

**United States Department of the Interior
Bureau of Land Management**

**Environmental Assessment
DOI-BLM-CO-S050-2013-0020 EA**

**January 2014
J Bird Mine Plan Amendment**
Location: West Montrose County

**U.S. Department of the Interior
Bureau of Land Management
Uncompahgre Field Office
2465 South Townsend Avenue
Montrose, CO 81401
Phone: (970) 240-5300**



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ENVIRONMENTAL ASSESSMENT

NUMBER: DOI-BLM-CO-S050-2013-0020 EA

CASEFILE / PROJECT NUMBER: COC – 68907

PROJECT NAME: J Bird Mine Plan of Operations Amendment

PLANNING UNIT: San Juan/San Miguel Planning Area

LEGAL DESCRIPTION: Generally known as T. 47 N., R. 20 W., W $\frac{1}{2}$ of Section 13, E $\frac{1}{2}$ of Section 14, N $\frac{1}{2}$ N $\frac{1}{2}$ of Section 23, and NW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 24, N.M.P.M. Specifically located in Protraction Block 41, W $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 13; Protraction Block 42, E $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 14; Protraction Block 45, N $\frac{1}{2}$ NE $\frac{1}{4}$ of Section 23; Protraction Block 46, N $\frac{1}{2}$ NW $\frac{1}{4}$ of Section 24, T. 47 N., R. 20 W., N.M.P.M.

APPLICANT: Rimrock Exploration and Development, Inc. (Rimrock)

INTRODUCTION and BACKGROUND

The proposed action, if approved, would amend an existing mine plan to allow drilling exploration holes to further delineate ore zones for an existing underground mine.

On June 6, 2005, Rimrock submitted a Notice of Intent (NOI) to BLM and to the Colorado Division of Minerals and Geology (CDMG), the predecessor of the Colorado Division of Reclamation, Mining and Safety (CDRMS) to conduct exploration drilling in the J Bird Mine project area. The assigned BLM case file number is COC – 68883. This project was proposed to disturb less than five acres of surface land and was therefore processed as a mining notice under the 43 CFR 3809 regulations. A National Environmental Policy Act (NEPA) compliance document was not required, and on July 7, 2005, this mining notice was accepted. On July 7, 2009, the J Bird mining notice COC – 68883 expired after having one two-year extension submitted and accepted in 2007.

On June 13, 2005, Rimrock submitted a Plan of Operations to develop the J Bird Mine and was assigned the BLM case file number of COC – 68907 and CDRMS permit number of M-2005-050. The mine would be developed to extract uranium and vanadium from the Salt Wash Member of the Morrison Formation in the Uravan Mineral Belt. The authorized mine and associated ventilation shafts are located on the J-Bird # 3, 4, 5 and 8 mining claims. The mining claims are owned by David H. Chiles and were located on February 26, 2005. The Plan of

Operations was submitted in accordance with BLM regulations at 43 CFR 3809 and 3715 and was approved on April 10, 2007, after EA # CO-150-2006-015 was completed. The J Bird mining notice and Plan of Operations are located in the same project area. Regulations at 43 CFR 3809.21(b) require that an operators project area have one authorization.

The Proposed Action, Plan amendment to the COC – 68907 permit, was submitted on March 5, 2013. Rimrock needs to continue to conduct exploration drilling to further delineate ore zones for their underground mining operations. This Plan amendment would incorporate those COC – 68883 mining notice activities which have been completed into the Plan and provide authorization for additional exploration in the project area.

The proposed action would amend the existing mine plan (COC – 68907 permit) to include exploration. Because the mine is authorized, this EA does not consider terminating the mine permit.

The Plan is located on Wray Mesa in Montrose County, Colorado approximately eight miles west of Bedrock, Colorado and 20 miles east of La Sal Junction, Utah (see Appendix A, map 1, 2 and 3), and includes the following mining claims: J–Bird #1 to #9, #14, and #16 to #18.

PURPOSE and NEED FOR THE ACTION

Rimrock submitted a mining Plan of Operations amendment as required by 43 CFR 3809 to incorporate an existing mining notice into this Plan to allow for the continued development of their uranium and vanadium deposit on mining claims located under the Mining Law of 1872. In order to mine, the applicant must have an approved Plan from the BLM. The BLM is required to document NEPA compliance prior to approval of the Plan.

The BLM need is to respond to the submitted Plan Amendment, which consolidates exploration drilling from a mining notice into the existing Plan. The BLM's purpose is to determine how to respond to the Plan Amendment.

Decision to be Made: The BLM will decide whether to approve the Plan Amendment as submitted, disapprove the Plan Amendment, or approve the proposed Plan Amendment with mitigation or changes to prevent unnecessary or undue degradation of public lands (43 CFR 3809.411(d)).

DESCRIPTION of the PROPOSED ACTION and ALTERNATIVES

Proposed Action:

The proposed action would amend the existing mine plan (COC – 68907 permit) to include exploration. It would not increase the currently-authorized tons of ore per day, change the frequency of ore transport, or modify the mine portal, waste rock dump, ore stockpile, or other infrastructure or mine operations.

As authorized by BLM under a prior mining notice, exploration holes have been drilled and four of these have been converted into ground–water monitoring wells per CDRMS requirements; these wells would be part of the permit. Within the Plan’s project area, Rimrock proposes to construct up to twenty (30 feet by 30 feet) exploration drill sites per year or up to 200 sites over the proposed 10 year time frame of this Plan. The proposed action would add up to 5 acres of new surface disturbance from drill site areas and drill access roads over a 10 year time frame to the 7.5 acres authorized for the existing mine (4 acres of disturbance currently exist).

Rimrock would use existing previously disturbed exploration drill access roads as much as possible; however, this Plan amendment also proposes to construct up to a total of 4,000 linear feet of 10-foot wide drill access roads, if necessary, over the 10 year time frame of this Plan’s operational life. Road construction may involve using a bulldozer to clear a path suitable to provide the drill rig with access (many times in the past, road building typical of this operation has only involved clearing trees, moving large rocks and grading drainage crossings). Drilling usually involves using air to force drill cuttings to the surface, with water being used in the event that the operation encounters damp material. Small, 10 foot by 10 foot by 2 foot catchment pits could be constructed to capture water and cuttings. The Plan amendment does not identify specifically where drill sites, road building or road enhancement locations would occur in the project area.

Upon receipt of CDRMS NOI applications for exploration drilling work, BLM would conduct on-site cultural and threatened and endangered (T&E) species resource surveys to ensure compliance with both the National Historic Preservation Act (NHPA) and the Threatened and Endangered Species Act (ESA). The application and completed surveys would be reviewed by BLM and adequacy documented prior to exploration disturbance authorizations being issued.

Concurrent reclamation would occur to reduce the amount of un-reclaimed surface disturbance from the drilling operation present in any period of time. Reclamation of exploration activities would involve re-contouring all surface areas that have been graded, including any water containment pits, drill sites, and access roads. Drill holes would be backfilled with cuttings, plugged with cement, sealed and closed. Drill access roads would be scarified, re-contoured and seeded, and salvaged vegetation would be placed upon them, as necessary, to benefit reclamation success. If needed, cross-country travel paths would be scarified, seeded, and have salvaged vegetation placed upon them, as needed.

Design Features

The Proposed Action includes the features listed below, which would be conditions of approval. These design features apply to exploration activity, and would amend (add to) conditions of approval for the existing mine plan:

Air Quality:

- The proposed project area disturbance would be seeded with a BLM-approved seed mix to stabilize soils and reduce the impacts of dust created from wind erosion.
- If dust becomes visible during any phase of the operations, the operator would provide dust abatement measures to the road and location. These would include water or magnesium chloride, emulsified asphalt or other dust palliatives to decrease the application frequency.

- Prior to beginning any construction, an air pollution emission notice (APEN), issued by the Colorado Air Quality Control Division, that details the measures taken to control fugitive dust emissions, will be required.

Cultural Resources:

- If historic or archaeological materials are uncovered during permitted activities, the operator would immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the Authorized Officer. Within five working days the Authorized Officer will inform the operator as to:
 - whether the materials appear eligible for the National Register of Historic Places;
 - the mitigation measures the operator would have to undertake before the activities may proceed.
- Pursuant to 43 CFR 10.4(g) the operator would notify the Authorized Officer, 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), the operator would stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the Authorized Officer.

Soils and Vegetation:

- Seed disturbed sites during reclamation with the BLM approved seed mix shown in Appendix B, and applied at a rate shown. Should re-vegetation attempts fail, seeding would be repeated by the operator at the request of the Authorized Officer. The objective is to establish a vegetative cover comprised of native species which is at least equal to that present prior to the disturbance, and a plant species composition at least as desirable as that present prior to the disturbance. Specifically, there should be at least 8 native species present in the re-vegetated community, and species composition by cover should be made up of no less than 5% of each of the following types of plants: native perennial grasses, native perennial forbs, and shrubs. Average shrub height should be 1.5 feet or more.
- Do not apply fertilizer at the time of seeding. Fertilizer applications, based on results of a soil analysis, can be made during the second growing season or after initial seeded species establishment.
- Restrict vehicle and pedestrian traffic to established roads and drill pads to prevent further soil mixing and compaction outside the proposed project area.

Invasive, Non-native species:

- The operator would control weeds on the project area for the life of the Plan in accordance with the Colorado Noxious Weed Act and Montrose County weed requirements. Prior to the use of herbicides, the operator would obtain from the Authorized Officer written approval of a weed control plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by the Authorized Officer.
- The operator would submit a Pesticide Use Proposal to the Authorized Officer, prior to noxious weed control, for approval to use herbicides on public land. An approved Pesticide

Application Record would be given to the Authorized Officer within 48 hours after application.

- Use of herbicides would comply with the applicable Federal and state laws. Herbicides would be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior.
- As a safeguard to avoid the inadvertent introduction of noxious weeds, clean vehicle(s) and machinery that have been driven or used in weed-infested areas with high pressure spray equipment before entering non-infested areas.
- The operator would monitor for noxious weeds and contact the Authorized Officer regarding treatment options. Submit the plan no later than March 1 of any calendar year to cover the proposed activities for the next growing season.

Threatened, Endangered, and Sensitive Species:

- If, in the future, water depletions associated with exploration and mining activities exceed 0.2 acre feet per year evaluated in this document, the operator would notify the Authorized Officer so that further water depletion payments, or consultation with U.S. Fish and Wildlife Service can be initiated.
- If, in the future, additional effects on species listed under the ESA are evident, consultation with the U.S. Fish and Wildlife Service would be reopened.

Wastes/Hazardous or Solid:

- Maintain Material Safety Data Sheets on-site for all chemicals located on-site.
- Sanitary facilities would be required on site.
- Report any fuel spills immediately to the Authorized Officer, and file copies of all characterization and remediation spill data and reports within two days with the Authorized Officer. Spill reporting, containment and cleanup would occur immediately and would be removed to the nearest approved landfill.
- Collect all trash and domestic solid waste from the mine site and the surrounding area and remove to an approved sanitary landfill.

Water Quality, Surface and Ground:

- Build water bars on existing roads to control erosion as directed by the Authorized Officer:

Grade	Spacing
2%	Every 200 feet
2–4%	Every 100 feet
4–5%	Every 75 feet
5+%	Every 50 feet

- The access roads on the project area may require gravel if road conditions deteriorate.
- Remove water diversions, including the settling pond, after reclamation of the sites has been completed and the sites have been stabilized.

Health and Safety:

- Post signs on the proposed project facilities that identify potential hazards associated with

their operation, including noise and explosive use. Material Safety Data Sheets for all chemicals would be maintained on site during operations.

- Follow fire restrictions/guidelines during periods of high wildfire danger as required by the Authorized Officer.

Noise:

- If noise exceeds Colorado noise emission limits (Colorado Regulation 25–12 Article 12, “Noise Abatement”) with any mining operations, adequate muffling techniques, such as hospital–type mufflers, would be applied to reduce noise levels to an acceptable level.

Paleontology:

- If paleontological materials (fossils) are uncovered during project activities, the operator would immediately stop activities that might further disturb such materials, and contact the Authorized Officer. The operator and the Authorized Officer would consult and determine the best option for avoiding or mitigating paleontological site damage.

No Action Alternative:

The “no action” alternative, would deny the proposed Plan. This alternative would deny authorizing the actions and activities that this specific exploration plan proposes; another plan could be submitted later for BLM to consider. The operation would continue as authorized under the COC – 68907 mine Plan (EA# CO-150-2006-015), which includes:

Up to 7.5 acres of disturbance (there is currently 4 acres of disturbance)

Up to 20 tons of ore per day

Ore hauled offsite for processing approximately every eight weeks

Mine Portal, waste rock dump, ore stockpile, ventilation holes, shop/change room/office trailer, water storage tank, buried water tank, and underground powder magazine.

See Appendix A, map 4.

SCOPING, PUBLIC INVOLVEMENT

BLM provided a public scoping and comment period March 29 through May 1, 2013. A Scoping Notice was sent to 31 parties, and was also posted on the BLM NEPA web site. Two comment letters were received; both from conservation organizations (Appendix C).

A public comment period was provided for the preliminary EA beginning September 9, 2013, for 50 days. One letter was received from a conservation organization (Appendices G and H).

ISSUES and CONCERNS

See Appendix C for a summary of issues expressed in comment letters from conservation organizations.

Internally, BLM has identified the following issues to consider:

- What are the potential emissions and fugitive dust impacts?

- Types of impacts from exploration to soils and vegetation, including noxious species.
- Which sensitive and Threatened/Endangered species may be impacted by exploration, and to what degree?
- Types impacts to migratory birds and wildlife.
- Types impacts from exploration to water quality.
- Will exploration increase the risk of wildfire?
- Would there be impacts to Realty Authorizations?

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: San Juan/San Miguel Planning Area Resource Management Plan

Date Approved: September, 1985

Decision Number/Page: Page 17

Decision Language: All public land is open to mineral entry and development unless previously withdrawn (i.e. wilderness, administrative withdrawals, etc.). Mineral exploration and development on public land would be regulated under 43 CFR 3800 to prevent unnecessary and undue degradation of the land.

Other applicable authorities include the Mining Law of 1872, the Federal Land Policy Management Act of 1976, and 43 CFR 3800.

Standards for Public Land Health: In January 1997, Colorado BLM approved the Standards for Public Land Health. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. A finding for each standard will be made in the environmental analysis (next section).

Standard	Definition/Statement
#1 Upland Soils	Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes. Adequate soil infiltration and permeability allows for the accumulation of soil moisture necessary for optimal plant growth and vigor, and minimizes surface runoff.
#2 Riparian Systems	Riparian systems associated with both running and standing water, function properly and have the ability to recover from major surface disturbances such as fire, severe grazing, or 100-year floods. Riparian vegetation captures sediment, and provides forage, habitat and bio-diversity. Water quality is improved or maintained. Stable soils store and release water slowly.
#3 Plant and Animal Communities	Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential. Plants and animals at both the community and population level are productive, resilient, diverse, vigorous, and able to reproduce and sustain natural fluctuations, and ecological processes.
#4 Threatened and Endangered Species	Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities.
#5 Water Quality	The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado. Water Quality Standards for surface and ground waters include the designated beneficial uses, numeric criteria, narrative criteria, and anti-degradation requirements set forth under State law as found in (5 CCR 1002-8), as required by Section 303(c) of the Clean Water Act.

AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES and MITIGATION MEASURES

This chapter provides a description of the human and environmental resources that could be affected by the Proposed Action and presents comparative analyses of the direct, indirect and cumulative effects on the affected environment stemming from the implementation of the Proposed Action.

Potential effects to the resources/concerns in the table (below) were evaluated to determine if detailed analysis is necessary. Consideration of some elements is to ensure compliance with laws, statutes, regulation or Executive Orders that impose certain requirements upon all Federal actions. Other items are relevant to the management of public lands in general, the Standards for Public Land Health, or to the BLM Uncompahgre Field Office (UFO) in particular.

Cumulative impacts of the Proposed Action are described at the end of this section.

Analysis tiers to EA # CO-150-2006-015, which analyses impacts from the J Bird Mine; refer to the 2006 EA for a description of impacts.

Critical Element	Not Applicable or Not Present	Present, But No Impact	Applicable & Present; Brought Forward for Analysis
Air Quality			X
ACEC	X		
Wilderness and WSAs	X		
Lands with wilderness characteristics	X		
Wild and Scenic Rivers	X		
Cultural		X	
Native American Religious Concerns		X	
Farmlands, Prime/Unique	X		
Soils			X
Vegetation			X
Invasive, Non-native Species			X
Threatened and Endangered Species			X
Migratory Birds			X
Wildlife, Terrestrial			X
Wildlife, Aquatic		X	
Wetlands & Riparian Zones	X		
Floodplains	X		

Water Quality, Surface and Ground			X
Wastes, Hazardous or Solid			X
Environmental Justice		X	
Access and Transportation			X
Fire			X
Geology and Minerals			X
Paleontology		X	
Noise			X
Range Management		X	
Realty Authorizations		X	
Recreation			X
Socio-Economics			X
Visual Resources			X

AREAS OF CRITICAL ENVIRONMENTAL CONCERN; WILDERNESS AND WILDERNESS STUDY AREAS; LANDS WITH WILDERNESS CHARACTERISTICS; WILD AND SCENIC RIVERS; FARMLANDS, PRIME OR UNIQUE; WETLANDS & RIPARIAN ZONES; FLOODPLAINS; ENVIRONMENTAL JUSTICE; RANGE MANAGEMENT

These resources or resource uses would not be impacted, and will not be analyzed further. Reasons they are not impacted follow:

There are not any Areas of Critical Environmental Concern (ACEC) within or near the project area.

