

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

**Decision Record
Environmental Assessment
DOI-BLM-UT-Y010-2010-0172-EA**

March 2011

**Proposed Rights-of-Way
for
Roads to access State Mineral Leases Held by K₂O
in the Canyon Rims Area**

*K₂O Utah, LLC
3622 West Bay Circle
Lehi, Utah 84043*

**U.S. Department of the Interior
Bureau of Land Management**

Moab Field Office
82 East Dogwood
Moab, Utah 84532
Phone: (435) 259-2100



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It is my decision to authorize the road rights-of-way to K₂O Utah, LLC (K₂O) as described in the proposed action in the attached environmental assessment (EA). Rights-of-way UTU-87967, UTU-87966 and UTU-88102 are for the upgrading, construction and use of roads. The rights-of-way are granted for terms of 10 years, with provisions for renewal, and subject to rental payments as determined in 43 CFR 2806.

Authorities: The authority for this decision is pursuant to Title V of the Federal Land Policy and Management Act of October 21, 1976 (90 Stat. 2776; 43 U.S.C. 1761).

Terms/Conditions/Stipulations: Potential resource conflicts were resolved through the stipulations and environmental commitments integral to the Proposed Action shown below:

1. The holder will provide a bond in the amount of \$200,000, to be maintained for any unintentional damage of the Needles Overlook hard surfaced road and until restoration of disturbed areas has been accepted by the authorized officer. Upon completion or partial completion of restoration, the authorized officer may terminate or reduce the amount of the bond. Surface disturbing activities will not commence until the BLM authorized officer has accepted the bond.
2. All project activities will follow the road construction guidelines in the BLM/USFS 2007 edition of surface Operating Standards and Guidelines for Oil and Gas Exploration and Development ("The Gold Book").
3. No construction activities will be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of 4 inches deep, the soil will be deemed too wet to adequately support construction equipment.
4. During construction operations, appropriate, site specific sedimentation controls (e.g., erosion blankets, hay bales, earthen berms) will be used in areas susceptible to erosion.
5. Installation of low water crossings will involve dipping the road down to the bed of the drainage and capping it as necessary with gravel or rip rap so that water is not impounded. The holder will maintain the water crossings.
6. Signs will be posted warning recreation traffic of heavy truck traffic and trucks turning during the road construction phase.
7. Signs will be posted for project related personnel to utilize only the authorized portions of the Needles Overlook Road.

8. Following construction, the holder will reclaim a 16-foot width of the 30-foot wide disturbance corridors leaving a 14-foot wide travel surface. The holder will re-contour disturbed areas to restore the site to approximately the original contour of the ground as determined by the authorized officer. Following re-contouring the holder will seed all disturbed areas, using an agreed upon method suitable for the location. Seeding will be repeated if a satisfactory stand is not obtained as determined by the authorized officer upon evaluation after the growing season.
9. To reduce potential impacts to visual resources, road cuts and fills will be kept to a minimum and blend with the natural environment.
10. To reduce potential impacts to raptors, prior to any road construction between March 1 and August 15, all areas within 0.5 miles of the rights-of-way will be surveyed for the presence of raptor nests by a BLM-approved biologist. If occupied raptor nests are found within 0.5 miles of the rights-of-way, construction and reclamation operations will not occur within that 0.5-mile buffer during the nesting season of that species.
11. To minimize impacts to burrowing owls, any prairie dog towns within 0.25 miles of the rights-of-way will be surveyed for the presence of ground-nesting burrowing owls by a BLM-approved biologist. If burrowing owls are present, construction and reclamation operations will not occur between March 1 and August 15 within the 0.25-mile buffer.
12. Construction and reclamation operations will not be authorized between May 1 and June 15, for the protection of pronghorn antelope during the fawning period. The restriction does not apply to maintenance and operation of the road. Exceptions to this restriction may be specified in writing by the Moab Field Office.
13. To minimize introduction of noxious and invasive weed species, the following measures will be implemented:
 - a. The holder and their contractors will power-wash all construction equipment and vehicles prior to the start of construction. Vehicles traveling between the project location and outside areas will be power-washed on a weekly basis.
 - b. The holder will implement an intensive weed control program at the beginning of the first growing season after road construction within the rights-of-way. Weed control along rights-of-way will be conducted through an Approved Pesticide Use and Weed Control Plan from the BLM.
14. Fugitive dust will be abated through the use of water spraying during construction operations.
15. Members of the road construction crew will car pool to and from the project area to minimize vehicle related emissions and fugitive dust from vehicle traffic.
16. Trash containers and portable toilets will be located within the rights-of-way during construction. Upon completion of road construction, the toilet and its contents will be disposed of in a sewage facility in accordance with applicable rules and regulations regarding sewage treatment and disposal. Trash will be disposed of in the San Juan County landfill.

