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

ENVIRONMENTAL ASSESSMENT

NEPA NUMBER

DOI-BLM-CO-N040-2013-0097-EA

CASEFILE NUMBER

Federal Right-of-Way COC76197

PROJECT NAME

Proposal to install a 12-inch diameter buried, welded steel natural gas pipeline ("Speakman A") on BLM and private land South of Parachute, Garfield County, Colorado.

PIPELINE LOCATION

Township 7 South (T7S), Range 95 West (R95W); Section 19, Lots 5 and 6; Garfield County, Colorado, Sixth Principal Meridian.

APPLICANT

Red Rock Gathering Company, LLC. Contact: Tracey Jensen, 2128 Railroad Avenue, Suite 106, Rifle, Colorado 81650.

PURPOSE AND NEED FOR THE ACTION

The purpose of the 12-inch natural gas pipeline is for Red Rock Gathering Company, LLC, hereinafter referred to as "RRG," is to relieve anticipated pressure increase caused by new wells coming along the proposed pipeline route. The pipeline would be required to transport the increased amount of gas.

ALTERNATIVES

Proposed Action

RRG proposes to install a buried 12-inch-diameter, welded steel natural gas pipeline on BLM and private land approximately 2.5 air miles southwest of Parachute, Garfield County, Colorado (Figure 1). The proposed RRG 12-inch natural gas pipeline would begin on private land at the Ursa Resources Group II Speakman A well pad in the NE¼SW¼ of Section 24, T7S, R96W, and would cross a combination of private and BLM land, terminating on private land approximately 600 feet east of the Encana PI19 well in the NW¼SW¼ of Section 20, T7S, R96W (Figures 2, 3, and 4). At the proposed point of termination, the 12-inch pipeline would tie into the RRG South Parachute 24-inch natural gas pipeline. In addition to the proposed 12-inch pipeline, RRG is proposing an access road near the entrance to the Encana PI19 well

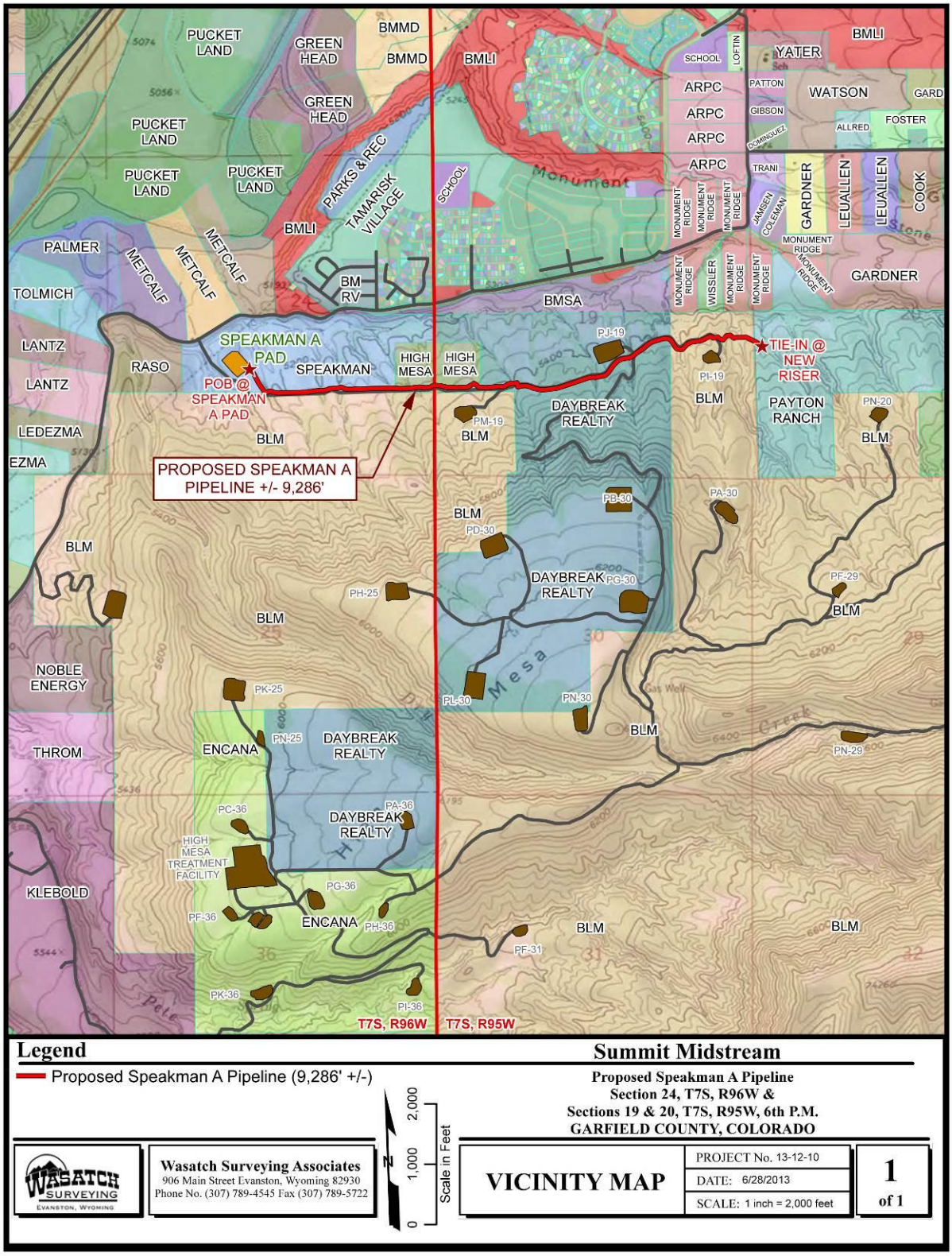

Figure 1. Project Vicinity

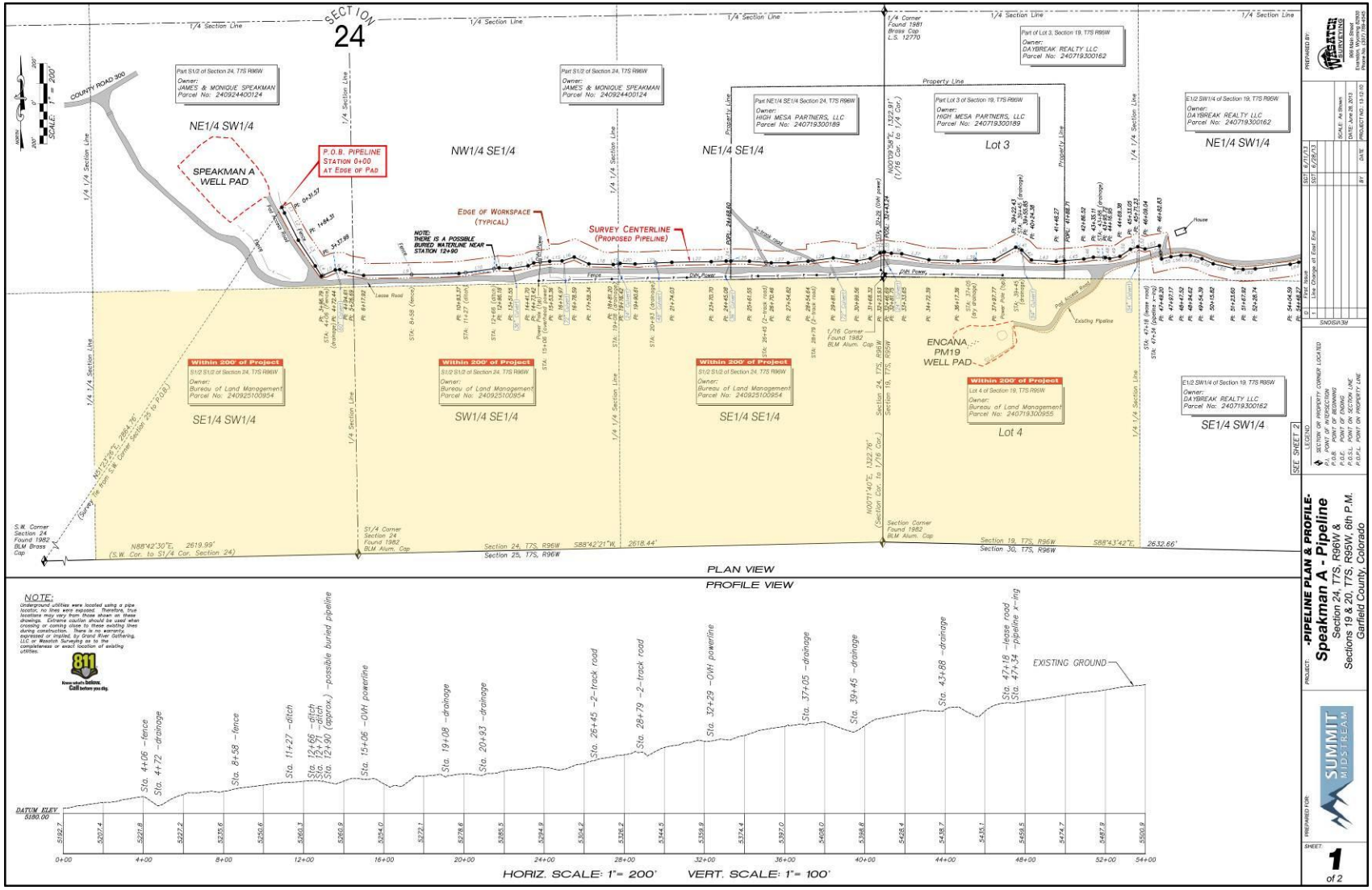

Figure 2. Pipeline Plan and Profile that Parallels BLM (Section 24 and Section 19)

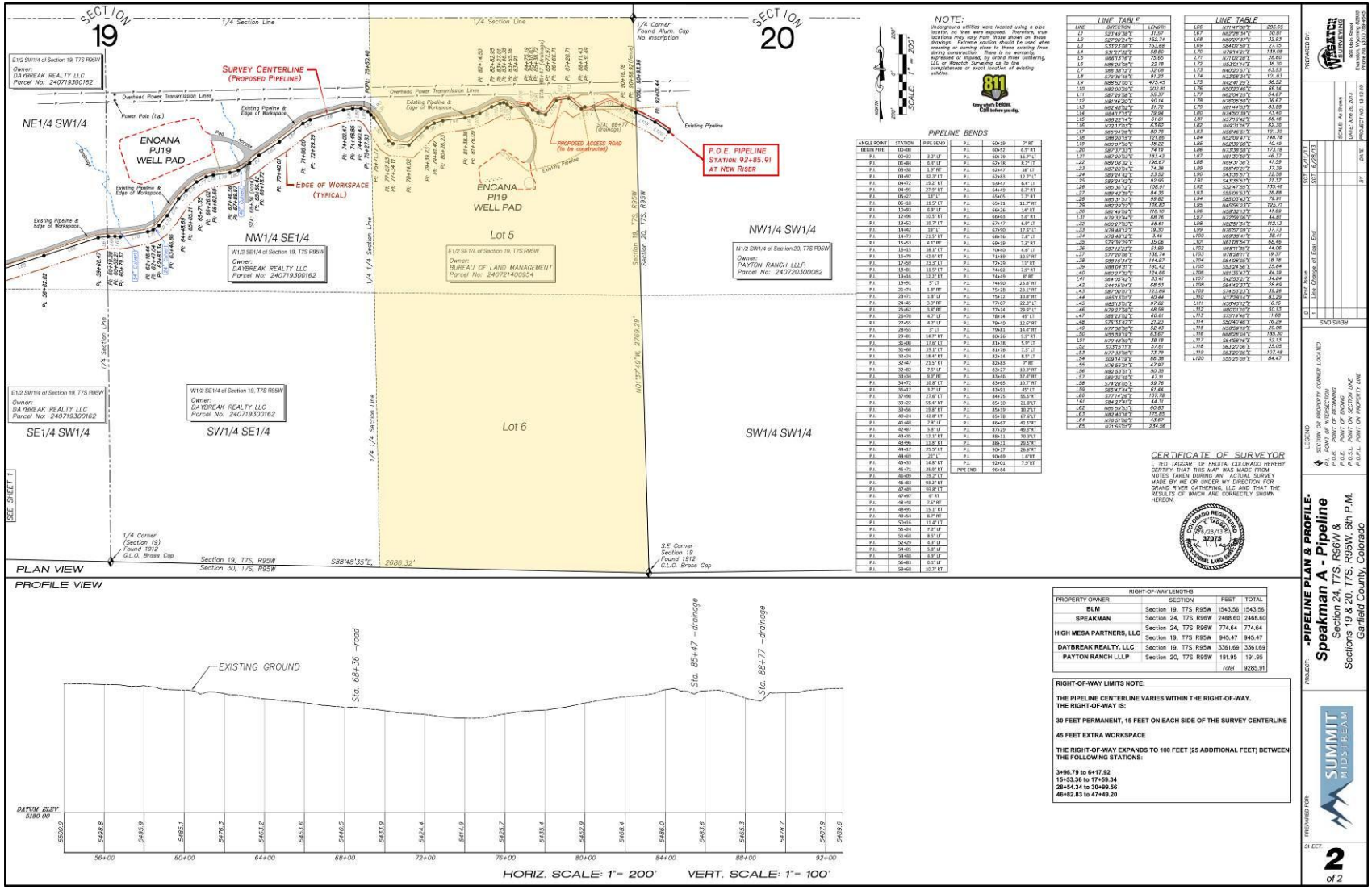

Figure 3. Pipeline Plan and Profile on BLM (Section 19)

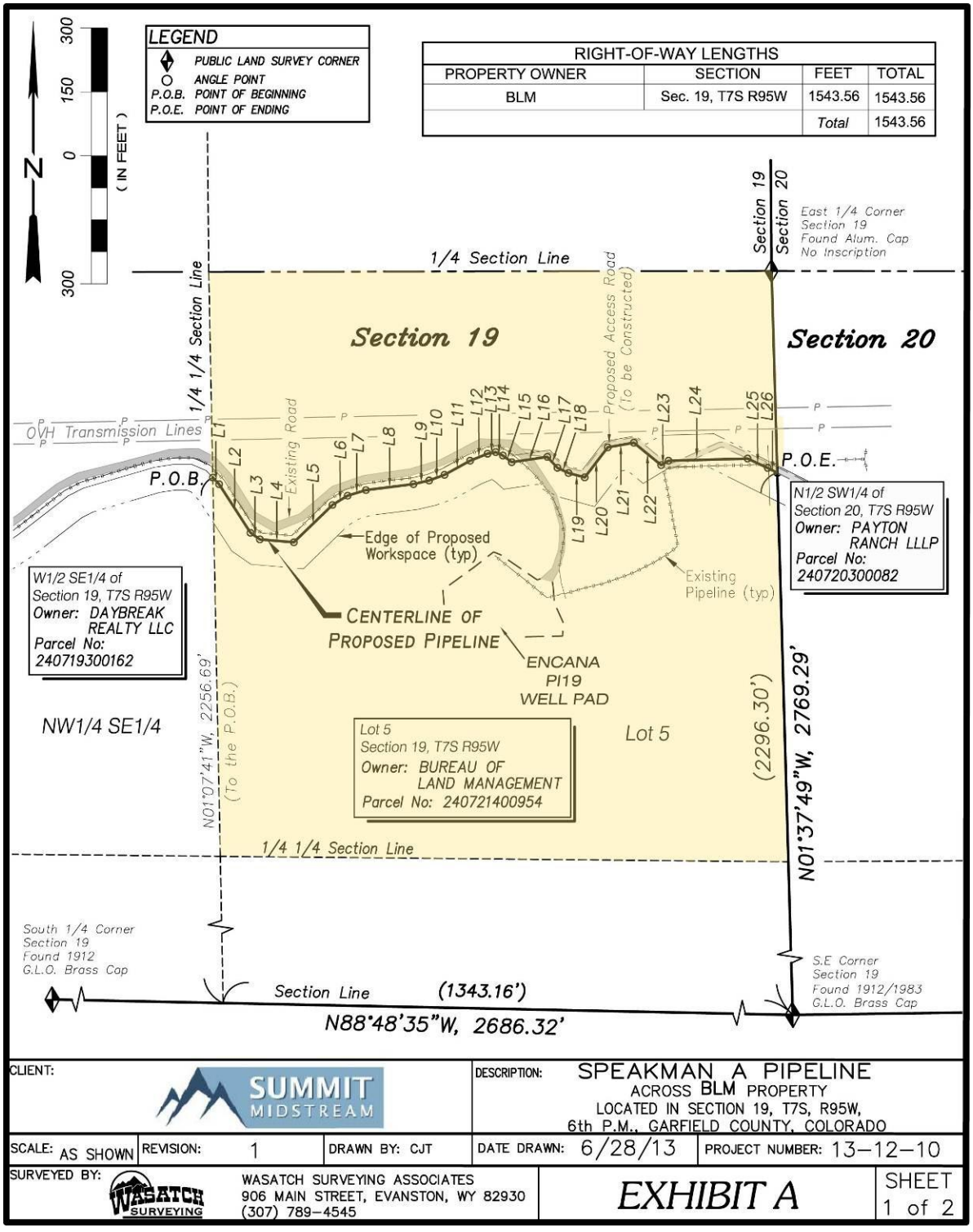

Figure 4. Pipeline and Access Road Plan on BLM (Section 19)

pad to the Payton property line (See Figure 4). The proposed road would provide RRG access to their pipeline for maintenance. If approved by the BLM, this work would begin August 12, 2013, with construction expected to last approximately 6 weeks.

Installation and operation of the proposed pipeline and access road would require issuance to RRG by the BLM of a right-of-way (ROW) grant for the portion on Federal surface (approximately 1,544 linear feet or 0.3 mile). The portion on private surface would add 7,742 feet (1.5 miles) for a total length of approximately 9,286 feet (1.8 miles). In its application, RRG requested a 30-foot-wide permanent ROW and a 45-foot-wide temporary construction workspace for a total ROW width of 75 feet. Portions of the pipeline alignment would be within an existing previously disturbed/reclaimed pipeline corridor and/or paralleling an existing access road. A 10-foot offset would be maintained where existing pipelines are encountered during installation of the new line. Associated above-ground facilities would include a 12-inch launcher located on the Ursa Speakman A well pad and a 12-inch receiver located on the Peyton property approximately 600-feet east of the Encana PI19 well pad. Acres of surface disturbance for the project are listed in Table 1.

Table 1. Anticipated Surface Disturbance for Pipeline Construction

Land Ownership	***30-Foot Permanent Right-of-Way***	***45-Foot Temporary Use Area***	***Total Area***
BLM (1,544 feet)	1.06 acres	1.6 acres	2.66 acres
Private (7,742 feet)	5.33 acres	8.0 acres	13.33 acres
Total (9,286 feet)	6.4 acres	9.6 acres	16 acres

Elements of the Proposed Action are described below.

Construction Access

Access for construction equipment and personal would be from CR 300 (Stone Quarry Road), existing oil and gas field access roads (not currently named), an existing previously disturbed/reclaimed pipeline ROW, and along the proposed ROW.

Clearing and Grading

Vegetation would be cleared with a hydro-axe and would be used as slash material along the pipeline ROW for storm water management during construction. Once construction is completed the vegetation would be spread out along the ROW to help protect the ROW during the revegetation process. Once the vegetation is removed, the top 6 to 12 inches (or until subsoils are reached) of top soil would be stock piled to one side of the ROW. The stripped top soil would be stored separately from the subsoil or other excavated material. The top soil would be spread over the ROW once the pipeline is buried and the project is complete.

All survey monuments would be marked prior to clearing the ROW and would be protected during construction with stakes and flagging. If a survey monument is damaged or removed during construction, it would be surveyed back to its original location once construction is completed, by a Certified Land Surveyor.

Trenching

The trench depth would be from 60 to 84 inches (5 to 7 feet), depending on ground conditions, existing utilities, culverts, and drainages in the ROW. Utility locates would be completed a minimum of 3 days prior to any ROW clearing and trenching. All existing utilities would be located and potholed for verification and depth prior to digging. Utilities perpendicular to the new pipeline would be crossed with a minimum separation of 12 inches. Utilities parallel to the new pipeline would be offset approximately 10 inches where possible.

Culvert and drainage crossings would be constructed with extra depth to ensure coverage over the new pipeline. All open trenches would be maintained in a safe condition to ensure that all personnel, livestock, and wildlife are safe. Construction equipment would include mechanical backhoes, trackhoes, and dozers.