Designated Wilderness or Wilderness Study Areas do not exist within or adjacent to the project area. The nearest designated wilderness areas are the Gunnison Gorge Wilderness and the Black Canyon Wilderness – each approximately 75 miles distant to the northeast. The Tabeguache Area (a federally designated area managed consistent with the Wilderness Act of 1964 for the protection of its wilderness character) lies approximately 24 miles to the east of the project area. The Dolores River WSA is about 4 miles southeast. Within the constraints of the design criteria in the Proposed Action, there would be no effects to the character of designated wilderness, WSAs or the Tabeguache Area.

The inventory for wilderness characteristics in the project area was updated in 2011. No lands within or adjacent to the project area were found to possess wilderness characteristics. The report “Inventory of Uncompahgre Planning Area Lands with Wilderness Characteristics: 2011 Update” is available at:
www.blm.gov/co/st/en/fo/ufo/uncompahgre_rmp/lwc_inventory.html

The project area is 7 miles west of the Dolores River, 12 miles southwest of the San Miguel River, and more than 1/2 mile from La Sal Creek at the closest points. The three rivers have been determined to be eligible for inclusion in the National Wild and Scenic River System. None of the project area is within or adjacent to the 1/2 mile wide river study corridor (1/4 mile on each side of an eligible segment). There would be no effect on the eligibility, preliminary classifications, or outstandingly remarkable values of any of the three rivers.

There are not any prime or unique farmlands within or in the vicinity of the project area.

There are not any wetlands, riparian zones or floodplains within or in the vicinity of the project area.

Minority, low-income or disadvantaged populations do not reside within or near the project area. The construction and location of project features would not disrupt any of these identified communities.

Grazing management would be minimally impacted, if at all. No fence lines are crossed, therefore, no gates or cattle guards are required. The loss of livestock forage due to vegetation disturbance would not be noticeable. Disturbed areas would be seeded, and there would be little impact on rangeland management activities.

AIR QUALITY

Affected Environment: The nearest Mandatory Class 1 Federal Air sheds are Arches National Park (about 35 miles northwest), Canyonlands National Park (about 35 miles west), and Black Canyon of the Gunnison Wilderness (about 75 miles east-northeast). Other notable air sheds in the area include the Dolores River Canyon WSA (approximately 4 miles southeast), the Sewemup WSA (approximately 10 miles northeast) and the Tabeguache Special Area (24 miles east). The nearest major roadway, CO State Highway 90, is about 0.5 miles to the north. Nearby communities include Paradox, located about 4 miles northeast; and Bedrock located about 7 miles east. Winds in the area are dominated by the effects of the drainage of La Sal Canyon and generally have a westerly component.

Air quality in this area complies with federal air quality standards according to the most recent Colorado Air Quality Control Commission's Report to the Public (CDPHE, 2012). The mine site is within the Western Slope Region for air quality planning. Air quality concerns in this area are primarily from motor vehicles, oil and gas development, the Nucla coal-fired power plant, coal mines, sand and gravel operations, windblown dust, wildfires, and prescribed fires. The National Ambient Air Quality Standards (NAAQS) are overseen by the State of Colorado.

Radon is a naturally occurring gas produced by the radioactive decay of uranium. Radon dissipates rapidly through time and space, within 1-2 meters from a source and is diluted to the natural concentrations in the outdoor air to about 0.4 pCi/L (EPA, 2013:

<http://www.epa.gov/radon>).

Environmental Consequences/Mitigation:

Proposed Action – A moderate amount of particulate matter (dust) would rise into the air if vegetation is removed. Blowing and fugitive dust from vehicles could be noticed on disturbed surfaces such as the mine site and access road. Design features require dust abatement measures. Air quality would be lowered by exhaust emissions from vehicles and drilling exploration holes. Air emissions would include carbon monoxide and nitrogen oxides from vehicle exhaust. Dust resulting from drilling operations would represent an incremental increase in particulate matter that is described as low and short term.

No Action Alternative – No exploration drilling would be completed. The mining operation would continue as authorized under the COC – 68907 mine plan (EA# CO-150-2006-015). Mine development and travel on roads would continue; types of impacts would be similar to the proposed action.

CULTURAL RESOURCES

Affected Environment: Human groups have inhabited the area during the past 10,000 to 12,000 years. They are characterized as Paleo-Indian hunters of big game; Archaic small game hunters and gatherers; and Formative, sedentary agriculturalists and proto-historic hunters and gatherers. The area has been disturbed by previous mining operations. In the vicinity of the Proposed Action, there are exploration drill holes, naturally reclaimed drill roads, a decline portal and an air vent raise (see Appendix A, map 4).

Environmental Consequences/Mitigation:

Proposed Action – Class I and Class III inventories for cultural resources of the mine site were conducted in January, 2006. The mine site was re-visited and field checked in June 2013 with negative results. No sites were found. Upon receipt of CDRMS NOI applications for exploration drilling work, BLM would conduct further on-site cultural surveys and avoid any sites as needed. There would be no known effect on cultural resources. No known National Register or otherwise eligible cultural properties, sacred sites or traditional cultural properties would be affected by the project.

No Action Alternative – The mine would continue operations under the current mine plan. There would be no known impacts to any National Register or otherwise eligible property or cultural resources.

NATIVE AMERICAN RELIGIOUS CONCERNS

Affected Environment: No Native American religious concerns have been identified in the project area.

Environmental Consequences/Mitigation:

Proposed Action – There would be no known effect on Native American religious concerns. If future tribal consultation or field visits reveal the presence of any Native American

religious concerns, the appropriate mitigation will be implemented.

No Action Alternative – The mine would continue operations under the current mine plan. There would be no known impacts to Native American religious concerns.

SOILS (includes a finding on Standard 1)

Affected Environment: The soils within the project area are largely a product of the local geologic parent material, climatic conditions, and the topographic position on the landscape. Sedimentary sandstone and shale formations occupy much of the surface geology of the area. The inter-bedded sandstone and shale units of the Dakota and Morrison formations, which dominate the surface over much of the area, weather to produce sandy and fine sandy loam textured soils. The specific soils and some of their characteristics can be seen in the table below. The soils described in the table below are from the San Miguel Soil Survey (USDA, Natural Resources Conservation Service).

Soil Unit Name	Geomorphic Description	Texture	Erosion Hazard for Roads and Trails	Runoff Potential	Acres
Wrayha stony clay loam, 3 to 40 percent slopes	Ridges	Stony Clay Loam	Severe	Very High	252
Rock outcrop-Orthents complex, 40 to 90 percent slopes	Canyons, mesas, structural benches	Un-weathered bedrock	Severe	Very High	1.4

The predominant soil type is the Wrayha stony clay loam, 3 to 40 percent slopes. These soils receive 14–16 inches of annual precipitation, and are located on canyon ridges. This soil is formed from residuum weathered from shale, is well drained, exhibits slow infiltration (Hydrologic Soil Group D) and permeability, and is in a “very high” runoff class. The soil has a low to moderate susceptibility for water erosion, and a moderate susceptibility for wind erosion. Typical vegetation consists of Piñon–juniper, Gambel’s oak, Indian Ricegrass, elk sedge, serviceberry and mountain mahogany. A typical soil profile is a stony clay loam from 0–7 inches and clay from 7 to 60 inches.

In addition to the woody over-story, biological soil crusts are also present and serve an important role in helping to stabilize the soil and inhibit wind and water erosion. Biological soil crusts are a complex mosaic of cyanobacteria, green algae, lichens, mosses, micro-fungi, and other bacteria. The crusts also serve a critical role in nutrient cycling, water infiltration, and seedling germination (USDI, 2001). Fairly high levels of crust development exist in the project area.

Environmental Consequences:

Proposed Action – Some of the potential direct impacts within the project area include:

- Removal of vegetation, exposing the soil to wind and water erosion.

- Increased sediment transport, through erosion processes such as sheet, gully, rill erosion, and mass movement.
- Mixing of soil horizons.
- Development of roads on slopes requiring cut and fill.
- Compaction from heavy truck traffic.
- Soil contamination from vehicle fuels, coolants, and lubricants.
- Loss of soil productivity.

Exploration would have a direct, physical impact to soils. In the approximately 250-acre claim area, approximately 5 acres of soil would be disturbed by road building, clearing of drill sites, and drilling of up to 200 exploration holes. A typical drill site would be 30 feet by 30 feet and could include a 100 sq. foot mud pit. Drill sites would be accessed by existing roads and by up to approximately 4000 feet of new 10 foot wide roads.

Exploration roads and drill sites would be re-contoured, if necessary, and scarified prior to seeding with native seed. Concurrent reclamation would occur, which would reduce the amount of bare soil and reduce erosion.

None of the soils described in the existing environment exhibit characteristics that would prevent the design features from minimizing impacts from the exploration activities. Some loss of soil productivity after reclamation would be expected until native vegetation is established and weed treatments are conducted.

Mitigation – Drainage crossings should be hardened with rip-rap or rock material rather than soil to prevent sediment mobilization during storm events.

The mitigation measure would further help maintain soil on site, reducing water erosion.

No Action Alternative –No exploration drilling would be completed. The mining operation would continue as authorized under the COC – 68907 mine plan (EA# CO-150-2006-015) and impact an area of up to 7.5 acres. The types of impacts from disturbance would be similar to those described in the proposed action.

Finding on the Public Land Health Standard for upland soils: During 2008, a Land Health Assessment (LHA) was conducted near the mine area (BLM, 2009). Soil health was assessed using the following indicators: evidence of excessive rills and pedestals, active gullies, appropriate groundcover and plant canopy cover (including Biological Soil Crust), adequate plant litter accumulation, minimal litter movement, appropriate soil organic material, and plant species diversity and presence of vigorous, desirable plants. Much of the project area's soils were rated as meeting the soil standard but with problems, meaning at least two of the above soil surface indicators were not adequate for the site. The specific rating for the mine area indicated upland erosion and high road density were present. More detailed information can be found in the West Paradox Land Health Assessment (BLM, 2009). Development of the project area would increase surface disturbance, increasing the potential for deterioration of soil and vegetative health. Standard 1 would continue to be identified as met until further assessed.

VEGETATION (includes a finding on Standard 3)

Affected Environment: The vegetation on the site consists of a medium density piñon-juniper (*Pinus edulis* and *Juniperus osteosperma*) community with the following associated species in the undisturbed areas: mountain mahogany, Gambel's oak, rubber rabbitbrush, Indian ricegrass, hairy false goldenaster, Sandberg bluegrass, bitterbrush, penstemon, wild buckwheat, and others.

An adjacent area had been burned in the 1990s (Wray Mesa Fire), and successfully re-vegetated. Some of this burned area appeared to have been previously disturbed by mining activity. Species common to the burned area were similar to those in the neighboring piñon-juniper community, with a few exceptions. Rubber rabbitbrush was much more common in the burned area, as was cheat grass. Piñon-juniper regeneration was evident and there was also a big sagebrush component to this community.

Cryptobiotic crusts were largely confined to those relatively undisturbed areas within the piñon-juniper community, many of which would not be disturbed under the Proposed Action.

Environmental Consequences/Mitigation:

Proposed Action – Up to 5 acres of vegetation could be disturbed in conjunction with the Proposed Action. Vegetation would be directly removed or damaged through the drilling activities under the amendment. Vegetation on additional acreage adjacent to the disturbed areas would receive indirect impacts associated with dust deposition and erosion, increased threats from invasive species, and the introduction of new geno-types into locally adapted plant populations from the seeded native species. Where soils are disturbed and native vegetation is lost, undesirable species are likely to increase, especially with cheat-grass present in the adjacent burned areas. Concurrent reclamation of completed areas would reduce the duration of the impacts and extent of the damage at any one time. The largely successful reclamation of the nearby Wray Mesa fire indicates that reclamation of the mined areas is likely to be successful within 5 years after seeding. Cryptobiotic crusts eliminated during exploration activities would not reestablish on this site for many decades, however, cryptogams are expected to survive across the project area where soils are left undisturbed.

Design features of the proposed action would reduce impacts to vegetation. These include several noxious weed control measures; seeding disturbed sites with a BLM approved seed mix applied at a rate and method approved by BLM; not allowing fertilizer to be applied at the time of seeding; and establishing re-vegetation performance criteria.

No Action Alternative –No exploration drilling would be completed. The mining operation would continue as authorized under the COC – 68907 mine plan (EA# CO-150-2006-015) and impact an area of up to 7.5 acres. The types of impacts are similar to those of the proposed action.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic; Wildlife, Terrestrial; and Invasive, Non-native Species): The area is currently rated as meeting Standard 3. While vegetation conditions are likely to decline

somewhat as a result of the Proposed Action, the small area affected will be negligible within the larger land health polygon. Therefore, the current rating is not expected to change.

INVASIVE, NON-NATIVE SPECIES (includes a finding on Standard 3)

Affected Environment: The mine site location was evaluated on January 11, 2006, and the only non-native plant species found at that time was cheat grass. An examination of the area immediately surrounding the mine location did not result in the identification of any noxious weeds. Infestation of the site could still occur if weed seeds are brought in from an off-site area, either on mine equipment or as a result of public access to the mine site.

Environmental Consequences/Mitigation:

Proposed Action – Approximately 5 acres of vegetation could be directly disturbed with exploration activities. Removal of vegetation increases the potential of noxious weed introduction and invasion, both directly on site and indirectly to adjacent rangeland. Noxious weeds could be introduced into the area via vehicles and machinery. Weeds could also be introduced in seed mixtures.

The Proposed Action includes design features to control weeds, clean machinery, and monitor for weeds, which should be adequate to mitigate infestations.

No Action Alternative – The existing mine area would continue as authorized and would impact an area of up to 7.5 acres. The potential for introduction and spread of noxious weeds would be similar to the proposed action.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic; Wildlife, Terrestrial; and Vegetation): The area is currently rated as meeting Standard 3. While there is some potential for introduction and spread of noxious weeds, the small area affected would be negligible within the larger land health polygon. The current rating is not expected to change.

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

Affected Environment: The BLM Uncompahgre Field Office (UFO) utilizes the U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Conservation System (IPaC) to generate the most current species list to analyze the effects of a Proposed Action on threatened, endangered and candidate species and designated critical habitat for these species (Consultation Tracking Number 06E24100-2013-SLI-0154). In accordance with BLM Manual 6840, the goal of management is to prevent a trend toward federal listing or loss of viability for sensitive species.

Appendix D lists potentially occurring federally listed species within the UFO and provides assessments for their occurrence within the project area. No threatened, endangered, or federally protected species or habitats occur within the project area. Big river fish (Colorado pikeminnow,

razorback sucker, bonytail chub, and humpback chub) occur downstream of the project area. Only those species where the project is within the known range of the species and with potential habitat or known occurrences are discussed below.

Appendix E identifies species of special management concern that are known or have potential to occur within the UFO along with occurrence assessments for the area. Several sensitive species are known or have the potential to occur in the project area. Only those species where the project is within the known range of the species and with potential habitat or known occurrences are discussed below.

Federally Listed Fish, BLM Sensitive Fish

The Colorado pikeminnow, razorback sucker, bonytail chub, and humpback chub occur downstream near the mouth of the Dolores River and in the Colorado River. There are no known occurrences of these species in the upper Dolores River or its tributaries (including La Sal Creek). There is not suitable habitat for these species in the project area. Designated Critical Habitat for these species is located downstream in the Colorado River. BLM sensitive fish and amphibian species may be found downstream in the Dolores River, but there is no habitat within the project area. Roundtail chub, bluehead sucker and flannelmouth sucker have been captured during Colorado Parks and Wildlife (CPW) sampling within the Dolores River below Bedrock, but there is no data for La Sal Creek.

BLM Sensitive Mammals

Allen's big-eared bat, big free-tailed bat, spotted bat, Townsend's big-eared bat, and fringed myotis all have the potential to have roost habitat in the area.

A small herd of desert bighorn sheep, estimated at approximately 45, inhabits the Dolores River Canyon. CPW mapped habitat for this population is approximately 5 miles east of the project area, and they are unlikely to utilize the project area.

BLM Sensitive Birds

The project area contains suitable habitat for Brewer's sparrow. Suitable habitat for peregrine falcon is located adjacent to the project area in La Sal Creek. There are no known nest sites for either of these species. Brewer's sparrow may use sagebrush and grassland areas for nesting habitat. Peregrine falcon could be nesting on adjacent cliffs or foraging throughout the project area. Known peregrine falcon eyrie locations are along the Dolores River below Bedrock and along the Paradox Valley. The closest known eyries are within approximately 7 miles of the project area. Northern goshawk may use the project area for wintering habitat.