17. Upon termination of the rights-of-way, the roads will be reclaimed to the original width.

PLAN CONFORMANCE AND CONSISTENCY:

The proposed action has been reviewed and found to be in conformance with the terms and conditions of the Moab Field Office Resource Management Plan (RMP), approved October 2008. The Proposed Action is in conformance with the approved RMP based on the following:

- 1) Lands and Realty, Goals and Objectives, page 65, which states: "Meet public needs for use authorizations such as rights-of-way (ROWs), alternative energy sources, and permits while minimizing adverse impacts to resource values."
- 2) Lands and Realty, Management Decision LAR-7, page 65, which states: "Right-of-way (ROW) avoidance and exclusion areas will be consistent with the stipulations identified in Appendix A for oil and gas leasing and other surface-disturbing activities. These stipulations have been developed to protect important resource values." Map 12 shows that the ROW applications are not located in a ROW avoidance or exclusion area.
- 3) Lands and Realty, Management Decision LAR-8, page 66, which states: As per the State of Utah v. Andrus, Oct. 1, 1979 (Cotter Decision), the BLM will grant the State of Utah reasonable access to State lands for economic purposes, on a case-by-case basis.

The Proposed Action is consistent with all applicable BLM policy, and other Federal, State, and local laws, regulations and plans. Specifically, Section 501 of the Federal Land Policy and Management Act of 1976 (FLPMA) authorizes the Secretary of the Interior to issue regulations for the use, occupancy, and development of the public lands for ROWs. Road ROWs are regulated under 43 CFR 2800. The applications received for the ROWs are consistent with these Federal regulations.

The Proposed Action is consistent with the San Juan County Master Plan based on the following desired conditions:

- 1) It is the desire of San Juan County to have routes of travel accessible by motor vehicle for all users, including the elderly, physically handicapped and disabled, to gain access to the public lands.
- 2) It is San Juan County's desire to provide access throughout the county to meet the needs of both residents and visitors for a wide variety of purposes. These purposes range from consumptive (mining, oil, gas, etc.) to recreational uses (hiking, biking, ATVing, horseback riding, etc).
- 3) San Juan County desires to have a fully developed trails plan which will compliment the diverse landscape and balance access between consumptive, recreational, motorized and non-motorized uses.

Alternatives considered: The EA considered two alternatives: the Proposed Action and the No Action Alternative.

Alternatives considered but eliminated from detailed study:

- An alternative that would allow K2O to use BLM designated routes, pursuant to Moab Field Office's Travel Plan, with no upgrading, widening, or surface enhancements.

The above alternative would not have met the purpose and need for the proposed project that involves the transport of heavy equipment utilizing semi trucks. The roads are not designed to meet the needs for the anticipated exploration activities and would have the potential for adverse environmental effects such as erosion and sediment production and, therefore, were not carried forward for detailed analysis.

- An alternative that could provide access to the State Mineral Lease ML-51729 from the northeast.

This option was evaluated but was determined to have more adverse impacts because it is within critical habitat for the Mexican Spotted Owl and within Desert Bighorn Sheep Lambing and Rutting Areas. Because the route from the northeast would potentially result in more adverse environmental impacts than the route included in the Proposed Action, this alternative was eliminated from detailed study in the EA.

- An alternative route to access State Mineral Lease ML-51729 that was originally proposed by K₂O that involved a continuation of the route included in the proposed action.

This option would require 0.7 miles of road upgrades as compared to 0.2 miles of new road construction in the Proposed Action which amounts to about 2.5 acres and 0.72 acres of surface disturbance, respectively. In addition K₂O's original proposal breaches into critical habitat for the Mexican Spotted Owl. Since K₂O's original proposal would result in more environmental impacts than the route included in the proposed Action, this alternative was not analyzed further in the EA.

