixed shrubland and pinyon/juniper community near CR 68. Due to the vegetation near the site and the nearby ridgetops the casual observer on adjacent ridgelines and valley bottoms would not be able to view the facility at great distances. The compressor station would be visible from CR 68 but would not dominate the view of the landscape in the area. With application of the mitigation shown below, the proposal would meet the objectives of VRM Class III and not dominate the view of the casual observer.

*Environmental Consequences of the No Action Alternative:* There would be no additional impact on visual resources.

*Mitigation:* Remove as little vegetation as possible during construction (see also mitigation for *Vegetation, Soils, and Wildlife*). The proposed compressor station should be painted a color that blends with the natural background setting and landscape to camouflage the equipment and facility (USDI, USDA 2007).

## **FIRE MANAGEMENT**

*Affected Environment:* The project occurs in fire management polygon C6-Lower Piceance Basin. This unit is dominated by pinyon/juniper and Wyoming big sagebrush. A total of 85.6 acres would be disturbed by the proposed project and approximately 38.6 acres would be pinyon/juniper woodlands. The remainder would be Wyoming big sagebrush or herbaceous communities found on prior pipeline disturbances. General management directions from the WRFO Fire Management Plan are listed below.

C-6: Fire is desired in this unit to improve vegetation mosaic and mule deer winter range condition. Fire in this polygon will be suppressed to protect oil shale, sodium, and gas facilities. In order to protect rare plants, retardant use will be limited in ACECs, and mechanized equipment will be limited to existing roads or trails to prevent impacts to rare

plants. There will be no mechanized fire line construction. Prescribed burns or other fire management treatments will be conducted to help manage sagebrush dominated drainages to break up the continuous fuels connecting large stands of pinyon/juniper.

*Environmental Consequences of the Proposed Action:* If woody debris from clearing of pinyon/juniper trees is piled or windrowed the associated heavy fuels could result in increased fire risks.

After reclamation, the fine herbaceous fuels that would be present on the pipeline corridors could be subject to fast moving relatively cool fires, similar to the surrounding shrublands. There should be no long term increase in fire risk as a result of this proposed project.

The Proposed Action would help to at least partially meet objectives set forth in the Fire Management Plan. Archaeological surveys completed for this project improve the database for future fire management decisions. Through corridor clearing and reclamation, the project would, to a degree, break up continuous fuels and improve vegetation mosaic. Due to the linear nature of the proposed pipelines, the clearings would not mimic fire caused vegetation mosaics. The reduced occurrence of heavy fuels in management unit C-6 would improve the safety margin for gas field equipment within the project area.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* Woody debris remaining from clearing of the woodland species from the corridors must be disposed of in a manner that does not result in increased wildfire risks. See the *Vegetation* mitigation section of this document for mitigation concerning management of woody debris. General requirements include no windrowing or piling of woody debris, and removal of firewood size material from the sites.

Also see mitigation in the *Vegetation* section of this document for mitigation appropriate to minimizing fire risk.

## **FOREST MANAGEMENT**

*Affected Environment:* Pinyon/juniper woodlands in the area vary from young to mature. The largest trees are located on ridge tops, with some trees up to 35 feet in height. Generally, tree size is smaller and spacing is greater on slopes. Where woodlands are mature stands of pinyon/juniper, understory vegetation density is low. The percentage of pinyon vs. juniper varies with location. Stand structure, production, and composition of the woodland community have not been determined at this time. The project lies within the Piceance Geographic Reference Area (PGRA), which has areas that are open for both commercial and non-commercial woodland harvest (BLM 1997).

*Environmental Consequences of the Proposed Action:* An estimated 134 cords of pinyon/juniper, suitable for use as fuel wood, would be removed as a consequence of the construction activity on 38.6 acres of pinyon/juniper woodland cover. Replacement of these woodland stands to stand characteristics similar to the current situation could take up to 250 years. It may take up to 40 years for woodland species to begin to establish on the pipeline disturbance.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* Commercial and non-commercial woodlands removed as a result of development will be appraised and purchased by Bargath prior to removal. See *Vegetation* section.

## **HYDROLOGY AND WATER RIGHTS**

*Affected Environment:* The Proposed Action is located in the White River watershed, which is tributary to the Green River (in Utah) which is tributary to the Colorado River. Ryan Gulch is located within stream segment 16 of the White River Basin. Black Sulphur Creek and its tributaries are situated in stream segment 20 of the White River Basin. The project area generally drains into Ryan Gulch, Black Sulphur Creek, and eventually stream segments 14b and 15 of Piceance Creek. The corridors would cross Ryan Gulch in Section 19, T2S, R98W. Ryan Gulch is an intermittent stream and is dry at the proposed crossing. There are several water monitoring wells within a one mile radius of the project area for Shell Frontier Oil and Gas, Williams Company, and American Soda (CDWR 2010). The D-bar diversion ditch, located in the SWSW of Section 17, T2S, R98W is the closest downstream water diversion in the Ryan Gulch drainage. Numerous water diversions are located in the Black Sulphur and Piceance Creek drainages downstream of the proposed pipelines and water treatment facility.

There are no perennial streams directly impacted by this project. Any surface water utilized by Bargath would be obtained from private sources with the permission of the water right holder. These private water sources include Mautz Ranch and Mantle's Ranch. See the *Endangered Species* section of this EA for more information on the effects of water use resulting from fluid minerals development on endangered Colorado River fish.

*Environmental Consequences of the Proposed Action:* During construction, drainage from compacted construction surfaces would reduce infiltration resulting in elevated surface runoff and sediment transport to downstream channels and streams. In the short term, the surface disturbance associated with pipeline and compressor station construction could alter ground water recharge and discharge patterns. In the long term, after reclamation of the pipeline corridors, surface runoff and infiltration from the pipeline corridors should be similar to preconstruction conditions. There would be no detectible change in runoff from the existing roads in the project area. The proposed compressor station, though situated on a relatively flat surface, is near the headwaters of two unnamed ephemeral channels. The 16.9 acre compressor station site is likely to increase runoff into the two unnamed channels near the site. These changes are unlikely to have any detectible impact on downstream water users or hydrologic function.