BLM Sensitive Reptiles & Amphibians

The project area contains suitable habitat for midget faded rattlesnake and milk snake. No wetlands or riparian zones occur in the project area. There are known locations of Northern leopard frog in the San Miguel River to the east of the project area, and known locations of canyon treefrog in the Dolores River, also to the east of the project area. There are no known locations of northern leopard frog in the vicinity of the project area, but it could be present in adjacent perennial and ephemeral streams.

BLM Sensitive Plants

Sandstone milkvetch, and Naturita milkvetch are plant species that specialize in niche habitats and are expected within the general area. Sandstone milkvetch are associated with sandstone rock ledges, domed slickrock fissures, talus under cliffs, sometimes sandy washes in the elevation range of 5000 to 6500 feet. Naturita milkvetch are associated with cracks and ledges of sandstone cliffs and flat bedrock areas typically with shallow soils within piñon-juniper woodland in elevation range of 4800 to 6700 feet.

Environmental Consequences:

Proposed Action –

Federally Listed Fish, BLM Sensitive Fish

Activities associated with exploration would not have direct impacts to Colorado pikeminnow, razorback sucker, bonytail chub, and humpback chub because habitat for these species is not located within the project area. See the Water Quality section for effects to Lower Dolores River. There could be downstream effects to fish habitat quality but, given the distance to occupied habitat for these species, may be undetectable.

Water use associated with this proposal (<0.2 acre-feet per year) could result in an impact to Endangered Colorado River fish. The USFWS determined in 1988 that any federal project that results in depletion of water from the Colorado River Basin would automatically be deemed likely to jeopardize the continued existence of the Colorado pikeminnow (formerly Colorado squawfish), humpback chub, bonytail chub, and razorback sucker and result in the destruction or adverse modification of their critical habitat. On February 25, 2009, BLM was issued a programmatic Biological Opinion (ES/GJ-6-CO-08-F-0010) on water depletions associated with BLM projects (excluding fluid mineral development) authorized by BLM within the Upper Colorado River Basin in Colorado. Utilizing this Biological Opinion, BLM would report the depletion to the USFWS and pay the fee for the depletion, thus meeting the requirements of the ESA. No consultation with the USFWS would be required. In the future, if accumulated water depletions associated with exploration and existing mining activities exceed a total of 0.2 acre feet per year, BLM would be notified so that further water depletion payments or consultation with USFWS can be initiated.

If in the future, additional effects on species listed under the ESA are evident, consultation with the USFWS could be reopened.

Similar to federally listed fish above, activities associated with exploration would not have direct impacts to BLM sensitive roundtail chub, bluehead sucker, flannelmouth sucker, or Colorado River cutthroat trout because habitat for these species is not located within the project area. Similar to federally listed fish, there could be downstream effects to water and fish habitat quality, but given distance to occupied habitat for these species, may be undetectable.

BLM Sensitive Mammals

Bighorn use occurs mostly in the Dolores River Canyon, while some use also occurs on the adjacent mesa tops. Since it is unlikely that desert bighorn will use the project area, no effect is expected to this species.

With the existing design features of the project, exploration activities should have negligible to no impact to BLM sensitive bat species.

BLM Sensitive Birds

Exploration activities would have indirect impacts to peregrine falcons, if present, by removal of vegetation that could be habitat for prey species. Additionally, disruptive activities associated with human presence and active machinery would cause animals (peregrine falcon or prey) to be displaced from the area around the activity. Through time, local peregrines may select their eyrie and foraging areas away from mining and exploration activities. Impacts from exploration and existing mining could have impacts to individuals, but would not likely result in effects at the over-all population level.

Exploration would also have similar indirect impacts to northern goshawk winter foraging habitat in the area as described above for peregrine falcon, however since northern goshawk most probably only use the area for winter foraging, their impacts would be smaller in scale, and they would most probably displace their foraging activities to other habitats.

Exploration activities may have direct and indirect impacts to Brewer's sparrow. Depending on timing of activities, removal of vegetation (sagebrush and grass) could cause direct impacts to Brewer's sparrow nest sites. Removal of vegetation for exploration activities would remove suitable habitat for both nesting and foraging. Additionally, as described above for peregrine falcon, indirect impacts could occur for Brewer's sparrow through disruptive activities. Exploration could have impacts to individual Brewer's sparrows would not likely result in effects at the over-all population level.

BLM Sensitive Reptiles & Amphibians

Both midget faded rattlesnake and milk snake may be present in the project area. Exploration activities could have direct impacts to snakes through crushing from equipment or other human encounters. Exploration and mining activities may have indirect impacts to sensitive snakes through removal of vegetation and/or alteration of rocky habitats. Removal or change of habitats would remove suitable habitat for hiding and prey. Exploration could have impacts to individual sensitive snakes, but would not likely result in effects at the over-all population level.

With habitat for amphibians being very limited within the project area, activities associated with exploration could have impacts to individuals, if present, but would not likely result in effects at the over-all population level.

BLM Sensitive Plants

While there are no known occurrences, Naturita milkvetch, or sandstone milkvetch are possible within the project area. Exploration activities could have direct impact to these species through direct take of individuals or impacts from dust on photosynthesis and reproduction associated with soil disturbing activities. Activity may affect individuals of a species, but is not likely to result in effects to populations.

Mitigation – It is recommended that botanical surveys be conducted for Naturita milkvetch, and sandstone milkvetch within the affected areas during the blooming period. If

individuals or populations are located, report locations to BLM. It is recommended that surface disturbing activities not occur within 300 feet of those locations.

To the extent possible, observed reptiles or amphibians will be avoided and will not be intentionally harmed. Additionally, to the extent possible, project activities will avoid disturbing known or potential hibernacula.

The mitigation will offer additional protection for milkvetch and reptiles/amphibians. Surveying for milkvetch will prevent a potential take of individual plants.

No Action Alternative – This alternative would deny the exploration and would continue operations as authorized under the COC- 68907 mine Plan (EA#CO-150-2006-015). The direct and indirect effects of the no action alternative on Special Status Species would be similar to those described for the Proposed Action. It is estimated that over the 10-year plan time frame, 0.74 acre feet of water could be used. In the future, if accumulated water depletions associated with mining activities exceed a total of 0.2 acre feet per year, BLM would be notified so that further water depletion payments or consultation with USFWS can be initiated.

Finding on the Public Land Health Standard for Threatened & Endangered species: A complete Land Health Assessment was conducted in 2008-2009 in the West Paradox area (BLM 2009a) including Causal Determinations (BLM 2009b). The project area was found to be meeting for Standard 3 (Healthy Communities) and Standard 4 (T&E Species). Described land health problems for the project area included low litter cover, low perennial forb cover, high level of bare soil, and low cool season perennial grass cover. Causal factors within the project area included: seral stage; uranium exploration and development; and uranium mining, exploration scrapes, roads. With design features as proposed (specifically for soils and vegetation), this project should not cause changes to meeting Land Health Standards for T&E species.

MIGRATORY BIRDS

Affected Environment: The project area provides habitat for migratory bird species that typically use piñon–juniper/shrub/grass and sagebrush communities. The priority species considered during this analysis are those found in the USFWS’s Birds of Conservation Concern (USFWS, 2002). Evaluations are based on data found in the Colorado Breeding Bird Atlas (Kingery, 1998), and the species shown below are those known to breed in the area and for which there is suitable habitat.

Appendix F identifies migratory bird species of special management concern that are known or have potential to occur within the UFO along with occurrence assessments for the area. Several migratory bird species are known or have the potential to occur in the project area. Only those species where the project is within the known range of the species and with potential habitat or known occurrences are discussed below.

Golden Eagle (*Aquila chrysaetos*)—Utilize a wide range of habitats to hunt, roost and raise young. Suitable mixes of sagebrush and cliffs, and vast expanses of open range with high populations of rabbits can support large populations (Kingery 1998). Habitat suitable for nesting occurs in the nearby Paradox Valley or Dolores River Canyon. Potential habitat occurs in the adjacent La Sal Creek area. No known nesting sites are located within one mile of the project area.

Peregrine Falcon (*Falco peregrinus*) —See the Special Status Species section.

Prairie Falcon— (*Falco mexicanus*) —Occupied nests for this species are located within the nearby Paradox Valley and Dolores River Canyon. Occasional foraging could take place around the project area. No known nesting sites are located within one mile of the project area.

Lewis' Woodpecker (*Melanerpes lewis*) —Utilize a wide range of treed habitats (forest, woodland, riparian). Nest in tree cavities. No known nesting sites are located within the project area. Area may be used for foraging and/or nesting.

Gray Vireo (*Vireo vicinior*) —Utilize piñon-juniper and open juniper-grassland habitats. No known nesting sites are located within the project area. Area may be used for foraging and/or nesting.

Pinyon Jay (*Gymnorhinus cyanocephalus*) —Utilize piñon-juniper woodland habitats. No known nesting sites are located within the project area. Area may be used for foraging and/or nesting.

Juniper Titmouse (*Baeolophus griseus*) — Utilize piñon-juniper woodlands, especially juniper. Nest in tree cavities. No known nesting sites are located within the project area. Area may be used for foraging and/or nesting.

Brewer's Sparrow (*Spizella breweri*) — See the Special Status Species section.

Cassin's Finch (*Haemorhous cassinii*) — Breeds and nests open montane coniferous forests.

In addition to the above species, a wide variety of migrant bird species utilize piñon–juniper and sagebrush habitats and surrounding areas for breeding and brood rearing.

Environmental Consequences:

Proposed Action – Up to 5 acres would be impacted as a result of exploration activities. The 5 acres of disturbance would be across two-hundred drill sites over the 10-year time frame. Depending on timing of activities, removal of vegetation associated with mine exploration could cause direct impacts to migratory birds through the direct take of individuals or nests, and indirect impacts through the removal of suitable habitat for both nesting and foraging. Additionally, disruptive activities associated with human presence and active machinery for exploration activities would cause migratory birds to be displaced from the area around the activity. Mine exploration surface disturbance is proposed in small patches (0.02 acre sites), but would have an area of disruption for migratory birds. Size of the disrupted area would vary by

species, but could be up to an approx. 0.5 mile buffer around the area for raptors. There could be impacts to individuals, but would not likely result in effects at the over-all population level.

Mitigation – To reduce impacts on migratory birds, it is recommended that no surface disturbing activities occur from May 15 through July 15. Alternatively, breeding bird surveys could be conducted during the breeding season, prior to surface disturbing activities. If no active nests are found, activities could proceed.

The mitigation will reduce impacts on breeding birds.

No Action Alternative – This alternative would deny the proposed exploration plan and would continue operations as authorized under the COC- 68907 mine Plan (EA#CO-150-2006-015). The direct and indirect effects of the no action alternative on migratory bird species would be similar to those described for the Proposed Action.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: The project area supports a variety of terrestrial wildlife species including reptiles, small mammals, carnivores, birds, and big game. Example species include garter snake, cottontail rabbit, least chipmunk, prairie dogs, coyote, bobcat, black bear, mountain lion, elk, mule deer, desert bighorn sheep, red-tailed hawk, and a large number of songbird species. Wildlife habitat in the area is already highly fragmented due to a proliferation of historic mining roads. Terrestrial wildlife species of concern are addressed in the Threatened, Endangered, and Sensitive Species section. Migratory bird species are addressed in the Migratory Bird section.

Both mule deer and elk are found in the unit. Mule deer are present year-round, but mostly use the area as winter range. The project area is mapped by the Colorado Parks and Wildlife (CPW) as only winter range with no severe winter range or winter concentration areas for either deer or elk within or adjacent to the project area.

Large predators, such as coyote, bobcat, and mountain lion are present in the area and use it regularly. Of the predators, coyotes are the most numerous and widespread. Black bear populations are likely limited to primarily the major drainages with well-developed riparian vegetation during years of low food production at the higher elevations. Mountain lion likely use almost all of this area throughout the year while hunting or raising young. Bobcats may also be found throughout most of the area.

Environmental Consequences:

Proposed Action – During exploration activities, local wildlife would be displaced from the immediate area around the disturbance. The distance of that displacement would be species dependent. There is some potential for direct mortality of species which are unable to leave the area, or of species, such as rattlesnakes, which may not be tolerated by miners. Other direct and indirect impacts to terrestrial wildlife species would be similar to those described in Threatened, Endangered and Special Status Species and Migratory Bird sections.

No Action Alternative – This alternative would deny the proposed exploration plan and would continue operations as authorized under the COC- 68907 mine Plan (EA#CO-150-2006-015). The direct and indirect effects of the no action alternative on terrestrial wildlife species would be similar to those described for the Proposed Action.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation; Invasive, Non-native Species; and Wildlife, Aquatic): A complete Land Health Assessment was conducted in 2008-2009 in the West Paradox area (BLM 2009a) including Causal Determinations (BLM 2009b). The project area was found to be meeting for Standard 3 (Healthy Communities). Land health problems in the project area included low litter cover, low perennial forb cover, high level of bare soil, and low cool season perennial grass cover. Causal factors within the project area included seral stage, uranium exploration and mining, and roads. With design features as proposed (specifically for soils and vegetation), this project should not cause changes to meeting Land Health Standards for Standard 3 (Healthy Communities).

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

Affected Environment:

Hydrology

Average annual precipitation is about 14 inches near the project site. Much higher precipitation falls in the form of snow at the higher surrounding elevations. Precipitation from frontal events occurs during winter and spring months. These events are typically low intensity but can last for several days. In contrast, summer precipitation is commonly associated with the southwest monsoonal air flow pattern producing short duration, high intensity rain events. These monsoonal events have the greatest potential to mobilize sediments and contaminants in the small ephemeral channels that drain the mine and surrounding area. No perennial water resources exist within the project area. Ephemeral drainages in the project area generally discharge toward La Sal Creek. Primary surface water resources in the vicinity of the project area include La Sal Creek and the Dolores River. The perennial stream systems (Dolores River and La Sal Creek) support aquatic life, typically warm water fisheries.

Standards and Classifications

The Clean Water Act of 1972 gives the Environmental Protection Agency (EPA), the authority to set effluent limits on discharges of pollutants into waters of the United States and regulate water quality standards for surface waters. The Clean Water Act also gives the EPA the ability to authorize state governments to administer the program while retaining oversight.

The State of Colorado passed the Colorado Water Quality Control Act, revised in 2002, granting authority to the Colorado Water Quality Control Commission to classify and assign numeric standards to state waters. State waters are classified according to present beneficial uses, or beneficial uses that may be reasonably expected in the future. Beneficial use classifications include aquatic life, recreation, agriculture, and water supplies for various purposes. Numeric standards are assigned in order to define allowable concentrations of various parameters under

the following categories: physical and biological, inorganic and metals. Water quality classifications and numeric standards for surface and downstream receiving waters in the planning area are contained in the Commission's 5 CCR 1002-31, Regulation No. 35, Classifications and Numeric Standards for Gunnison and Lower Dolores River Basins (Colorado Water Quality Control Commission 2012).

It is BLM policy that agency projects should meet or exceed water quality standards established by the State of Colorado for all water bodies located on or influenced by BLM-administered lands.

The Water Quality Classifications below lists the water quality classifications for the surface waters influenced by the exploration area:

4 th Level Watershed	Stream Segment	Stream Classification ¹⁻⁵
14030004 Lower Dolores River	Main stem of West Creek from the source to the confluence with the Dolores River; Roc Creek; La Sal Creek and Mesa Creek from their sources to their confluences with Dolores River.	Aquatic Life Cold 1 Recreation E Water Supply Agriculture
	Main stem of the Dolores River from the Little Gypsum Valley Bridge at the San Miguel/Montrose County line, to the Colorado/Utah border.	Aquatic Life Warm 1 Recreation E Agriculture

1- Waters are designated either warm or cold based on water temperature regime. Class 1 waters are capable of sustaining a wide variety of cold or warm water biota, while class 2 waters are not.

2- Recreation Class E - Existing Primary Contact Use. These surface waters are used for primary contact recreation or have been used for such activities since November 28, 1975.

Compliance with section 303(d) of the Clean Water Act requires Colorado to identify water where effluent limitations are not strong enough to attain water quality standards. These waters are placed on the 303(d) list. Each water body on the list must have a Total Maximum Daily Load Assessment (TMDL) prepared. The TMDL calculates the maximum quantity of a pollutant that may be added to a water body from all sources, including point sources, nonpoint sources,

and natural background sources, without exceeding the applicable water quality criteria for that pollutant. The assessment also quantifies how much the pollutant would need to be reduced to meet the criteria.

The impaired surface waters table below shows the surface waters in the area that are on Colorado’s impaired waters, 303(d) or Monitoring and Evaluation list (CDPHE, Water Quality Control Commission, 5 CCR 1002-93).