- An alternative that would allow K₂O to utilize the routes with obtaining a right-of-way

As a general rule, a right-of-way is required whenever building or construction is necessary. Construction of the roads is necessary in order to accommodate the intended use. Designing the roads to meet the needs for the anticipated exploration activities minimizes the potential adverse environmental effects such as erosion and sediment production. In addition to the routes requiring upgrades and construction, the BLM has determined that a right-of-way is necessary for the use of BLM's hard surfaced road, the Needles Overlook Road; because the proposed use may result in damages to this road which K₂O will be required to repair. Therefore, an alternative for not issuing a right-of-way to K₂O for the BLM designated routes was not carried forward for detailed analysis.

Rationale for Decision: The provisions in the right-of-way applications, the attachments to the right-of-way applications, and the Terms and Conditions for the right-of-way grants are adequate to prevent undue and unnecessary impacts to the environment. The rights-of-way are in conformance with management actions provided for in the Moab Field Office RMP and consistent with BLM objectives of 43 CFR 2800.

The rights-of-way provide access to state lands which meets the objectives for the purpose and need for this project. Potential alternatives were considered, and eliminated, in Section 2.4 of the EA. All of the mitigation measures from the EA were carried forward. The project was posted on the Electronic Notification Bulletin Board and the Moab Field Office received two comments on the project.

Protest/Appeal Language: This decision shall take effect immediately upon the date it is signed by the Authorized Officer April , 2011 and shall remain in effect while any appeal is pending unless the Interior Board of Land Appeals issues a stay (43 CFR 3165.4). Any appeal of this decision must follow the procedures set forth in 43 CFR Part 4. Within 30 days of the decision, a notice of appeal must be filed in the office of the Authorized Officer at:

Bureau of Land Management
Moab Field Office
82 E Dogwood Ave
Moab, UT 84532

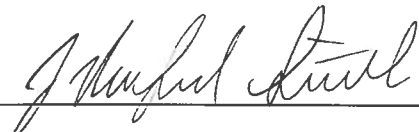
If a statement of reasons for the appeal is not included with the notice, it must be filed with the Interior Board of Land Appeals, Office of Hearings and Appeals U.S. Department of the Interior, 801 North Quincy St., Suite 300, Arlington, VA 22203 within 30 days after the notice of appeal is filed with the Authorized Officer.

If you wish to file a petition for stay pursuant to 43 CFR Part 4.21(b), the petition for stay should accompany your notice of appeal and shall show sufficient justification based on the following standards:

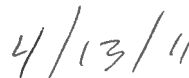
1. The relative harm to the parties if the stay is granted or denied,
2. The likelihood of the appellant's success on the merits,
3. The likelihood of irreparable harm to the appellant or resources if the stay is not granted, and
4. Whether the public interest favors granting the stay.

If a petition for stay is submitted with the notice of appeal, a copy of the notice of appeal and petition for stay must be served on each party named in the decision from which the appeal is taken, and with the IBLA at the same time it is filed with the Authorized Officer.

A copy of the notice of appeal, any statement of reasons and all pertinent documents must be served on each adverse party named in the decision from which the appeal is taken and on the Office of the Regional Solicitor, U.S. Department of the Interior, 6201 Federal Building, 125 South State Street, Salt Lake City, Utah 84138-1180, not later than 15 days after filing the document with the Authorized Officer and/or IBLA.



Authorized Officer



Date

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

**Finding of No Significant Impact
Environmental Assessment
DOI-BLM-UT-Y010-2010-0172-EA**

March 2011

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in the Canyon Rims Area**

*K₂O Utah, LLC
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Lehi, Utah 84043*

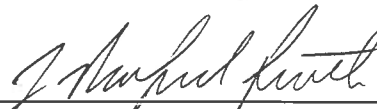
**U.S. Department of the Interior
Bureau of Land Management**

Moab Field Office
82 East Dogwood
Moab, Utah 84532
Phone: (435) 259-2100
Fax: (435) 259-2106



FINDING OF NO SIGNIFICANT IMPACT
Environmental Assessment
DOI-BLM-UT-Y010-2010-0172-EA
Proposed Rights-of-Way
Roads to access State Mineral Leases Held by K₂O
in the Canyon Rims Area

Based on the analysis of potential environmental impacts contained in the (referenced or attached) environmental assessment, and considering the significance criteria in 40 CFR 1508.27, I have determined that the action will not have a significant effect on the human environment. An environmental impact statement is therefore not required.