Open trench crossings of ephemeral and intermittent drainages would temporarily upset the channel stability. On the intermittent and ephemeral drainages this may cause increased sedimentation and some bank instability for the short term. Long-term stability is not likely to be compromised. The project is not likely to directly impact and/or disturb vegetation along Black Sulphur Creek and its associated wetlands. No impacts to water rights are anticipated as a result of pipeline construction or use.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* All channel crossings will be conducted under the USACE nationwide permit guidelines. See *Water Quality* section.

## RECREATION

*Affected Environment:* The Proposed Action occurs within the White River Extensive Recreation Management Area (ERMA). BLM custodially manages the ERMA to provide for unstructured recreation activities such as hunting, dispersed camping, hiking, horseback riding, wildlife viewing, and off-highway vehicle use. The project area most closely resembles the recreation opportunity spectrum (ROS) class of roaded natural (RN). Roaded natural settings are characterized by a natural environment with evidence of rural residences and agricultural land uses. Resource manipulations are noticeable and are harmonious with the natural environment but substantial modifications may be encountered. The areas provide about equal opportunities for interaction with other visitors and to experience isolation from the sights and sounds of man.

*Environmental Consequences of the Proposed Action:* Recreation use in the project area is low. The upland areas within the project area have open public vehicle access via Rio Blanco County roads. Public access in some areas is limited by private lands and fluid mineral developments. What recreation activity there is occurs primarily during big game hunting season. Due to construction activities, the public would most likely not recreate in the vicinity of the pipeline route during construction and in the vicinity of the compressor station during construction and operations of the facility.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* None.

## RANGELAND MANAGEMENT

*Affected Environment:* The majority of the project is on public land located within the Square S and Reagles grazing allotments (numbers 6026 and 6027). The allotments in the proposed project area are used May through November with most pastures resting every other year and some resting every third year.

The project lies within sagebrush shrublands and pinyon/juniper woodland plant communities within these two grazing allotments. The total livestock carrying capacity of the combined 82,417 acre allotments is 3,406 animal unit months (AUM) or 24.2 acres/AUM (an AUM equals the amount of forage required by one mature cow and one calf for one month) (BLM 1997).

The total livestock carrying capacity of the 64,050 acre Square S allotment is 2,451 AUMs or 26 acres/AUM (BLM 1994). The total livestock carrying capacity of the 18,367 acre Reagles allotment is 955 AUMs or 19.2 acres/AUM (BLM 1994).

The proposed pipeline crosses one fence that is either a pasture fence within allotments, boundary fence between grazing allotments, or boundary fence between private and public land.

*Environmental Consequences of the Proposed Action:* Until pipeline construction disturbances are successfully reclaimed there would be a short term loss of approximately 4.2 AUMs. Square S allotment would lose approximately 0.8 AUMs (20.31 acres/26 acres/AUM). Reagles allotment would lose approximately 3.4 AUMs (65.11 acres/19.2 acres/AUM).

Forage loss on 18.5 acres within the Reagles allotment that would be occupied by the above-grade pipeline facilities and compressor station would be long term. This loss would be approximately 0.96 AUMs or 0.1 percent of the forage within the allotment. The short-term forage loss in the Reagles allotment would amount to approximately 0.35 percent of the forage allotted to livestock and in the Square S allotment the allotted forage loss would be 0.03 percent. These losses, which are likely to be less than the annual fluctuation in forage production, are not expected to result in any need for changes in livestock numbers or grazing periods. Reclamation of disturbed areas would likely offset the short-term forage loss on the allotments within two to three years through increased herbaceous production above current production levels.

This Proposed Action could interfere with proper functioning of the range improvements near the proposal. The fences and water sources in this area are necessary for control of cattle to achieve grazing objectives on the grazing allotments and to keep cattle from straying into the wrong grazing use area. Damage to fences or gates left open interfere with control of cattle and ultimately with proper utilization of the rangeland resource. Damage to watering facilities could affect water availability and distribution of livestock resulting in increased grazing pressure on areas that have water available for livestock. These impacts would be greatest during the construction phases, especially if construction coincides with livestock use of the area in spring or late fall.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* Any fence crossings and gates encountered on existing roads on public land that are utilized in construction of the pipeline would require placement of a temporary cattle guard constructed to BLM specifications to keep cattle from straying into other areas. Construction of the pipelines would involve at least nine fence crossings that are on (or border) public land. Proper fence bracing and construction (to BLM standards, BLM Manual 1-1572, BLM 1989) must be in place when going through a fence so as to maintain proper wire tensions. The effectiveness (control of cattle) of these fences at these crossing points must be maintained at all times during construction and operation of the pipeline.

Bargath is responsible for repairing any damage to livestock water sources or other range improvements caused by pipeline construction activities.

## **GEOLOGY AND MINERALS**

*Affected Environment:* The general project area is located in the central part of the Piceance Creek Basin, on the northern flank of the Black Sulfur Anticline (Hail and Smith 1994).

The Tertiary Uinta and Green River Formations overlie the majority of the proposed pipeline and associated facilities. The Black Sulphur Tongue of the Uinta occurs in Sections 4, 8, and 17, T2S, R98W.

The northern portion of the pipeline alignment would cross Shell Frontier Oil and Gas, Inc. Oil Shale Research, Development ,and Demonstration (RD&D) Lease COC69166 in Section 4, T2S, R98W.

*Environmental Consequences of the Proposed Action Affected Environment:*

Construction of the pipeline may interfere with Shell's ongoing oil shale activities. Location of the pipeline may limit the useable area for Shell's oil shale research.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* To limit interference with ongoing oil shale activities, the proponent should coordinate with Shell about timing and disturbance activities prior to the commencement of construction activities.