Pipe Installation

The pipe would be transported to the project location with a truck and trailer, loaded pyramid style for stringing the pipe along the ROW. The pipe would be placed along the trench, using skids to hold the pipe in place. The pipe would be welded into place alongside the excavated trench. Once welded together, side booms and other approved mechanical equipment would be used to lower the pipe into the trench without damaging or scratching the pipe coating. One installed the pipeline would be inspected by a third party inspector prior to backfill. Any bending of the pipe would be done on site with approved equipment and inspected prior to installation.

Two different construction methods would occur during the installation of this project. The new pipeline corridor (approximately 4,750 feet of total pipeline length) would use a 75-foot disturbance corridor width with topsoil stripping occurring across 65 feet of the working area with the remaining 10 feet of the corridor used to stockpile the topsoil. The expanded existing pipeline corridor (approximately 4,535 feet of total pipeline length, approximately 1,544 feet of which would be on BLM) would involve approximately 35 feet of new vegetation clearing and topsoil stripping using hydro-axe equipment and earthwork machinery. Additionally, approximately 30 feet of the reclaimed existing pipeline corridor would be re-disturbed with topsoil stripping for the working area and another 10 feet for the topsoil stockpile.

Backfilling

The pipeline would be lowered into the trench with side booms and other approved mechanical equipment. A third party inspector would be onsite to ensure the pipeline has not been damaged or scratched. All material used to backfill would be approved by the inspector. A sifting bucket would be used to ensure larger rocks are not part of the padding material around the pipeline. The trench would be compacted with approved equipment to suitable compaction rate depending on area, road crossings, etc. Once the trench is backfilled, the topsoil would be spread over the disturbed ROW. The pocking method would be used as final grade across the ROW on BLM. The ROW on private land would be reclaimed as per the owner's request.

Pressure Testing

The entire pipeline would be tested in compliance with DOT regulations (49 CFR Part 192). Incremental segments of the pipeline would be filled to the desired maximum pressure and held for the duration of the test (8 hours minimum). (Ref. 49 CFR 192.503.c). A third party contractor would haul the water to the pipeline and dispose of the water once the test is completed. The third party contractor would be responsible for the

source of the water and disposal of it. The pipeline would be dried out once the test is complete using cleaning and foam pigs.

Cleanup and Reclamation

Cleanup and reclamation would take place immediately after the pipeline is installed, backfilled and tested. An approved seed mix would be requested from the BLM prior to installation. The soil would be raked and/or disked in preparation for seeding, depending on temperature and moisture. In areas where drill seeding is not possible, the area would be hydro-seeded or broadcast-seeded. Once the seeding is completed, slash would be spread across the ROW on BLM land ground. As specified by a Condition of Approval (COA) in Appendix A, slash from any pinyon pines apparently infected with the *Ips* beetle would not be spread on the ground but chipped and either buried onsite or hauled offsite for disposal. All reclamation and reseeding is planned to be completed prior to December 1, 2013.

Operations and Maintenance

The proposed access road would be placed within the existing disturbed ROW once the pipeline is completed. The access road would be compacted and topsoil would not be placed back in this area. The road grade would be designed and constructed to ensure safety and would be approximately 12-feet in width. The road would consist of 3 inches of rock with a 6-inch roadbase cap. The access road would be used to access the receiver for pigging the Speakman A 12-inch pipeline. Access would vary depending on the time of year, but would generally be once a week to once every other week. One light weight pickup truck would be used to access the receiver during the pigging operations.

A gate would be installed at the beginning of the proposed access road off of the entrance to the PI19 well pad and a gate would be installed at the BLM boundary/Payton property line, which would be locked to prohibit access to the private property.

Pipeline warning signs would be installed within 5 days of construction completion and prior to use of the pipeline for transportation of product. Pipeline warning signs are required at all road crossings. Signs would be visible from sign to sign along the R/W. For safety purposes each sign would be permanently marked with the holder's name and shall clearly identify the owner (emergency contact) and purpose (product) of the pipeline. (49 CFR 192.707 Line Markers for Mains and Transmission Lines.)

Surveys would be conducted along the pipeline until seeding and storm water management has been completed. Annual monitoring would be conducted and an annual monitoring report would be submitted. Regular inspections would be conducted with prompt control of noxious weeds or other undesirable plant species. Annual weed monitoring reports would be submitted to the BLM.

No Action Alternative

The No Action Alternative would consist of denying the ROW application for use of Federally administered lands, and therefore construction of the RRG 12-inch natural gas pipeline and access road would not occur on BLM. From reviewing land status patterns in the vicinity of the project area, it does not appear that RRG could feasibly construct a connecting gas pipeline between the beginning and ending points without crossing Federal land. The No Action Alternative constitutes denial of the Federal ROW grant needed for RRG to complete the desired gas pipeline connections and access road. Consequently, none of the planned development activities outlined in the Proposed Action would occur.

In accordance with Council on Environmental Quality (CEQ) regulations, the impacts of the No Action Alternative are evaluated in this EA to provide a baseline to compare impacts associated with the Proposed Action. Aside from the obvious Socioeconomic and field development impacts that would occur should the pipeline fail to be implemented, all other resources would not be affected under the No Action Alternative, because the project would not be authorized or implemented.

PLAN CONFORMANCE REVIEW

The Proposed Action and No Action Alternative are subject to and have been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: The current land use plan is the *Glenwood Springs Resource Management Plan* (RMP), approved in 1984 and revised in 1988 (BLM 1984). Relevant amendments include the *Oil and Gas Plan Amendment to the Glenwood Springs Resource Management Plan* (BLM 1991) and the *Oil &Gas Leasing & Development Record of Decision and Resource Management Plan Amendment (*BLM 1999a).

Decision Language: The 1991 Oil and Gas Plan Amendment (BLM 1991) included the following at page 3: "697,720 acres of BLM-administered mineral estate within the Glenwood Springs Resource Area are open to oil and gas leasing and development, subject to lease terms and (as applicable) lease stipulations" (BLM 1991, page 3).

Discussion: The Proposed Action is in conformance with the 1991 and 1999 RMP amendments cited above because the Federal mineral estate proposed for development was open to oil and gas leasing and development and, subsequent thereto, Federal fluid mineral leases were duly issued. That decision recognized the need for ancillary facilities such as access roads, natural gas pipelines, and water pipelines.

STANDARDS FOR PUBLIC LAND HEALTH

In January 1997, Colorado BLM approved the Standards for Public Land Health. The five 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. The environmental analysis must address whether impacts resulting from the Proposed Action or alternatives being analyzed would maintain, improve, or deteriorate land health conditions relative to these resources. Analyses are conducted in relation to baseline conditions described in land health assessments (LHAs) completed by the BLM. The Proposed Action would occur in an area within the Battlement Mesa Watershed LHA (BLM 2000).

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Evaluation of the Proposed Action by BLM resource specialists in the Colorado River Valley Field Office (CRVFO) included site visits, review of updated geographic information system (GIS) data, and review of recent resource surveys conducted by RRG contractors. Based on that evaluation, the BLM has determined that the currently proposed project warranted analysis of potentially significant impacts to the 16 elements of the human and natural environment:

Access and Transportation
Air Quality
Cultural Resources
Geology and Paleontology
Invasive Non-Native Plants
Native American Religious Concerns
Noise
Realty Authorizations
Socioeconomics
Soils
Special Status Species
Vegetation
Visual Resources
Wastes, Hazardous and Solid
Water Quality, Surface
Wildlife, Terrestrial and Aquatic

These resources and resource uses, and potential impacts and associated mitigation, are described in the following subsections. Note that mineral resources and groundwater resources are not addressed in this EA because of a determination by BLM resource specialists that installation and operation of the proposed pipeline project would not affect these resources or associated resource uses.

Access and Transportation

Affected Environment

Access to the project area is through privately owned lands with no legal public access. The project area is accessed by private land owners and vehicles serving oil and gas development, including traffic related to construction, drilling, completion, production, and maintenance activities. County Road 300 (CR 300)(Stone Quarry Road) would be used to access the private land and oil and gas field access roads within the project vicinity on BLM land.

Environmental Consequences

Proposed Action

The Proposed Action would result in a substantial temporary increase in truck traffic. An estimated 347 truck trips over a 6-week period would be required to support the construction of the RRG 12-inch natural gas pipeline (Table 2). RRG would use previously permitted locations throughout the pipeline alignment for equipment staging areas.

Table 2. Anticipated Traffic Increases to Implement Project

Type of Traffic	*Trips per Day 1/*	*Total Trips*
Phase 1 – Clearing and Trenching (3 weeks)		
Construction Personnel	**8**	**120**
Inspection	**2**	**30**
Light Truck Traffic	**2**	**30**
Heavy Truck Traffic	**3**	**12**
	Subtotal	**192**
Phase 2 – Pipe Delivery (1 week)		
Construction Personnel	**5**	**25**
Inspection	**2**	**10**
Light Truck Traffic	**2**	**10**
Heavy Truck Traffic	**1**	**5**
	Subtotal	**50**
Phase 3 – Crimped Fitted Pipe Connections and Pipe Inspection (3 days)		
Construction Personnel	**5**	**15**
Inspection	**2**	**6**
	Subtotal	**21**

Table 2. Anticipated Traffic Increases to Implement Project		
Type of Traffic	***Trips per Day 1/***	***Total Trips***
Phase 4 – Pressure Testing Pipeline (2 days)		
Construction Personnel	**4**	**8**
Inspection	**2**	**4**
Light Truck Traffic	**2**	**4**
Heavy Truck Traffic	**1**	**2**
	Subtotal	**18**
Phase 5 – Recontouring and Reseeding (1 week)		
Construction Personnel	**8**	**40**
Inspection	**2**	**10**
Light Truck Traffic	**2**	**10**
Heavy Truck Traffic	**2**	**6**
	Subtotal	**66**
	TOTAL	**347**
1/ Trips per day equal one round-trip to and from the work site		

No Action Alternative

Under the No Action Alternative, the right-of-way grant would be denied, and no additional truck traffic would occur beyond production and maintenance traffic servicing of the existing well pads in the area.

Air Quality

Affected Environment

Colorado Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS) are health-based criteria for the maximum acceptable concentrations of air pollutants in areas of public use. Although specific air quality monitoring has not been conducted within the project area, regional air quality monitoring has been conducted in Rifle and elsewhere in Garfield County. Air pollutants measured in the region for which ambient air quality standards exist include carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), ozone (O_3), particulate matter less than 10 microns (μ) in diameter (PM_{10}), and particulate matter less than 2.5 μ in diameter ($PM_{2.5}$).

The project area lies within Garfield County, which has been described as an attainment area under CAAQS and NAAQS. An attainment area is an area where ambient air pollution quantities are below (i.e., better than) NAAQS standards. Regional background values are well below established standards, and all areas within the cumulative study area are designated as attainment for all criteria pollutants. The Garfield County Quarterly Monitoring Report summarizing data collected at monitoring sites in Parachute, Silt, Battlement Mesa, and Rifle in January through June 2012 (the most recent posting) confirms continuing attainment of the CAAQS and NAAQS (Garfield County 2012). Federal air quality regulations are enforced by the CDPHE.

Federal air quality regulations adopted and enforced by CDPHE through the Clean Air Act (CAA) Prevention of Significant Deterioration (PSD) Program limit incremental emissions increases of air pollutants from certain sources to specific levels defined by the classification of air quality in an area. Incremental increases in PSD Class I areas are strictly limited, while increases allowed in Class II areas are less strict.

The project area and surrounding areas are classified as PSD Class II, as is Dinosaur National Monument, located approximately 180 miles to the northwest. PSD Class I areas located within 100 miles of the project area are Flat Tops Wilderness (approximately 25 miles north), Maroon Bells – Snowmass Wilderness (approximately 35 miles south), West Elk Wilderness (approximately 60 miles southeast), Black Canyon of the Gunnison National Park (approximately 65 miles south), and Eagles Nest Wilderness (approximately 60 miles east).

Proposed Action

The CDPHE, under CAA delegated authority from the U.S. Environmental Protection Agency (EPA) and in conformance with Colorado's State Implementation Plan (SIP), is the agency with primary responsibility for air quality regulation and enforcement in connection with industrial developments and other air pollution sources in Colorado. Unlike the conceptual "reasonable but conservative" engineering designs used in NEPA analyses, CDPHE air quality preconstruction permitting is based on site-specific, detailed engineering values, which are assessed in CDPHE's review of the permit application. CDPHE requires an Air Pollutant Emission Notice (APEN) and construction permit for land development activities which disturb greater than 25 contiguous acres.

The Proposed Action includes constructing and installing 1.5 total miles of pipeline. Total disturbance area would be 16 acres, with 2.7 acres on BLM land (Table 1). The air quality would decrease during the approximately 6 weeks of construction.

The Proposed Action would result in localized short-term increases in emissions during brush clearing of the ROW, topsoil stockpiling, trenching, pipe delivery, pipeline installation, backfilling, and reclamation. Pollutants generated during construction activities would include emissions from vehicles and heavy equipment and fugitive dust (PM_{10} and $PM_{2.5}$) associated with soil disturbance and travel on unpaved roadways. Once construction activities are complete, air quality impacts associated with these activities would diminish dramatically and decrease to near zero over current levels as revegetation progresses to a self-sustaining perennial plant cover.

The width of pipeline ROW clearing would be kept to a practical minimum to avoid undue disturbance to existing vegetation. Where topsoil removal and storage is not necessary, brush clearing would be limited to removal of above ground vegetation to avoid disturbance of root systems, which would help reduce fugitive dust. In addition BLM would require water or dust suppressant be applied during construction.

The CRVFO analyzes air quality impacts of oil and gas development projects using results of a regional air model prepared by Tetra Tech, Inc. and its subcontractor, URS Corporation, in October 2011. The modeling addressed the cumulative impacts of incremental oil and gas development in the CRVFO by assuming a range of future Federal (BLM and USFS) and private wells and associated facilities such as compressors, storage tanks, and roads. Methods and results of the modeling are presented in an Air Resources Technical Support Document (ARTSD) (BLM 2011), available for viewing at the CRVFO in Silt, Colorado, and on its website.

Emissions addressed in the air quality model included greenhouse gases (GHGs), "criteria pollutants" (CO, NO_2, SO_2, ozone, PM_{10}, and $PM_{2.5}$), and hazardous air pollutants (HAPs) including BTEX (benzene, ethylbenzene, toluene, and xylenes), formaldehyde, and n-hexane. The model also addressed potential

impacts on visibility due to particulates and "photochemical smog" (caused by chemical reactions in the atmosphere) and on lake chemistry of selected pristine lakes due to modeled deposition rates of sulfur and resultant impacts on acid neutralizing capacity of the lake waters.

For the maximum level of future oil and gas development modeled, the visibility analysis predicted a slight impact (1 day per year with a reduction in visibility of 1deciview or greater) in the Flat Tops Wilderness and no days with 1 deciview or greater reduction in visibility at all other modeled Class I and II receptors. For the remaining pollutants analyzed, modeled levels of future oil and gas development within the CRVFO would have no or negligible long-term adverse impacts on air quality.

Since the Proposed Action is within the scope of the future development modeled, no significant adverse impacts on air quality are anticipated.

No Action Alternative

Under the No Action Alternative, the portion of the pipeline on BLM-administered public lands would be denied, resulting in cancellation or redesign of the project. Therefore, no project-related impacts significantly affecting air quality would be anticipated.

Cultural Resources

Affected Environment

Section 106 of the National Historic Preservation Act (NHPA) requires Federal agencies to take in to account the effects their actions would have on cultural resources. As a general policy, an agency must consider effects to cultural resources for any undertaking that involves Federal monies, Federal permitting/authorization, or Federal lands.

Five Class III (intensive pedestrian survey) cultural resource inventories (CRVFO# 902, 14606-2, 14606-3, 5407-14A and 5410-6) have been conducted previously on portions of the proposed project area for adjacent pads, access roads and/or pipelines and account for approximately 84% of the proposed pipeline being inventoried. Three additional inventories (CRVFO# 1287, 5405-5, and 5406-15) have taken place in close proximity to the project area. The cultural inventories and pre-field file searches of the Colorado SHPO database and BLM Colorado River Valley Field Office cultural records identified no historic properties in the immediate project Area of Potential Effect (APE). Eligible or sites potentially eligible for the National Register of Historic Places (NRHP) are referred to in Section 106 of the National Historic Preservation Act as "historic properties."

Environmental Consequences

Proposed Action

No cultural resources within the Project Area were identified as eligible or potentially eligible for the NRHP. Therefore, the BLM made a determination of "**No Historic Properties Affected**." This determination was made in accordance with the 2001 revised regulations [36CFR800.4(d)(1)] for Section 106 of the National Historic Preservation Act (16U.S.C 470f), the BLM/State Historic Preservation Officer (SHPO) Programmatic Agreement and Colorado Protocol]. As the BLM has determined that the Proposed Action would have no direct impacts to known "historic properties," no formal consultation was initiated with the SHPO.

Although unlikely, indirect, long-term cumulative damage from increased access and the presence of project personnel could result in a range of impacts to known and undiscovered cultural resources in the vicinity of the project location. These impacts could range from accidental damage or vandalism, illegal collection and excavation. An Education/Discovery COA for cultural resource protection is attached to this EA in Appendix A. The importance of this COA would be stressed to the operator and its contractors, including informing them of their responsibilities to protect and report any cultural resources encountered during construction operations.

No Action Alternative

The No Action Alternative constitutes denial of the Federal ROW grant needed for RRG to complete the desired gas pipeline connections and access road. Consequently, none of the planned development activities outlined in the Proposed Action would occur. Therefore, the No Action Alternative would greatly reduce but not eliminate the potential for accidental damage, vandalism, illegal collection, and excavation on the public lands involved.

Fossil Resources

Affected Environment

The predominant bedrock formation present at or near the surface within the project area is the Shire member of the Wasatch Formation. This formation is overlain by areas of Quaternary aged sediment gravels and alluvial sands and muds. Occurring in varying thicknesses, these Quaternary sediments are considered Potential Fossil Yield Classification Class 2, defined as having a low probability of fossil occurrence. Class 2 geologic units are not likely to contain vertebrate or scientifically significant invertebrate fossils.

The Wasatch Formation is considered a BLM Condition 4 formation, defined as an area that is known to contain vertebrate fossils or noteworthy occurrences of invertebrate fossils. These types of fossils are known to occur or have been documented, but may vary in occurrence and predictability. The Wasatch Formation is divided into the early Eocene Shire, and the Paleocene age Molina and Atwell Gulch members.

All members of the Wasatch Formation contain vertebrate fossils in varying abundances (Murphy and Daitch 2007). Rocks of the Wasatch Formation are lithologically very similar to one another throughout the Piceance Creek Basin as heterogeneous continental fluvial deposits with interfingering channel sandstone beds and overbank deposits consisting of variegated claystone, mudstone, and siltstone beds (Franczyk et al. 1990). Eocene mammals have been found in the lower part of the Shire member.

Fossils historically identified in the Wasatch are archaic mammals—including marsupials, representatives of two extinct orders of early mammals (pantodonts and creodonts), artiodactyls (deer-like even-toed ungulates), ancestral horses and other perissodactyls (odd-toed ungulates), carnivores, and primates—as well as birds, lizards, turtles, crocodilians, gars and other fishes, freshwater clams, gastropods (snails), and other invertebrates (BLM 1999a).

Environmental Consequences

Proposed Action

The Wasatch is mapped as the predominant surface formation of the project area, field inspection and geologic map analysis revealed the Wasatch exposed in varying degrees along the proposed pipeline route. In

many areas, the Wasatch is overlain by Quaternary aged pediment, colluvial and alluvial deposits, the thickness of the Quaternary sediments cannot be accurately determined, but construction activities have the potential to adversely affect important fossils that may be present in the underlying Wasatch Formation. The greatest potential for impacts is associated with excavation of shallow bedrock that may be unearthed during well pad and facilities (especially pipeline) construction. In general, alluvium, colluvium, and other unconsolidated sediments are much less likely than bedrock to contain well-preserved fossils.

An examination of the BLM paleontology database indicates no fossil localities within a 1-mile radius of the proposed project area. Areas covered with vegetation and soil cover do not usually yield fossil resources, but inspections would be conducted for proposed facilities that are located on or within 200 feet of Wasatch Formation bedrock surface exposures on Federal lands. Application of the CRVFO's standard COA for the protection of paleontological resources will be attached to the APDs and is detailed in Appendix A.

No Action Alternative

The No Action Alternative constitutes denial of the Federal ROW grant needed for RRG to complete the desired gas pipeline connections and access road. Consequently, none of the planned development activities outlined in the Proposed Action would occur. Therefore, the No Action Alternative would greatly reduce but not eliminate the potential for accidental damage, vandalism, illegal collection and excavation on the public lands involved.