Impaired Surface Waters in the Area

Segment Description	Portion	Colorado’s Monitoring & Evaluation Parameter(s)	Clean Water Act Section 303(d) Impairment	303(d) Priority
COGULD02 Dolores River from Little Gypsum Valley bridge to Colorado/Utah border	all	<i>E. coli</i>	Fe(Trec)	H

In addition to the state’s water quality classifications and numeric standards, all surface waters of the State are subject to the Basic Standards (Colorado Department of Public Health and Environment, Water Quality Control Commission, Regulation NO. 31), which in part reads: state surface waters shall be free from substances attributable to human-caused point or nonpoint source discharge in amounts, concentrations or combinations that:

1. Can settle to form bottom deposits detrimental to the beneficial uses. Depositions are stream bottom buildup of materials which include but are not limited to anaerobic sludge, mine slurry or tailings, silt, or mud; or
2. form floating debris, scum, or other surface materials sufficient to harm existing beneficial uses; or
3. produce color, odor, or other conditions in such a degree as to create a nuisance or harm existing beneficial uses or impart any undesirable taste to significant edible aquatic species or to the water; or
4. are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life; or
5. produce a predominance of undesirable aquatic life; or
6. cause a film on the surface or produce a deposit on shorelines.

Water Rights

There are no springs or livestock ponds located in the project area.

Groundwater

Naturally occurring clay and sandstone layers associated with the Summerville Formation inhibit the downward migration of waters from the project area. Four exploration holes have been developed for groundwater monitoring in the Brushy Basin and Salt Wash Members of the Morrison Formation just above the confining Summerville Formation. The wells are 400 to 500 feet deep, are used to monitor the presence of groundwater, and if present, water quality.

Environmental Consequences:

Proposed Action – Water quality could be directly impacted by exploration. Approximately 5 acres would be disturbed over a period of 10 years. Some of the potential direct impacts within the exploration project area include:

- Surface compaction leading to increases in runoff and peak flows.
- Increased sediment transport, through erosion processes such as sheet, gully, rill erosion, and mass movement.
- Changes in surface water/groundwater recharge from artificial interception of storm waters in ditches and berms associated with roads and sites.
- Surface water contamination from spills or leaks on exploration roads.
- Water depletions from road dust abatement.

Surface water and shallow groundwater aquifers could potentially be impacted in the short and long term by accidental spills of toxic and/or hazardous materials such as oil, coolant, lubricants, and fuel. The impact of such spills would not extend beyond the permit area due to the low volumes of spilled materials available onsite. The potential for deeper groundwater contamination is low due to the stratified nature of the clay and sandstone layers in the Morrison Formation.

Impacts from the Proposed Action would include loss of soil to surface erosion during heavy precipitation events. Runoff and erosion would occur due to building of pads, roads and alteration in ephemeral stream channels and flow paths. Using the Water Erosion Prediction Project tool (USDA WEPP, 2013), 4000' of roads and 200 pad sites were modeled with the road erosion predictor module. The model estimated 793 pounds of sediment would be generated from the road prism but wouldn't mobilize beyond 130 feet from the road. Similarly, the same model was run with 20 drill pads 30' x 30', and found 458 pounds of sediment would be generated from the pad surface but would not mobilize beyond 130 feet from the pad surface. The model used 30 years of climate data including 1769 storm events.

The disturbed WEPP module was run for the larger 253-acre mine permit area to predict the probability of sediment delivery occurring the first year following disturbance. Due to the average slope across the permit area being 12% or lower, the probability of sediment delivery occurring beyond the permit area is 10%. The model used 10 years of climate data and 594 storm events to determine the probability. The volume of sediment mobilized was too low to quantify.

The design features of the proposed action would help to maintain water quality and further reduce the probability of sediment transport beyond the permit area. These include seeding the topsoil stockpile with native vegetation and completing concurrent reclamation of disturbed areas as an ongoing practice. Exploration roads would be re-contoured and ripped prior to seeding with native seed.

No Action Alternative – The mine site would continue to be authorized, and would impact an area of up to 7.5 acres. The direct and indirect effects of the no action alternative on water quality would be similar to those described under the Proposed Action.

Finding on the Public Land Health Standard for water quality: A complete Land Health Assessment was conducted in 2008 in the West Paradox area (BLM, 2009). The nearest stream assessed for Land Health Standard 5 was La Sal Creek. It was found to be “meeting with Problems”. Soil surface indicators are used as surrogates to determine the potential ratings for water bodies. Surrogate indicators include the amount of bare soil surface, live plant basal coverage, and the amount of plant litter on the soil surface. Problems with La Sal Creek indicated upland erosion and a high road density from uranium mining in the watershed. A water quality sample conducted found parameters within State water quality standards. This exploration project would not likely alter these Land Health Standard findings. Standard 5 would continue to be identified as met until further assessed.

WASTES, HAZARDOUS OR SOLID

Affected Environment: Hazardous materials and waste are not part of the natural environment. Some potentially hazardous materials have been used with the currently-authorized mining.

Environmental Consequences/Mitigation:

Proposed Action – Some potentially hazardous materials would be used during exploration, including combustible motor fuels and lubricants. Improper handling of these materials and wastes can affect the local environment.

General and cumulative impacts are not anticipated, but are dependent upon responsible use of materials and immediate containment and adequate cleanup in the event of spills. The impact of the Proposed Action on exposure to hazardous or solid wastes would be low to moderate and short-term during exploration operations. The Proposed Action contains design features to mitigate impacts from hazardous wastes.

No Action Alternative – No exploration drilling would be completed. The mining operation would continue as authorized under the COC – 68907 mine plan (EA# CO-150-2006-015). Potential impacts on the mine site would be similar to those of the proposed action.

ACCESS AND TRANSPORTATION

Affected Environment: The project area is approximately five miles southwest of Paradox, Colorado. The primary access to the mine site from Paradox is by way of Colorado State Highway 90, Utah State Highway 46, San Juan County Road 162, and Montrose County Road Y1. The county roads are graded with native materials. The J Bird Mine is located along Montrose County Road Y1. The level of public use in the area is low to moderate depending on the season of use.

Environmental Consequences/Mitigation:

Proposed Action – Traffic is not anticipated to increase beyond the small amount associated with the existing mine. All exploration and mining activity will remain within the

boundary of the project area. Generation of dust when dry, rutting when wet, and overall road deterioration could result if roads are not properly maintained or due to use in inclement weather. Short term impacts would be anticipated as low to moderate during exploration activities.

County roads, with the approval of the County, and existing or new roads would be upgraded as needed by providing proper drainage and/or resurfacing for all-weather use with the incorporation of culverts, water bars, ditching and/or gravel. Existing routes would be used to the extent possible before considering construction of new routes.

No Action Alternative – No exploration drilling would be completed. The mining operation would continue as authorized under the COC – 68907 mine plan. There would continue to be a small amount of traffic, with similar types of impacts as the proposed action.

FIRE MANAGEMENT

Affected Environment: Most of the project area consists of a medium density piñon- juniper community. Hot, dry conditions are normal during the summer months within the project area. Fire activity is a natural process in these environments. The vegetation types across the area of the Proposed Action are considered low to moderate fire risk. Over the past 20 years, lightning has caused dozens of fires in the vicinity, but they have not grown to become large fires. The medium density piñon- juniper forest present has a limited value locally as a source of firewood and as posts for fence construction. The project area is not considered in the commercial forest base due to canopy composition and structure.

Environmental Consequences:

Proposed Action –The Proposed Action is not expected to increase the risk of fire, or to affect the rate, duration, or frequency of future fires. Minor brush clearing surrounding potential exploration drill sites could provide a minor, immeasurable benefit by removing excess fuel.

Mitigation –

- Avoid parking hot vehicles over shrubs and grass.
- Use spark arresters on equipment generating sparks, including ATVs.

The mitigation, particularly in dry conditions, would reduce fire danger.

No Action Alternative – Under this alternative, there would be no additional project-related effects to existing fire and forestry conditions, beyond those already occurring. There would continue to be low fire risk associated with the existing mine.

GEOLOGY AND MINERALS

Affected Environment: Uranium is found in the Salt Wash Member of the Jurassic Morrison Formation. The majority of the ore is formed in tabular sandstone bodies ranging in size from several tons to millions of tons. The deposits were formed when uranium and

vanadium enriched groundwater flowed through reducing environments. The reducing environment resulted in precipitation of the uranium and vanadium minerals. Grades of the deposits in the Uravan Mineral Belt range from 0.16 percent to 0.25 percent U₃O₈. Vanadium is also associated with these deposits; the ratio of vanadium to uranium is approximately 4:1 in the area.

The Proposed Action involves the following thirteen unpatented mining claims:

Claim Name	CMC Number
J-Bird #1	253248
J-Bird #2	253249
J-Bird #3	253250
J-Bird #4	253251
J-Bird #5	253252
J-Bird #6	253253
J-Bird #7	253254
J-Bird #8	253873
J-Bird #9	253874
J-Bird #14	254362
J-Bird #16	254364
J-Bird #17	254365
J-Bird #18	254366

The potential for solid leasable minerals is low. There are no solid leasable mineral leases for either coal or non-energy solid minerals. At this location, there are not sand and gravel or other salable mineral deposits. There are no salable mineral sales permits present.

Environmental Consequences/Mitigation:

Proposed Action – There are no environmental consequences to geology and minerals from exploration. This action would not prevent oil and gas exploration activities from occurring. Since there are no deposits of sand and gravel, there is no impact to salable minerals actions.

No Action Alternative – No exploration drilling would be completed. The mining operation would continue as authorized under the COC – 68907 mine plan. There would be no additional impacts to geology and minerals beyond those associated with the currently permitted mining activities.

PALEONTOLOGY

Affected Environment: The Proposed Action is situated in an area of known paleontological resources including Jurassic period Morrison Formation and other Jurassic and Cretaceous outcrops known for vertebrate fossil bearing members.

Environmental Consequences/Mitigation:

Proposed Action – No new disturbance would be anticipated within the known fossil bearing members. Should the proposed project be altered in such a way as to disturb previously undisturbed fossil strata or outcrops, a complete paleontological inventory of the disturbance would be required before the operation commences.

No Action Alternative – No new impacts to paleontological resources.

NOISE

Affected Environment: Sound levels in the project area vary depending on proximity to a highway and other existing facilities, and fluctuate with temperature, humidity and wind. Topography could provide natural barriers to sound transmission or augment noise if located in elevated or exposed areas. The project area is located on public lands with no residences in the vicinity.

Environmental Consequences/Mitigation:

Proposed Action – An increase in the local noise level would occur during exploration operations. Drilling rigs would generate noise during those operations. The impact to the background noise level in the vicinity would be anticipated to be moderate to high and short-term during exploration. Most noise impacts would terminate or decrease greatly after these activities stop. There would not be impacts to residences. Public land visitors to the area could hear some noise while active drilling operations occur. Impacts to wildlife and migratory birds are described in those sections.

No Action Alternative – No exploration drilling would be completed. The mining operation would continue as authorized under the COC – 68907 mine plan, with impacts as described in the proposed action.

LAND USE / REALTY AUTHORIZATIONS

Affected Environment: The area has been leased for oil and gas under Lease COC64549, issued on 3/12/2001. Montrose County has a road right-of-way for the county road (COC42672).

Environmental Consequences/Mitigation

Proposed Action – There would be no impacts to lands and realty authorizations as a result of the Proposed Action.

No Action Alternative – No exploration drilling would be completed. Continued mining would not impact lands and realty authorizations.

RECREATION

Affected Environment: The project is located in the western portion of the Uncompahgre Field Office. There are no developed recreation sites within the project area. Predominant recreation activities in the project area include off-highway vehicle riding and hunting. The BLM permits several outfitters under a Special Recreation Permit in or near the area including lion and big game outfitters, and commercial motorcycle tours.

Environmental Consequences/Mitigation

Proposed Action – Overall, this Proposed Action is expected to have very little if any impact on the recreational values of the area. The level of impact to recreation is anticipated to be low to moderate and short-term during exploration.

No Action Alternative – Continued mining would have very little if any impact on the recreational values of the area. The level of impact to recreation is anticipated to continue to be low to non-existent and long term during the life of the mine.

VISUAL RESOURCES

Affected Environment: Visual resource management (VRM) requirements are applied to projects to mitigate impacts to landscape character, comprised of form, color, texture, and line. The project area is currently being managed as Class III; the management objective for Class III landscapes is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate.

Environmental Consequences/Mitigation

Proposed Action – Short term impacts to visual resources from the Proposed Action are considered to be low to moderate. Long term, with the limited sized of the project and the expected vegetative recovery, the project would have minimal effects on the visual resource of the area which would be consistent with the management objectives of Class III. Reclamation of exploration activities would involve re-contouring all surface areas and seeding, which would reduce or eliminate long-term impacts to visual resources.

No Action Alternative – Continued mining as authorized would have minimal effects on the visual resource of the area.

SOCIO-ECONOMICS

Affected Environment: In the year 2011, the population of Montrose County was 40,810. From 2000, the population had grown by approximately twenty-two percent (Headwater Economics Toolkit - EPS-HDT).

The estimated number of people employed in Montrose County in 2011 was 18,270 (Headwater Economics Toolkit - EPS-HDT). Employment in agriculture, forestry and mining accounted for

5.7 percent (1,042 people) of total employment (employment for mining alone was not reported).

Environmental Consequences:

Proposed Action – The Proposed Action would minimally increase the number of jobs for people directly employed in the mineral or drilling industry. There could be approximately one new job associated with drilling operations. It would indirectly contribute to the number of jobs in the goods and services industries that support the mining industry. These jobs would have minor, long-term beneficial effects on local communities such as Naturita and Nucla.

Housing availability is sufficient in most of the affordable local communities. The Proposed Action would be expected to have a negligible effect on the availability of affordable housing.

There would be little, if any, economic loss to private land owners from displacement of big game. Effects on big game would be minor, and any resulting reduction in private big game hunting within the vicinity of the project area would be minimal especially considering the low level of commercial hunting in the area.

No Action Alternative – No exploration drilling would be completed. The mining operation would continue as authorized under the COC – 68907 mine plan. No additional jobs would be directly created and there would be no beneficial effects on the number of jobs in the goods and services sectors that support the mining industry.

CUMULATIVE IMPACTS SUMMARY

Cumulative impacts could result from the proposed activity when added to the impacts from all other past, present and reasonably foreseeable future activity, regardless of who is conducting such activity. Within the west end of Montrose County, approximately 80% of the lands are federal surface and federal minerals; the remainder is private and state lands.

Historically the western portion of Montrose County was agricultural and ranch lands. In the late 1800's, uranium was discovered in the area. The area experienced four boom and bust mining cycles for radium, vanadium and uranium. As a result of the mining in the past, there are numerous mine sites, many of which have been reclaimed. Colorado Geological Survey Bulletin 40 shows 659 radioactive mineral occurrences in Montrose County. In 2004, there were large increases in the market prices for uranium and vanadium which resulted in renewed interest in staking of mining claims, as well as drilling and exploration activity on public lands. This activity resulted in the submission of two 3809 Plans of Operation and several 3809 Notices in the UFO. There could be a continued increase in mine and exploration proposals in the greater area.

In the Uravan Mineral Belt, the UFO now has five active 3809 Plans of Operations (the J Bird Mine, the Last Chance Mine, the Prince Albert Mine, the Van #4 Shaft and the Mineral Joe Mine) and three active 3809 Mining Notices.

The Department of Energy is in the process of completing an Environmental Impact Statement (EIS) analyzing continued leasing of uranium on federally withdrawn lands (DOE, 2013). If Alternative 4, the preferred alternative, is selected, it is estimated there could be up to 19 different mining operations on the DOE lease tracts (DOE, 2013).

Oil and gas exploration wells could increase by a small amount. Currently in the west-end area of Montrose County, four exploratory oil and gas wells have been drilled in the past 5 years; one being capable of production and three were dry holes that have been abandoned.

Other actions contributing to impacts, cumulatively, include livestock grazing, vegetation treatments, wildfire, wildlife use, rights-of-ways, recreational use, and travel infrastructure. Private land activities are similar, but also include residential and agricultural activities, and energy developments.

Impacts to air quality would generally add incrementally for short periods of time (<5 hours) with no measurable cumulative impacts beyond the localized area. Degradation associated with drilling activities would terminate upon completion of the drilling.

The watershed for the analysis of biological resources is the LaSal Creek subwatershed, and is 15,230 acres. Other activities causing, or that could cause, impacts to biological resources on BLM and Forest Service lands in the watershed are listed with approximate acreage in the table below:

Activities	Acreage
J Bird Mine	12.5 acres disturbed within 253acre permit area
Historic uranium mining and exploration roads	(174 miles*10'road bed) = 211 acres
DOE Uranium Leasing Program (Lease Tracts)	0 acres
Rights of Way	(10.4 miles*10'road bed) = 12 acres
Other roads, travel/recreation	(55.5 miles*10'road bed) = 67 acres
Grazing (BLM)	8319 acres
Grazing (USFS)	3217 acres
Vegetation Treatments (Chaining BLM)	780 acres

The total public acreage impacted by human actions in the 15,230 acre watershed is 12,618 acres. The vast majority of the impacted acres are due to grazing. Within those grazed acres, the vegetation treatment areas (780 acres) see the majority of the use. Terms and conditions attached to the grazing permits require proper management of vegetation to prevent the loss of cover and subsequent degradation of soil and water quality.