## **SOCIO-ECONOMICS**

*Affected Environment:* The Proposed Action would be developed in Rio Blanco County but construction resources would also be drawn from Garfield County, Mesa County, and eastern Utah. Rio Blanco County had a 2008 population of 6,340, which is a slight increase in population from the 2002 population of 6,063. The major communities in the county are Meeker (population 2,183) and Rangely (population 2,096) (U.S. Census Bureau 2009). The county underwent a substantial economic and demographic growth in the late 1970s and early 1980s as major energy companies attempted to develop oil shale as a national energy fuel source. After a decline in jobs and population from the boom levels, the number of jobs and people in the county has remained static. Currently, the government sector makes up almost a third of all jobs in the county. The traditional farming and ranching sector has been supplemented in the last few years by a growing number of jobs in the oil and gas extraction industry as drilling and related processing activity have expanded. Many of the resources for development of the oil and gas resource come out of Garfield County, Mesa County, or Uintah County in Utah and locate in Rio Blanco County on only a temporary basis. In addition to oil and gas exploration and development, the other major economic activity that occurs in the project area is livestock grazing.

*Environmental Consequences of the Proposed Action:* The employment required for construction of the pipelines may be as many as 65 workers for 90 to 120 days and 42 workers for 60 to 120 days for construction of the compressor station. These employees would not represent new employment for the area but would be workers already available in the area or from nearby communities in western Colorado or eastern Utah. Motels, restaurants, grocery stores, gas stations, and vehicle and equipment repair shops may all experience some additional activity. The facilities developed by the Proposed Action would expand the local property tax base. This net effect of these impacts would be considered beneficial but low.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* None.

## **ACCESS AND TRANSPORTATION**

*Affected Environment:* The primary access to the project site would be via Rio Blanco County Roads. Beginning at Colorado Highway 64, access would be south on County Road 5, southwest on County Road 24, and then various private and developed oil and gas roads into the project area. Within the project area County Roads 86, 68, 85, and 144 along with various developed oil and gas roads would be primary travel corridors. A more detailed summary of county road and pipeline intersections and overland travel is presented in the Proposed Action section of this document.

Motorized vehicle travel on public lands within the area of the Proposed Action is limited to existing roads from October 1 to April 30 each year. Cross-country motorized vehicle travel is allowed from May 1 to September 30 as long as no resource damage occurs as a result (BLM 1997).

*Environmental Consequences of the Proposed Action:* Construction of the proposed pipeline would contribute to traffic along the county roads for a period of 90 to 120 days and construction of the compressor station would contribute to traffic for a period of 60 to 120 days. A maximum of about 96 project related vehicles can be anticipated to use the county roads. These would consist of pickup trucks, motor graders, flat bed trucks, dump trucks, welder trucks, stringing trucks, and others as outlined in the POD. Existing vehicle traffic levels are low in the area, so the short term increase caused by this project would not result in substantial effects to local traffic patterns. The condition of the roadways should be returned to its previous condition by the applicant. At those points where the pipeline route intersects county roads, trenching may result in some traffic delays. Boring under county roads would prevent traffic delays at those locations.

During the life of the project, traffic caused by pipeline, compressor station, and above-grade pipeline facilities should be very low.

After construction of the water management facility on private land, all water would be hauled to the facility by truck. The use of the proposed water lines to transport water to the water management facility would result in an 80 percent to 90 percent reduction in truck traffic to the water management facility.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* All activities would be required to comply with applicable local, state, and Federal transportation laws, statutes, regulations, standards, and plans. Activities would strictly adhere to Gold Book fourth edition surface operating standards for oil and gas exploration and development (USDI, USDA 2007) and BLM manual section 9113 (BLM 1985).

All non-county roads used to access pipeline facilities would be maintained in their current condition or better.

Further mitigation of impacts to access and transportation should be achieved through management practices including:

- use of a construction yard as the primary parking for personal vehicles;
- encouragement and/or arrangement for employees and contractors to carpool to and from the site;
- requiring contractors and employees to comply with all posted speed limits;
- compliance with county and state weight restrictions and limitations;
- controlling dust along unsurfaced access roads and minimizing the tracking of mud onto paved roads; and
- post-construction restoration of unsurfaced roads to equal or better condition than existed before construction.

## **REALTY AUTHORIZATIONS**

*Affected Environment:* The majority of the proposed pipeline would follow existing pipeline corridors. Approximately 6.27 miles of the proposed pipeline will be located on federally owned lands administered by the BLM. Rights-of-way are required for the pipeline, water lines, and the temporary use areas. Construction activity and the rights-of-way (ROWs) will be adjacent to Rio Blanco County Roads 68, 86, and 144 for portions of the proposed project.

A portion of the proposed project would share existing ROW corridors located on BLM land. A search of the BLM LR2000 database indicates several ROWs are located within legal sections (as based on the Federal township and range system) through which the Proposed Action would pass.

Qwest Corporation has a ROW for telephone lines near and along portions of Bargath's proposed corridors. Enterprise Products Operating, Exxon Mobil, Colorado Interstate Gas Co., Wilgath, Questar, and Public Service of Colorado all have existing pipeline ROW's along and/or near Bargath's proposed pipeline corridors. Wilgath and Shell Oil and Gas hold ROW grants for roads near the project area. Exxon Mobil and Williams Production RMT Company both have oil and gas facilities located near the proposed project area. Shell Frontier Oil and Gas has an oil shale RD&D lease in Section 4, T2S, R98W and several groundwater monitoring wells are located near the project area. Colorado State University, in cooperation with Shell Frontier Oil and Gas, has ongoing reclamation vegetation research plots near the proposed project.