Invasive Non-Native Plants

Affected Environment

Colorado's noxious weeds are designated by the Colorado Department of Agriculture and regulated under the Colorado Noxious Weed Act, Title 35, Article 5.5. State-listed noxious weeds are differentiated into List A species designated for eradication, List B species designated for containment to stop continued spread, and List C species which are too widespread for containment but whose negative impacts may be reduced by improved integrated weed management.

The project area is located near the toe slope of High Mesa, south of the community of Battlement Mesa, at elevations of 5,180 to 5,440 feet. The well pipeline location passes through a mixture of pinyon-juniper woodlands, sagebrush dominated shrublands, agricultural lands, and an area recovering from wildfire. The agricultural area vegetation consists of alfalfa and non-native pasture grasses. Within patches of the sagebrush shrublands, cheatgrass (*Bromus tectorum*) is a dominant species, particularly in the burned area. Elsewhere in the sagebrush shrublands and in the pinyon-juniper woodlands, a mix of shrubs, forbs, and grasses occur.

Based on surveys conducted on July 17, 2013 (WWE 2013a, WWE 2013b), six State List B noxious weed species four State List C species are located within 50 feet of the pipeline corridor. List B species observed are Canada thistle (*Cirsium arvense*), houndstongue (*Cynoglossum officinale*), jointed goatgrass (*Aegilops cylindrica*), musk thistle (*Carduus nutans*), Russian knapweed (*Acroptilon repens*), and Russian-olive (*Elaeagnus angustifolia*). State List C species observed are bulbous bluegrass (*Poa bulbosa*), cheatgrass (*Bromus tectorum*), common burdock (*Arctium minus*), and field bindweed (*Convolvulus arvensis*).

Other non-native invasive species are common in the project area, including clasping pepperweed (*Lepidium perfoliatum*), kochia (*Bassia scoparia*), prickly lettuce (*Lactuca serriola*), Russian-thistle (*Salsola tragus*), tall tumble-mustard (*Sisymbrium altissimum*), and yellow sweetclover (*Melilotus officinalis*). Although not

designated as noxious, these species readily colonize and spread in disturbed soils, where their presence can impede or prevent establishment of seeded species or colonization by other desirable plants.

Environmental Consequences

Proposed Action

Under the Proposed Action, a total of 16 acres would be disturbed, of which 2.66 acres would be on BLM land, and 13.33 acres would be on private land. Following construction completion, all of the disturbed areas would undergo reclamation. A total of 6.4 acres would remain part of the permanent right-of-way. Although reclamation would occur, the site could be subject to future disturbance for pipeline maintenance.

Surface-disturbing activities, such as those proposed for this project, provide a niche for invasion and establishment of non-native plant species particularly when these species are already present in the surrounding area. The mechanisms for invasion and establishment are multi-fold. Removal of native vegetation removes the competition from native plants for resources, including sunlight, water, and soil nutrients, creating niches for invasive species (Parendes and Jones 2000). Linear disturbances, such as roads and pipelines, provide corridors of connected habitat along which invasive plants can easily spread (Gelbard and Belnap 2003). Pipeline installation activities require construction equipment and motorized vehicles, which often transport invasive plant seeds either alone or in mud clods on the vehicle undercarriage or tires and deposit them in disturbed habitats along access roads and at well pad sites (Schmidt 1989, Zwaenepoel et. al. 2006).

Noxious weeds and other invasive species are well-adapted to colonize and dominate in disturbed ground. They generally do not require well-developed soils, can out-compete native species for resources, produce prodigious quantities of seeds, and have seeds which can survive for many years or even decades within the soil. When weeds establish on a site, they can also significantly alter the composition of the soil microbial community of bacteria and fungi, making it increasingly more difficult over time for native species to reestablish on the site (Hierro et. al. 2006, Reinhart and Callaway 2006, Vinton and Goergen 2006, Vogelsgang and Bever 2009). Due to the quantity and longevity of weed seeds and the effects of weeds on the soil, once these invasive species have established on a site they can be extremely difficult to eliminate.

Because of previous disturbance from the existing road adjacent to the proposed pipeline route, and because of the past wildfire along the pipeline corridor, several noxious weeds and other invasive, non-native plant species have become established within and surrounding the proposed project area. With new disturbance from the proposed project, the potential for increased establishment of these undesirable plants following construction activities is high. Vehicles and construction equipment could also transport new noxious weed species to the site, where they would have disturbed habitats in which to establish.

To mitigate the risk of invasive species establishing or spreading, a weed control COA would be attached to APDs to require periodic monitoring and weed control practices to ensure that these weedy plants are controlled (Appendix A). Establishment of native plant species is also important in preventing invasive non-native plant species establishment and spread. Therefore, reclamation-related COAs would also be attached to APDs to require seeding and monitoring of reclamation seeding results, with recommendations for an appropriate native seed mix (Appendix A). However, portions of the proposed pipeline alignment cross areas of private land ownership. In these areas the reclamation seed mix would be at the landowner's discretion and would not be restricted to native plant species.

No Action Alternative

Under the No Action Alternative, the pipeline would not be approved, and no new ground disturbance would occur. The existing noxious weed and invasive plant concerns would remain.

Native American Religious Concerns

Affected Environment

The Proposed Action would occur within an area identified by the Ute Tribes as part of their ancestral homeland. Five Class III cultural resource inventories (see section on Cultural Resources) have been conducted in the Proposed Action's vicinity to determine if any areas were known to be culturally sensitive to Native Americans. No sensitive areas were identified or are currently known in the proposed project area.

Environmental Consequences

Proposed Action

At present, no Native American concerns are known within the project area and none were identified during the inventories. The Ute Tribe of the Uintah and Ouray Bands, one of the primary Native American tribes in this area of the CRVFO, have indicated that they do not wish to be consulted for small projects or projects where no Native American areas of concern have been identified either through survey or past consultations. Therefore, formal consultation with Native American Tribes was not undertaken for the current project. If new data regarding cultural resources are identified or disclosed, new terms and conditions may have to be negotiated to accommodate their concerns.

Although the Proposed Action would have no direct impacts, increased access and personnel in the vicinity of the proposed project could indirectly impact unknown Native American resources ranging from illegal collection to vandalism.

The National Historic Preservation Act (NHPA) requires that if newly discovered cultural resources are identified during project implementation, work in that area must stop and the agency Authorized Officer notified immediately (36 CFR 800.13). The Native American Graves Protection and Repatriation Act (NAGPRA), requires that if inadvertent discovery of Native American Remains or Objects occurs, activity must cease in the area of discovery, a reasonable effort made to protect the item(s) discovered, and immediate notice made to the agency Authorized Officer, as well as the appropriate Native American group(s) (IV.C.2). Notice may be followed by a 30-day delay (NAGPRA Section 3(d)). Further actions also require compliance under the provisions of NHPA and the Archaeological Resource Protection Act. Red Rock Gathering Company, LLC will notify its staff and contractors of the requirement under the NHPA, that work must cease if cultural resources are found during project operations. An Education/Discovery COA for the protection of Native American values would be attached to the APDs (Appendix A). The importance of the COAs and requirements of the NAGPRA would be stressed to the operator and its contractors, including informing them of their responsibilities to protect and report any cultural resources encountered.

No Action Alternative

The No Action Alternative constitutes denial of the Federal ROW grant needed for RRG to complete the desired gas pipeline connections and access road. Consequently, none of the planned development activities outlined in the Proposed Action would occur. Therefore, the No Action Alternative would greatly reduce but

not eliminate the potential for accidental damage, vandalism, illegal collection, and excavation on the public lands involved.

Noise

Affected Environment

The project area is located south of Parachute, Colorado, with activities proposed adjacent to (within 0.5 mile of) to CR 300 (Stone Quarry Road) and the community of Battlement Mesa. The area is within a rural setting characterized by oil and gas development activities. Noise levels in the area are presently created by traffic on CR 300 serving the community of Battlement Mesa and existing wells and ongoing drilling and completion activities in the area. A portion of the Proposed Action would occur less than 0.25 mile from an existing residence.

Noise is generally described as unwanted sound, weighted and noise intensity (or loudness) is measured as sound pressure in decibels (dBAs). The decibel scale is logarithmic, not linear, because the range of sound that can be detected by the human ear is so great that it is convenient to compress the scale to encompass all the sounds that need to be measured. Each 20-unit increase on the decibel scale increases the sound loudness by a factor of 10. Sound levels have been calculated for areas that exhibit typical land uses and population densities. In rural recreational areas, ambient sound levels are expected to be approximately 30 to 40 dBA (USEPA 1974, Harris 1991). As a basis for comparison, the noise level would be 60 dBA during a normal conversation between two people standing 5 feet apart.

Environmental Consequences

Proposed Action

The project would result in increased levels of noise during the construction and installation phases. The noise would be most noticeable along the roads used to haul equipment and at the project location. Oil and gas activities are subject to noise abatement procedures as defined in the COGCC Rules and Regulations (Aesthetic & Noise Control Regulations). Operations involving pipeline or gas facility installation or maintenance, compressors, the use of a drilling rig, completion rig, workover rig, or stimulation are subject to the maximum permissible noise levels for industrial zones. The 2006 revised COGCC noise control rules call for noise levels from oil and gas operations at any well site and/or gas facility to comply with the maximum permissible levels (Table 3) at a distance of 350 feet.

Table 3. Noise Standards for Light Industrial and Residential/Agriculture/Rural

Zone	*7:00 A.M. to 7:00 P.M*	*7:00 P.M. to 7:00 A.M*
Light Industrial	70 dBA	65 dBA
Residential/Agricultural/Rural	55 dBA	50 dBA

Given the location of the proposed project activities, with close occupied structures, the standard for residential, agricultural, and rural lands is applicable. The allowable noise level for periodic impulsive or shrill noises is reduced by 5 dBA from the levels shown (COGCC 2008). Short-term increases in nearby noise levels would result from construction and installation phases of the pipeline. Based on the Inverse Square Law of Noise Propagation (Harris 1991) and an typical noise level for construction sites of 65 dBA at 500 feet (Table 4), project-related noise levels would be approximately 59 dBA at a distance of 1,000 feet, approximating active commercial areas (USEPA 1974).

Table 4. Noise Levels at Typical Construction Sites and along Access Roads			
Equipment	***Noise Level (dBA)***		
	50 feet	***500 feet***	***1,000 feet***
Air Compressor, Concrete Pump	82	62	56
Backhoe	85	65	59
Bulldozer	89	69	63
Crane	88	68	62
Front End Loader	83	63	57
Heavy Truck	88	68	62
Motor Grader	85	65	59
Road Scraper	87	67	61
Tractor, Vibrator/Roller	80	60	54
Sources: BLM (1999a), La Plata County (2002)			

Traffic noise would also be elevated temporarily as a consequence of the Proposed Action. The greatest increase would be along access roads during the construction and installation phases. Based on the La Plata County data presented in Table 4 approximately 68 dBA of noise (at 500 feet) would be created by each fuel and water truck that travels these roads. Less noise would be created by smaller trucks and passenger vehicles such as pickup trucks and sport utility vehicles. Although the duration of increased noise from this source would be short, it would occur repeatedly during the construction and installation phases.

Upon completion and initiation of operation of the proposed natural gas pipeline, noise impacts related to large truck traffic and construction equipment along the access roads would decrease, but noise from small truck traffic for routine pipeline maintenance (1 to 2 times a month) would continue for the lifespan of the pipeline.

No Action Alternative

Under this alternative, the installation of a new gas pipeline would not occur, avoiding any new noise impacts associated with construction.

Realty Authorizations

Affected Environment

The Proposed Action would require a realty authorization by the BLM. Construction of the RRG 12-inch pipeline and access road would be authorized under a new ROW grant for which RRG has applied (COC76197). Table 5 lists existing Federal realty authorizations affecting BLM lands within the project area.

Environmental Consequences

Proposed Action

The Proposed Action would be constructed in the late summer of 2013. Potential impacts to existing Federal realty authorizations associated with construction may coincide with other projects in the area. A COA would be included in the ROW authorizations requiring RRG to coordinate with other ROW holders regarding

pipeline alignments, locations and crossings, and be fully responsible for weed control and reclamation of the disturbed portions of the pipeline corridor.

Table 5. Existing Realty Authorizations in the Project Area

Oil & Gas Leases and CAs	FLPMA Powerlines	FLPMA Access Roads	FLPMA Produced Water Pipelines	MLA Natural Gas Pipelines
COC33291[1] COC72075[2] COC74981[2] COC01523[1] COC019572[1] COC76193[1] COC76197[1] COC125217[3] COC27825[1]	COC29423 –Public Service Company of Colorado	COC71070 – Daybreak Realty, LLC	COC72082-01[2] - Encana COC73100[2] - Encana	COC66335 – Canyon Gas Resources, LLC COC72082 – Encana COC76193 – Public Service Company of Colorado COC125217 – Public Service Company of Colorado

[1] O&G Lease
[2] Communitization Agreement
[3] Will be replaced by COC76197

No Action Alternative

The No Action Alternative would not require new realty authorizations, and no impacts would occur to the various existing authorizations.

Socioeconomics

Affected Environment

The project area is located entirely within Garfield County, Colorado, with a total county land area of 2,958 square miles (Garfield County 2013a). The county seat is Glenwood Springs; other towns include Carbondale, New Castle, Silt, Rifle, Battlement Mesa, and Parachute. Interstate 70 transects the county east to west with a network of county and private roads servicing the project area.

The population of the county grew by an average of approximately 2.5% per year from 2000 to 2011 but decreased by 2.6% from 2008 to 2011 due to the national economic downturn, resulting in a net increase of 27% from 44,259 to 56,270 residents (CDOLA 2013a). Population growth in Garfield County is expected to nearly double to 109,887 in 2040 (CDOLA 2012). In July 2011, the Garfield County population was 70% urban and 30% rural, with a population density of approximately 19 people per square mile (City Data 2012).

In February 2013, the total estimated civilian labor force was 34,107 with an unemployment rate of 7.8% (CDLE 2013). In the fourth quarter of 2011, the industry groups with the highest percentage of total employment were construction (14.4%), retail trade (13.7%), and Health Care and Social Assistance (13.5%). Table 6 lists the top 10 industries in Garfield County for the fourth quarter of 2011 (CDLE 2013).

Table 6. Selected Industry Sectors for Garfield County		
Rank	***Job Sector***	***Employees***
1	Construction (buildings and engineered projects)	2,901
2	Retail Trade	2,782
3	Health Care and Social Assistance	2,732
4	Education Services	2,484
5	Accommodation and Food Services	2,464
6	Mineral Extraction (including mining and oil and gas)	2,426
7	Public Administration	1,717
8	Professional, Scientific & Technical Services	1,047
9	Administration, Support, Waste Management, and Remediation	874
10	Transportation and Warehousing	782

Personal income in Garfield County has also risen, growing approximately 6% per year from $1.3 billion in 2000 to $2.1 billion in 2011. However, personal income dropped by nearly 10% from 2008 to 2011. Annual per capita income has grown in the same period approximately 3% per year, from $29,081 to $37,858, but annual per capita income dropped by nearly 11% from 2008 to 2011 (USDOC 2012).

The communities of Parachute, Rifle, Silt, and New Castle are considered to have the most affordable housing, while the communities of Glenwood Springs and Carbondale have the least affordable housing. In March 2012 the cost of living index in Garfield County was 88.6 (less than the U.S. average of 100) (City Data 2012).

Activities on public land in the vicinity of the project area are primarily ranching/farming, hunting, OHV travel, and the development of oil and gas resources. Hunters contribute to the economy because many require lodging, restaurants, sporting goods, guides and outfitting services, food, fuel, and other associated supplies.

Production of natural gas in Garfield County increased dramatically during recent years, from approximately 70 billion cubic feet (BCF) in 2000 to 700 BCF in 2012 (COGCC 2013a). Approximately 1,286 drilling permits were approved in Garfield County between April 2, 2012 and March 29, 2013 (COGCC 2013b). However, U.S. natural gas prices have dropped in recent years from $10.79 per thousand cubic feet (MCF) in July 2008 to $1.89/MCF in April 2012 (USDOE 2013). The U.S. price of natural gas has begun to improve, in December 2012 it was $3.35/MCF, but has not reached the prices of 2008. Natural gas development activity in Garfield County remains low.

Property tax revenue from oil and gas development is a source of public revenue in Garfield County. In 2012, oil and gas assessed valuation in Garfield County was approximately $2.8 billion, or about 73% of total property tax assessed value distribution (Garfield County 2013b). The county's largest taxpayers are in the oil and gas industry (Garfield County 2013c).

The Federal government makes Payments in Lieu of Taxes (PILT) to local governments to help offset losses in property taxes due to nontaxable Federal lands within their boundaries (USDI NBC 2013). The PILT distributions are based on acres for all Federal land management agencies. Approximately 60% of all Garfield County lands are Federally owned (Garfield County 2013a). The amount may also be adjusted based on population and as apportioned by Congress. By formula, payments are decreased as other Federal funds,

such as mineral royalty payments, increase. PILT amounts to Garfield County over the last five years ranged from $1,732, 974 in 2008 to $403,176 in 2012 (USDI NBC 2013).

In addition to PILT distributions, Federal mineral royalties are levied on oil and gas production from Federal mineral leases. Oil and gas lessees pay royalties equal to 12.5% of the wellhead value of oil and gas produced from public land (BLM 2007a). Half the royalty receipts received from production are distributed to the state and county governments, which are then allocated to fund county services, schools, and local communities.

The NEPA process requires a review of the environmental justice issues as established by Executive Order 12898 (February 11, 1994). The order established that each Federal agency identify any "disproportionately high and adverse human health or environment effects of its programs, policies, and activities on minority and low-income populations." The Hispanic/Latino community is the only minority population of note in the project vicinity. In 2010, approximately 28% of the residents of Garfield County identified themselves as Hispanic/Latino, compared to 17% in 2000 (CDOLA 2013b). Statewide, the population of Hispanic/Latino residents grew 41.2% during the same 10-year period (CDOLA 2013c). African-American, American Indian, Asian, and Pacific Islander residents accounted for a combined 1.6% of the Garfield County population in 2010, compared to a statewide level of 7% (CDOLA 2013b).

Environmental Consequences

Proposed Action

The Proposed Action would have minor positive impacts on the local economy of Garfield County through the creation of additional job opportunities in the oil and gas industry and in supporting trades and services. In addition, Garfield County would receive additional tax and royalty revenues.

The Proposed Action could result in negative social impacts including changing the character of the area, reducing scenic quality, increasing dust levels especially during construction, and increasing traffic.

No Action Alternative

Under this alternative, the installation of a natural gas pipeline or construction of an access road would not occur precluding any new socioeconomic impacts related to natural gas gathering operations.

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

Affected Environment

The Proposed Action would be implemented on private land and BLM land at elevations between 5,180 and 5,500 feet with a gradient ranging from 1% to 47%. Portions of the proposed pipeline and workspace would be located within an existing previously disturbed pipeline corridor and/or parallel an existing access road. The eastern portion of the proposed pipeline alignment would be located in area that burned in the 1987 Battlement Mesa fire. The proposed project area is covered by the *Soil Survey of Rifle Area, Colorado* (NRCS 2013, USDA1985). The soil types across the length of the project occur generally on a mix of loams found on mesas, sides of valleys and alluvial fans, alluvium derived from basalt, sandstones, and shale. More specifically, the project area contains the soil types in Table 7.