The majority of the disturbed road acres in the watershed are due to exploration roads bulldozed prior to the 1970's. While these roads are visible on aerial photos, it can be very difficult to locate these same roads on the ground. Most of these roads are actually well vegetated with native species, possibly due to the lack of invasive species present when the disturbance occurred.

The remaining acreage of active disturbance, primarily in the form of roads, and including the proposed action, totals 91.5 acres. This is 0.6% of the 15,230 acre watershed. While roads can

generate a substantial amount of sediment during runoff events, particularly poorly aligned roads, the modeling of the proposed action in the water quality section showed that sediment is unlikely to be mobilized beyond a 130 foot buffer from the road. Similar modeling results would be expected from the majority of the roads since they are also located on the gently sloping or flat benches above LaSal Creek.

The proposed action, when combined with the past, present and reasonably foreseeable actions, could add to impacts from other activities on private and federal lands in the watershed, and could contribute to decreased soil health and degraded vegetation by a small degree, as well as an minor long term cumulative impacts for noxious weed introduction and spread.

The small area of exploration would have minor indirect impacts on some T&E species and could result in a reduction in quantity and/or quality of habitat for some species. When added to other existing and foreseeable activities, the proposed action is not expected to risk placing a species in jeopardy.

Although relatively few acres, the exploration activity would cumulatively increase surface disturbance, and could contribute to a reduction in quantity and/or quality of migratory bird habitat and of terrestrial wildlife habitat. The types of impacts expected from all of the cumulative actions in the watershed would be similar to those described for the Proposed Action.

With proper management, cumulative impacts of hazardous chemicals and wastes should be minimal. The impacts resulting to access and transportation are expected to be non-existent or minimal due to the small size of the exploration operation, and would not add noticeably to impacts from other activities.

Exploration activities would not result in cumulative impacts to geology or minerals. Existing mining, when combined with the regional mining activities from other operations on BLM managed lands and DOE lease tracts would add to the steady depletion of uranium and vanadium bearing ores resulting in a decrease of in-place mineral value.

Cumulative impacts to recreation would not be noticeable. Cumulative impacts to visual resources, due to the small size of the exploration operation and reclamation, would not be noticeable.

INTERDISCIPLINARY REVIEW: The following BLM personnel have contributed to and have reviewed this environmental assessment.

<u>Name</u>	<u>Title</u>	<u>Area of Responsibility</u>
Rob Ernst	Geologist	Minerals, All
Missy Siders	Wildlife Biologist/T & E	Threatened and Endangered Species, Sensitive Species, Wildlife, Migratory Birds
Glade Hadden	Archaeologist	Cultural Resources, Native American Religious Concerns, Paleontology
Angela Losasso	Rangeland Management Specialist	Invasive Species, Range Management
Jedd Sondergard	Hydrologist	Water Resources, Soils
Amanda Clements	Ecologist	Vegetation, Riparian
Teresa Pfifer	Lands & Minerals Staff Supvr.	Access, Realty Authorizations
Julie Jackson	Recreation Planner	Recreation, Visual Resources, Transportation
Edd Franz	Recreation Planner	Wilderness, Lands with Wilderness Character
Bruce Krickbaum	NEPA Coordinator	NEPA, Environmental Justice
Kelly Homstad	Fire Use Specialist	Air Quality, Fire & Forest Management

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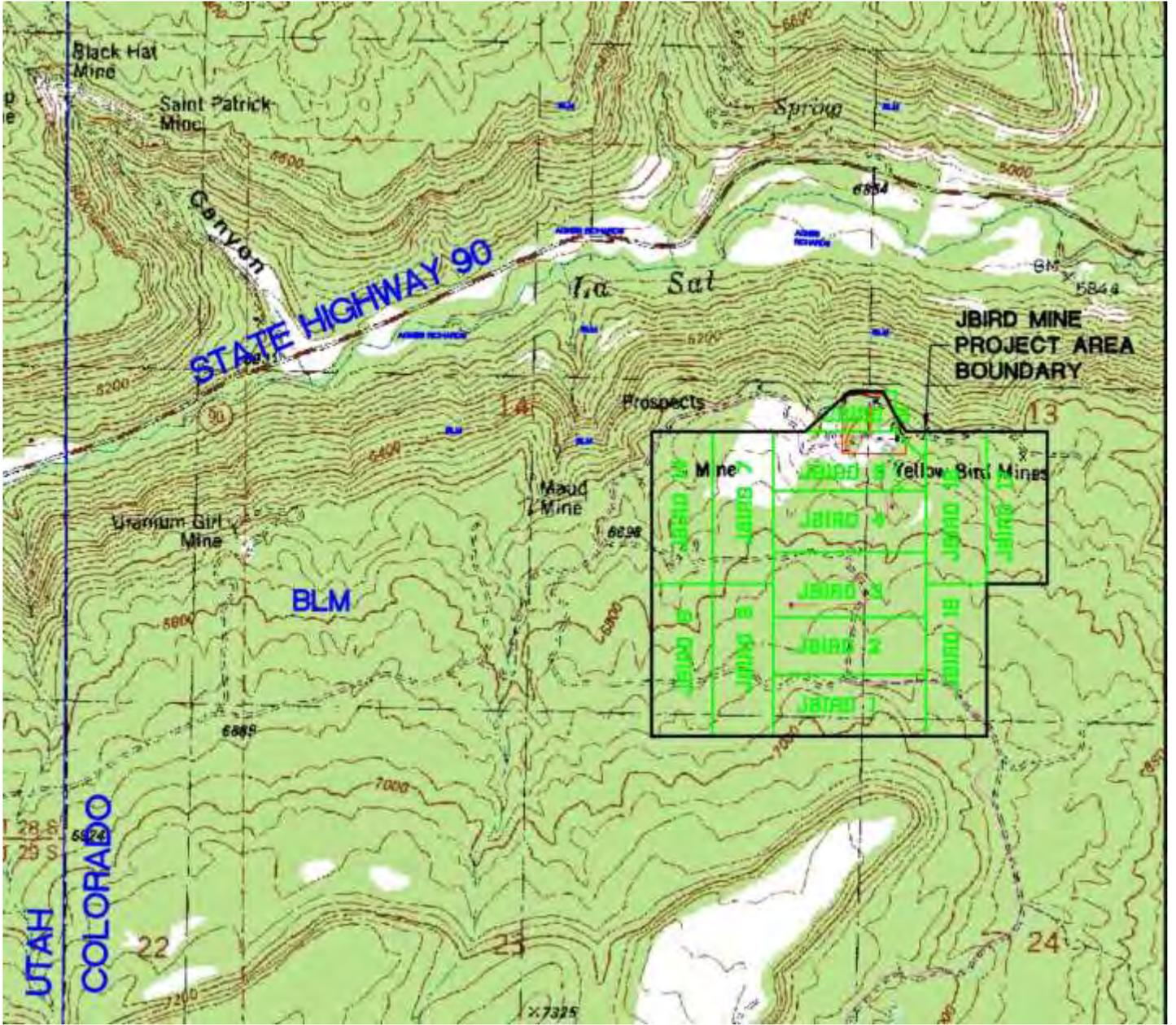
Appendix A



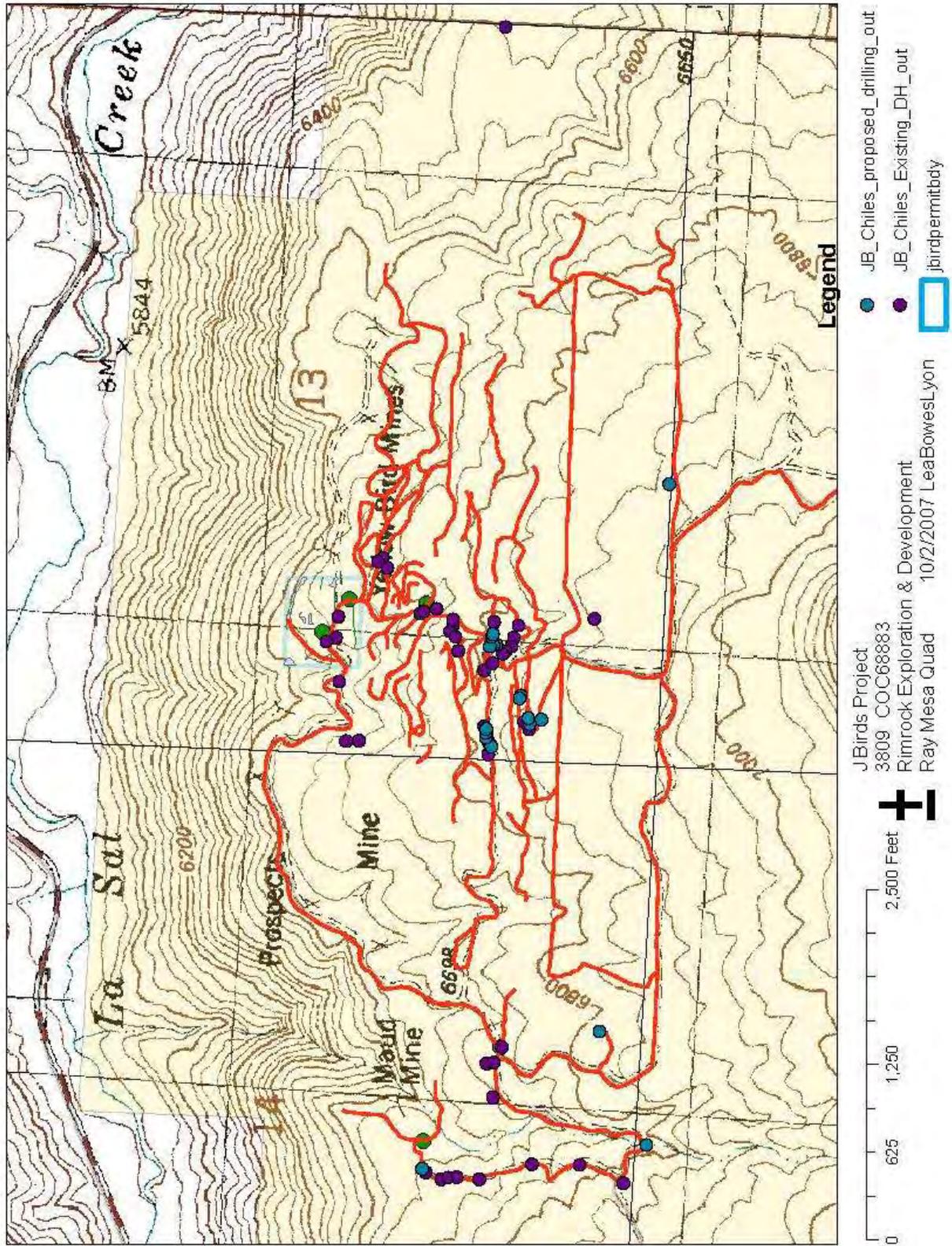
J Birds Mine Project Area
T47N, R20W, Sec. 13: NW
Rimrock Exploration and Development Inc.
3809 Plan of Operations, COC-68970



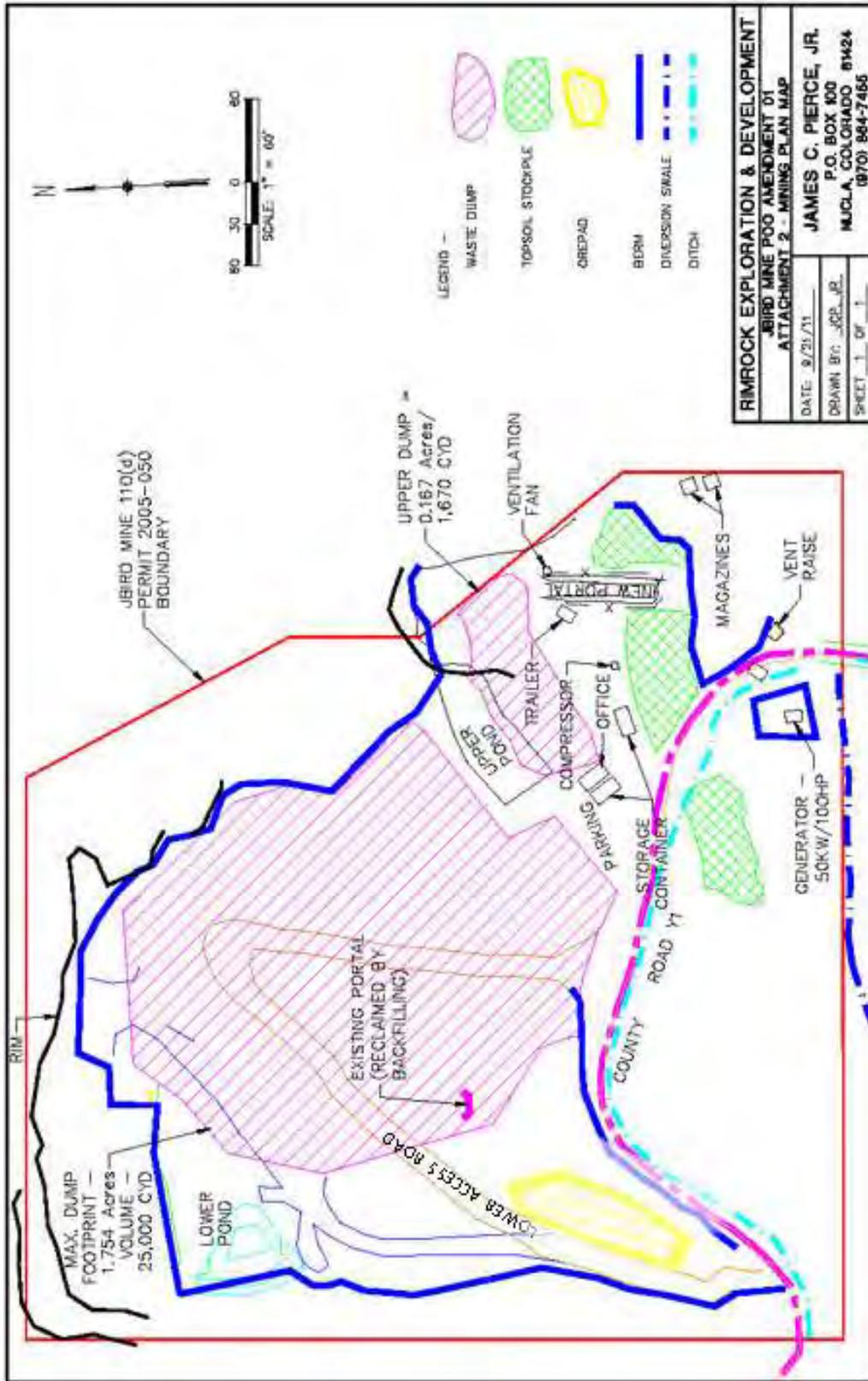
Map 1: Regional Location Map for the J Bird Mine Plan Amendment Project



Map 2: J Bird Mine Plan Amendment Project Area



Map 3: Past drill hole and drill access road location map



Map 4: J Bird Mine Map (No Action)

Appendix B

BLM Recommended Seed Mix

Recommended Standard Native Seed Mix for Sagebrush and Piñon-Juniper Zone, Mid Elevations (6,000-8,000')

This native seed mix should work well in the mid elevation zone in the 11-16" rainfall zone. Use the complete mix on larger projects where substantial amounts of ground will be disturbed, and the likelihood of reseeding from adjacent vegetation is low. On small projects where linear or small patches of vegetation are disturbed and there is abundant adjacent native vegetation for reseeding, use just the bottlebrush squirreltail and western wheatgrass (at 4 lbs PLS seed for each species per acre, under the drill rate, double this rate for aerial application with no seed incorporation).

Price and seed availability vary, so not all species may be available at the time you need them, or priced affordably. However the major ones should usually be available. If price or availability is a concern, contact the Authorized Officer for approval to reduce or leave out those species and increase percentages of remaining species correspondingly (column A in table below, total to this column should equal 100%, carry through changes in columns B, D, and E following instructions under column headings).

The rate shown below is for a drilled seeding, or some other method that incorporates the seed into the soil. Rates should be doubled if the seed is to be aerially applied.

BLM places the following requirements on seed mixes which are put on BLM lands:

- 1) Use the following minimum PLS (Pure Live Seed) tolerances

PLS tested %	Tolerance % points
81-100	-7
61-80	-6
41-60	-5
21-40	-4
0-20	-3

- 2) All seed must comply with BLM and Colorado weed seed guidelines. There should be no prohibited species seed, and no more than allowable levels of restricted species seed. In addition, there should be no more than 0.5% total weed seed, less than 2% other seed, and no trash larger than 1/4" in length. Seed shall not be stored in burlap bags.
- 3) The UFO places additional local restrictions on seed to minimize cheat grass spread. If seed tests show any *Bromus tectorum* or *Bromus japonicus*, the BLM should be consulted with for approval. No mix placed on BLM shall contain more than 150 seeds.