*Environmental Consequences of the Proposed Action:* Construction activity should take place within the areas authorized in the right-of-way grant and temporary use permit. To avoid impacts to existing rights-of-way, Bargath should coordinate with existing ROW holders. To avoid impacts to county roads, any construction activity adjacent to or within Rio Blanco County road ROWs should be coordinated with Rio Blanco County Road & Bridge Department. The natural gas pipeline right-of-way COC74270 would have a permanent ROW width of 50 feet with a length of 7,043 feet, containing approximately 8.1 acres. In addition ROW COC74270 would include three 100 feet by 200 feet sites for above-grade pipeline facilities along the ROW,

containing a total of 1.4 acres, and 17.2 acres for the proposed Fence Yard compressor station and three associated access roads. The pipelines and water lines would be constructed within the same trench. The water lines ROW COC74318 would be 33,085 feet long with a width of 50 feet for corridors 6A-2 and 6A-4 and a width of 15 feet within the associated pipeline ROW for corridors 6A-1a and 6A-1b, containing 32.3 acres, more or less. The temporary use permit COC74270-01 would be 33,085 feet long with a width of 50 feet for corridor 6A-1a, a width of 35 feet for corridor 6A-1b, a width 25 feet for corridors 6A-2 and 6A-4, and include extra workspace areas, containing approximately 29.0 acres. The ROWs would overlap.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* All activities shall comply with all applicable local, state, and Federal laws, statutes, regulations, standards, and implementation plans. This would include acquiring all required State and Rio Blanco County permits, effectively coordinating with existing ROW holders, and implementing all applicable mitigation measures required by each permit.

Rio Blanco County Road & Bridge Department shall be contacted and any permits obtained prior to any construction activity adjacent to County Roads 68, 86, and 144.

The applicant shall provide the BLM Authorized Officer with data in a format compatible with the WRFO's ESRI ArcGIS Geographic Information System (GIS) to accurately locate and identify the ROW and all constructed infrastructure, (as-built maps) within 60 days of construction completion. Acceptable data formats are: (1) corrected global positioning system (GPS) files with sub-meter accuracy or better; (2) ESRI shapefiles or geodatabases; or at last resort, (3) AutoCAD .dwg or .dxf files. Option 2 is highly preferred. In ALL cases the data must be submitted in UTM Zone 13N, NAD 83, in units of meters. Data may be submitted as: (1) an email attachment; or (2) on a standard compact disk (CD) in compressed (WinZip only) or uncompressed format. All data shall include metadata, for each submitted layer, that conforms to the Content Standards for Digital Geospatial Metadata from the Federal Geographic Data Committee standards. Questions should be directed to WRFO BLM GIS staff at (970) 878-3800.

**CUMULATIVE IMPACTS SUMMARY:** Cumulative impacts from oil and gas development were analyzed in the White River Resource Area Preliminary Resource Management Plan/ Final Environmental Impact Statement (PRMP/FEIS). Current development, including the actions proposed in the Water Fork project and other associated development, has not exceeded the foreseeable development analyzed in the PRMP/FEIS.

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**PERSONS / AGENCIES CONSULTED:**

Consultation with the Colorado State Historic Preservation Office was completed on November 22, 2010.

**INTERDISCIPLINARY REVIEW:**

<b>Project Team</b>		
<b>Name</b>	<b>Title</b>	<b>Area of Responsibility</b>
<b>BLM Oversight</b>		
Stacey Burke	Realty Specialist	Project Lead; Realty Authorizations
Paul Daggett	Mining Engineer	Geology and Minerals
Ed Hollowed	Wildlife Biologist	Migratory Birds; Threatened, Endangered and Sensitive Animal Species; Wildlife; Wetlands and Riparian Zones
Jill Schulte	Botanist	Areas of Critical Environmental Concern; Threatened and Endangered Plant Species
Andrew Burrows Jim Michels	Outdoor Recreation Planner	Recreation; Wilderness; Access and Transportation, Visual Resource Management
Mark Hafkenschiel	Rangeland Management Specialist	Vegetation; Invasive, Non-Native Species; Rangeland Management
Kristin Bowen	Archaeologist	Cultural and Paleontological Resources
Bob Lange	Hydrologist	Air Quality; Water Quality, Surface and Ground; Hydrology and Water Rights;, and Soils
Christina Barlow	Natural Resource Specialist	Wastes, Hazardous or Solid
Jim Michels	Fire / Fuels Technician	Fire Management, Forest Management
Melissa Kindall	Range Technician	Wild Horses
<b>WestWater Engineering Inc. (Third Party Contractor)</b>		
Jim Ferguson	Project Lead/ Wildlife Biologist	Air Quality; Water Quality, Surface and Ground; Hydrology and Water Rights; Geology and Minerals; and Soils
Mary Nichols	Geologist	

<b>Project Team</b>		
<b>Name</b>	<b>Title</b>	<b>Area of Responsibility</b>
Carl Conner Mary Nichols	Archaeologist Geologist	Areas of Critical Environmental Concern; Cultural Resources; Paleontological Resources; Wastes, Hazardous or Solid; Access and Transportation; Wilderness; Realty Authorizations; Recreation; and Visual Resources
Rusty Roberts Amie Wilsey	Biologist, Range Scientist Environmental Scientist/ Biologist	Threatened and Endangered Plant Species; Invasive, Non-Native Species; Wetlands and Riparian Zones; Vegetation; Fire Management; Rangeland Management; and Wild Horses
Mike Klish Amie Wilsey	Prin. Environmental Scientist/Biologist Environmental Scientist	Migratory Birds; Threatened, Endangered and Sensitive Animal Species; Wildlife, Terrestrial and Aquatic
Jim Ferguson	Project Lead/ Wildlife Biologist	Forest Management

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

## **DOI-BLM-CO-110-2010-0080-EA**

**FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE:** The environmental assessment (EA) and analysis of 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.

WestWater Engineering, an environmental consulting firm, with the guidance, participation, and independent evaluation of the U.S. Bureau of Land Management (BLM) prepared this document. The BLM, in accordance with 40 CFR 1506.5 (a) and (c), is in agreement with the findings of the analysis and approves and takes responsibility for the scope and content of this document.