Table 7. Soil Types and Characteristics Affected by the Proposed Action

Soil Type	*Description*	*Erosion Hazard*	*Shallow Excavations*	*Source of Reclamation Material*	*Topsoil Source*	*Pipeline Segment*
Ildefonso Stony Loam Map Unit 34 (25-45% slopes) Elevation 5,000-6,500 feet	Deep, well drained, hilly to steep soil found on mesa breaks, sides of valleys, and alluvial fans. Consists of mixed alluvium derived primarily from basalt. Permeability is moderately rapid, available water capacity is low, and surface runoff is medium. Used for grazing and wildlife habitat.	Severe	Very Limited	Poor	Poor	Section 19 (BLM) and 20 (Private)
Potts Loam Map Unit 56 (6-12% slopes) Elevation 5,000-7,000	Deep, well drained, moderately sloping to rolling soil found on mesas, benches, and sides of valleys. Consists of mixed alluvium derived from sandstone, shale, or basalt. Permeability is moderate, available water capacity is high, and surface runoff is medium. Used for grazing, wildlife habitat, and dryland farming.	Severe	Somewhat Limited	Fair	Fair	Section 24 (Private)
Potts-Ildefonso Complex Map Unit 58 (12-25% slopes) Elevation 5,000-6,500 feet	Deep, well drained, strongly sloping to hilly soils found on mesas, alluvial fans, and sides of valleys. The Potts soil (60% of unit) and consists of alluvium derived from sandstone, shale, or basalt. The Ildefonso soil (30% of unit) formed in very strong calcareous, basaltic alluvium and small amounts of eolian material. Included with this soil are small areas of Morval and Lazear soils (10-18% of unit) at the higher elevations. Permeability is moderate (Potts) to moderately rapid (Ildefonso), water capacity is low (Ildefonso) to high (Potts), and surface runoff is medium. Used for limited grazing and wildlife habitat.	Moderate	Very Limited	Fair	Poor	Sections 19 and 24 (Private)
Torriorthents-Rock Outcrop Map Unit 67 Complex, Steep (15-70% slopes) Elevation 5,800-8,500 feet	Exposed sandstone and shale bedrock and stony soils that are shallow to moderately deep over sandstone and shale and stony basaltic alluvium. Torriorthents (clayey to loamy and contain gravel, cobbles, and stones) make up about 60% of this complex, and Rock outcrop (Mesa Verde sandstone and Wasatch shale with small areas of limestone and gypsum) makes up 25%. Small isolated areas of other soils (e.g. Ildefonso and Lazear) make up 10-15% of the unit. Used for limited livestock grazing, wildlife habitat, and recreation.	Very Severe	Very Limited	Poor	Poor	Sections 19 and 24 (Private)

Environmental Consequences

Proposed Action

Under the Proposed Action, a total of 16 acres of soil would be disturbed for pipeline construction and installation, of which 2.66 acres would occur on BLM lands and 13.33 acres, would occur on private lands. The Proposed Action would involve surface disturbance resulting in vegetation loss and soil compaction and displacement. In general, the area that would be affected by the Proposed Action contains adequate vegetation buffers and low to moderate slopes that would reduce the potential for sediment transport to nearby ephemeral streams and eventually the Colorado River.

Construction activities would cause mixing of soil horizons, slight to moderate increases in local soil loss, and loss of soil productivity. Infestations of noxious and other invasive weeds resulting from soil disturbance would also affect soil productivity. The potential for soil transport to surface waters would increase as a function of slope, proximity to streams, and type of disturbance.

Throughout the affected area, the potential would exist for accidental spills or leaks of petroleum products and hazardous materials during construction. These events would cause soil contamination. Long-term soil productivity could be achieved by continued maintenance to reduce erosion, remediation of soil contamination, and reduction in the pad footprint through interim reclamation. Such impacts could be adequately mitigated by the general and site-specific COAs listed in Appendix A. Following interim and final reclamation, it would be the responsibility of the operator to continue revegetation efforts until self-sustaining communities of desirable vegetation has been established. Appropriate revegetation is important to mitigate soil erosion and weed infestations.

No Action Alternative

Under the No Action Alternative, the portion of the pipeline on BLM-administered public lands would be denied, resulting in cancellation of the project. Therefore, no project-related impacts significantly affecting soil resources would occur.

Analysis on Public Land Health Standard 1 for Upland Soils

The Battlement Creek Watershed LHA conducted in 2000 determined that all areas were meeting Standard 1 for upland soils, although one area was found to be impacted by accelerated erosion. The Proposed Action with associated mitigation is unlikely to prevent Standard 1 from being achieved. Measures attached as COAs (Appendix A) for controlling erosion and reclaiming disturbances would minimize long-term impacts to soil volume and productivity. The No Action Alternative would have no bearing on the ability of the area to meet public land health standard for soils because no new development would occur on BLM land.

Special Status Species – Plants (includes an analysis on Public Health Standard 4)

Federally Listed, Proposed, or Candidate Species

Affected Environment

According to the USFWS, four Federally listed plant species may occur within or be impacted by actions occurring in Garfield County. Table 8 lists these species and presents information relative to the project.

Table 8. Potential for Occurrence of Threatened or Endangered Plant Species

Species and Status	***Occurrence***	***Habitat Association***	***Range or Habitat in Vicinity?***	***Potentially Affected?***
Parachute penstemon *(Penstemon debilis)* - - Threatened	Sparsely vegetated, south-facing, steep, white shale talus of the Parachute Creek Member of the Green River Formation; 8,000 to 9,000 feet	Other oil shale endemics such as Roan Cliffs blazing-star, Cathedral Bluffs meadow rue, dragon milkvetch, Piceance bladderpod, and oil shale fescue	No	No
DeBeque phacelia *(Phacelia submutica)* – Threatened	Sparsely vegetated, steep slopes in chocolate-brown, gray, or red clay on Atwell Gulch and Shire Members, Wasatch Formation; 4,700 to 6,200 feet	Desert shrubland with four wing saltbush, shadscale, greasewood, broom snakeweed, bottlebrush squirreltail, and Indian ricegrass, grading upward into scattered junipers	No	No
Colorado hookless cactus *(Sclerocactus glaucus)* – Threatened	Rocky hills, mesa slopes, and alluvial benches in salt desert shrub communities; often with well-formed microbiotic crusts; can occur in dense cheatgrass 4,500 to 6,000 feet	Desert shrubland with shadscale, galleta grass, black sagebrush, Indian ricegrass grading upward into big sagebrush and sagebrush/pinyon-juniper	Yes	No
Ute lady's tresses orchid *(Spiranthes diluvialis)* – Threatened	Subirrigated alluvial soils along streams and in open meadows in floodplains; 4,500 to 7,200 feet	Box-elders, cottonwoods, willows, scouring rushes, and riparian grasses, sedges, and forbs	No	No

The project area is between approximately 5,180 and 5,440 feet in elevation, near the toe slope of High Mesa and south of the community of Battlement Mesa. Only the Colorado hookless cactus has the potential to occur within or near the project area.

Botanical surveys were conducted in July 2013 by WestWater Engineering (WWE 2013). The proposed pipeline would pass through patches of sagebrush habitat where Colorado hookless cactus could potentially occur. However, botanical surveys conducted in July 2013 by WestWater Engineering (WWE 2013) found no Colorado hookless cactus plants within these areas. No suitable habitat for any other Federally listed plant species was found during these surveys.

Environmental Consequences

Proposed Action

Because there are no known occurrences of Colorado hookless cactus within or near the project area, the Proposed Action would have "**No Effect**" on Colorado hookless cactus. Because the habitat types in and around the project area are unsuitable for DeBeque phacelia, Parachute penstemon, and Ute lady's tresses, the Proposed Action would have "**No Effect**" on these species.

No Action Alternative

Under the No Action Alternative, the pipeline would not be approved. Because there would be no new ground disturbance, the No Action Alternative would have "**No Effect**" on any Federally listed plant species.

BLM Sensitive Plant Species

Affected Environment

BLM sensitive plant species with habitat and/or occurrences in Garfield County are listed in Table 9 along with information on typical occurrences, habitat associations, potential for occurrence in the project area based on known geographic range and habitat requirements and potential for being affected.

Table 9. Potential for Occurrence of BLM Sensitive Plant Species

Species	*Occurrence*	*Habitat Association*	*Range or Habitat in Vicinity?*	*Potentially Affected?*
DeBeque milkvetch (*Astragalus debequaeus*)	Varicolored, fine-textured, seleniferous or saline soils of Wasatch Formation; 5,100 to 6,400 feet	Pinyon-juniper woodlands and desert shrub.	Yes	No
Naturita milkvetch (*Astragalus naturitensis*)	Sandstone mesas, ledges, crevices and slopes in pinyon/juniper woodlands; 5,000 to 7,000 feet	Pinyon-juniper woodlands	No	No
Piceance bladderpod (*Lesquerella parviflora*)	Shale outcrops of the Green River Formation, on ledges and slopes of canyons in open areas; 6,200 to 8,600 feet	Pinyon-juniper woodlands, shrublands; often with other oil shale endemic species	No	No
Roan Cliffs blazing-star (*Mentzelia rhizomata*)	Steep, eroding talus slopes of shale, Green River Formation; 5,800-9,000 feet	Pinyon-juniper woodlands, shrublands; often with other oil shale endemic species	No	No
Harrington's beardtongue (*Penstemon harringtonii*)	Flats to hillsides with rocky loam and rocky clay loam soils derived from coarse calcareous parent materials or basalt; 6,200 to 9,200 feet	Sagebrush shrublands, typically with scattered pinyon-juniper	No	No
Cathedral Bluffs meadow-rue (*Thalictrum heliophilum*)	Endemic on sparsely vegetated, steep shale talus slopes of the Green River Formation; 6,300 to 8,800 feet	Pinyon-juniper woodlands and shrublands; often with other oil shale endemics, sometimes with rabbitbrush or snowberry	No	No

The proposed project lies within the range and elevation level of only one sensitive plant species, DeBeque milkvetch. However, no suitable habitat for this species is present within or adjacent to the project area. Therefore, no suitable habitat for any BLM sensitive plant species exists within or near the project area.

Environmental Consequences

Proposed Action

No occurrences of BLM sensitive plants are known or anticipated in locations within or adjacent to the project area. Therefore, the Proposed Action would have no impact on BLM sensitive plants.

No Action Alternative

Under the No Action Alternative, the proposed pipeline would not be approved. Because there would be no new ground disturbance, and because no BLM sensitive plant species are known to occur within or near the project area, the No Action Alternative would have no adverse impacts on any BLM sensitive plant species.

Analysis on Public Land Health Standard 4 for Special Status Plant Species

Based on the Land Health Assessment Report, Battlement Mesa Area (2000) and species status updates which have occurred since 2000, no Federally listed or BLM Sensitive plant species are known to occur within this watershed area. Standard 4 was being met for special status plant species as of 2000. Because there are no known special status plants occurring within or adjacent to the project area, the proposed project would make no contribution towards not meeting Standard 4 for these special status plants.

Special Status Species – Animals

Federally Listed, Proposed, or Candidate Species

Affected Environment

Eight species of Federally listed, proposed, or candidate threatened or endangered vertebrate species occur within Garfield County or may affected by projects within the County. These species, their status, and their distributions and habitat associations in the region are listed in Table 10.

Table 10. Potential for Occurrence of Threatened or Endangered Animal Species

Species and Status	Distribution in Region	Preferred Habitats	Potentially Present in Vicinity?	Potentially Adversely Affected?
Canada lynx *(Lynx canadensis)* – Threatened	Dispersed use in in upper montane and subalpine zones of Colorado mountains.	Subalpine spruce-fir forests; also lodgepole pine and aspen to as low as upper montane.	No	No
Yellow-billed cuckoo *(Coccyzus americanus)* – Candidate	Major rivers and tributaries of western, northwestern, and south-central Colorado.	Large cottonwood stands with tall shrub understory along rivers.	No	No
Mexican spotted owl (*Strix occidentalis lucida*) – Threatened	No historic occurrence in area; present in southwestern Colorado and southern Front Range.	Rocky cliffs in canyons with closed-canopy coniferous forests.	No	No

Razorback sucker *(Xyrauchen texanus)* – Endangered	Mainstem Colorado River and major tributary rivers – upstream to town of Rifle in CRVFO.	General: Deep, slow runs, pools, and eddies. Spawning: silt to gravel substrates in shallow water and seasonally flooded overbank areas.	No	**Yes**
Colorado pikeminnow *(Ptychocheilus lucius)* – Endangered			No	**Yes**
Humpback chub *(Gila cypha)* -- Endangered	Mainstem Colorado River and major tributaries – upstream to Black Rocks near Utah state line.	Rocky runs, riffles, and rapids in swift, deep rivers.	No	**Yes**
Bonytail chub *(Gila elegans)* – Endangered			No	**Yes**
"Lineage GB" cutthroat trout (*Oncorhynchus clarki* ssp.*)* – Threatened	Identified in 60 streams in Colorado River basin, including CRVFO area.	Clean, cool headwaters streams and ponds isolated from other strains of cutthroat trout.	No	No

Environmental Consequences

Proposed Action

The project would have "**No Effect**" on the Canada lynx, Mexican spotted owl, and western yellow-billed cuckoo, which are not expected to occur in the project vicinity based their ranges and habitats present. The endangered Colorado River fishes could potentially be affected by the consumptive use of water taken from the Colorado River basin to support activities associated with the Proposed Action. Depletions in flows in the Colorado River and major tributaries are a major source of impacts to these fishes due to changes in the flow regime that reduce the availability and suitability of spawning sites and habitats needed for survival and growth of the larvae. Principal sources of depletion in the Colorado River basin include withdrawals for agricultural or industrial uses, withdrawals for municipal water supplies, and evaporative losses from reservoirs. On average, approximately 0.7 acre-feet of Colorado River water is consumed during activities related to each oil and gas well. Additional depletions related to oil and gas activities, including the Proposed Action, include dust abatement and use of water in pressure-testing the pipeline before being put into service. The Sunnyside 16-inch natural gas pipeline project is projected to result in consumptive use of approximately 1.19 acre-feet of fresh water for dust abatement and 0.635 acre-feet for pressure testing.

In 2008, the BLM prepared a Programmatic Biological Assessment (PBA) addressing water-depleting activities associated with BLM's fluid minerals program in the Colorado River Basin in Colorado. In response to this PBA, the USFWS issued a Programmatic Biological Opinion (PBO) (ES/GJ-6-CO-08-F-0006) on December 19, 2008. The PBO concurred with BLM's effects determination of "**May Affect, Likely to Adversely Affect**" for the Colorado pikeminnow, humpback chub, bonytail chub, or razorback sucker as a result of depletions associated with oil and gas projects.

To offset these impacts, the BLM has set up a Recovery Agreement, which includes a one-time fee per well. The estimated depletions from the Proposed Action will be added to the CRVFO tracking log and submitted to the USFWS per the PBA/PBO at the end of the year to account for depletions associated with BLM's fluid mineral program. The calculated mitigation fees are used by the USFWS for mitigation projects and contribute to the recovery of these endangered species through restoration of habitat, propagation, and genetics management, instream flow identification and protection, program management, non-native fish management, research and monitoring, and public education.

Inflow of chemical pollutants such as fuels and lubricants used in pipeline construction could impact the endangered big-river fishes if concentrations were sufficient to cause acute effects. The potential for adverse impacts would be limited to the Colorado pikeminnow and razorback sucker, the two species known to occur within the CRVFO area. Spills or other releases of chemical pollutants as a result of oil and gas activities are infrequent in the CRVFO area due to the various design requirements imposed by BLM and the State of Colorado.

In the event of a spill or accidental release, the operator is required to implement its Spill Prevention, Control, and Countermeasures (SPCC) plan, including such cleanup and mitigation measures as required by BLM or the State. In addition, stormwater controls (Appendix A) would reduce the risk of transport of these substances as well as sediments to surface waters, including the Colorado River. For these reasons, and because any spills making their way into the Colorado River would be rapidly diluted to levels below that are not deleterious, or even detectable, the potential for adverse impacts from chemical releases is not considered significant. Consequently, the Proposed Action would have "**No Effect**" on the endangered big-river fishes from potential impacts to water quality.

No Action Alternative

Under the No Action Alternative, the Federal ROW grant authorizing the installation of the pipelines would be denied. No new surface disturbance would occur on BLM land.

BLM Sensitive Animal Species

BLM sensitive animal species with habitat and/or occurrence records in the portion of the CRVFO that includes the project area and vicinity are listed in Table 11. Species indicated in the table as present or possibly present in the project vicinity are described more fully following the table.

Table 11. BLM Sensitive Vertebrate Species Present or Potentially Present in the Project Area

Common Name	***Habitat***	***Potential for Occurrence***
Fringed myotis (*Myotis thysanodes*)	Roosting: Caves, trees, mines, and buildings. Foraging: Pinyon-juniper, montane conifers, and semi-desert shrubs.	Possible
Townsend's big-eared bat (*Corynorhinus townsendii*)		
Northern goshawk (*Accipiter gentilis*)	Montane and subalpine coniferous forests and aspen forests; may move to lower elevation pinyon/juniper woodland in search of prey during winter.	Possible in winter
Bald eagle *(Haliaeetus leucocephalus)*	Nesting/Roosting: Mature cottonwood forests along rivers. Foraging: Fish and waterfowl along rivers and lakes; may feed on carrion, rabbits, and other foods in winter.	Nests and roosts along Colorado River
Peregrine falcon (*Falco peregrinus*)	Nesting: Cliffs, usually near a river, large lake, or ocean. Foraging: Waterfowl on rivers and lakes; upland fowl in open grassland or steppe.	Possible – habitat marginal
Brewer's sparrow (*Spizella breweri*)	Extensive stands of sagebrush, primarily Wyoming sagebrush on level or undulating terrain.	Possible – habitat marginal
Midget faded rattlesnake (*Crotalus oreganus concolor*)	Cold desert of NW Colorado, SW Wyoming, and NE Utah, primarily in sagebrush with rock outcrops and exposed canyon walls.	Possible – habitat marginal
Great Basin spadefoot (*Spea intermontana*)	Permanent or seasonal ponds and slow-flowing streams in pinyon-juniper woodlands and semi-desert shrublands.	No suitable habitat

Table 11. BLM Sensitive Vertebrate Species Present or Potentially Present in the Project Area		
Common Name	***Habitat***	***Potential for Occurrence***
Northern leopard frog (*Lithobates pipiens*)	Clean, perennial waters in slow-flowing streams, wet meadows, marshes, and shallows of clean ponds and lakes.	Possible – habitat marginal
Bluehead sucker (*Catostomus latipinnis*)	Primarily smaller streams with a rock substrate and mid to fast- moving waters; also shallows of larger rivers.	Not present
Flannelmouth sucker (*Catostomus discobolus*)	Runs, riffles, eddies, and backwaters in large rivers.	Present in Colorado River
Roundtail chub (*Gila robusta*)	Slow-moving waters adjacent to fast waters in large rivers.	
"Lineage CR" cutthroat trout (*Oncorhynchus clarki* ssp.)	Headwaters streams and ponds with cool, clear waters isolated from populations of non-native cutthroats and rainbow trout.	Not present

Environmental Consequences

Proposed Action

Fringed Myotis and Townsend's Big-eared Bat – No caves or other suitable roosting sites occur in the project area. Loss of large trees, potentially also used for roosting, would be negligible. No new loss of habitat above which the bats could search for aerial prey would occur, and the area they might avoid during nighttime drilling and completion activities would represent a small portion of their total feeding range, if present.

Northern Goshawk – This species is mostly limited to spruce/fir or aspen forests, such as atop the Roan Plateau, Battlement Mesa, and other areas that reach subalpine elevations. However, goshawks may migrate to lower elevation pinyon/juniper or Douglas-fir habitats during winter and therefore could make occasional, transitory use of the project area for winter foraging. Goshawks feed primarily on small birds but also on diurnal small mammals (rabbits, chipmunks, etc.).

Bald Eagle – Formerly listed as endangered, then downlisted to threatened, and eventually removed from the list of threatened or endangered species, the bald eagle remains protected by the Bald and Golden Eagle Protection Act (BGEPA) as well as the MBTA. Bald eagles nest and roost along the Colorado and most likely occasionally venture into the Parachute Creek drainage for hunting activities. Bald eagles hunt primarily for fish and waterfowl but secondarily for rabbits, ground squirrels, or other upland prey, especially in winter.

Peregrine Falcon – Also formerly listed as endangered, then downlisted to threatened, and eventually removed from the list of threatened or endangered species, the peregrine falcon nests along the Roan Cliffs in the general project vicinity and hunts primarily for waterfowl along the Colorado River or upland fowl and other birds on nearby sagebrush-covered plateaus. No peregrine nests are known or expected in the project area. Transient peregrines could hunt for small birds in grassland, sagebrush, and open pinyon-juniper habitats in the project area for hunting small birds, but any such use would be infrequent.

Brewer's Sparrow – This species is a near-obligate on sagebrush and is mostly limited to extensive stands and lower and middle elevations, especially those dominated by Wyoming big sagebrush on level to rolling or undulating terrain. Smaller stands or those on steep mountainsides may also be used, and the species occasionally nests in stands of short willows near timberline. The sagebrush habitat in the project area is marginally suitable for nesting by this Neotropical migrant.

Midget Faded Rattlesnake – This species is mostly limited to areas with rock outcrops that provide escape cover, thermal cover, and especially hibernacula. These are crucial components for reproduction and survival and are uncommon in the project vicinity. The midget faded rattlesnake is known to occur in northwestern Colorado in a variety of habitats, including pinyon and juniper woodlands and shrublands, such as are found in the project area.

Northern Leopard Frog – The northern leopard frog is limited to perennial waters, including ponds and slow-flowing perennial streams or persistent portions of intermittent streams. It requires good water quality and abundant aquatic or shoreline vegetation. The habitat in the project area appears marginally suitable for the species, but no leopard frogs have been reported during fish surveys or other surveys of the stream. Because the project would not involve habitat disturbance near water sources, impacts to this species are not expected.