	A	B	C	D	E
Species	Desired % of planting	Multiplier (A x 0.01)	PLS lbs for full stand	PLS lbs per acre needed for mix (B x C)	PLS lbs per acre for project (D x # acres)
Western Wheatgrass (<i>Pascopyrum smithii</i>) Variety Arriba	35	0.35	10	3.5	
Bottlebrush squirreltail (<i>Elymus elemoides</i>)	20	0.20	8	1.6	
Indian Ricegrass (<i>Acnatherum hymenoides</i>) Variety Paloma	10	0.1	8	0.8	
Galleta Grass (<i>Hilaria</i> or <i>Pleuraphis jamesii</i>)	5	0.05	8	0.4	
Sand Dropseed (<i>Sporobolus cryptandra</i>)	5	0.05	1	0.05	
Needle and Thread (<i>Stipa</i> or <i>Heterostipa comata</i>)	5	0.05	10	0.5	
Scarlet Globemallow (<i>Sphaeralcea coccinea</i>)	2	0.02	3	0.06	
Annual Sunflower (<i>Helianthus annuus</i>)	3	0.03	10	0.3	
Rocky Mountain Penstemon (<i>Penstemon strictus</i>)	2	0.02	2	0.04	
Northern Sweet Vetch (<i>Hedysarum boreale</i>)	2	0.02	15	0.3	
Winterfat (<i>Eurotia</i> or <i>Krascheninnikovia lanata</i>)	1	0.01	5	0.05	
Four-Wing Saltbush (<i>Atriplex canescens</i>) from western Colorado, E Utah	5	0.05	6	0.3	
Wyoming Big Sagebrush (<i>Artemisia tridentata wyomingensis</i>)	5	0.05	1	0.05	
Totals	100	1.0		7.95	

- 4) BLM requires additional seed tests on seeding projects that are greater than 20 acres and/or require over 200 lbs of seed. For these seeding projects, the project proponent should have the seed supply company store the purchased seed prior to mixing, and pull samples to be sent to a certified laboratory, preferably Colorado State Laboratory at the following address. Seed test results must comply with the criteria listed above before seed is mixed, shipped and applied to the project area:
Colorado State Laboratory
Colorado State University
Department of Soil and Crop Sciences
Fort Collins, CO 80523
- 5) BLM will need copies of seed tags and test results for all seed applied regardless of project size.
- 6) Only State Certified weed free mulch shall be used

Appendix C

Issues Raised by Scoping Comments

Issue	Submitter	BLM Comment
La Sal Creek ORVs need to be protected.	Dolores River Coalition	None of the project area is within or adjacent to the ½ mile wide river study corridor of La Sal Creek. The ORV will not be impacted by the project. This is documented in the EA, page 10.
Impacts due to a storm event and run-off.	Dolores River Coalition	Erosion and sediment movement is discussed on page 26 in the Water Quality section.
Need cumulative impacts, air quality, impacts to plants and animals, riparian areas, and invasive species in EA.	Dolores River Coalition	Cumulative impacts are discussed in the EA, beginning on page 32.
Transportation, waste disposal and recreational resources need to be considered.	Dolores River Coalition	These issues are discussed in the EA, on pages 27 and 30.
This action requires an EIS.	INFORM, Sheep Mountain Alliance, Uranium Watch	BLM disagrees; this action does not have the level of significance warranting an EIS.
Impacts to the Dolores River via La Sal Creek: Storm water Natural and Rec. values along with wildlife	INFORM, Sheep Mountain Alliance, Uranium Watch	Runoff and erosion are discussed on page 26 of the EA. La Sal Creek and Dolores River are discussed on pages 10 and 16/17, 23, 24, and 25.
Direct and Cumulative Impacts of Water Depletions require an EIS.	INFORM, Sheep Mountain Alliance, Uranium Watch	The water depletion topic is discussed on pages 5 and 17. See appendix G for further explanation on why an EIS is not required because of this topic.
Radioactive Contamination	INFORM, Sheep Mountain Alliance, Uranium Watch	This is beyond the scope of the EA. As explained in the background, and in the Proposed Action, additional mining activities will not be authorized. This EA is for exploration under a currently-permitted mine.

Cultural, transportation, road construction issues need to be analyzed.	INFORM, Sheep Mountain Alliance, Uranium Watch	These are discussed on pages 11/12, 27/28, and in parts of other sections, such as Soils.
Cumulative impacts need to be understood.	INFORM, Sheep Mountain Alliance, Uranium Watch	Cumulative impacts are discussed in the EA, beginning on page 32.
DOE ULP PEIS connected action.	INFORM, Sheep Mountain Alliance, Uranium Watch	This EA does not expand a mine or authorize new mining. The action is not tied to future authorizations in the DOE ULP EIS, and a delay in making a decision on this EA's proposed action is not warranted.

Appendix D

THREATENED AND ENDANGERED SPECIES OF THE UFO ¹									
SPECIES	STATUS	HABITAT DESCRIPTION ₂	CRITICAL HABITAT (Y/N)? ³	KNOWN? ₄	RANGE (Y/N)? ⁵	HABITAT (Y/N)? ⁶	NO EFFECT (X)? ⁷	MENLAE (X) ⁸	MELAE (X) ⁹
<i>FISH</i>									
Bonytail <i>Gila elegans</i>	E	Warm-waters of the Colorado River main stem and tributaries, some reservoirs; flooded bottomlands for nurseries; pools and eddies over rocky substrates with silt-boulder mixtures for spawning	No	None	N	N	X		
Humpback chub <i>Gila cypha</i>	E	Warm-water, canyon-bound reaches of Colorado River main stem and larger tributaries; turbid waters with fluctuating hydrology; young require low-velocity, shoreline habitats such as eddies and backwaters	No	None	N	N	X		
Razorback sucker <i>Xyrauchen texanus</i>	E	Warm-water reaches of the Colorado River main stem and larger tributaries; some reservoirs; low velocity, deep runs, eddies, backwaters, side canyons, pools, eddies; cobble, gravel, and sand bars	No	None	N	N	X		

THREATENED AND ENDANGERED SPECIES OF THE UFO ¹

SPECIES	STATUS	HABITAT DESCRIPTION ²	CRITICAL HABITAT (Y/N)? ³	KNOWN? ⁴	RANGE (Y/N)? ⁵	HABITAT (Y/N)? ⁶	NO EFFECT (X)? ⁷	MENLAE (X) ⁸	MELAE (X) ⁹
		for spawning; tributaries, backwaters, floodplain for nurseries							
Colorado pikeminnow <i>Ptychocheilus lucius</i>	E	Warm-waters of the Colorado River main stem and tributaries; deep, low velocity eddies, pools, runs, and near shore features; uninterrupted streams for spawning migration and young dispersal; also floodplains, tributary mouths, and side canyons; highly complex systems	No	None	N	N	X		
Greenback cutthroat trout <i>Oncorhynchus clarki stomias</i>	T	Cold water streams and lakes with adequate spawning habitat (riffles), often with shading cover; young shelter in shallow backwaters	No	None	N	N	X		
<i>MAMMALS</i>									
Black-footed ferret ¹⁰ <i>Mustela nigripes</i>	E	Prairie dog colonies for shelter and food; >200 acres of habitat with at least 8 burrows/acre	No	None	N	N	X		

THREATENED AND ENDANGERED SPECIES OF THE UFO ¹

SPECIES	STATUS	HABITAT DESCRIPTION ²	CRITICAL HABITAT (Y/N)? ³	KNOWN? ⁴	RANGE (Y/N)? ⁵	HABITAT (Y/N)? ⁶	NO EFFECT (X)? ⁷	MENLAE (X) ⁸	MELAE (X) ⁹
Canada lynx <i>Lynx canadensis</i>	T	Spruce-fir, lodgepole pine, willow carrs, and adjacent aspen and mountain shrub communities that support snowshoe hare and other prey	No	None	N	N	X		
North American Wolverine ¹³ <i>Gulo gulo luscus</i>	P	Alpine and arctic tundra, boreal and mountain forests (primarily coniferous). Limited to mountains in the south, especially large wilderness	No	None	N	N	X		
Gunnison's prairie dog <i>Cynomys gunnisoni</i>	C	Level to gently sloping grasslands, semi-desert shrub lands, and montane shrub lands, from 6,000'-12,000 in	No	None	Y	Y (Prairie Population)	X (to Montane Population)		
BIRDS									
Mexican spotted owl ¹¹ <i>Strix occidentalis</i>	T	Mixed-conifer forests and steep-walled canyons with minimal human disturbance	No	None	Y	N	X		
Southwestern willow flycatcher ¹¹ <i>Empidonax traillii extimus</i>	E	For breeding, riparian tree and shrub communities along rivers, wetlands, and lakes; for wintering, brushy grasslands, shrubby	No	None	N		X		

THREATENED AND ENDANGERED SPECIES OF THE UFO ¹

SPECIES	STATUS	HABITAT DESCRIPTION ₂	CRITICAL HABITAT (Y/N)? ³	KNOWN? ₄	RANGE (Y/N)? ⁵	HABITAT (Y/N)? ⁶	NO EFFECT (X)? ⁷	MENLAE (X) ⁸	MELAE (X) ⁹
Gunnison sage grouse ¹² <i>Centrocercus minimus</i>	P	Sagebrush communities (especially big sagebrush) for hiding and thermal cover, food, and nesting; open areas with sagebrush stands for leks;	No	None	Y	N	X		
Western yellow-billed cuckoo <i>Coccyzus americanus</i>	C	Riparian, deciduous woodlands with dense undergrowth; nests in tall cottonwood and mature willow riparian, moist thickets, orchards,	No	None	Y	N	X		
<i>PLANTS</i>									
Clay-loving wild buckwheat <i>Eriogonum pelinophilum</i>	E	Mancos shale badlands in salt desert shrub communities, often with shadscale, black sagebrush, and mat saltbush; 5200' – 6400'	No	None	N		X		
Colorado hookless cactus <i>Sclerocactus glaucus</i>	T	Salt-desert shrub communities in clay soils on alluvial benches and breaks, toe slopes, and deposits often with cobbled, rocky, or graveled surfaces; 4500'	No	None	N		X		

THREATENED AND ENDANGERED SPECIES OF THE UFO ¹									
SPECIES	STATUS	HABITAT DESCRIPTION ²	CRITICAL HABITAT (Y/N)? ³	KNOWN? ⁴	RANGE (Y/N)? ⁵	HABITAT (Y/N)? ⁶	NO EFFECT (X)? ⁷	MENLAE (X) ⁸	MELAE (X) ⁹
<i>INVERTEBRATES</i>									
Uncompahgre fritillary butterfly ¹¹ <i>Boloria acrocema</i>	E	Restricted to moist, alpine slopes above 12,000' in elevation with extensive snow willow patches; restricted to San Juan Mountains	No	None	N	N	X		

¹ U.S. Fish and Wildlife Service. 2009. Federally listed species in Colorado. Official correspondence, February.

² Van Reyper G. 2006. Bureau of Land Management TES [threatened, endangered, sensitive] species descriptions. Uncompahgre Field Office, Montrose, CO, updated 2009/2010. Unpublished document.

³ Designated Critical Habitat in Project Area?

⁴ Potential and/or known occurrences in Project Area? Assessment based on UFO files and GIS data, partner data, and local knowledge.

⁵ Project area is within the current known range of the species?

⁶ Project area contains suitable habitat for the species?

⁷ Project activities will have "No Effect" to the species or its habitat

⁸ Project activities "May Effect, Not Likely to Adversely Effect" to the species or its habitat

⁹ Project activities "May Effect, Likely to Adversely Effect" to the species or its habitat

¹⁰ Black-footed ferret believed to be extirpated from this portion of its range.

¹¹ Species not known to occur within UFO boundaries, but known to occur in close proximity.

¹² U.S. Fish and Wildlife Service. 2013. 78FR2486 Proposed Listing, 78FR7540 Proposed Critical habitat.

¹³ U.S. Fish and Wildlife Service. 2013. 78FR7864 Proposed Listing, 78FR7890 Establishment of a Nonessential Experimental Population

Appendix E

BLM SENSITIVE SPECIES OF THE UFO ¹							
SPECIES	HABITAT DESCRIPTION ^{2,3}	KNOWN ⁴	RANGE? ⁵	HABITAT? ⁶	NO EFFECT? ⁷	MAI ⁸	LFL ⁹
<i>FISH</i>							
Roundtail chub <i>Gila robusta</i>	Warm-water rocky runs, rapids, and pools of creeks and small to large rivers; also large reservoirs in the upper Colorado River system; generally prefers cobble-rubble, sand-cobble, or sand-gravel substrate	None	Y	Y (Known in Dolores)		X	
Bluehead sucker <i>Catostomus discobolus</i>	Large rivers and mountain streams, rarely in lakes; variable, from cold, clear mountain streams to warm, turbid streams; moderate to fast flowing water above rubble-rock substrate; young prefer quiet shallow areas near shoreline	None	Y	Y (Known in Dolores)		X	
Flannelmouth sucker <i>Catostomus latipinnis</i>	Warm moderate- to large-sized rivers, seldom in small creeks, absent from impoundments; pools and deeper runs often near tributary mouths; also riffles and backwaters; young usually in shallower water than are adults	None	Y	Y (Known in Dolores)		X	
Colorado River cutthroat trout <i>Oncorhynchus clarki pleuriticus</i>	Cool, clear streams or lakes with well-vegetated streambanks for shading cover and bank stability; deep pools, boulders, and logs; thrives at high elevations	None	Y	N	X		
<i>MAMMALS</i>							
Desert bighorn sheep <i>Ovis canadensis nelsoni</i>	Steep, mountainous or hilly terrain dominated by grass, low shrubs, rock cover, and areas near open escape and cliff retreats; in the resource area, concentrated along major river corridors and canyons	None	N	N	X		
White-tailed prairie dog ¹⁴ <i>Cynomys leucurus</i>	Level to gently sloping grasslands and semi-desert grasslands from 5,000' – 10,000' in elevation	None	N		X		

BLM SENSITIVE SPECIES OF THE UFO ¹							
SPECIES	HABITAT DESCRIPTION ^{2,3}	KNOWN ⁴	RANGE? ⁵	HABITAT? ⁶	NO EFFECT? ⁷	MAI ⁸	LEL ⁹
Kit fox <i>Vulpes macrotis</i>	Semi-desert shrub lands of saltbrush, shadscale and greasewood often in association with prairie dog towns	None	N		X		
Allen's (Mexican) big-eared bat <i>Idionycteris phyllotis</i>	Ponderosa pine, piñon-juniper woodland, oak brush, riparian woodland (cottonwood); typically found near rocky outcrops, cliffs, and boulders; often forages near streams and ponds. Thought to be in the West End.	None	Y	Y		X	
Big free-tailed bat <i>Nyctinomops macrotis</i>	Rocky areas and rugged terrain in desert and woodland habitats; roosts in rock crevices in cliffs and in buildings caves, and occasionally tree holes	None	Y	Y		X	
Spotted bat <i>Euderma maculatum</i>	Desert shrub, ponderosa pine, piñon-juniper woodland, canyon bottoms, open pasture, and hayfields; roost in crevices in cliffs with surface water nearby	None	Y	Y		X	
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	Mesic habitats including coniferous forests, deciduous forests, sagebrush steppe, juniper woodlands, and mountain; maternity roosts and hibernation in caves and mines; does not use crevices or cracks; caves, buildings, and tree cavities for night roosts	None	Y	Y		X	
Fringed myotis <i>Myotis thysanodes</i>	Desert, grassland, and woodland habitats including ponderosa pine, piñon/juniper, greasewood, saltbush, and scrub oak; roosts in caves, mines, rock crevices, and buildings	None	Y	Y		X	
BIRDS							
Bald eagle ⁵ <i>Haliaeetus leucocephalus</i>	Nests in forested rivers and lakes; winters in upland areas, often with rivers or lakes nearby	None	Y	N	X		
American peregrine falcon ⁵ <i>Falco peregrines anatum</i>	Open country near cliff habitat, often near water such as rivers, lakes, and marshes; nests on ledges or holes on cliff faces	None	Y	Y (Adjacent in LaSal Creek)		X	