**DECISION/RATIONALE:** It is my decision to authorize the construction, maintenance, and operation of the Fence Yard compressor station and the natural gas pipelines and water lines as described in the Proposed Action, including the above-grade facilities and the temporary use areas, with the following mitigation measures:

### **MITIGATION MEASURES:**

#### **Operator Committed Mitigation:**

1. On fragile soils, identified by the BLM (generally slopes exceeding 35%), Best Management Practices (BMPs) to be employed during reclamation include: water bars at intervals of 25 feet, the use of erosion control blankets for site stabilization, and seeding to Authorized Officer's (AO) specifications. Stormwater-management inspections would be conducted as required to insure compliance with construction standards. Erosion control practices would be inspected to evaluate their effectiveness and document any maintenance needed.
2. Topsoil would be removed for storage from all sites at a minimum depth of 6 inches for storage along the ROW and left undisturbed until being re-spread for reclamation. Soil storage areas would be clearly marked to restrict vehicle/equipment use to only what is necessary to move the soil. Metal fence posts, construction fencing, construction barriers, or other physical barriers would be placed at regular intervals between the working surfaces and soil storage areas. Storing soil on the non-working side of the trench may be adequate if it is signed or given some type of visual indicator to limit physical impacts.
3. To protect the productivity and structure of soils, under no circumstances will topsoil or subsoil excavated from the trench down to the effective rooting depth (ERD) for the reclamation plants be used as padding in the trench, to fill sacks for trench breakers, or for any other use as construction material. Reclamation ERD would be a minimum of 16 inches and a maximum of 24 inches below the ground surface for all soils.

4. Prior to seed application, the seedbed shall be prepared via tilling the soil to a minimum depth of four inches by utilizing a disk or harrow. In all accessible areas, seeding will be accomplished using a rangeland drill. Seed shall be drilled to a depth of ¼-inch to ½-inch. In areas where a rangeland drill cannot access, seed will be hand broadcast at twice the drill rate, and harrowed to provide an adequate degree of soil to seed contact.

Monitoring of the reclaimed ROWs will be performed to document site stability, desired vegetative establishment, and noxious weed occurrence. Reclamation monitoring efforts will be performed biannually and the results of the respective monitoring program will be provided to the BLM in the form of a reclamation report that is submitted to the BLM by September 30<sup>th</sup> of each year. The purpose of this report will be to provide a description and photo-documentation of the project(s), to provide information such as reclamation status, date reseeded, acres reseeded, percent re-vegetated, noxious weed presence, and other applicable comments. Bargath will employ any necessary additional reclamation and/or weed management efforts based on the results of the biannual reclamation monitoring, and will ensure that the BLM is notified prior to the respective activities.

**BLM Required Mitigation:**

Preliminary:

1. To limit interference with ongoing oil shale activities the proponent should coordinate with Shell about timing and disturbance activities prior to the commencement of construction activities.
2. All activities shall comply with all applicable local, state, and Federal laws, statutes, regulations, standards, and implementation plans. This would include acquiring all required State and Rio Blanco County permits, effectively coordinating with existing ROW holders, and implementing all applicable mitigation measures required by each permit.
3. Rio Blanco County Road & Bridge Department shall be contacted and any permits obtained prior to any construction activity adjacent to County Roads 68, 86, and 144.

Air, Water, Soils:

4. During construction activities, the pipeline ROW and access roads would be treated with water or a BLM approved chemical dust suppressant, so that there is not a visible dust trail behind vehicles and/or construction equipment. If water is used, only the water needed for abating dust should be applied; and the water should be fresh water free of chemicals, oils, or solvents.
5. New roads built around the Fence Yard compressor site would be built according to BLM Manual Section 9113 standards for road shape and drainage features.
6. During construction, the ROW should remain undisturbed to the maximum extent possible. That is, only the minimum necessary disturbance is approved for making the working surface safe and passable. Do not remove topsoil under areas used for the storage of soils and if possible do not remove topsoil from working surfaces. Do not use material below or adjacent to the trench spoils to feed pipeline padding machines.

7. All areas where the topsoil has been removed and soils have become compacted will be ripped to a depth of 18 inches below the finished grade or to bedrock. Another suitable method of de-compaction may be used before topsoil is re-spread with approval of the BLM AO. Areas where the topsoil has not been removed, but have been compacted, must be de-compacted by disking or other methods to prepare the soils for reclamation.

8. After initial construction activities are completed and if soil productivity is diminished from its pre-disturbance condition, then reseeding, hydro-mulching, or other efforts will be initiated to re-establish soil productivity during reclamation activities.

9. In order to protect public land health standards, erosion features such as riling, gullying, piping, and mass wasting on the ROW or adjacent to the ROW as a result of this action will be addressed immediately after observation by contacting the AO and submitting a plan to assure successful soil stabilization with BMPs to address erosion problems.

10. After pipeline construction activities are completed, Bargath will be responsible for taking measures to prevent off-road vehicle use along the pipeline ROW until reclamation has been successful or as directed by the AO. Bargath will develop a plan with the AO to prevent vehicle traffic from using the ROW after final reclamation has been completed. Where the ROW deviates from an existing road and once the pipeline is installed, no residual access is authorized along the pipeline right-of-way. Bargath would remain responsible for employing methods (e.g., redistributing large woody debris across entire width of ROW) that effectively deters subsequent vehicle use of the right-of-way on BLM-administered lands through the life of the permit.

11. All activity shall cease when soils or road surfaces become saturated to a depth of three inches unless otherwise approved by the AO.

12. No operations using chemical processes or other pollutants in their activities will be allowed to occur within 200 ft of any water bodies.

13. If there is the release of produced water during pipeline testing, any leaks from ponds located at the water treatment facility, or spills of substances during pipeline construction or the operation of the water treatment facility or the compressor site that could contaminate shallow groundwaters, the holder will notify the BLM immediately to protect BLM administered lands and water quality.

14. All waterbars are to be constructed with the berm on the downhill side to prevent the soft material from silting in the trench. The initial waterbar should be constructed at the top of the backslope. For slopes greater than 40% the operator will place waterbars at least every 25 feet and use erosion fabric. For slopes less than 10% the operator may use straw wattles or other means placed at the manufacturer's recommended spacing.

15. Bargath will notify the Army Corps of Engineers (USACE) of any ephemeral, intermittent, perennial channels and wetlands that would be crossed or otherwise impacted by the Proposed Action. Copies of all correspondence with USACE will be submitted to BLM WRFO. The crossings are expected to be completed under an USACE Nationwide #12 permit (USACE 2007).

Hazardous or Solid Wastes:

16. The right-of-way holder shall comply with all Federal, State, and/or local laws, rules, and regulations addressing the emission of and/or the handling, use, and release of any substance that poses a risk of harm to human health or the environment.