Flannelmouth Sucker and Roundtail Chub – Similar to the endangered Colorado River fishes described previously, these species are vulnerable to alterations in flow regimes in the Colorado River that affect the availability and suitability of spawning sites and habitats needed for development of the larvae. The amount of consumptive water use associated with the Proposed Action would not be expected to cause discernible impacts to flows in the Colorado River. Also similar to the endangered big-river fishes, these BLM sensitive species are adapted to naturally high sediment loads and therefore would not be affected by increased sediment transport to the Colorado River. However, these species are vulnerable to inflow of sediments into smaller streams by smothering the eggs of these species. The potential for adverse impacts from inflow of chemical pollutants is also greater in small streams due less dilution and the presence of larval or juvenile fishes, which are more susceptible to mortality from acute toxicity. The COAs for the protection of water quality (Appendix A) would minimize the potential for impacts from inflow of sediments or toxicants. Prompt implementation of the SPCC plan following any spill or other release of hydrocarbons, saline waters, or other contaminants would further reduce the risk of significant adverse impacts to these species and other aquatic life in affected waters.

No Action Alternative

Under the No Action Alternative, the Federal ROW grant authorizing the installation of the pipelines would be denied. No new surface disturbance would occur on BLM land. However, RRG could install the longer pipelines entirely across private lands, resulting in more surface disturbance than associated with the Proposed Action. Additional impacts to any BLM sensitive animal species would not be expected, however, since a vast portion of the nearby private lands was included in the biological surveys.

Analysis on Public Land Health Standard 4 for Special Status Animal Species

Based on the Land Health Assessment Report, Battlement Mesa Area (2000) habitat conditions within this area appear suitable for special status animal species known or likely to occur (BLM 2000). However, large portions of the landscape are being fragmented due to extensive natural gas development. Continued habitat fragmentation is of concern as large blocks of contiguous intact habitat are required by many species. Sustained development and the proliferation of roads, well pads, pipelines, compressor stations, tank farms and other surface facilities would continue to reduce habitat patch size and affect both habitat quality and quantity. The potential to impact some species would increase as development continues. The Proposed Action in conjunction with similar activities throughout this watershed would increase fragmentation and could increase sediment loads. Although the contribution of the Proposed Action is in itself small, it may further trend the area away from meeting Standard 4 for special status wildlife.

The No Action Alternative would not result in a failure of the area to achieve Standard 4 because the proposed developments on BLM land would not occur.

Vegetation

Affected Environment

The proposed pipeline would cross a mix of agricultural pasture land, sagebrush shrublands, and pinyon-juniper woodlands at elevations ranging from 5,180 to 5,440 feet. Agricultural lands along the alignment are dominated by alfalfa (*Medicago sativa*) and non-native grasses, including crested wheatgrass (*Agropyron cristatum*), intermediate wheatgrass (*Thinopyrum intermedium*), Russian wildrye (*Psathyrostachys juncea*), smooth brome (*Bromus inermis*), and tall wheatgrass (*Thinopyrum ponticum*).

Pockets of sagebrush shrublands have areas of dense cheatgrass, in addition to native shrubs, forbs, and grasses, including big sagebrush (*Artemisia tridentata* ssp. *tridentata*), broom snakeweed (*Gutierrezia sarothrae*), fourwing saltbush (*Atriplex canescens*), rubber rabbitbrush (*Ericameria nauseosa*), shadscale (*Atriplex confertifolia*), bluebunch wheatgrass (*Pseudoroegneria spicata*), galleta grass (*Pleuraphis jamesii*), needle and thread grass (*Hesperostipa comata*), common sunflower (*Helianthus annuus*), goldenrod (*Solidago sp.*), hairy false goldenaster (*Heterotheca villosa*), kingcup cactus (*Echinocereus triglochidiatus*), lupine (*Lupinus* sp.), plains prickly pear cactus (*Opuntia polycantha*), scarlet globemallow (*Sphaeralcea coccinea*), spearleaf buckwheat (*Eriogonum lonchophyllum*), and spiny phlox (*Phlox hoodii*). These species grade into the adjacent pinyon-juniper woodland, and also comprise much of the understory beneath pinyon pine (*Pinus edulis*) and Utah juniper (*Juniperus osteosperma*).

Previous disturbances have occurred within the project area. An existing road parallels much of the proposed pipeline corridor, and non-native species are common along the roadsides. The eastern end of the pipeline corridor burned previously in a wildfire, and is dominated by cheatgrass. Juniper removal projects involving hand-cutting of small junipers occurred along minor draws immediately south of the corridor in 2012.

Environmental Consequences

Proposed Action

Under the Proposed Action, a total of 16 acres would be disturbed, of which 2.66 acres would occur on BLM land, and 13.33 acres would occur on private land. Temporary reclamation on BLM land would consist of seeding with native plant species in accordance with the reclamation COAs presented in Appendix A, and using species mixes appropriate for pinyon-juniper and sagebrush plant communities. The composition of plant species used for reclamation on private lands would be at the discretion of the landowner.

Native vegetation surrounding the project area would not be directly impacted, but could be indirectly impacted by dust. Dust can negatively impact plants by clogging stomatal openings in the leaves, impeding gas exchange in the leaves, and reducing the ability of plants to take in carbon dioxide (Sharifi et. al. 1997). Dust on the leaf surface can also effectively reduce light availability at the leaf surface (Thompson et. al. 1984). Light and carbon dioxide are both critical for plants to conduct photosynthesis, and reductions in either can reduce the quantity of carbohydrates plants can produce through photosynthesis, and thereby reduce plant growth and seed production (Wijayratne et. al. 2009). Dust levels could be expected to increase above ambient levels in the short term from pad and road construction, pipeline installation, and drilling. Dust levels would increase in the long term from the exposed bare ground surface of the working pad and vehicle traffic associated with well operation. Increased dust could reduce growth rates and seed production in neighboring plants.

Neighboring vegetation would also become more vulnerable to invasion by noxious weeds and other non-native invasive plant species. Ground disturbance provides excellent habitat for noxious weeds and other invasive species, particularly when these species are already present on the site as is the case for this project. Construction equipment and vehicles entering the site from elsewhere also provide potential vectors for introducing new invasive species. Because of the previous disturbance history, noxious weed presence, and non-native invasive species establishment in the surrounding vegetation, it would be particularly vulnerable to new noxious weed infestations. Implementation of standard COAs for noxious weeds and temporary reclamation (Appendix A) would reduce the risk of noxious weed and invasive species establishment and spread, but non-native species could be expected to persist on this site due to their current widespread establishment here combined with the new disturbance to the existing vegetation. In this case, they could move beyond the disturbance area to neighboring undisturbed vegetation where bare ground habitat is available

No Action Alternative

Under the No Action Alternative, the proposed pipeline would not be approved and no new ground disturbance would occur. Therefore, the No Action Alternative would have no impact on vegetation.

Analysis on Public Land Health Standard 3 for Plant Communities

Based on the Battlement Mesa Area Land Health Assessment (2000), 96% of this allotment area was meeting the standard for plant communities, and 4% was not meeting the standard. Problems noted included a high percentage of cheatgrass and presence of other noxious weeds, stressed juniper and poor understory shrub condition, decadent sagebrush and greasewood with little understory production and few perennial grasses, and low sagebrush vigor with poor seedling recruitment. Also noted was dominance of sagebrush communities by old shrubs with poor seedling recruitment. Appendix A includes provisions to revegetate the disturbances with native species and to control noxious weeds. If successfully revegetated, the Proposed Action should not contribute to the failure of the area to meet Standard 3. The No Action Alternative would have no bearing on the ability of the area to meet the public land health standard for plant and animal communities because no new development would occur on BLM land.

Visual Resources

Affected Environment

The proposed 12-inch pipeline would be located on private and BLM land approximately 2.5 air miles south of Parachute, Colorado. The lands administered by the BLM are classified as Visual Resource Management (VRM) Class II as identified by the 1984 Glenwood Springs Resource Management Plan (Figure 5). The objectives for VRM Classes II, as defined in the BLM's Manual H-8410-1-Visual Resource Inventory (BLM 1986), are described below.

- The objective of VRM Class II is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

Federal lease terms regarding visual concerns are not applicable on private land. Visual resource management objectives do not apply to non-BLM lands; visual values for those lands are only protected by landowner discretion. The BLM can only make recommendations to mitigate impacts to scenic values.

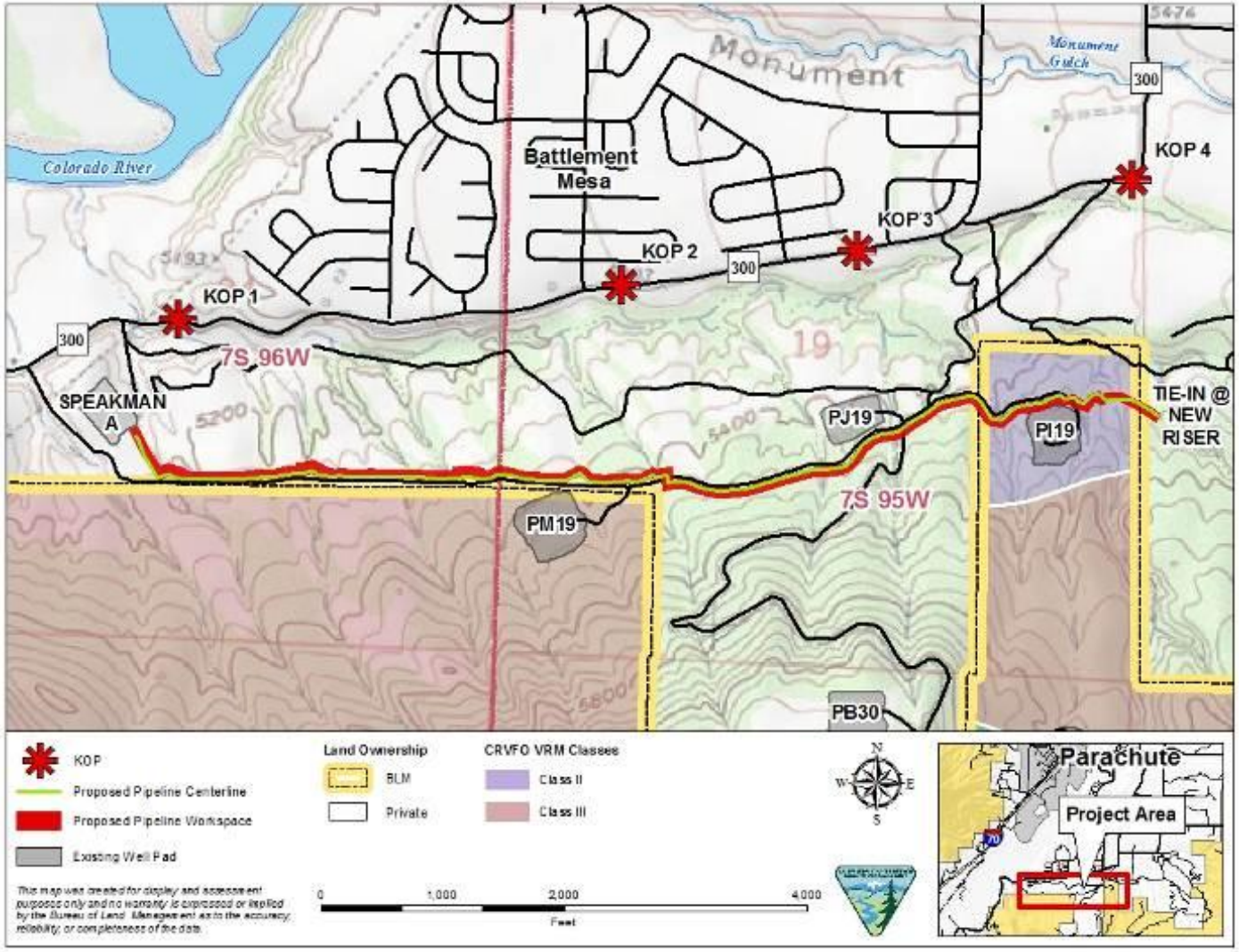

Figure 5. Proposed Action in Relation to CRVFO Visual Resource Management Classes.

Segments of the proposed pipeline and workspace would be located within an existing previously disturbed/reclaimed pipeline corridor and/or would parallel and existing access road. The eastern segment of the proposed pipeline alignment would be located in area that burned in the 1987 Battlement Mesa fire.

The project area consists of finger-like mesas gently sloping upward towards the south/southeast from the Colorado River Valley floor. The mesa slopes are dissected by drainages and terminate at the toe of the Battlement Mesa ridgeline slopes. The area is characteristic of rural ranching land, scattered rural residences, the residential community of Battlement Mesa, and oil and gas development. The Proposed Action would occur along the edge of the mesas that descend from the toe of Battlement Mesa. Vegetation consists of a partially-burned pinyon juniper woodland and sagebrush flat that is now dominated by grasses.

The visual resource analysis area includes the community of Battlement Mesa and CR 300 (Stone Quarry Road). This viewshed is important as it is viewed by a large number of people who live, work, and travel through the area. The Speakman A 12-inch pipeline would occur in the viewer's foreground, less than 5 miles and of moderate to very high visual exposure where details of vegetation and landform are readily discernible and changes in visual contrast can easily be noticed.

The visual impact analysis for the 12-inch pipeline is based on the views from four Key Observation Points (KOPs) representing one linear (roadway) location and four stationary locations (Figures 6 through 9). All four KOPs represent typical views while traveling near the project location and/or views as seen from the Community of Battlement Mesa.

Figure 6. KOP 1 is located along along CR 300 (Stone Quarry Road). This is a typical view of the Ursa II Resources Speakman A well pad while traveling west along CR 300. The viewer would be lower than the well pad, and the Proposed Action would not be visible from this KOP.

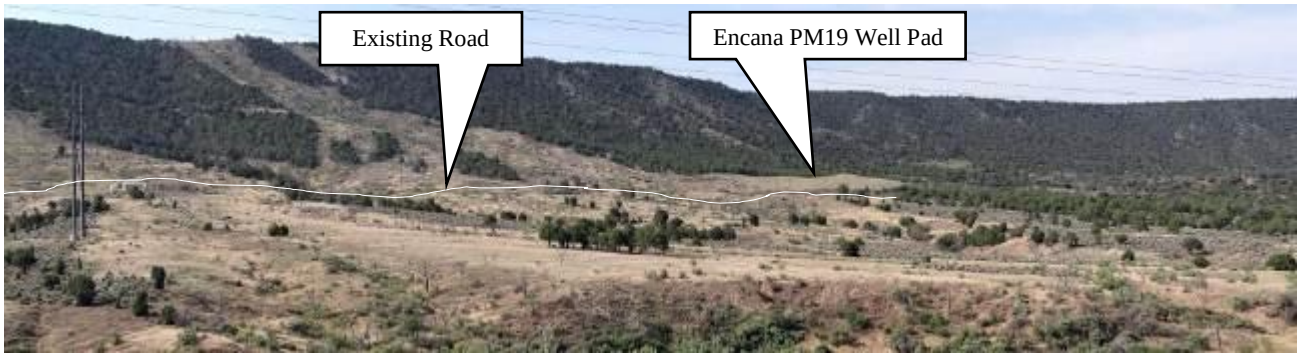

Figure 7. KOP 2 is a typical view while traveling west or east along CR 300 and from the community of Battlement Mesa. The viewer would be lower than the Proposed Action, which would parallel the existing road. As the proposed alignment approaches the existing Encana PM19 well pad from the west, it is located below the road and would be visible outside the pinyon-juniper stand (right midground). As the alignment leaves the Encana PM19 pad to the east, the alignment would be located above the existing road.

Figure 8. KOP 3 is located along CR 300. This is a typical view while traveling west or east along CR 300 and from the community of Battlement Mesa. The viewer would be lower than the Proposed Action from this location. The Proposed Action would be above and parallel to the existing road as viewed from this location.

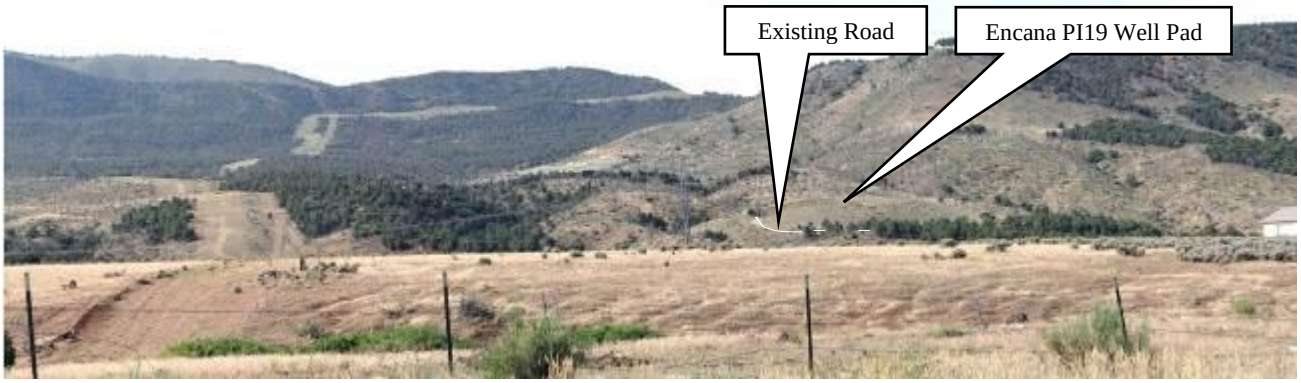

Figure 9. KOP 4 is located at the intersection of CR 300 and Monument Ridge Road. The viewer would be looking directly toward the project area from this location. However, the rolling topography in the immediate foreground provides some screening into the project area on BLM.

Environmental Consequences

Proposed Action

A segment of the proposed 12-inch pipeline and access road would cross BLM in Section 19. The remainder of the pipeline would be located on private land and would parallel BLM in sections 19 and 24. To avoid or minimize impacts to visual resources, segments of the proposed route would be installed within an existing, previously disturbed pipeline corridor or parallel to an existing road as much as possible. The eastern segment of the proposed pipeline would be constructed within an old burn scar, which would reduce the amount of contrast in color and texture as opposed to constructing a pipeline in a densely wooded area. The pipeline corridor would follow the existing contours, eliminating any potential for perpendicular lines in the landscape.

Short-term visual impacts due to pipeline installation would occur in the project area. The existing landscape would be changed by the introduction of contrasting elements within the landscape in the form of new lines, colors, forms, and textures. The new pipeline would increase the presence of heavy equipment, and vehicular traffic with an associated increase in dust and light pollution. Once the pipelines are installed, the pipeline corridor would be recontoured and seeded.

During the short term the pipeline corridor would be visible but would not attract the attention of the casual observer. Over the long term, the pipeline would not be noticeable to the casual observer. The segment that crosses BLM in section 19 would be screened from view by the rolling topography in the immediate foreground (See KOP 4). The remainder of the pipeline would begin to blend with the vegetation that is reestablishing within the old burn scar. The standard Best Management Practices (BMPs) related to reclamation and facility paint colors would mitigate the visual impacts created by the pipeline workspace.

No Action Alternative

The No Action Alternative would deny the ROW application for the use of Federally administered lands, and therefore construction of the Speakman A 12-inch natural gas pipeline would not occur on BLM land. From reviewing land status patterns in the vicinity of the project area, it does not appear that Summit could feasibly construct a connecting gas pipeline between the beginning and ending points without crossing Federal land. The No Action Alternative constitutes denial of the Federal Right-of-Way Grant needed for Summit to complete the desired gas pipeline connections. Consequently, none of the planned development activities outlined in the Proposed Action would occur and impacts to visual resources would not occur.

Wastes, Hazardous or Solid

Affected Environment

The affected environment for hazardous materials includes air, water, soil, and biological resources that may potentially be affected by an accidental release of hazardous materials during transportation to and from the project area, storage, and use in construction and operations. Sensitive areas for hazardous materials releases include areas adjacent to water bodies, above aquifers, and areas where humans or wildlife would be directly impacted.

BLM Instruction Memoranda numbers WO-93-344 and CO-97-023 require that all National Environmental Policy Act documents list and describe any hazardous and/or extremely hazardous materials that would be produced, used, stored, transported, or disposed of as a result of a proposed project. The Glenwood Springs

Resource Area, Oil & Gas Leasing & Development, Draft Supplemental Environmental Impact Statement (June 1998), Appendix L, Hazardous Substance Management Plan, contains a comprehensive list of materials that are commonly used for oil and gas projects. It also includes a description of the common industry practices for use of these materials and disposal of the waste products. These practices are dictated by various Federal and State laws and regulations, and the BLM standard lease terms and stipulations that would accompany any authorization resulting from this analysis. The most pertinent of the Federal laws dealing with hazardous materials are as follows:

- The Oil Pollution Act (Public Law 101-380, August 18, 1990) prohibits discharge of pollutants into Waters of the U.S., which by definition would include any tributary, including any dry wash that eventually connects with the Colorado River.