BLM SENSITIVE SPECIES OF THE UFO ¹							
SPECIES	HABITAT DESCRIPTION ^{2, 3}	KNOWN ⁴	RANGE? ⁵	HABITAT? ⁶	NO EFFECT? ⁷	MAI ⁸	LFL ⁹
	and crags						
Northern goshawk <i>Accipiter gentilis</i>	Nests in a variety of forest types including deciduous, coniferous, and mixed forests including ponderosa pine, lodgepole pine, or in mixed-forests with fir and spruce; also nest in aspen or willow forests; migrants and wintering individuals can be observed in all coniferous forest types	None	Y	Y (Winter foraging only)		X	
Ferruginous hawk <i>Buteo regalis</i>	Open, rolling and/or rugged terrain in grasslands and shrubsteppe communities; also grasslands and cultivated fields; nests on cliffs and rocky outcrops. Winter migrant.	None	Y	N	X		
Burrowing owl ¹⁵ <i>Athene cunicularia</i>	Level to gently sloping grasslands and semi-desert grasslands; Prairie dog colonies for shelter and food	None	Y	N	X		
Columbian sharp-tailed grouse <i>Tympanuchus phasianellus columbian</i>	Native bunchgrass and shrub-steppe communities for nesting; mountain shrubs including serviceberry are critical for winter food and escape cover. Thought to be extirpated from UFO.	None	N		X		
Long-billed curlew <i>Numenius americanus</i>	Lakes and wetlands and adjacent grassland and shrub communities. Rare occurrence.	None	Rare	N	X		
White-faced ibis <i>Plegadis chihi</i>	Marshes, swamps, ponds and rivers	None	Y	N	X		
American white pelican <i>Pelecanus erythrorhynchos</i>	Typically large reservoirs but also observed on smaller water bodies including ponds; nests on islands	None	Y	N	X		
Brewer's sparrow <i>Spizella breweri</i>	Breeds primarily in sagebrush shrub lands, but also in other shrub lands such as mountain mahogany or rabbitbrush; migrants seen in wooded, brushy, and weedy riparian, agricultural, and urban areas; occasionally observed in piñon-juniper	None	Y	Y		X	
Black swift ¹⁵ <i>Cypseloides niger</i>	Nests on precipitous cliffs near or behind high waterfalls; forages from montane to adjacent lowland habitats. Rare.	None	Y	N	X		

BLM SENSITIVE SPECIES OF THE UFO ¹							
SPECIES	HABITAT DESCRIPTION ^{2,3}	KNOWN ⁴	RANGE? ⁵	HABITAT? ⁶	NO EFFECT? ⁷	MAI ⁸	LF ⁹
<i>REPTILES AND AMPHIBIANS</i>							
Longnose leopard lizard <i>Gambelia wislizenii</i>	Desert and semi-desert areas with scattered shrubs or other low plants; e.g., sagebrush; areas with abundant rodent burrows, typically below 5,000' in elevation	None	Y	N	X		
Midget faded rattlesnake ¹³ <i>Crotalus oreganus concolor</i>	Rocky outcrops for refuge and hibernacula, often near riparian; upper limit of 7500'-9500' in elevation	None	Y	Y		X	
Milk snake <i>Lampropeltis triangulum taylori</i>	Variable types including shrubby hillsides, canyons, open ponderosa pine stands and piñon-juniper woodlands, arid river valleys and canyons, animal burrows, and abandoned mines; hibernates in rock crevices	None	Y	Y		X	
Northern leopard frog ¹⁴ <i>Lithobates pipiens</i>	Springs, slow-moving streams, marshes, bogs, ponds, canals, flood plains, reservoirs, and lakes; in summer, commonly inhabits wet meadows and fields; may forage along water's edge or in nearby meadows or fields	None	Y	N	X		
Canyon treefrog <i>Hyla arenicolor</i>	Rocky canyon bottoms along intermittent or perennial streams in temporary or permanent pools or arroyos ; semi-arid grassland, piñon-juniper, pine-oak woodland, scrubland, and montane zones; elevation 1000' - 10,000'	None	Y	N	X		
Boreal toad <i>Anaxyrus boreas boreas</i>	Mountain lakes, ponds, meadows, and wetlands in subalpine forest (e.g., spruce, fir, lodgepole pine, aspen); feed in meadows and forest openings near water but sometimes in drier forest habitats	None	N	N	X		
<i>PLANTS</i>							
Debeque milkvetch <i>Astragalus debequaeus</i>	Varicolored, fine-textured, seleniferous, saline soils of the Wasatch Formation-Atwell Gulch Member; elevation 5100' – 6400'	None	N	N	X		
Grand Junction milkvetch <i>Astragalus linifolius</i>	Sparsely vegetated habitats in piñon-juniper and sagebrush communities, often within Chinle and Morrison Formation and selenium-	None	Y	Y	X		

BLM SENSITIVE SPECIES OF THE UFO ¹							
SPECIES	HABITAT DESCRIPTION ^{2,3}	KNOWN ⁴	RANGE? ⁵	HABITAT? ⁶	NO EFFECT? ⁷	MAI ⁸	LFL ⁹
	bearing soils, only known to occur on the eastern base of the Uncompahgre Plateau; elevation 4800' – 6200'						
Naturita milkvetch <i>Astragalus naturitensis</i>	Cracks and ledges of sandstone cliffs and flat bedrock area typically with shallow soils, within piñon-juniper woodland; elevation 5400' – 6700'	None	Y	Y		X	
San Rafael milkvetch <i>Astragalus rafaেলensis</i>	Banks of sandy clay gulches and hills, at the foot of sandstone outcrops, or among boulders along dry watercourses in seleniferous soils derived from shale or sandstone formations; elevation 4500' – 5300'	None	N	N	X		
Sandstone milkvetch <i>Astragalus sesquiflorus</i>	Sandstone rock ledges (Entrada formation), domed slickrock fissures, talus under cliffs, sometimes in sandy washes; elevation 5000' – 5500' (6500')	None	Y	N		X	
Gypsum Valley cateye <i>Cryptantha gypsophila</i>	Confined to scattered gypsum outcrop and grayish-white, often lichen-covered, soils of the Paradox Member of the Hermosa Formation; often the dominant plant at these sites; elevation 5200' – 6500'	None	N	N	X		
Fragile (slender) rockbrake <i>Cryptogramma stelleri</i>	Cool, moist, sheltered calcareous cliff crevices and rock ledges	None	N	N	X		
Kachina daisy (fleabane) ¹⁵ <i>Erigeron kachinensis</i>	Saline soils in alcoves and seeps in canyon walls; elevation 4800' – 5600'	None	N	N	X		
Montrose (Uncompahgre) bladderpod <i>Lesquerella vicina</i>	Sandy-gravel soil mostly of sandstone fragments over Mancos Shale (heavy clays) mainly in piñon-juniper woodlands or in the eco-zone between it and salt desert scrub; also in sandy soils derived from Jurassic sandstones and in sagebrush steppe communities; elevation 5800' – 7500'	None	N	N	X		
Colorado (Adobe) desert parsley <i>Lomatium concinnum</i>	Adobe hills and plains on rocky soils derived from Mancos Formation shale; shrub communities dominated by sagebrush, shadscale,	None	N	N	X		

BLM SENSITIVE SPECIES OF THE UFO ¹							
SPECIES	HABITAT DESCRIPTION ^{2, 3}	KNOWN ⁴	RANGE? ⁵	HABITAT? ⁶	NO EFFECT? ⁷	MAI ⁸	LFL ⁹
	greasewood, or scrub oak; elevation 5500' – 7000'						
Paradox Valley (Payson's) lupine <i>Lupinus crassus</i>	Piñon-juniper woodlands, or clay barrens derived from Chinle or Mancos Shale formations, often in draws and washes with sparse vegetation; elevation 5000' – 5800'	None	N	N	X		
Dolores skeleton plant ¹⁵ <i>Lygodesmia doloresensis</i>	Reddish purple, sandy alluvium and colluviums of the Cutler Formation between the canyon walls and the river in juniper, shadscale, and sagebrush communities; elevation 4000' – 5500'	None	N	N	X		
Eastwood's monkey- flower <i>Mimulus eastwoodiae</i>	Shallow caves and seeps on steep canyon walls; elevation 4700' – 5800'	None	N	N	X		
Paradox (Aromatic Indian) breadroot <i>Pediomelum aromaticum</i>	Open piñon-juniper woodlands in sandy soils or adobe hills; elevation 4800' – 5700'	None	N	N	X		
INVERTEBRATES							
Great Basin silverspot butterfly <i>Speyeria nokomis nokomis</i>	Found in streamside meadows and open seepage areas with an abundance of violets	None	Y	N	X		

¹ Based on Colorado BLM State Director's Sensitive Species List (Last update: April 15, 2011).

² Van Reyper G. 2006. Bureau of Land Management TES [threatened, endangered, sensitive] species descriptions. Uncompahgre Field Office, Montrose, CO, updated 2009/ 2010. Unpublished document.

³ Spackman SB, JC Jennings, C Dawson, M Minton, A Kratz, C Spurrier. 1997. Colorado rare plant field guide. Prepared for the BLM, USFS, and USFWS by the Colorado Natural Heritage Program.

⁴ Potential and/or known occurrences in Project Area? Assessment based on UFO files and GIS data, partner data, and local knowledge.

⁵ Project area is within the current known range of the species?

⁶ Project area contains suitable habitat for the species?

⁷ Project activities will have no effect to the species or its habitat

⁸ Project activities may effect individuals of the species or its habitat, but not likely to result in a trend toward federal listing

⁹ Project activities are likely to result in a trend toward federal listing for the species

¹⁰ ESA delisted species.

¹¹ Federal candidate species; in accordance with BLM policy and Manual 6840, candidate and proposed species are to be managed and conserved as BLM sensitive species. For the Gunnison prairie dog, candidate status includes only those populations occurring in the "montane" portion of the species' range.

¹² Species not known to occur in UFO.

¹³ Validity of subspecies designation is in question by taxonomists.

¹⁴ Species was petitioned for listing and is currently under status review by FWS, and a 12-month finding is pending; i.e., listing of the species throughout all or a significant portion of its range may be warranted.

¹⁵ Species not on BLM Colorado State Director's Sensitive List; included at the Field Office level to account for recent sightings, proximate occurrences, and/or potential habitat.

Appendix F

BIRDS OF CONSERVATION CONCERN OF THE UFO ¹									
SPECIES	HABITAT DESCRIPTION ₂	RANGE/STATUS _{2,3}	Populations Trends ⁴	KNOWN ₅	RANGE ₆	HABITAT? ₇	NO EFFECT? ₈	MAI ⁹	LFL ¹⁰
Gunnison sage grouse <i>Centrocercus minimus</i>	Sagebrush communities (especially big sagebrush) for hiding and thermal cover, food, and nesting; open areas with sagebrush stands for leks; sagebrush-grass-forb mix for nesting; wet meadows for rearing chicks	Year-round resident, breeding.	-5.5 (-6.1) <u>-7.5 (-10.1)</u> Note: <i>Centrocercus sp.</i>						
American bittern <i>Botaurus lentiginosus</i>	Marshes and wetlands; ground nester	Spring/ summer resident, breeding confirmed in the region but not within the UFO	No data	None	Y	N	X		
Bald eagle ¹¹ <i>Haliaeetus leucocephalus</i>	Nests in forested rivers and lakes; winters in upland areas, often with rivers or lakes nearby	Fall/winter resident, no confirmed breeding	+14.3 (+15.2) <u>+14.3</u> <u>(+15.2)</u>						
Ferruginous hawk <i>Buteo regalis</i>	Open, rolling and/or rugged terrain in grasslands and shrubsteppe communities; also grasslands and cultivated fields; nests on cliffs and rocky outcrops	Fall/ winter resident, non-breeding	+2.5 (+4.0) <u>+0.7 (+0.8)</u>						
Golden eagle <i>Aquila chrysaetos</i>	Open country, grasslands, woodlands, and barren areas in hilly or mountainous terrain; nests on rocky outcrops or large trees	Year-round resident, breeding	-1.4 (-0.9) <u>-0.2 (+0.8)</u>	None	Y	Y (Adjacent in LaSal Creek)		X	

BIRDS OF CONSERVATION CONCERN OF THE UFO ¹									
SPECIES	HABITAT DESCRIPTION ²	RANGE/STATUS ^{2,3}	Populations Trends ⁴	KNOWN ⁵	RANGE ⁶	HABITAT? ⁷	NO EFFECT? ⁸	MAI ⁹	LFL ¹⁰
Peregrine falcon ¹¹ <i>Falco peregrinus</i>	Open country near cliff habitat, often near water such as rivers, lakes, and marshes; nests on ledges or holes on cliff faces and crags	Spring/summer resident, breeding	+1.5 (+6.3) <u>+28.1</u> <u>(+21.7)</u>						See assessment under Sensitive Species Section
Prairie falcon <i>Falco mexicanus</i>	Open country in mountains, steppe, or prairie; winters in cultivated fields; nests in holes or on ledges on rocky cliffs or embankments	Year-round resident, breeding	+1.7 (+6.3) <u>+3.0 (+2.6)</u>	None	Y	Y (Adjacent in LaSal Creek)		X	
Long-billed curlew <i>Numenius americanus</i>	Lakes and wetlands and adjacent grassland and shrub communities	Spring/ fall migrant, non-breeding	+0.1 (+0.3) <u>-4.4 (-3.5)</u>						See assessment under Sensitive Species Section
Snowy plover ¹² <i>Charadrius alexandrinus</i>	Sparsely vegetated sand flats associated with pickleweed, greasewood, and saltgrass	Spring migrant, non-breeding	No Data	None	N	N	X		
Mountain plover <i>Charadrius montanus</i>	High plain, cultivated fields, desert scrublands, and sagebrush habitats, often in association with heavy grazing, sometimes in association with prairie dog colonies ; short vegetation	Spring/ fall migrant, non-breeding	-3.4 (-2.5) <u>-1.3 (-0.2)</u>	None	N	N	X		

BIRDS OF CONSERVATION CONCERN OF THE UFO ¹									
SPECIES	HABITAT DESCRIPTION ²	RANGE/STATUS ^{2,3}	Populations Trends ⁴	KNOWN ⁵	RANGE ⁶	HABITAT? ⁷	NO EFFECT? ⁸	MAI ⁹	LFL ¹⁰
Yellow-billed cuckoo ¹³ <i>Coccyzus americanus</i>	Riparian, deciduous woodlands with dense undergrowth; nests in tall cottonwood and mature willow riparian, moist thickets, orchards, abandoned pastures	Summer resident, breeding	<u>-1.0 (-2.6)</u>						
Flammulated owl <i>Otus flammeolus</i>	Montane forest, usually open and mature conifer forests; prefers ponderosa pine and Jeffrey pine	Summer resident, breeding	No Data	None	N	N	X		
Burrowing owl <i>Athene cunicularia</i>	Open grasslands and low shrub lands often in association with prairie dog colonies; nests in abandoned burrows created by mammals; short vegetation	Summer/ fall resident, breeding	<u>-0.1 (+0.4)</u> <u>-0.9 (-0.6)</u>						
Lewis's woodpecker <i>Melanerpes lewis</i>	Open forest and woodland, often logged or burned, including oak, coniferous forest (often ponderosa), riparian woodland, and orchards, less often in piñon-juniper	Year-round resident, breeding	<u>-2.0 (-1.4)</u> <u>-0.9 (+0.8)</u>	None	Y	Y		X	
Willow flycatcher ¹² <i>Empidonax traillii</i>	Riparian and moist, shrubby areas; winters in shrubby openings with short vegetation	Summer resident, breeding	<u>-2.6 (-1.8)</u> <u>-3.1 (-2.8)</u>	None	Y	N	X		
Gray vireo <i>Vireo vicinior</i>	Piñon-juniper and open juniper-grassland	Summer resident, breeding	<u>+1.7 (+1.4)</u> <u>+0.6 (+1.6)</u>	None	Y	Y		X	
Pinyon jay <i>Gymnorhinus cyanocephalus</i>	Piñon-juniper woodland	Year-round resident, breeding	<u>-3.6 (-3.3)</u> <u>-3.0 (-3.4)</u>	None	Y	Y		X	

BIRDS OF CONSERVATION CONCERN OF THE UFO ¹									
SPECIES	HABITAT DESCRIPTION ²	RANGE/STATUS ^{2,3}	Populations Trends ⁴	KNOWN ⁵	RANGE ⁶	HABITAT? ⁷	NO EFFECT? ⁸	MAI ⁹	LFL ¹⁰
Juniper titmouse <i>Baeolophus griseus</i>	Piñon-juniper woodlands, especially juniper; nests in tree cavities	Year-round resident, breeding	+0.3 (+1.5) <u>-0.5 (-0.2)</u>	None	Y	Y		X	
Veery <i>Catharus fuscescens</i>	Deciduous forests, riparian, shrubs	Possible summer resident, observed recently in Gunnison County, possible breeding	-4.9 (-7.7) <u>-5.7 (-5.8)</u>	None	N	N	X		
Bendire's thrasher <i>Toxostoma bendirei</i>	Desert, especially areas of tall vegetation, cholla cactus, creosote bush and yucca, and in juniper woodland	UFO is outside known range	-4.7 (-4.6)	None	N	N	X		
Grace's warbler <i>Dendroica graciae</i>	Mature coniferous forests	Summer resident, breeding	-1.6 (+1.9) <u>+6.1 (+5.2)</u>	None	N	N	X		
Brewer's sparrow <i>Spizella breweri</i>	Sagebrush-grass stands; less often in piñon-juniper woodlands	Summer resident, breeding	-1.7 (-0.1) <u>-2.0 (-1.6)</u>	See assessment under Sensitive Species Section					
Grasshopper sparrow <i>Ammodramus savannarum</i>	Open grasslands and cultivated fields	UFO is outside known range	-1.9 (-8.1) <u>-3.0 (-1.1)</u>	None	N	N	X		
Chestnut-collared longspur <i>Calcarius ornatus</i>	Open grasslands and cultivated fields	Spring migrant, non-breeding	<u>+0.4 (-3.4)</u>	None	N	N	X		
Black rosy-finch <i>Leucosticte atrata</i>	Open country including mountain meadows, high deserts, valleys, and plains; breeds/ nests in alpine areas near rock piles and cliffs	Winter resident, non-breeding	No Data	None	Y	N	X		
Brown-capped rosy-finch <i>Leucosticte australis</i>	Alpine meadows, cliffs, and talus and high-elevation parks and valleys	Summer residents, breeding	No Data	None	N	N	X		

BIRDS OF CONSERVATION CONCERN OF THE UFO ¹									
SPECIES	HABITAT DESCRIPTION ²	RANGE/STATUS ^{2,3}	Populations Trends ⁴	KNOWN ⁵	RANGE ⁶	HABITAT? ⁷	NO EFFECT? ⁸	MAI ⁹	LFL ¹⁰
Cassin's finch <i>Haemorhous cassinii</i>	Open montane coniferous forests; breeds/ nests in coniferous forests	Year-round resident, breeding	-0.6 (+0.3) <u>+0.4 (+2.2)</u>	None	Y	Y		X	

¹ U.S. Fish and Wildlife Service. 2008. Birds of Conservation Concern 2008. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, Virginia. 85 pp. [Online version available at <<http://www.fws.gov/migratorybirds/>>].