17. The holder shall employ, maintain, and periodically update to the best available technology(s) aimed at reducing emissions, fresh water use and hazardous material utilization, production and releases.

18. All substances that pose a risk of harm to human health or the environment shall be stored in appropriate containers. Fluids that pose a risk of harm to human health or the environment, including but not limited to produced water, shall be stored in appropriate containers and in secondary containment systems at 110% of the largest vessel's capacity. Secondary fluid containment systems, including but not limited to tank batteries shall be lined with a minimum 24 mil impermeable liner.

19. Where required by law or regulation to develop a plan for the prevention of releases or the recovery of a release of any substance that poses a risk of harm to human health or the environment, provide a current copy of said plan to the Bureau of Land Management's White River Field Office.

20. Construction sites and all facilities shall be maintained in a sanitary condition at all times; waste materials shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

21. As a reasonable and prudent right-of-way holder, acting in good faith, the holder will report all emissions or releases that may pose a risk of harm to human health or the environment, regardless of a substance's status as exempt or nonexempt and regardless of fault, to the Bureau of Land Management's White River Field Office at (970) 878-3800.

22. As a reasonable and prudent right-of-way holder, acting in good faith, the holder will provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any substance that may pose a risk of harm to human health or the environment, regardless of that substance's status as exempt or non-exempt. Where the holder fails, refuses or neglects to provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any quantity of a substance that poses a risk of harm to human health or the environment, the Bureau of Land Management's White River Field Office may take measures to clean-up and test air, water (surface and/or ground) and soils at the lessee/operator's expense. Such action will not relieve the holder of any liability or responsibility.

23. With the acceptance of this authorization, the commencement of development under this authorization, or the running of thirty calendar days from the issuance of this authorization, whichever occurs first, and during the life of the pipeline, the holder, and through the holder, its agents, employees, subcontractors, successors and assigns, stipulates and agrees to indemnify,

defend and hold harmless the United States Government, its agencies, and employees from all liability associated with the emission or release of substances that pose a risk of harm to human health or the environment.

Vegetation, Reclamation, and Noxious/Invasive Weed Species:

24. To improve the success of reclamation some type of weed-free mulch will be used during reclamation activities to improve soil moisture conditions and improve germination success. A plan will be submitted to the AO for approval for mulch use with types and methods by slope.

25. Revegetation will commence immediately after construction and will not be delayed until the following fall. Drill seeding is the preferred method of application. Bargath will promptly revegetate all areas of earthen disturbance not necessary for production, with the following seed mix:

**White River Field Office Native Seed Mix #3**

Species	Seeding Rate Pure Live Seed (PLS)*
Western Wheatgrass (Rosanna)	2 lb/ac. PLS
Indian ricegrass (Nezpar)	2 lb/ac. PLS
Bluebunch wheatgrass (Whitmar)	2 lb/ac. PLS
Thickspike wheatgrass (Critana)	1 lb/ac. PLS
Fourwing Saltbush (Wytana)	1 lb/ac. PLS
Utah Sweetvetch	1lb/ac. PLS
Alternates: Needle and Thread Grass and Globemallow	

\* Seeding rate is for drilled seed; for broadcast seeding, the rate should be doubled.

26. Stockpiled topsoil and spoil piles will be separated and clearly labeled to prevent mixing during reclamation efforts.

27. Bargath will be responsible for achieving a reclamation success rate equal to a minimum cover and composition of 80 percent of the Desired Plant Community (as defined by the ecological site) or in relation to the seed mix applied within three growing seasons after the application of seed. This community must be capable of persisting on the site without intervention and allow for successional processes consistent with achieving the seral stage on the site prior to surface disturbance.

28. Additional reclamation efforts will be undertaken at Bargath’s expense. 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.

29. The holder shall implement an integrated weed management plan according to BLM manual 9015-Integrated Weed Management (BLM 1992; available at <http://www.blm.gov/ca/st/en/prog/weeds/9015.html>). Prior to the season of construction, the holder shall submit Pesticide Use Proposals for the use of herbicides appropriate for control/eradication of the noxious weed species along the proposed pipeline ROW and compressor station site including: cheatgrass, houndstongue, common mullein, bull thistle, spotted knapweed, and black henbane.

30. The holder shall eliminate any noxious plants before any seed production has occurred. Application of pesticides and herbicides on public lands will conform to BLM manual 9015 and the BLM White River Resource Management Plan, Appendix B, Management of Noxious Weeds (BLM 1997). Eradication should make use of materials and methods approved in advance by the AO. The holder will clean all off-road equipment to remove seed and soil prior to commencing operations on public lands within the project area. Long term weed control on pipeline facilities and the Fence Yard compressor station site will utilize methods and materials approved by BLM as directed by the AO.

Fire, Forestry, and Visual Resources:

31. All trees removed in the process of construction shall be purchased from BLM. Commercial and non-commercial woodlands removed as a result of development will be appraised and purchased by Bargath prior to removal.

32. Woody material required for reclamation shall be stockpiled along the margins of the authorized use area, separate from the topsoil piles. Once the disturbance has been recontoured and reseeded, stockpiled woody material shall be scattered across the reclaimed area in the same area where the material originated. Redistribution of woody material will not exceed 20 percent ground cover. Woody material will be distributed in such a way as to avoid large concentrations of heavy fuels and in a manner that will effectively deter vehicle use.

33. Trees or shrubs that must be removed for construction or ROW preparation shall be cut to a stump height of 6 inches or less prior to heavy equipment operation. Woody material removed for construction that is not needed for reclamation shall be cut into 4-foot sections down to a diameter of 4 inches and placed in manageable stacks immediately adjacent to a public road to facilitate removal for company use or removal by the public.

34. Remove as little vegetation as possible during construction. The proposed compressor station should be painted a color that blends with the natural background setting and landscape to camouflage the equipment and facility.

T&E Species:

35. In the future, if new information reveals project related impacts to any species listed as endangered or threatened which exceed the impacts described in the associated NEPA document, Section 7 consultation with U.S. Fish and Wildlife Service (FWS) must be initiated.