- The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (Public Law 96-510 of 1980) provides for liability, compensation, cleanup, and emergency response for hazardous substances released into the environment. It also provides national, regional, and local contingency plans. Applicable emergency operations plans in place include the National Contingency Plan (40 CFR 300, required by section 105 of CERCLA), the Region VIII Regional Contingency Plan, the Colorado River Sub-Area Contingency Plan (these three are Environmental Protection Agency produced plans), the Mesa County Emergency Operations Plan (developed by the Mesa County Office of Emergency Management), and the BLM Grand Junction Field Office Hazardous Materials Contingency Plan.

- The Resource Conservation and Recovery Act (RCRA) (Public Law 94-580, October 21, 1976) regulates the use of hazardous substances and disposal of hazardous wastes. Note: While oil and gas lessees are exempt from RCRA, right-of-way holders are not. RCRA strictly regulates the management and disposal of hazardous wastes.

In the event of a spill or accidental release, the operator is required to implement its Spill Prevention, Control, and Countermeasures (SPCC) plan, including such cleanup and mitigation measures as required by BLM or the State. Emergency responses to releases of hazardous materials or petroleum products on BLM lands are handled through the BLM Grand Junction Field Office contingency plan. BLM would have access to regional resources if justified by the nature of an incident.

Environmental Consequences

Proposed Action

Possible pollutants that could be released during the construction phase of this project would include diesel fuel, hydraulic fluid, and lubricants. These materials would be used during construction of the pads, roads, and pipelines, and for refueling and maintaining equipment and vehicles. Potentially harmful substances used in the construction and operation phases would be kept onsite in limited quantities and trucked to and from the site as required. No hazardous substance, as defined by 40 CFR 355 would be used, produced, stored, transported, or disposed of in amounts above threshold quantities. Waste generated by construction activities would not be exempt from hazardous waste regulations under the oil and gas exploration and production exemption of RCRA. Exempt wastes include those associated with well production and transmission of natural gas through the gathering lines and the natural gas itself.

With the exception of produced hydrocarbons, ethylene glycol (antifreeze), lubricants, and amine compounds, chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act in

quantities of 10,000 pounds or more would not be used, produced, stored, transported, or disposed of during construction or operation of the facilities. None of the chemicals that would be used in construction meet the criteria for an acutely hazardous material/substance, or meet the quantities criteria per BLM Instruction Memorandum No. 93-344. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in amounts above threshold planning quantities would be produced, used, stored, transported, or disposed of during construction or operation of the facilities.

Solid waste (human waste, garbage, etc.) would be generated during construction activities. These would be removed to a landfill or water treatment facility as needed, and all would be removed prior to interim reclamation.

Applicable laws, regulations, standard lease stipulations, and contingency plans and emergency response resources are expected to adequately mitigate any potential hazardous or solid waste issues associated with the Proposed Action.

No Action Alternative

Under this alternative, the Federal ROW grant authorizing the installation of the pipelines would be denied. No new surface disturbance would occur on BLM.

Water Quality

Affected Environment

The Proposed Action would occur within the Colorado River below Rifle Creek USGS 6th code hydrologic units. Approximately ¼ mile to the north, an unnamed intermittent stream parallels the proposed pipeline alignment and empties directly into the Colorado River after 1 mile. The proposed project will cross ephemeral drainages which flow to the North into this unnamed intermittent stream. According to the *Stream Classifications and Water Quality Standards* (CDPHE, Water Quality Control Commission [WQCC] Regulation No. 37) (CDPHE 2007), unnamed ephemeral drainages that drain the project area are within water quality stream segment 12b, which includes all tributaries to the Colorado River including wetlands, from a point immediately below the confluence of Parachute Creek to a point immediately below the confluence with Roan Creek. Following is a brief description of segments 12b.

- Segment 12b – This segment has been classified aquatic life cold 2, recreation class P, water supply, and agriculture. Aquatic life cold 2 indicates that this water course is not capable of sustaining a wide variety of cold or warm water biota due to habitat, flows, or uncorrectable water quality conditions. Recreation class P refers to waters that are not attainable for primary contact recreation. This segment is, however, suitable or intended to become suitable for potable water supplies and agricultural purposes that include irrigation and livestock use.

None of the streams within segment 12b is on the State of Colorado's *303(d) List of Impaired Waters and Monitoring and Evaluation List* (CDPHE, WQCC Regulation No. 93) (CDPHE 2010). The *Colorado Monitoring and Evaluation List* identifies water bodies where there is reason to suspect water quality problems, but uncertainty also exists regarding one or more factors. No stream segments within the project area are on the State of Colorado *Monitoring and Evaluation List* (CDPHE 2010).

The USGS has no collected surface water flow and quality data at the unnamed intermittent stream the project area flows into. Data were also collected from the Colorado River below the project area near Rulison in 1977 and is currently being collected upstream at Canyon Creek and downstream near Cameo (USGS 2013)(Table 12).

Table 12. Selected Water Quality Data for Two Sampling Locations near the Project Area

Parameter	Colorado River Near Cameo, CO USGS #0909550 8/8/2013	Colorado River Above So. Canyon USGS #09085150 7/1/2013	Colorado River below Rulison, CO USGS #09092570 7/8/1977
Instantaneous Discharge (cfs)	2,160	3,040	2,000
Water Temperature (°C)	18.4	17.1	21
Field pH (standard units)	8.3	7.9	8.3
Specific Conductance (µS/cm/cm at 25°C)	847	728	970
Total Dissolved Solids (mg/L)	NA	586	585
Hardness as CaCO3 (mg/L)	116	119	230
Chloride (mg/L)	NA	192	180
Selenium (µg/L)	NA	0.38	1
Dissolved Oxygen (mg/L)	7.7	8.5	9.2

Note: NA = data not available
Source: USGS 2013 http://nwis.waterdata.usgs.gov

The closest downstream sediment measuring station on the Colorado River is near DeBeque, Colorado. A summary of USGS data collected at this station show a mean sediment load of 1,817 tons per day during the period of 1974 to 1977. The maximum and minimum values for this location during the same period were 41,300 and 8 tons per day, respectively (USGS 2013).

Environmental Consequences

Proposed Action

Under the Proposed Action, a total of approximately 16 acres of soil would be disturbed for pipeline construction and installation, of which 2.66 acres would occur on BLM lands and 13.33 acres, would occur on private lands. Portions of the proposed pipeline and workspace would be located within an existing previously disturbed pipeline corridor and/or parallel an existing access road. The eastern portion of the proposed pipeline alignment would be located in area that burned in the 1987 Battlement Mesa fire. Reclamation plans would be implemented and monitored following the proposed construction activities. Potential impacts to surface waters could occur from surface-disturbing activities, traffic, and waste management. Surface-disturbing activities associated with the pipeline can cause loss of vegetation cover, increased soil compaction, temporarily increased availability of sediments for runoff events, increased volume and velocity of runoff, and increase sedimentation to surface waters.

The proposed pipeline route has the potential to impact ephemeral drainages that are tributary to the Colorado River. Culverts would carry stormwater through sections crossed by the existing road and collocated pipeline.

Other substances associated with construction-related activities, including petroleum-based hydrocarbons, could also be carried by runoff into surface waters. Initially, impacts would be minimized by proper stormwater management and timely installation of BMPs, including control of erosion, stockpiling of topsoils, and timely rehabilitation of disturbed surfaces. Inspection and monitoring of construction activities to identify possible spill events and ensure required clean-up would also reduce these potential impacts.

The pipelines would be pressure-tested to detect leakage prior to use for transport of natural gas. Implementation of the general and site-specific COAs for mitigating impacts to surface waters (Appendix A) would minimize risks of adverse impacts associated with construction and ongoing pipeline maintenance activities.

No Action Alternative

Under the No Action Alternative, the portion of the pipeline on BLM-administered public lands would be denied, resulting in cancellation of the project. Therefore, no project-related increases in potential impacts from hazardous or solid wastes would be expected.

Waters of the U.S.

Affected Environment

Waters of the U.S. located in the project vicinity include the mainstem of the Colorado River and multiple ephemeral or intermittent tributaries. An unnamed intermittent stream that parallels the proposed pipeline alignment 0.25 mile to the north drains to the Colorado approximately 1 mile northwest of the project site. Ephemeral tributaries to this intermittent stream would be crossed by the pipeline.

Section 404 of the Clean Water Act requires a Department of the Army permit from the U.S. Army Corps of Engineers (USACE) prior to discharging dredged or fill material into waters of the U.S. as defined by 33 CFR Part 328. A permit is required for both permanent and temporary discharges into waters of the United States; larger discharges require an individual permit, while smaller discharges may be granted under a nationwide permit (NWP).

Environmental Consequences

Proposed Action

Crossings of waters of the U.S. could cause temporary increases in sediment transport as a result of disturbance of the substrate and reduced plant cover. Increased sediment loads in ephemeral or intermittent drainages crossed by the pipeline could potentially supply sediments to the Colorado River approximately 1 mile to the northwest. General and site-specific surface-use COAs listed in Appendix A would be implemented to minimize both short-term and long-term disruption of hydrologic function of the unnamed intermittent drainage to the north of the project, thereby reducing the potential for sediment transport to downstream segments and the Colorado River.

None of the planned crossings of ephemeral or intermittent drainages would directly impact any wetland or riparian communities associated with the drainages. Because of the pulsatile, storm-related flow events that characterize minor drainages crossed by the alignment, any temporary increases in sediment deposition within the drainage channels or transported to the Colorado River would be minor in comparison to the sediment-rich environment of the river and its tributaries draining in pipeline corridor.

No Action Alternative

The No Action Alternative would constitute denial of the pipeline as proposed through BLM. Therefore, no impacts to Waters of the U.S. would occur on BLM lands.

Analysis on Public Land Health Standard 5 for Water Quality

The Battlement Creek Watershed LHA conducted in 2000 determined that all areas were meeting Standard 5 for Water Quality. With proper techniques for crossing ephemeral drainages, installing culverts, controlling erosion and sedimentation, preventing spills, and revegetating disturbed areas (e.g., see COAs in Appendix A), the Proposed Action would not prevent Standard 5 from being met. The No Action Alternative would have no bearing on the ability of the area to meet public land health standard for soils because no new development would occur on BLM land.

Wildlife

Aquatic Species

Affected Environment

The Proposed Action would occur in an area of highly dissected terrain containing a number of ephemeral drainages. Due to the short stream lengths and small watersheds of ephemeral streams potentially affected by the Proposed Action, fish species do not occur. Aquatic macroinvertebrates most likely to occur include water striders, water boatmen, predaceous diving beetles, and the aquatic larvae of caddisflies and true flies such as biting midges, nonbiting midges, and mosquitoes. Amphibians, if present, would probably be limited to species such as tadpoles or salamanders that are adapted to seasonal flow regimes in arid environments. For these species, seasonally inundated areas, including the floors of ephemeral washes and ponds such as stock ponds, may be sufficient for breeding and sustaining the aquatic larvae long enough to allow metamorphosis to air-breathing terrestrial adult forms.

Environmental Consequences

Proposed Action

Implementation of the Proposed Action could result in increases in erosion and sedimentation into nearby drainages and eventually the Colorado River. Because the Proposed Action includes summer use of the project areas, it is likely that roads and pads would not be muddy for extended periods of time. Roads are generally drier and in better condition during the non-winter months and consequently less prone to erosion. Vehicular use during muddy road conditions could contribute to increased erosion of sediments into nearby ephemeral drainages and eventually the Colorado River. The potential increase in transport of sediments to ephemeral drainages and the Colorado River would be minimal given background sediment loads currently carried by these streams. Consequently, no sediment-intolerant aquatic wildlife species are known or expected to be present that would be negatively affected by the expected minimal amount of sediment transport. Measures to minimize erosion and sedimentation of aquatic environments are included among the COAs (Appendix A).

No Action Alternative

The No Action Alternative would constitute denial of the pipeline as proposed through BLM. Therefore, no potential for impacts to Aquatic Wildlife Species would exist on BLM lands.

Migratory Birds

Affected Environment

The Migratory Bird Treaty Act (MBTA) provides protection to native passerines (flycatchers and songbirds) as well as birds of prey, migratory waterbirds (waterfowl, wading birds, and shorebirds), and other species such as doves, hummingbirds, swifts, and woodpeckers. Within the context of the MBTA, "migratory" birds include non-migratory "resident" species as well as long-distance and short-distance migrants, essentially encompassing virtually all native bird species. For most bird species, nesting habitat is of special importance because it is critical for supporting reproduction in terms of nesting and foraging sites. Because birds are generally territorial during the nesting season, their ability to access and utilize sufficient food is limited by the quality of the territory occupied. During non-breeding seasons, birds are generally non-territorial and able to feed across a larger area and wider range of habitats.

Emphasizing the need to conserve declining migratory bird species, the U.S. Fish and Wildlife Service (USFWS 2008) has published a list of Birds of Conservation Concern (BCC). This section focuses on BCC species, non-BCC species that are Neotropical (long-distance) migrants, and raptors—three groups especially vulnerable to habitat loss or modification on their breeding grounds. Species protected under the Endangered Species Act or classified by the BLM as sensitive species are addressed in the section on Special Status Species.

The current BCC list includes 13 species potentially present in or near the project area: the bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), peregrine falcon (*Falco peregrinus*), prairie falcon (*Falco mexicanus*), flammulated owl (*Otus flammeolus*), yellow-billed cuckoo (*Coccyzus americanus*), Lewis's woodpecker (*Melanerpes lewis*), willow flycatcher (*Empidonax traillii*), gray vireo (*Vireo vicinior*), pinyon jay (*Gymnorhinus cyanocephalus*), juniper titmouse (*Baeolophus griseus*), Brewer's sparrow (*Spizella breweri*), and Cassin's finch (*Haemorhous cassinii*). The yellow-billed cuckoo (candidate for Federal listing as threatened or endangered) and the bald eagle, peregrine falcon, flammulated owl, and Brewer's sparrow (BLM sensitive species) are addressed in the earlier section on Special Status Species.

The minimal amount of pinyon-juniper habitat provides potential but marginal nesting sites for the pinyon jay, juniper titmouse, and gray vireo, with the last species much less likely based on geographic range. Non-BCC species potentially nesting in pinyon-juniper in the project area include migrants such as the black-chinned hummingbird (*Archilochus alexandri*), western kingbird (*Tyrannus verticalis*), Say's phoebe (*Sayornis saya*), dusky flycatcher (*Empidonax oberholseri*), mountain bluebird (*Sialis currucoides*), western bluebird (*S. mexicana*), blue-gray gnatcatcher (*Polioptila caerulea*), plumbeous vireo (*Vireo plumbeus*), black-throated gray warbler (*Dendroica nigrescens*), and chipping sparrow (*Spizella passerina*).

Sagebrush shrublands in the project area provide marginal habitat for the Brewer's sparrow, a near-obligate in sagebrush shrublands. Non-BCC species associated with sagebrush shrublands include the western meadowlark (*Sturnella neglecta*) and three species of Neotropical migrants: western kingbird, vesper sparrow (*Pooecetes gramineus*), and lark sparrow (*Chondestes grammacus*).

Habitats along the proposed pipeline corridor are generally unsuitable for other BCC species, except that the bald eagle, golden eagle, prairie falcon, and peregrine falcon are known to nest in the general project vicinity within a few to several miles of the alignment and therefore well within the home ranges of these species while foraging. Of these, the golden eagle and prairie falcon, being associated primarily with xeric, unwooded habitats, are more likely to occur than the bald eagle and peregrine, which hunt primarily along rivers and lakes.

Environmental Consequences

Proposed Action

The Proposed Action would result in the conversion of 2.66 acres of primarily sagebrush and pinyon-juniper habitat on BLM land to a grass/forb community along the pipeline corridor. The zone of reduced habitat use along the construction route during construction would vary depending on the avian species, season, type of construction activity, and amount of screening provided by the habitat but could extend more than 300 feet away from the construction zone. If construction occurs outside the nesting season as planned, this displacement would be temporary, with use by birds recovering rather quickly as the construction activities move past an area. However, if construction were to occur during the nesting season, the zone of reduced use would have a longer effect, because some or most of the birds that might otherwise nest nearby would instead nest elsewhere—potentially including less suitable habitats that result in fewer or no fledged offspring—or fail to nest at all that year.

A stipulation attached to ROW grants issued by the BLM under the Proposed Action would minimize construction-related effects by prohibiting removal of vegetation during the 60-day period May 1 to July 1 (see Appendix A). An exception to this stipulation would be granted if a nesting survey conducted by a qualified biologist results in finding no active nests of a BCC species within 100 feet of the pipeline alignment. If such a nest is found, construction within 300 feet of the nest would be delayed until successful fledging or failure due to natural causes.

Following construction, the pipeline ROW would be seeded with a mix of native perennial grass species approved by BLM. Potentially, portions of the pipeline on private lands may be seeded with a different mix containing non-native perennial pasture grasses and non-native perennial forbs (e.g., alfalfa or sweetclover), depending on the preference of the surface landowner. Many decades would be required for the ROW to begin to revert to a more native habitat type, even assuming no periodic re-disturbance to upgrade the pipeline or add another pipeline.

In addition to direct and indirect habitat loss is the effect of habitat fragmentation on nesting bird species. While the width of the pipeline corridor would not create a movement barrier to birds—unlike, for example, some small mammal and reptile species—it would have the effect of reducing the patch size of some tree or shrub stands and increasing the amount of habitat edge. Thus, habitat-interior species, which include most of the BCC species and Neotropical migrants listed above, would be subject to additional habitat loss due their tendency to avoid the newly created habitat edge along the corridor. Bird species associated with grass/forb rather than shrubland communities, or with habitat edges instead of habitat interiors, would benefit slightly from the habitat modification once reclamation has been achieved. Edge species tend to include habitat generalists, such as the migratory American robin (*Turdus migratorius*) and the resident black-billed magpie (*Pica hudsonius*) and house finch (*Haemorhous mexicanus*), and a nest parasite, the brown-headed cowbird (*Molothrus ater*).

Notwithstanding the sources of direct and indirect impacts discussed above, habitat loss and habitat fragmentation associated with the Proposed Action would be unlikely to have a discernible effect on population sizes of any of the BCC species or other birds discussed above. This conclusion is based on both the small amount of actual habitat loss, the transitory nature of the construction phase, and the presence of existing habitat fragmentation in the project area that already has created smaller habitat patches and greater habitat edges than in an undeveloped area.

The operator remains subject to the MBTA, administered by the USFWS, which precludes the "take" of any raptor or most other native species. Under the Act, the term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The USFWS interprets "harm" and "kill" to include loss of eggs or nestlings due to abandonment or reduced attentiveness by one or both adults as a result of disturbance by human activity, as well as physical destruction of an occupied nest. This protection applies to nesting raptors. Birds of prey most likely to nest or forage in the project vicinity include Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*A. striatus*), red-tailed hawk (*Buteo jamaicensis*), Swainson's hawk (*B. swainsoni*), American kestrel (*Falco sparverius*), great horned (*Bubo virginiana*), and long-eared owl (*Asio otus*). All of these species nest primarily in trees, and all but the accipters sometimes use rock ledges. Less likely to occur is a ground-nesting species, the northern harrier (*Circus cyaneus*). Of these, the red-tailed hawk is the most common species in open grassland, sagebrush, and sparse woodland habitats in the CRVFO area, while Cooper's hawk is common in areas of taller, denser, and more extensive trees such as cottonwood riparian corridors, aspen, and montane conifers.

To reduce adverse impacts to other migratory birds, including BCC species found to nest in the area, a TL would be applied from May 1 to July 1 to prohibit removal of vegetation throughout the project area. A separate TL would prohibit ground-disturbing activities to be initiated during the raptor nesting season of February 15 to August 15 without a prior survey for raptor nests. A raptor nesting survey was not conducted for the project prior to preparation of this EA based on the proponent's development schedule for late summer and fall 2013. Appendix A provides details of the two COAs, to be applied if construction is delayed beyond the planned schedule.

No Action Alternative

The No Action Alternative would constitute denial of the pipeline as proposed through BLM. Therefore, no potential for impacts to Migratory Birds would exist on BLM lands.