² Cornell Lab of Ornithology. All about birds: bird guide. <<http://www.allaboutbirds.org/guide/>> Accessed 05/15/2009.

³ Status within the UFO. San Juan Institute of Natural and Cultural Resources. Colorado Breeding Bird Atlas. Fort Lewis College, Durango, Colorado. <<http://www.cobreedingbirdatlasii.org/>> Accessed: 05/15/2009.

⁴ Populations trends based on Patuxent Breeding Bird Survey Results for the Southern Rockies Region and Colorado for 1966-2010 (2000-2010). Accessed 10/30/2012 <<http://www.mbr-pwrc.usgs.gov/cgi-bin/atlas10.pl?S16&2&10>>

⁵ Potential and/or known occurrences in Project Area? Assessment based on UFO files and GIS data, partner data, and local knowledge.

⁶ Project area is within the current known range of the species?

⁷ Project area contains suitable habitat for the species?

⁸ Project activities will have no effect to the species or its habitat

⁹ Project activities may effect individuals of the species or its habitat, but not likely to result in a trend toward federal listing

¹⁰ Project activities are likely to result in a trend toward federal listing for the species

¹¹ ESA delisted species.

¹² Non-listed subspecies/ population.

¹³ ESA candidate species.

Appendix G

Summary of Comments from the 50-day Preliminary EA Public Comment Period

Issue	BLM Response
<p>PP2: Scoping comments are not adequately addressed and an EIS is required.</p>	<p>Substantive scoping comments have been addressed. An EIS is beyond scope of proposed action of adding drilling to an existing plan.</p>
<p>PP3: BLM is approving an expansion proposal that is speculative in nature and appears to be an attempt to secure an approval for activities that are not imminent. We wish to specifically restate our standing concerns that this analysis and approval will become outdated by the time any exploration activities commence.</p>	<p>This amendment is for drilling which could begin soon. The commenter does not offer a source for the assertion that exploration will not commence before approval “becomes outdated”.</p>
<p>PP4: The degree to which exploratory activities and future expansion at the J Bird Mine will enhance those cumulative impacts have also not been adequately analyzed</p>	<p>The proposed action does not expand the J Bird Mine. Exploration would help delineate where ore is located. The level of currently approved mining would not increase as a result of the action. Any future expansion is speculative.</p>
<p>PP4: ... fails to take into consideration that any ore produced from the mine in the future will be processed at the White Mesa Mill, across state lines in Utah. It also fails to consider the regional scale and inter-connectedness of uranium mining and milling activities in the Uravan Mineral Belt; these activities are tied to one another and impact the entire Four Corners region, not just western Montrose County.</p> <p>PP6: EA also fails to adequately define the degree to which cumulative impacts in the region will be attributable to activities specifically authorized for the J Bird.</p>	<p>Impact from DOE ULP is adequately addressed in the Cumulative Impacts Analysis. It is beyond the scope of this document to analyze impacts from the mills, which receive or would receive ore from mines from within and outside the area, including other states. It is also beyond the scope to analyze impacts from a mill that may or may not ever be approved to be constructed.</p> <p>The analysis defines impacts attributed to the J Bird Mine exploration.</p>
<p>PP5: ... the Draft (DOE ULP) PEIS is intended not just to analyze the specific impacts of the leasing program but to also provide a regional assessment of cumulative impacts. Because the approval of the J Bird plan amendment is not timely, we encourage BLM to delay the final decision on this proposal until such time as a regional</p>	<p>This EA does not expand a mine or authorize new mining. The action is not tied to future authorizations in the DOE ULP EIS, and a delay in making a decision on this EA’s proposed action is not warranted. Cumulative impacts of this proposed action have been analyzed.</p>

<p>cumulative impacts analysis is released that meets all the requirements of NEPA, including the “hard look” necessary to protect the public interest, and until such time as BLM can incorporate the analysis into the J Bird EA.</p>	
<p>PP6: The preliminary EA acknowledges that water quality could be directly impacted and identifies several potential causes for degradation, including the presence of acid-producing rock, surface erosion and increased sediment transport, or contamination from spills. However, the degree to which water quality could be degraded is not specified.</p>	<p>Included sediment modeling to better quantify the impacts to water quality. Also included a quantitation of the acres impacted in the cumulative impacts analysis for soils and water quality.</p>
<p>PP6: NEPA requires that any mitigation measures relied upon by the BLM in any finding of no significant impact must be quantified.</p>	<p>While the mitigation measures identified lessen impacts, the FONSI does not rely on mitigation measures to reach a level of insignificance. The impacts would be at a level of insignificance without the mitigation; the mitigation does improve the project. The EA does explain what each mitigation measure would accomplish.</p>
<p>PP7: BLM’s summary of cumulative impacts from the proposed action reflect ... lack of specificity.</p>	<p>The cumulative impacts section has been revised.</p>
<p>PP7: The lack of a complete cultural resources analysis for the proposed action is also cause for concern. ...a complete cultural resources analysis is required.</p>	<p>A phased approach to Cultural resource inventories in this type of project is an appropriate response to the project’s nature, and is consistent with Section 106 of the national Historic Preservation Act, BLM’s 8100 manual direction and the Colorado State Protocol. Until a specific action is authorized on a specific parcel of public lands, an archaeologist cannot do an inventory. Inventory will occur as exploration holes are needed and applied for, before BLM authorizes the site work or drilling. Deferring inventory until implementation is consistent with the existing laws and directives governing Cultural Resources under Section 106 of the National Historic Preservation Act, its enabling legislation and supporting directives through the BLM’s Cultural resource program. The existing inventory data is sufficient to allow for the authorization to proceed as written. The permit does not allow surface disturbing activities within the exploration area, and contains a proviso that</p>

	<p>any planned surface disturbing actions within the exploration area must also have an accompanying Cultural Resource Inventory before approval. Should the permit holder violate that provision, said permit holder will be in violation of the law.</p>
<p>PP9&10: ... a formal Endangered Species Act consultation with the U.S. Fish & Wildlife Service also is incomplete. The endangered species analysis is not being conducted because there is no suitable habitat within the project area and the impacts will occur off-site and downstream. This conclusion appears to contradict the reality that any water depletions in the Dolores River Basin cause impacts to the endangered fish species, a point that is noted by BLM in the preliminary EA.</p> <p>Noting that some impacts will occur, while failing to quantify and fully define them in consultation with the Fish & Wildlife Service violates the Endangered Species Act, and leaving open the possibility that additional consultations with Fish & Wildlife could be reopened in the future, again, does not facilitate the reasoned decision-making required by NEPA. Nor does it satisfy NEPA's requirement that a Fish & Wildlife consultation must be conducted in advance of decisions, even if it is only possible that impacts may occur.</p>	<p>This action falls under an existing programmatic consultation with USFWS for the big river fish and recognized that there may be impacts to these species. As stated in the EA, "BLM was issued a programmatic Biological Opinion (ES/GJ-6-CO-08-F-0010) on water depletions associated with BLM projects (excluding fluid mineral development) authorized by BLM within the Upper Colorado River Basin in Colorado. Utilizing this Biological Opinion, BLM would report the depletion to the USFWS and pay the fee for the depletion, thus meeting the requirements of the ESA. No consultation with the USFWS would be required. It is estimated that over the 10-year plan time frame, 2.0 acre-feet of water would be used. In the future, if accumulated water depletions associated with mining activities over 10-year life of project exceed a total of 2 acre-foot, BLM would be notified so that further water depletion payments, or consultation with USFWS can be initiated. If in the future, additional effects on species listed under the ESA are evident, consultation with the USFWS could be reopened."</p> <p>Depletions for this project were reported in the BLM's water depletion report for this project. There is no further requirement unless greater than 2.0 acre-feet of water is used.</p>

Appendix H

Comment letter received during the 32-day public comment period.

Information Network for Responsible Mining • Uranium Watch

Oct. 11, 2013

Robert P. Ernst
BLM Uncompahgre Field Office
2465 S. Townsend Avenue
Montrose, Colorado 81401

Re: Preliminary Environmental Analysis and Unsigned Finding of No Significant Impact for Rimrock's J Bird Mine Plan of Operations Amendment

Via email to rernt@blm.gov, blm_co_ufo_uranium@blm.gov

Dear Mr. Ernst,

Thank you for the opportunity to provide comments on the unsigned Finding of No Significant Impact and the Preliminary Environmental Assessment for the J Bird Mine, located on public lands on Wray Mesa in western Montrose County. These comments are submitted on behalf of the public interest groups Information Network for Responsible Mining and Uranium Watch.

We would like to reiterate concerns we raised in scoping comments we submitted to you in May that have not been adequately addressed in the preliminary EA and should be addressed in more detail in an Environmental Impact Statement. It is critically important that the final EA thoroughly identify and analyze the environmental impacts before BLM makes a decision to approve the J Bird's amended Plan of Operations.

First and foremost of these is our continuing concern that BLM is approving an expansion proposal that is speculative in nature and appears to be an attempt to secure an approval for activities that are not imminent. There are no economic ore reserves currently present at the J Bird Mine and there are unlikely to be economic reserves in the short-term. Without economic reserves, an expansion of a mine that has been idle for decades is extremely unlikely to occur. Because an analysis conducted under the guidance of the National Environmental Protection Act loses relevance and meaning as time passes — even as technology, science and connected actions proceed — we wish to specifically restate our standing concerns that this analysis and approval will become outdated by the time any exploration activities commence. The timeliness, purpose and need of the proposed action have not been addressed in the preliminary EA.

The cumulative impacts and the degree to which exploratory activities and future expansion at the J Bird Mine will enhance those cumulative impacts have also not been adequately analyzed in the preliminary EA. BLM has restricted its analysis of cumulative impacts by defining the impacted area as western Montrose County. This fails to take into consideration that any ore produced from the mine in the future will be processed at the White Mesa Mill, across state lines in Utah. It also fails to consider the regional scale and inter-connectedness of uranium mining and milling activities in the Uravan Mineral Belt; these activities are tied to one another and impact the entire Four Corners region, not just western Montrose County. A decision on the part of BLM to authorize new activities at the J Bird are premature before the completion of a regional cumulative impacts analysis of sufficient depth and scope that examines the past, present, and future impacts of uranium production.

BLM is a cooperating agency in such an analysis, included in the Programmatic Environmental Impact Statement currently being conducted by the Department of Energy for its Uranium Leasing Program, and should be aware that the analysis is still incomplete and will not be concluded until sometime in 2014. We have also been disappointed by the preliminary analysis provided by the DOE in the Draft PEIS and have identified to that agency numerous places where the cumulative analysis falls short. This is an important point because the Draft PEIS is intended not just to analyze the specific impacts of the leasing program but to also provide a regional assessment of cumulative impacts that will serve, in some respects, as informal guidance for connected actions and new proposals that arise in the future. Because the approval of the J Bird plan amendment is not timely, we encourage BLM to delay the final decision on this proposal until such time as a regional cumulative impacts analysis is released that meets all the requirements of NEPA, including the “hard look” necessary to protect the public interest, and until such time as BLM can incorporate the analysis into the J Bird EA. It is both a matter of practicality and legality that the question of cumulative impacts be settled prior to the authorization of specific new actions, including mine expansions and increased exploration.

The preliminary EA also fails to adequately define the degree to which cumulative impacts in the region will be attributable to activities specifically authorized for the J Bird. In our scoping comments, we noted that BLM needs to determine the “threshold of activity” and how the specific activities at the J Bird will change and impact that threshold. Throughout the discussion of cumulative impacts in the preliminary EA, there are numerous conclusions that cumulative impacts will not be “noticeable” or “insignificant,” but there is no quantification. For example, in the discussion of surface and ground water quality, the preliminary EA acknowledges that water quality could be directly impacted and identifies several potential causes for degradation, including the presence of acid-producing rock, surface erosion and increased sediment transport, or contamination from spills. However, the degree to which water quality could be degraded is not specified; this lack of quantification makes it more difficult to make a reasonable decision about the proposed action. In the same way, NEPA requires that any mitigation measures relied upon by the BLM in any finding of no significant impact must be quantified. Simply listing mitigation measures without a specific and scientifically defensible quantification of the effectiveness of those measures violates NEPA.

In order to meet the requirements of NEPA, the foreseeable environmental consequences of an action must be disclosed. Furthermore, NEPA prohibits federal agencies from relying upon conclusions or assumptions that are not supported by scientific or objective data, or conclusions that lack specificity. BLM's summary of cumulative impacts from the proposed action reflect this lack of specificity, wherein the resulting impacts are acknowledged yet "are expected to be minimal given the small size of the proposed mining operation." While we do not wish to unnecessarily belabor the point, we feel compelled to ask, at what point do numerous "minimal" impacts collectively cause an action to cross the threshold? Considering the list of connected actions such as the DOE leasing and existing authorized mines on public lands that BLM identified in the preliminary EA, it appears that there are numerous cumulative impacts accruing on top of the camel's back. BLM's preliminary EA does not fully disclose the impacts nor answer this most relevant of questions.

The lack of a complete cultural resources analysis for the proposed action is also cause for concern. The unsigned FONSI states that the existing mine site has been properly inventoried, but the proposed expansion area has not. However, NEPA requires that a cultural analysis be conducted *before* actions are authorized. BLM's statement that any future required cultural analysis be conducted only if and when applications for exploration are made automatically precludes the reasoned decision-making required by NEPA, for such a decision cannot be reasonable if all the information required is not on the table at the time the decision is made. Waiting for future exploration applications to come in and then finishing the analysis also further underscores our point that the proposed amendment is speculative in nature, and even BLM is acknowledging it as such. If the proposal were viable, then it would be imperative to conduct the required cultural resources analysis before an approval of activities is made. Regardless, a complete cultural resources analysis is required.

Similarly, a formal Endangered Species Act consultation with the U.S. Fish & Wildlife Service also is incomplete. The preliminary EA notes that endangered Colorado River species — the pikeminnow, razorback sucker, bonytail chub and humpback chub — will be indirectly impacted by the proposed action. Yet, the endangered species analysis is not being conducted because there is no suitable habitat within the project area and the impacts will occur off-site and downstream. This conclusion appears to contradict the reality that any water depletions in the Dolores River Basin cause impacts to the endangered fish species, a point that is noted by BLM in the preliminary EA. "There could be downstream effects to fish habitat quality but, given the distance to occupied habitat for these species, may be undetectable."

Noting that some impacts will occur, while failing to quantify and fully define them in consultation with the Fish & Wildlife Service violates the Endangered Species Act, and leaving open the possibility that additional consultations with Fish & Wildlife could be reopened in the future, again, does not facilitate the reasoned decision-making required by NEPA. Nor does it satisfy NEPA's requirement that a Fish & Wildlife consultation must be conducted *in advance of* decisions, even if it is only possible that impacts may occur.

We hope that BLM will take another look at the impacts of the proposed action and, rather than signing the FONSI, decide to conduct the full Environmental Impact Statement that this proposal deserves.

Thank you again for considering our comments.

Respectfully submitted,

Jennifer Thurston
Director
INFORM
P.O. Box 27
Norwood, CO 81423
jennifer@informcolorado.org
212-473-7717

Sarah M. Fields
Director Uranium Watch
P.O. Box 344
Moab, Utah 84532
sarah@uraniumwatch.org
435-259-9450