Wildlife:

36. Goshawks would be included in the raptor nest surveys. Raptor nest surveys are to be completed prior to any development activity during the raptor nesting season (April 1 to August 15). Nests found during these surveys would be subject to Conditions of Approval as stipulated in the White River Resource Management Plan (1997).

37. Where raptor nests are located within the buffer zones, the timing limitations shown in Table 9 would apply to project related construction activities.

**Table 9: Timing Limitations and Recommended Buffers**

<b>Species</b>	<b>Buffer Zone (miles)</b>	<b>Seasonal Restriction</b>
Candidate, Threatened and endangered species, and BLM sensitive species	0.5	Feb. 1 <sup>st</sup> to Aug. 15 <sup>th</sup>
Other Raptors	0.25	Feb. 1 <sup>st</sup> to Aug. 15 <sup>th</sup>

38. No Surface Occupancy (NSO) stipulations of up to 0.25 mile radius would be applied to any Endangered, Threatened, Candidate, or BLM Sensitive raptor nests found during field surveys and up to 1/8 mile buffer applied to the nests of other raptor species. Seasonal raptor nesting restrictions and No Surface Occupancy restrictions will also be implemented when raptor nests are encountered within the recommended restriction buffer zones (BLM 1997).

39. Noise abatement measures should be taken at the Fence Yard compressor station to reduce sound levels to at least the light industrial standards as defined by the Colorado Oil and Gas Conservation Commission 800 Series Aesthetic and Noise Control Regulations (Colorado Oil and Gas Commission 2009). Construction guidelines in the “Gold Book” should also be followed for compressor station noise abatement. These mitigation measures include: mufflers installed on internal combustion engines (hospital grade) and compressor components, enclosing compressors and engines in sound insulated buildings, and installing sound barriers (USDI, USDA 2007). The Fence Yard compressor station should be designed so that sound emissions would be emitted to the northeast toward the access road and the RD&D lease.

40. The holder will place escape ramps at all livestock and wildlife trails intersected by the trench. Open trenches will be inspected regularly for injured or trapped wildlife. If injured and/or trapped animals are found in the trench, Bargath will contact the local CDOW District Wildlife Manager. Pipe placed in the trench will be capped overnight to prevent wildlife from entering the pipe and becoming trapped or injured.

*Cultural and Paleontological Resources:*

41. Bargath has arranged with Rio Blanco County to be allowed to use County Road 68 during construction for the piling of soil and as the working surface for approximately 750 feet in order to avoid direct impacts to the 5RB3 site. A barrier fence will be placed along the southeast edge of the 5RB3 site in order to restrict personnel and traffic from disturbing the site during construction of the pipelines. The site will also be monitored by an authorized contract archaeologist during construction for its protection.

42. All employees of the holder and any subcontractors must be informed by the holder before commencement of operations that any disturbance to, defacement of, or removal of archaeological, historical, or cultural material (including pot shards and arrowheads) would be treated as law enforcement/administrative issues. The holder would be held accountable for the conduct of its employees and subcontractors in this regard.

43. If subsurface cultural materials are discovered during operations, all work in the vicinity of the resource would cease, and the BLM AO would be notified immediately. The holder would take any additional measures requested by the AO, including the possibility of hiring a qualified archaeologist to carry out specific instructions. Within five working days of the reported discovery, the AO would inform the holder as to:

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

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

44. Pursuant to 43 CFR 10.4(g), the holder of this authorization must immediately notify the AO by telephone and with written confirmation 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), the holder must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.

45. A paleontological monitor would be present at any time that it becomes necessary to excavate into the underlying rock formation during construction. If Bargath must blast the underlying rock formation it will be necessary for the paleontological monitor to stop work on the trench and examine the rock ejected from the trench before work can continue. After the loose rock is removed from the trench, work on trench excavation will be stopped again to allow the paleontological monitor to evaluate the material for fossil resources.

46. The holder is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for disturbing or collecting vertebrate fossils, collecting large amounts of petrified wood, or collecting fossils for commercial purposes on public lands. If significant paleontological resources are discovered during surface disturbing actions or at any other time, the operator or any of his agents must stop work immediately at the site, immediately contact the appropriate BLM representative, and make every effort to protect the site from further impacts, including looting, erosion, or other human or natural damage. The BLM or designated paleontologist will evaluate the discovery and take action to protect or remove the resource within 10 working days. Work may not resume at that location until approved by the official BLM representative. If the holder 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, significant delays may occur while the AO enacts mitigation procedures. The operator may elect to contract an approved paleontologist to execute site mitigations in order to expedite proceedings. 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 holder will then be allowed to resume construction.

Rangeland Management:

47. Any fence crossings and gates encountered on existing roads on public land that are utilized in construction of the pipeline would require placement of a temporary cattle guard constructed to BLM specifications to keep cattle from straying into other areas. Construction of the pipelines would involve at least nine fence crossings that are on (or border) public land. Proper fence bracing and construction (to BLM standards, BLM Manual 1-1572, BLM 1989) must be in place when going through a fence so as to maintain proper wire tensions. The effectiveness (control of cattle) of these fences at these crossing points must be maintained at all times during construction and operation of the pipeline.

48. Bargath is responsible for repairing any damage to livestock water sources or other range improvements caused by pipeline construction activities.

Access and Transportation:

49. All activities would be required to comply with applicable local, state, and Federal transportation laws, statutes, regulations, standards, and plans. Activities would strictly adhere to Gold Book fourth edition surface operating standards for oil and gas exploration and development (USDI, USDA 2007) and BLM manual section 9113 (BLM 1985).

50. All non-county roads used to access pipeline facilities would be maintained in their current condition or better.

51. Further mitigation of impacts to access and transportation should be achieved through management practices including:

- use of a construction yard as the primary parking for personal vehicles;
- encouragement and/or arrangement for employees and contractors to carpool to and from the site;
- requiring contractors and employees to comply with all posted speed limits;
- compliance with county and state weight restrictions and limitations;
- controlling dust along unsurfaced access roads and minimizing the tracking of mud onto paved roads; and
- post-construction restoration of unsurfaced roads to equal or better condition than existed before construction.