Other Terrestrial Species

Affected Environment

The site is located within winter range, severe winter range, and winter concentration area for mule deer (*Odocoileus hemionus*) and winter range and winter concentration area for Rocky Mountain elk *(Cervus elaphus nelsonii)* as mapped by CPW (2010). Winter range is that part of the overall range of a species where 90% of the individuals are located during the average five winters out of ten from the first heavy snowfall to spring green-up, or during a site-specific period of winter as defined for each data analysis unit (CPW 2011). Severe winter range is that part of the overall range where 90% of the individuals are located when the annual snowpack is at its maximum and/or temperatures are at a minimum in the two worst winters out of ten (CPW 2010). Winter Concentration areas are that part of the winter range where densities are at least 200% greater than the surrounding winter range density during the same period used to define winter range in the average five winters out of ten (CPW 2010). Field surveys indicate that the project area is occupied winter range for elk and that mule deer occupy the proposed project area on a year-round basis.

Large carnivores present in the project area include the mountain lion (*Puma concolor*) and black bear (*Ursus americanus*). Mountain lions move seasonally to generally follow migrations of their preferred prey, mule deer. Two medium-sized carnivores, the coyote (*Canis latrans*) and bobcat (*Lynx rufus*), are also present in the region in open habitats and broken or wooded terrain, respectively, where they hunt for small mammals, reptiles, and ground-dwelling birds. Smaller carnivores in habitats similar to those near the project site include the ringtail (*Bassariscus astutus*) and spotted skunk (*Spilogale gracilis*).

Small mammals present within the project area include rodents such as the rock squirrel (*Spermophilus variegatus*), golden-mantled squirrel (*Callospermophilus lateralis*), least chipmunk (*Neotamias minimus*), and packrat (bushy-tailed woodrat)(*Neotoma cinerea*), as well as the desert cottontail (*Sylvilagus audubonii*). Rodents and, to a lesser extent rabbits, are the primary prey base for a variety of avian and mammalian predators.

Birds

The wild turkey (*Meleagris gallopavo*) is native to North America and is the largest upland gamebird. Wild turkeys are omnivorous, foraging on the ground or climbing shrubs and small trees to feed. They prefer eating hard mast such as acorns, nuts, and various trees, including pinyon pine as well as various seeds, berries such as juniper and bearberry, roots and insects. Wild turkeys often feed in cow pastures and are also known to eat a wide variety of grasses. The northern portion of the project area is mapped as wild turkey overall range. See the sections on Migratory Birds and Special Status Species for discussions of other birds in the area.

Reptiles and Amphibians

Species most likely to occur include the western fence lizard (*Sceloporus undulatus*), plateau striped whiptail (*Cnemidophorus velox*), gopher snake (bullsnake) (*Pituophis catenifer*), and yellow-bellied racer (*Coluber constrictor*), all of which may be found in sagebrush shrublands, pinyon-juniper woodlands, and degraded pastures such as occur in the project vicinity. Species potentially present along Battlement Creek include the smooth green snake (*Opheodrys vernalis*) and milk snake (*Lampropeltis triangulum*)

Although the project area does not contain any suitable habitat, the surrounding vicinity provides potentially suitable habitat for the northern leopard frog (see the section on Special Status Species) and two additional amphibians, the Woodhouse's toad (*Bufo woodhousii*), and western chorus frog (*Pseudacris triseriata*). Within the CRVFO and vicinity, Woodhouse's toad occurs primarily along ephemeral washes that do not support fish and contain pools of water for a period of at least a few weeks every spring. The chorus frog occurs primarily in cattail and bulrush wetlands and along the vegetated margins of seasonal or perennial ponds and slow-flowing streams. Some existing stock ponds and slow-flowing portions of the drainages are potentially suitable for the northern leopard frog, though none have been documented.

Environmental Consequences

Proposed Action

Under the Proposed Action, pipeline installation would result in approximately 2.66 acres of vegetation removal and soil disturbance within juniper woodland, sagebrush shrubland, and mountain/riparian shrubland habitats in addition to re-disturbance of previously constructed and reclaimed pipeline corridors. Through time, other herbaceous and, more slowly, woody plants could colonize the reclaimed areas from nearby undisturbed areas. However, the process of succession from seeded grasses to native forbs and shrubs would require many years or decades. Initially, the process could be impeded by periodic treatment for weeds, which also would kill or injure any colonizing native forbs and shrub seedlings. Over the long term, colonizing forbs and shrubs would also be likely to be removed for periodic maintenance or updating of the pipeline or the addition of another adjacent line.

The conversion of shrubby habitats to grasses would reduce foraging, nesting/breeding, and sheltering habitat for a number of wildlife species. Because no long-term human occupancy of the ROW (i.e., use as a road or trail, etc.) is expected, few and minor long-term indirect impacts would occur other than direct habitat loss or

modification. The disturbance corridor may fragment portions of the route to a level that some species can no longer find suitable habitat in large enough blocks or far enough from habitat edges. However, while the fragmentation of habitats may occur, the relatively minor impact relative to the expanses of similar habitat types nearby is expected to result in no discernible population effects, although individuals may be forced to move to other, less suitable sites (assuming that the more suitable sites are already occupied). This would have the effect habitats of reducing the survival and reproductive success of some individuals.

Species that prefer grass-dominated habitats would benefit from conversion of shrublands to reclamation grasses. Larger mammals such as deer, elk, coyotes, bobcats, and other species may increase their use of the ROW as a travel corridor. Similarly, while tree- or shrub-nesting songbirds and some species of small mammals would suffer from the relatively small area of direct habitat loss, species associated with grassy habitats could increase.

Impacts from disturbance associated with human activity and operation of vehicles and heavy equipment during construction would create a temporary zone of reduced use along the corridor. This zone would vary in width depending on the particular habitat type (and associated density of screening), the sensitivity of the particular species, and the season. Overall, however, the zone of reduced use would remain in a given area for a relatively short time, because construction would progress along the entire length of the pipeline in a few weeks.

Application of a big game winter timing limitation (TL) stipulation for the period December 1 through April 30 (Appendix A) would prohibit construction during the period of winter habitat use by the two recreationally important big game ungulates. Construction outside the big game winter TL would also minimize the potential for disturbance-related impacts to nesting raptors. Additionally, construction would have to be delayed or suspended until completion of nesting by any raptors that may begin to nest within or near the corridor (see Appendix A).

No Action Alternative

The No Action Alternative would constitute denial of the pipeline as proposed through BLM. Therefore, no potential for impacts to Terrestrial Wildlife Species would exist on BLM lands.

Analysis on Public Land Health Standard 3 for Animal Communities

The Proposed Action would not jeopardize the viability of any terrestrial vertebrate species. Sustained development and the proliferation of pipelines and other surface facilities would continue to reduce habitat size and affect both habitat quality and quantity. The potential to impact some species would increase as development continues. Although the contribution of the Proposed Action is in itself small, it may further trend the area away from meeting Standard 3 for terrestrial wildlife.

The No Action Alternative would not result in a failure of the area to achieve Standard 3 because no proposed developments would occur on BLM land.

SUMMARY OF CUMULATIVE IMPACTS

Historically, habitat loss or modification in the CRVFO areas was characteristic of agricultural, ranching lands, rural residential, with localized industrial impacts associated with the railroad and I-70 corridors and the small communities. More recently, the growth of residential and commercial uses, utility corridors, oil and gas developments, and other rural industrial uses (e.g., gravel mining along the Colorado River) has

accelerated the accumulation of impacts in the area. Cumulative impacts have included (1) direct habitat loss, habitat fragmentation, and decreased habitat effectiveness; (2) increased potential for runoff, erosion, and sedimentation; (3) expansion of noxious weeds and other invasive species; (4) increased fugitive dust from construction of oil and gas pads, roads, and pipelines and associated truck travel; (5) increased noise, especially along access and haul roads; (6) increased potential for spills and other releases of chemical pollutants; and (7) decreased scenic quality.

Although none of the cumulative impacts was described in the 1999 FSEIS (BLM 1999a) as significant, and while new technologies and regulatory requirements have reduced the impacts of some land uses, it is clear that past, present, and reasonably foreseeable future actions have had and would continue to have adverse effects on various elements of the human environment. Anticipated impacts for existing and future actions range from negligible to locally major, and primarily negative, for specific resources.

The primary bases for this assessment are twofold: First, the rate of development, particularly oil and gas development has generally been increasing in the area, resulting in an accelerated accumulation of individually nominal effects. Second, residential and commercial expansion, as well as most of the oil and gas development, has occurred on private lands where mitigation measures designed to protect and conserve resources may not be applied to the same extent as on BLM lands. Recent COGCC regulations have closed considerably the gap between the potential environmental impacts associated with development of private versus Federal fluid mineral resources.

The Proposed Action would contribute to the collective adverse impact for some resources. Although the contribution would be minor, the Proposed Action would contribute incrementally to the collective impact to air quality, vegetation, migratory birds, terrestrial wildlife, and other resources. These cumulative impacts would be in addition to those associated with a nearby water pipeline(s) project for Encana Oil and Gas (USA) Inc. ("Encana"). The Encana 12-inch and 6-inch water pipelines would be approximately 10.6 miles in length and would be completed in the late summer-fall of 2013 (BLM 2013).

PERSONS AND AGENCIES CONSULTED

Red Rock Gathering (RRG) Company, LLC: Cameron Bingham, Construction Manager.

Red Rock Gathering Company (RRG), LLC: Tracey Jensen, Permitting.

INTERDISCIPLINARY REVIEW

BLM staff who participated in the preparation of this EA are listed in, including review of survey results submitted by the operator's consultants, evaluation of impacts likely to occur from implementation of the Proposed Action, and identification of appropriate COAs to be attached and enforced by BLM, are listed in Table 13.

Table 13. BLM Interdisciplinary Team Authors and Reviewers

Name	***Title***	***Areas of Participation***
D. J. Beaupeurt	Realty Specialist	Lands and Realty
John Brogan	Archaeologist	Cultural Resources, Native American Religious Concerns
Allen Crockett	Supervisory Natural Resource Specialist	Technical Review, NEPA Review

Table 13. BLM Interdisciplinary Team Authors and Reviewers		
Name	***Title***	***Areas of Participation***
Shauna Kocman	Hydrologist, Environmental Engineer	Air Quality, Noise, Soils, Surface Water
Julie McGrew	Natural Resource Specialist	Project Lead, Access and Transportation, Range Management, Socioeconomics, Visual Resources
Judy Perkins	Botanist	Invasive Non-Native Species, Special Status Plants, Vegetation
Sylvia Ringer	Wildlife Biologist	Migratory Birds, Special Status Animals, Aquatic and Terrestrial Wildlife
Todd Sieber	Geologist	Fossil Resources, Geology and Minerals, Groundwater

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APPENDIX A

Surface-Use Conditions of Approval
and
General Terms and Conditions

(Exhibit B of ROW Grant COC76197, COC76197T)

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STIPULATIONS
EXHIBIT B OF ROW GRANT COC76197, COC76197T
Reference: DOI-BLM-CO-N040-2013-0097-EA

COMMON CARRIER: Common carrier provisions shall be applied, per **43CFR2885.11(b)**, to construction, operation, and maintenance of the pipeline as a common carrier. This means that the pipeline owners and operators must accept, convey, transport, or purchase without discrimination all oil or gas delivered to the pipeline without regard to where the oil and gas was produced (i.e., whether on Federal or non-Federal lands).

Terms and Conditions Specific to Pipeline Construction and Operation

1. Copies Retained Onsite. Copies of the ROW grant/TUP with the stipulations shall be kept on site during construction and maintenance activities. All construction personnel shall review the grant and stipulations before working on the ROW/TUP.

2. Pre-construction Meeting. The operator shall schedule and conduct a pre-construction meeting with BLM prior to the operator's commencing construction and/or surface disturbing activities on the ROW. The operator, its agent, its contractor(s), and other parties involved with construction and/or any surface-disturbing activities associated with the ROW shall attend this meeting to review the stipulations of the ROW grant, including the POD as applicable, as well as required safety regulations, if appropriate.

3. Utilities Locates. All existing pipelines, surface valves, and other utilities shall be field located, clearly marked, and the appropriate Utility Notification Center (www.unc.org) shall be notified before any construction/surface work occurs. All publicly owned underground facilities shall be marked according to the APWA color code.

4. Survey Monuments. The holder shall protect all survey monuments found within the right-of-way. Survey monuments include, but are not limited to, General Land Office and BLM Cadastral Survey Corners, reference corners, witness points, U.S. Coast and Geodetic benchmarks and triangulation stations, military control monuments, and recognizable (both public and private) survey monuments. In the event of obliteration or disturbance of any of the above, the holder shall immediately report the incident, in writing, to the authorized officer and the respective installing authority, if known. Where General Land Office or BLM right-of-way monuments or references are obliterated during operations, the holder shall secure the services of a registered land surveyor or a BLM Cadastral Surveyor to restore the disturbed Monument(s) and References using survey procedures found in the Manual of Surveying Instruction of the Survey of the Public Lands in the United States, latest edition. The holder shall record survey into the appropriate county and send a copy to the authorized officer. If the BLM Cadastral Surveyors or other Federal surveys are used to restore the disturbed survey monument, the holder shall be responsible for the survey cost. Reference 43 CFR 9185.4-1(a).

5. Indemnification. The operator agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. 9601 *et seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et seq.*) on the ROW (unless the release or threatened release is wholly unrelated to the operator's activity in the ROW). This agreement applies without regard to whether a release is caused by the operator, its agent, or unrelated third parties.

6. Compliance with Laws and Regulations. The operator shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the operator shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601 *et seq*.) with regard to any toxic substances that are used, generated by, or stored on the ROW or on facilities authorized under this ROW grant (see 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by any Federal agency or state government as a result of a reportable release of spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or state government.

7. Brush Clearing for Pipeline Work. The pipeline brush/tree clearing work shall be accomplished with the use of a brush cutter machine (hydroax) across the entire planned disturbance corridor for the pipeline unless otherwise authorized by the BLM. Such clearing work shall be completed prior to start of any earthwork.

8. Pipeline Excavation Restrictions. Excavation work disturbing the topsoil and underlying root mass shall occur only above the planned pipeline trench area. Areas within the disturbance corridor that will serve as topsoil or trench spoil areas shall have topsoil and root mass remain in place with the excess materials windrowed on top of the mowed vegetation.

9. Pipeline Installation. The steel gas pipeline (maximum 12-inch diameter) shall be buried within the authorized right-of-way width. The pipeline shall be installed to industry and BLM "Gold Book" standards. *(Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development: The Gold Book. Fourth Edition—Revised 2007; (P-417 BLM/WO/ST-06/021+3071/REV 07.)*

   The pipeline(s) shall be buried with at least 4 feet of cover from the top of the pipe to the surface. The centerline of the ROW and the exterior limits shall be clearly flagged prior to any construction activity.

   Pipelines installed beneath stream crossings shall be buried at a minimum depth of 4 feet below the channel substrate to avoid exposure by channel scour and degradation. Following burial, the channel grade and substrate composition shall be returned to pre-construction conditions.

10. Private Landowners and Existing Rights-of-Way. The operator shall obtain agreements allowing construction with all existing authorized surface users of Federal pad locations prior to surface disturbance or construction of the location, staging areas, or access across or adjacent to any existing pad locations. In the case of privately owned surface, the operator shall certify and provide copies (minus any monetary information) to the AO showing that a Surface Use Agreement has been reached with the authorized surface user, prior to commencing construction.

11. Compliance with Stipulations. This grant is issued subject to the operator's compliance with all applicable regulations contained in Title 43 Code of Federal Regulations parts 2800 and 2880.

12. Chemical Storage and Use. The operator shall not store hazardous materials, chemicals, fuels, lubricating oils, or perform concrete coating activities within 200 feet of any water body or dry drainage. Equipment or vehicles that are crossing or working within 200 feet of water bodies shall not be refueled unless the Environmental Inspector gives a specific exception. If any hazardous material must be temporarily stored or transferred within 200 feet of a water body (i.e. stationary

pumps), then it must be placed within a secondary containment structure that is capable of containing 110 percent of the volume of the stored material.

13. Saturated Soil Conditions. When saturated soil conditions exist on or along the ROW any type of construction shall be halted until soil material dries out or is frozen sufficiently for construction to proceed without undue damage and erosion to soils.

14. Welding of Pipeline. A minimum of 10% of all welds shall be X-rayed. Visual inspections shall be performed on 100% of all pipeline welds. Any pipeline occurring within the Rifle Municipal Watershed Area and/or within 100 feet of any perennial or intermittent stream crossing shall have all welds X-rayed. Area All bored areas shall have 100% X-rays of all pipeline welds. (49 CFR 192.225 Welding procedures) All welders shall be appropriately certified. (49 CFR 192.227 Qualification of welders). NOTE: 49 CFR Subpart F—Joining of Materials other than by Welding (192.281 includes plastic pipe).

15. Pipeline Warning Signs. Pipeline warning signs shall be installed within five days of construction completion and prior to use of the pipeline for transportation of product. Pipeline warning signs are required at all road crossings. Signs shall be visible from sign to sign along the right-of-way. For safety purposes, each sign shall be permanently marked with the holder's name and shall clearly identify the owner (emergency contact) and purpose (product) of the pipeline. (49 CFR 192.707(a) Buried Pipelines).

    All surface pipelines shall be marked with surface signs denoting the type of pipeline, WARNING notations, CONTACT information.

16. Pipeline Testing and Notifications. The entire pipeline shall be tested in compliance with DOT regulations (49 CFR Part 192). Incremental segments of the pipeline shall be tested to the desired maximum pressure and held for the duration of the test (8 hours minimum). (49 CFR 192.503.c).

    Water shall be used as the medium to perform the strength and leak tests. A third party contractor shall haul the necessary amount of water to the pipeline and dispose of the water at an approved facility once the test is completed.

    Notification to all nearby residents as well as the Garfield County Dispatch Center shall be made no less than 24 hours prior to the pressure test and blow down. All necessary and reasonable precautions shall be taken to ensure the safety of the employees and the general public, the lands, domestic animals and wildlife, etc. This may include, but not be limited to, restriction of access to the pipe being tested, temporary warning signs installed in appropriate locations, effective communication.

    The operator and its contractors shall ensure that pressure testing operations are carried out in accordance with the following requirements of the U.S. Department of Transportation (USDOT) and U.S. Environmental Protection Agency (EPA). In addition, the operator and its contracts shall ensure that:

    - Portable compressors for pressure testing are not stationed within 100 feet of any residence.
    - Water used in pressure-testing of the pipeline are disposed at a State-approved facility or reused.

17. Fire Suppression. Welding or other use of acetylene or other torch with open flame shall be operated in an area barren or cleared of all flammable materials at least 10 feet on all sides of equipment. Internal combustion engines shall be equipped with approved spark arrestors which meet either (a)

the USDA Forest Service Standard 5100-1a or (b) Society of Automotive Engineers (SAE) recommended practices J335(b) and J350(a).

18. Reporting of Undesirable Events. RRG agrees to comply with, and be bound by, 43 CFR 2880 Mineral Leasing Act, Part 2885.11, Terms and Conditions of Use, concerning the reporting of all undesirable events. (Reference: Onshore Order NTL-3A, issued pursuant to the authority prescribed in Title 30 CFR 221.5, 221.7, and 221.36.)

19. As-Built Survey. An "as-built" center line survey of the right-of-way crossing Federal land, provided by a Certified Land Surveyor licensed to work in the State of Colorado, shall be provided to the AO within 2 months of completion of the project.

Surface-Use Conditions of Approval Generally Applicable to Oil and Gas Projects in the CRVFO

1. Administrative Notification. The operator shall notify the BLM representative at least 48 hours prior to initiation of construction. If requested by the BLM representative, the operator shall schedule a pre-construction meeting, including key operator and contractor personnel, to ensure that any unresolved issues are fully addressed prior to initiation of surface-disturbing activities or placement of production facilities.

2. Dust Abatement. The operator shall implement dust abatement measures as needed to prevent fugitive dust from vehicular traffic, equipment operations, or wind events. The BLM may direct the operator to change the level and type of treatment (watering or application of various dust agents, surfactants, and road surfacing material) if dust abatement measures are observed to be insufficient to prevent fugitive dust.

3. Drainage Crossings and Culverts. Construction activities at perennial, intermittent, and ephemeral drainage crossings (e.g. burying pipelines, installing culverts) shall be timed to avoid high flow conditions. Construction that disturbs any flowing stream shall utilize either a piped stream diversion or a cofferdam and pump to divert flow around the disturbed area.

   Culverts at drainage crossings shall be designed and installed to pass a 25-year or greater storm event. On perennial and intermittent streams, culverts shall be designed to allow for passage of aquatic biota. The minimum culvert diameter in any installation for a drainage crossing or road drainage shall be 24 inches. Crossings of drainages deemed to be jurisdictional waters of the U.S. pursuant to Section 404 of the Clean Water Act may require additional culvert design capacity. Due to the flashy nature of area drainages and anticipated culvert maintenance, the U.S. Army Corps of Engineers (USACE) recommends designing drainage crossings for the 100-year event. Contact the USACE Colorado West Regulatory Branch at 970-243-1199 ext. 17 (Travis Morse).

   Pipelines installed beneath stream crossings shall be buried at a minimum depth of 4 feet below the channel substrate to avoid exposure by channel scour and degradation. Following burial, the channel grade and substrate composition shall be returned to pre-construction conditions.

4. Jurisdictional Waters of the U.S. The operator shall obtain appropriate permits or authorizations from the U.S. Army Corps of Engineers (USACE) prior to discharging fill material into waters of the U.S. in accordance with Section 404 of the Clean Water Act. Waters of the U.S. are defined in 33 CFR Section 328.3 and may include wetlands as well as perennial, intermittent, and ephemeral streams. Permanent impacts to waters of the U.S. may require mitigation. Contact the USACE Colorado West Regulatory Branch at 970-243-1199 ext. 17 (Travis Morse). Copies of any printed or emailed approved USACE permits or verification letters shall be forwarded to the BLM.

5. Wetlands and Riparian Zones. The operator shall restore temporarily disturbed wetlands or riparian areas. The operator shall consult with the BLM Colorado River Valley Field Office to determine appropriate mitigation, including verification of native plant species to be used in restoration.

6. Reclamation. The goals, objectives, timelines, measures, and monitoring methods for final reclamation of oil and gas disturbances are described in Appendix I (Surface Reclamation) of the 1998 Draft Supplemental EIS (DSEIS). Specific measures to follow during interim and temporary (pre-interim) reclamation are described below.

   a. Reclamation Plans. In areas that have low reclamation potential or are especially challenging to restore, reclamation plans will be required prior to APD approval. The plan shall contain the following components: detailed reclamation plats, which include contours and indicate irregular rather than smooth contours as appropriate for visual and ecological benefit; timeline for drilling completion, interim reclamation earthwork, and seeding; soil test results and/or a soil profile description; amendments to be used; soil treatment techniques such as roughening, pocking, and terracing; erosion control techniques such as hydromulch, blankets/matting, and wattles; and visual mitigations if in a sensitive VRM area.

   b. Deadline for Interim Reclamation Earthwork and Seeding. Interim reclamation to reduce a pad to the maximum size needed for production, including earthwork and seeding of the interim reclaimed areas, shall be completed within 6 months following completion of the last well planned to be drilled on that pad as part of a continuous operation. If a period of greater than one year is expected to occur between drilling episodes, BLM may require implementation of all or part of the interim reclamation program.

      Reclamation, including seeding, of temporarily disturbed areas along roads and pipelines, and of topsoil piles and berms, shall be completed within 30 days following completion of construction. Any such area on which construction is completed prior to December 1 shall be seeded during the remainder of the early winter season instead of during the following spring, unless BLM approves otherwise based on weather. If road or pipeline construction occurs discontinuously (e.g., new segments installed as new pads are built) or continuously but with a total duration greater than 30 days, reclamation, including seeding, shall be phased such that no portion of the temporarily disturbed area remains in an unreclaimed condition for longer than 30 days. BLM may authorize deviation from this requirement based on the season and the amount of work remaining on the entirety of the road or pipeline when the 30-day period has expired.

      If requested by the project lead NRS for a specific pad or group of pads, the operator shall contact the NRS by telephone or email approximately 72 hours before reclamation and reseeding begin. This will allow the NRS to schedule a pre-reclamation field visit if needed to ensure that all parties are in agreement and provide time for adjustments to the plan before work is initiated.

      The deadlines for seeding described above are subject to extension upon approval of the BLM based on season, timing limitations, or other constraints on a case-by-case basis. If the BLM approves an extension for seeding, the operator may be required to stabilize the reclaimed surfaces using hydromulch, erosion matting, or other method until seeding is implemented.

   c. Topsoil Stripping, Storage, and Replacement. *All* topsoil shall be stripped following removal of vegetation during construction of pads, pipelines, roads, or other surface facilities. In areas of thin soil, a minimum of the upper 6 inches of surficial material shall be stripped. The BLM may specify a stripping depth during the onsite visit or based on subsequent information regarding soil

thickness and suitability. The stripped topsoil shall be stored separately from subsoil or other excavated material and replaced prior to final seedbed preparation.

d. Seedbed Preparation. For cut-and-fill slopes, initial seedbed preparation shall consist of backfilling and recontouring to achieve the configuration specified in the reclamation plan. For compacted areas, initial seedbed preparation shall include ripping to a minimum depth of 18 inches, with a maximum furrow spacing of 2 feet. Where practicable, ripping shall be conducted in two passes at perpendicular directions. Following final contouring, the backfilled or ripped surfaces shall be covered evenly with topsoil.

   Final seedbed preparation shall consist of scarifying (raking or harrowing) the spread topsoil prior to seeding. If more than one season has elapsed between final seedbed preparation and seeding, and if the area is to be broadcast-seeded or hydroseeded, this step shall be repeated no more than 1 day prior to seeding to break up any crust that has formed.

   If directed by the BLM, the operator shall implement measures following seedbed preparation when broadcast-seeding or hydroseeding is to be used) to create small depressions to enhance capture of moisture and establishment of seeded species. Depressions shall be no deeper than 1 to 2 inches and shall not result in piles or mounds of displaced soil. Excavated depressions shall not be used unless approved by the BLM for the purpose of erosion control on slopes. Where excavated depressions are approved by the BLM, the excavated soil shall be placed only on the downslope side of the depression.

   If directed by the BLM, the operator shall conduct soil testing prior to reseeding to identify if and what type of soil amendments may be required to enhance revegetation success. At a minimum, the soil tests shall include texture, pH, organic matter, sodium adsorption ratio (SAR), cation exchange capacity (CEC), alkalinity/salinity, and basic nutrients (nitrogen, phosphorus, potassium [NPK]). Depending on the outcome of the soil testing, the BLM may require the operator to submit a plan for soil amendment. Any requests to use soil amendments not directed by the BLM shall be submitted to the CRVFO for approval.

   Seedbed preparation is not required for topsoil storage piles or other areas of temporary seeding.

e. Seed Mixes. A seed mix consistent with BLM standards in terms of species and seeding rate for the specific habitat type shall be used on all BLM lands affected by the project (Attachment 1 of the letter provided to operators dated October 23, 2012). Note that temporary seeding no longer allows the use of sterile hybrid non-native species.

   For private surfaces, the menu-based seed mixes are recommended, but the surface landowner has ultimate authority over the seed mix to be used in reclamation. The seed shall contain no prohibited or restricted noxious weed seeds and shall contain no more than 0.5 percent by weight of other weed seeds. Seed may contain up to 2.0 percent of "other crop" seed by weight, including the seed of other agronomic crops and native plants; however, a lower percentage of other crop seed is recommended. Seed tags or other official documentation shall be submitted to BLM at least 14 days before the date of proposed seeding for acceptance. Seed that does not meet the above criteria shall not be applied to public lands.

f. Seeding Procedures. Seeding shall be conducted no more than 24 hours following completion of final seedbed preparation.

Where practicable, seed shall be installed by drill-seeding to a depth of 0.25 to 0.5 inch. Where drill-seeding is impracticable, seed may be installed by broadcast-seeding at twice the drill-seeding rate, followed by raking or harrowing to provide 0.25 to 0.5 inch of soil cover or by hydroseeding and hydromulching. If hydroseeding and hydromulching are used, these shall be conducted as separate steps to ensure adequate contact of seeds with the soil and adequate coverage by the mulch.

If interim revegetation is unsuccessful, the operator shall implement subsequent reseedings until interim reclamation standards are met.

g. Mulch. Mulch shall be applied within 24 hours following completion of seeding. Mulch may consist of either hydromulch or of certified weed-free and non-native seed-free straw, certified weed-free native grass hay, or wood straw crimped into the soil.

NOTE: Mulch is not required in areas where erosion potential mandates use of a biodegradable erosion-control blanket (straw matting).

h. Erosion Control. Cut-and-fill slopes shall be protected against erosion with the use of water bars, lateral furrows, or other measures approved by the BLM. Cut-and-fill slopes along drainages or in areas with high erosion potential shall also be protected from erosion using hydromulch designed specifically for erosion control or biodegradable blankets/matting, bales, or wattles of weed-free straw or weed-free native grass hay. A well-anchored fabric silt fence shall also be placed at the toe of cut-and-fill slopes along drainages or to protect other sensitive areas from deposition of soils eroded off the slopes. Additional BMPs shall be employed as necessary to reduce soil erosion and offsite transport of sediments.

i. Monitoring. The operator shall conduct annual monitoring surveys of all sites categorized as "operator reclamation in progress" and shall submit an annual monitoring report of these sites, including a description of the monitoring protocols followed, to the BLM by **December 31** of each year. The monitoring program shall use the four Reclamation Categories defined in Appendix I of the 1998 DSEIS to assess progress toward reclamation objectives. The annual report shall document whether attainment of reclamation objectives appears likely. If one or more objectives appear unlikely to be achieved, the report shall identify appropriate corrective actions. Upon review and approval of the report by the BLM, the operator shall be responsible for implementing the corrective actions or other measures specified by the BLM.

7. Weed Control. The operator shall regularly monitor and promptly control noxious weeds or other undesirable plant species as set forth in the Glenwood Springs Field Office *Noxious and Invasive Weed Management Plan for Oil and Gas Operators*, dated March 2007. A Pesticide Use Proposal (PUP) must be approved by the BLM prior to the use of herbicides. Annual weed monitoring reports, including Pesticide Application Records (PARs), shall be submitted to BLM by **December 1** of each year.

8. Big Game Winter Range Timing Limitation. To minimize impacts to wintering big game, no construction, drilling or completion activities shall occur during a Timing Limitation (TL) period from **December 1 to April 30 annually**.

9. Bald and Golden Eagles. It shall be the responsibility of the operator to comply with the Bald and Golden Eagle Protection Act (Eagle Act) with respect to "take" of either eagle species. Under the Eagle Act, "take" includes to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest and disturb. "Disturb" means to agitate or bother a bald or golden eagle to a degree that causes, or is

likely to cause, based on the best scientific information available, (1) injury to an eagle; (2) a decrease in its productivity by substantially interfering with normal breeding, feeding, or sheltering behavior; or (3) nest abandonment by substantially interfering with normal breeding, feeding, or sheltering behavior. Avoidance of eagle nest sites, particularly during the nesting season, is the primary and preferred method to avoid a take. Any oil or gas construction, drilling, or completion activities planned within 0.5 mile of a bald or golden eagle nest, or other associated activities greater than 0.5 miles from a nest that may disturb eagles, should be coordinated with the BLM project lead and BLM wildlife biologist and the USFWS representative to the BLM Field Office (970-876-9051).

10. Raptor Nesting. To protect nesting raptors, a survey shall be conducted prior to construction, drilling, or completion activities that are to begin during the raptor nesting season (February 1 to August 15). The survey shall include all potential nesting habitat within 0.25 mile of a well pad or 0.125 mile of an access road, pipeline, or other surface facility. Results of the survey shall be submitted to the BLM. If a raptor nest is located within the buffer widths specified above, a 60-day raptor nesting TL will be applied by the BLM to preclude initiation of construction, drilling, and completion activities during the period of March 15 – May 15. The operator is responsible for complying with the MBTA, which prohibits the "take" of birds or of active nests (those containing eggs or young), including nest failure caused by human activity (see COA for Migratory Birds).

11. Migratory Birds. Consistent with Executive Order 13186 and BLM Colorado guidelines, CRVFO has established a COA (Appendix A) prohibiting initiation of vegetation removal or ground-disturbing activities during the period **May 1 to July 1**, the peak period for incubation and brood rearing among migratory birds. An exception to this COA can be granted if a survey by a qualified biologist during the nesting season of BCC species potentially present indicates no active nests within 30 meters (100 feet) of the disturbance area.

12. Birds of Conservation Concern. Pursuant to BLM Instruction Memorandum 2008-050, all surface-disturbing activities of previously undisturbed lands providing suitable habitat for Birds of Conservation Concern (BCC) is prohibited from **May 1 to July 1**. An exception to this TL may be granted if nesting surveys conducted no more than one week prior to surface-disturbing activities indicate that no BCC species are nesting within 30 meters (100 feet) of the area to be disturbed. Nesting shall be deemed to be occurring if a territorial (singing) male is present within the distance specified above. Nesting surveys shall include an audial survey for diagnostic vocalizations in conjunction with a visual survey for adults and nests. Surveys shall be conducted by a qualified breeding bird surveyor between sunrise and 10:00 AM under favorable conditions for detecting and identifying a BCC species. This provision does not apply to ongoing construction, drilling, or completion activities that are initiated prior to May 1 and continue into the 60-day period at the same location.

13. Range Management. Range improvements (fences, gates, reservoirs, pipelines, etc.) shall be avoided during development of natural gas resources to the maximum extent possible. If range improvements are damaged during exploration and development, the operator will be responsible for repairing or replacing the damaged range improvements. If a new or improved access road bisects an existing livestock fence, steel frame gate(s) or a cattleguard with associated bypass gate shall be installed across the roadway to control grazing livestock.

14. *Ips* Beetle. To avoid mortality of pinyon pines due to infestations of the *Ips* beetle, any pinyon trees damaged during road, pad, or pipeline construction shall be chipped after being severed from the stump or grubbed from the ground, buried in the toe of fill slopes (if feasible), or cut and removed from the site within 24 hours to a location approved by the Colorado State Forest Service.

15. Fossil Resources. All persons associated with operations under this authorization shall be informed that any objects or sites of paleontological or scientific value, such as vertebrate or scientifically important invertebrate fossils, shall not be damaged, destroyed, removed, moved, or disturbed. If in connection with operations under this authorization any of the above resources are encountered the operator shall immediately suspend all activities in the immediate vicinity of the discovery that might further disturb such materials and notify the BLM of the findings. The discovery must be protected until notified to proceed by the BLM. Where feasible, the operator shall suspend ground-disturbing activities at the discovery site and immediately notify the BLM of any finds. The BLM will, as soon as feasible, have a BLM-permitted paleontologist check out the find and record and collect it if warranted. If ground-disturbing activities cannot be immediately suspended, the operator shall work around or set the discovery aside in a safe place to be accessed by the BLM-permitted paleontologist.

16. Cultural Education/Discovery. All persons in the area who are associated with this project shall be informed that if anyone is found disturbing historic, archaeological, or scientific resources, including collecting artifacts, the person or persons will be subject to prosecution. Pursuant to 43 CFR 10.4(g), the BLM shall be notified by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4 (c) and (d), activities shall stop in the vicinity of the discovery, and the discovery shall be protected for 30 days or until notified by the BLM to proceed.

    If in connection with operations under this contract, the operator, its contractors, their subcontractors, or the employees of any of them discovers, encounters, or becomes aware of any objects or sites of cultural value or scientific interest such as historic ruins or prehistoric ruins, graves or grave markers, fossils, or artifacts, the operator shall immediately suspend all operations in the vicinity of the cultural resource and shall notify the BLM of the findings (16 USC 470h-3, 36 CFR 800.112). Operations may resume at the discovery site upon receipt of written instructions and authorization by the BLM. Approval to proceed will be based upon evaluation of the resource. Evaluation shall be by a qualified professional selected by the BLM from a Federal agency insofar as practicable. When not practicable, the operator shall bear the cost of the services of a non-Federal professional.

    Within five working days, the BLM will inform the operator as to:

    - whether the materials appear eligible for the National Register of Historic Places
    - what mitigation measures the holder will likely have to undertake before the site can be used (assuming that *in-situ* preservation is not necessary)
    - the timeframe for the BLM to complete an expedited review under 36 CFR 800.11, or any agreements in lieu thereof, to confirm through the SHPO State Historic Preservation Officer that the findings of the BLM are correct and that mitigation is appropriate

    The operator may relocate activities to avoid the expense of mitigation and delays associated with this process, as long as the new area has been appropriately cleared of resources and the exposed materials are recorded and stabilized. Otherwise, the operator shall be responsible for mitigation costs. The BLM will provide technical and procedural guidelines for relocation and/or to conduct mitigation. Upon verification from the BLM that the required mitigation has been completed, the operator will be allowed to resume construction.

    Antiquities, historic ruins, prehistoric ruins, and other cultural or paleontological objects of scientific interest that are outside the authorization boundaries but potentially affected, either directly or indirectly, by the Proposed Action shall also be included in this evaluation or mitigation. Impacts that occur to such resources as a result of the authorized activities shall be mitigated at the operator's cost, including the cost of consultation with Native American groups.

Any person who, without a permit, injures, destroys, excavates, appropriates or removes any historic or prehistoric ruin, artifact, object of antiquity, Native American remains, Native American cultural item, or archaeological resources on public lands is subject to arrest and penalty of law (16 USC 433, 16 USC 470, 18 USC 641, 18 USC 1170, and 18 USC 1361).

17. Visual Resources. To the extent practicable, existing woody vegetation outside the ROW corridor shall be preserved when clearing and grading for the pipeline corridor. The BLM may direct that cleared woody vegetation and rocks within the ROW corridor be salvaged and re-distributed over reshaped cut-and-fill slopes and along the highly visible sections of the pipeline corridor to emulate the texture closer to that of the native landscape and to encourage vegetation growth.

    To assist with revegetation, root systems shall be left in place where feasible and only removed in the trench construction.

    Above-ground facilities shall be painted **Shadow Gray** to minimize contrast with adjacent vegetation or rock outcrops.

    Rocks saved during construction shall be placed "white side down" on the pipeline corridor during interim reclamation to reduce the amount of color contrast with the surrounding landscape and to deter off-road travel. Rocks and woody debris shall be replaced on the pipeline corridor to emulate the texture closer to that of the native landscape and to encourage vegetation growth.

    During construction, the BLM and RRG representatives shall jointly review construction measures to determine effectiveness in meeting visual resource mitigation measures, and if subtle changes in construction techniques are warranted.

18. Windrowing of Topsoil. Topsoil shall also be windrowed, segregated, and stored along pipelines and roads for later spreading across the disturbed corridor during final reclamation. Topsoil berms shall be promptly seeded to maintain soil microbial activity, reduce erosion, and minimize weed establishment.

19. Soils. Cuts and fills shall be minimized when working on erosive soils and slopes in excess of 30 percent. Cut-and-fill slopes shall be stabilized through revegetation practices with an approved seed mix shortly following construction activities to minimize the potential for slope failures and excessive erosion. Fill slopes adjacent to drainages shall be protected with well-anchored silt fences, straw wattles, or other acceptable BMPs designed to minimize the potential for sediment transport. On slopes greater than 50 percent, BLM personnel may request a professional geotechnical analysis prior to construction.

FONSI

DOI-BLM-CO-N040-2013-0097-EA

The Environmental Assessment (EA) analyzing the environmental effects of the Proposed Action has been reviewed. The project design and approved mitigation measures result in a Finding of No Significant Impact (FONSI) on the environmental elements analyzed in this EA. Therefore, an Environmental Impact Statement (EIS) is not necessary to analyze further the environmental effects of the Proposed Action.

DECISION RECORD

DECISION: It is my decision to approve the Proposed Action of the Speakman A 12-inch Natural Gas Pipeline project.

RATIONALE:

1. This decision will provide for the orderly, economical, and environmentally sound gathering and conveyance of natural gas resources from valid Federal oil and gas leases.

2. Portions of the project alignment will follow existing pipeline corridors and roads. Segments where new corridors will be constructed have been located and designed to minimize adverse environmental consequences.

3. This decision does not authorize the initiation of construction activities on BLM lands. Such activities will be authorized only upon issuance by BLM of a right-of-way (ROW) grant and Temporary Use Permit (TUP) for portions of the pipeline on BLM lands.

MITIGATION: Environmental impacts will be avoided, minimized, or mitigated by the following:

- Construction of the pipeline along an existing pipeline corridor and roads to the extent practicable.
- A variety of additional restrictions applied as Conditions of Approval (COAs) attached as stipulations to the ROW grant (Appendix A).

Copies of the Red Rock Gathering Company, LLC (RRG) 12-inch Natural Gas Pipeline EA are available for review at the BLM Colorado River Valley Field Office located at 2300 River Frontage Road in Silt, Colorado 81625.

NAME OF PREPARER: Julie McGrew, Natural Resource Specialist

SIGNATURE OF AUTHORIZED OFFICIAL:

Allen B. Crockett, Ph.D., J.D.
Supervisory Natural Resource Specialist

DATE: Aug. 15, 2013