GIS Reporting:

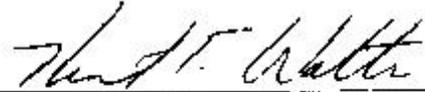
52. The holder shall provide the BLM Authorized Officer with data in a format compatible with the WRFO's ESRI ArcGIS Geographic Information System (GIS) to accurately locate and identify the ROW and all constructed infrastructure, (as-built maps) within 60 days of construction completion. Acceptable data formats are: (1) corrected global positioning system (GPS) files with sub-meter accuracy or better; (2) ESRI shapefiles or geodatabases; or at last resort, (3) AutoCAD .dwg or .dxf files. Option 2 is highly preferred. In ALL cases the data must be submitted in UTM Zone 13N, NAD 83, in units of meters. Data may be submitted as: (1) an email attachment; or (2) on a standard compact disk (CD) in compressed (WinZip only) or uncompressed format. All data shall include metadata, for each submitted layer, that conforms to the Content Standards for Digital Geospatial Metadata from the Federal Geographic Data Committee standards. Questions should be directed to WRFO BLM GIS staff at (970) 878-3800.

**COMPLIANCE/MONITORING:** On-going compliance inspections and monitoring will be conducted by WRFO staff. Specific mitigation developed in the associated Environmental Assessment will be followed. The holder will be notified of compliance related issues, and depending on the nature of the issue(s), will be provided 30 days to resolve such issues.

**NAME OF PREPARER:** Stacey Burke

**NAME OF ENVIRONMENTAL COORDINATOR:** Heather Sauls

**SIGNATURE OF AUTHORIZED OFFICIAL:**



Field Manager

**DATE SIGNED:**

05/13/2011

**ATTACHMENTS:** Figure 1: Location of Project Area  
Figure 2: Location of Temporary Use Areas and Pipeline Corridors



# BLM White River Resource Area

**Location of Project Area**  
 CO-110-2010-0080-EA  
 Ryan Gulch Gathering Project - Water Fork

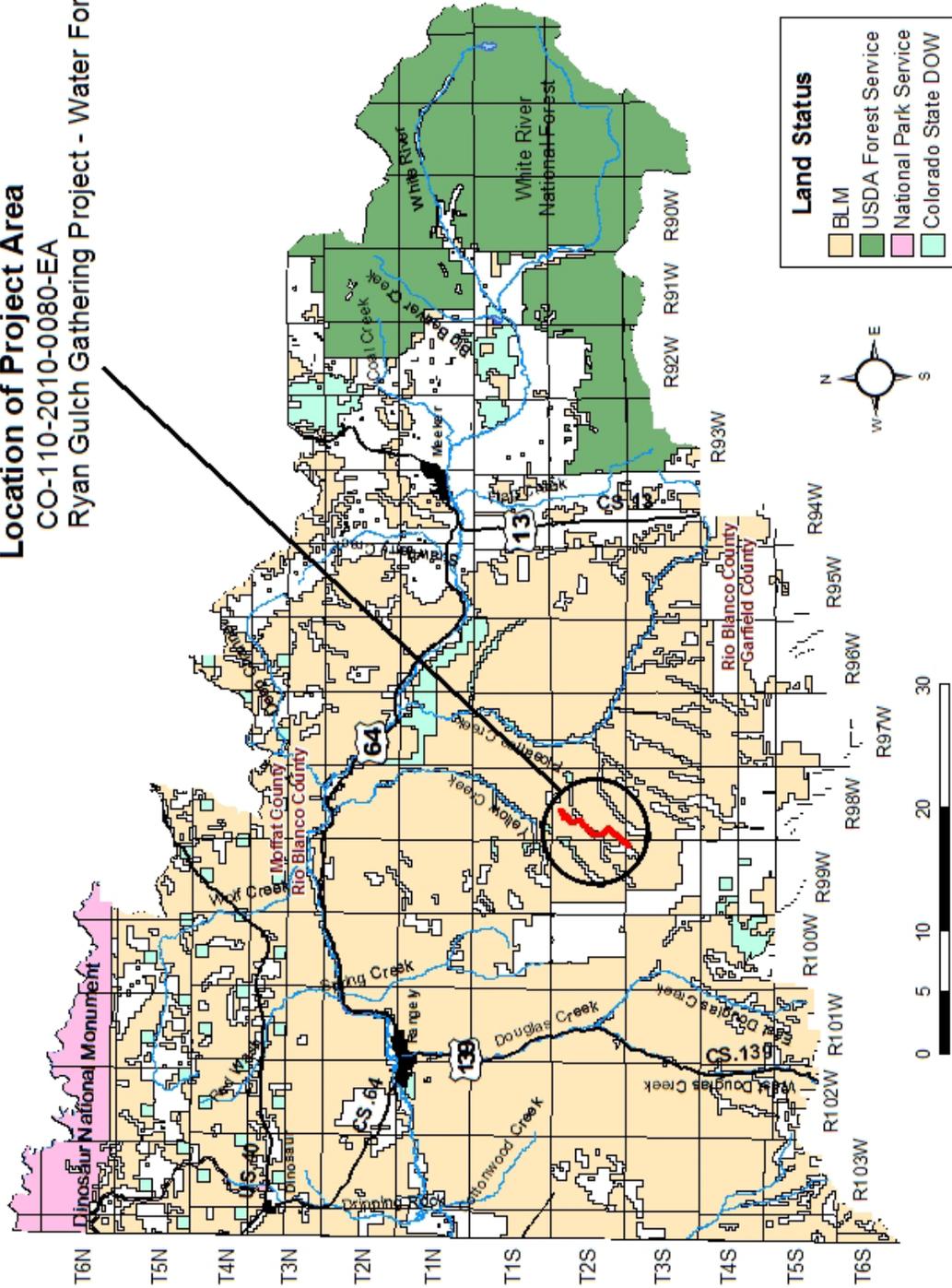


Figure 1