Authorized Officer

4/13/11

Date

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

Environmental Assessment DOI-BLM-UT-Y010-2010-0172-EA

February 2011

**Proposed Rights-of-Way
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Roads to Access State Mineral Leases Held by K₂O
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Lehi, Utah 84043*

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Moab Field Office
82 East Dogwood
Moab, Utah 84532
Phone: (435) 259-2100
Fax: (435) 259-2106



**Proposed Rights-of-Way (ROW) for Roads to Access State Mineral Leases
Held by K₂O in the Canyon Rims Area
Environmental Assessment DOI-BLM-UT-Y010-2010-0172-EA**

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Appendix A – Interdisciplinary Team Checklist

Appendix B – Summary of Public Scoping Comments and Responses

MAPS

Map 1 – Proposed ROWs

Map 2 – Canyon Rims Special Recreation Management Area

Map 3 – Pronghorn Habitat

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Roads to Access State Mineral Leases Held by K₂O in the Canyon Rims Area
DOI-BLM-UT-Y010-2010-0172-EA**

1.0 PURPOSE & NEED

1.1 Introduction

This Environmental Assessment (EA) has been prepared to disclose and analyze the environmental consequences of three right-of-way (ROW) applications proposed by K₂O Utah, LLC (K₂O). The proposed ROWs would allow upgrading and new construction of roads in the Canyon Rims area in order for K₂O to access their State mineral leases where they are considering potash exploration.

This EA is a site-specific analysis of potential impacts that could result with the implementation of the Proposed Action or alternative to the Proposed Action. This EA assists the Bureau of Land Management (BLM) in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any “significant” impacts could result from the analyzed actions. “Significance” is defined by NEPA and is found in regulation 40 CFR 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of “Finding of No Significant Impact” (FONSI). If the decision maker determines that this project has “significant” impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a Decision Record (DR) may be signed for the EA approving the selected alternative, which could be the Proposed Action or another alternative, or a combination of the alternatives analyzed. A DR, including a FONSI statement, documents the reasons why implementation of the selected alternative would not result in “significant” environmental impacts (effects) beyond those already addressed in the Moab Field Office Resource Management Plan (RMP), October 2008.

1.2 Background

On May 7, 2010, K20 filed two ROW applications (UTU-87967 and UTU-87966) with the Moab Field Office of the BLM. A revised application for ROW UTU-87967 was submitted to the BLM on July 19, 2010. On August 4, 2010, K₂O filed a third ROW application (UTU-88102) with the BLM. These proposed ROWs would allow access on roads across Federal lands in order to reach mineral leases held by K₂O on lands managed by the State of Utah School and Institutional Trust Lands Administration (SITLA) hereafter referred to as State lands. K20 is considering plans to conduct potash exploration on their State mineral leases. The BLM ROW serial numbers with the corresponding State mineral lease number and tentative borehole number are as follows:

ROW UTU-87967 to State mineral lease ML-51279 and borehole number Hatch Point 16-16-29-21

ROW UTU-87966 to State mineral lease ML-51732 and borehole number Hatch Point 13-16-29-22

ROW UTU-88102 to State mineral lease ML-51731 and borehole number Hatch Point 4-36-29-21

K₂O has indicated that they have not yet identified prospective locations for any potash exploration boreholes within their State mineral leases. They are currently in the process of reviewing proprietary two-dimensional (2D) seismic data to see whether or not potash exploration is a viable opportunity within these State lease parcels, and if so, where to locate pads for exploratory boreholes. The borehole numbers identify boreholes that could be drilled within each State lease. The proposed ROWs and the State mineral leases are provided on Map 1.

1.3 Purpose

The BLM's purpose for reviewing K20's proposal is in accordance with the Federal Land Policy and Management Act (FLPMA) and the Federal regulations at 43 CFR 2800. The FLPMA requires the BLM to consider the issuance of ROWs for the use of roads on public lands. The cited Federal regulations state that it is BLM's objective to grant ROWs to any qualified individual, business, or government entity and to control the use of the ROW in a manner that protects natural resources and prevents undue and unnecessary degradation of public lands. Furthermore, the Moab Field Office (MFO) Resource Management Plan recognizes the issuances of ROWs on appropriate public lands.

1.4 Need

The BLM's underlying need is to consider the applicant's proposal consistent with BLM road and safety standards found in the Gold Book for Oil and Gas Exploration and Development and the Roads Manual at 9113. According to these standards, road construction must be suitable for the intended use while ensuring public safety and the protection of natural resources. K20's proposal would involve the transport of heavy drilling equipment utilizing semi trucks and low average daily traffic. Based on this use, the roads would need to be built as low volume, single-lane roads which may be reclaimed after the use terminates. The roads would also need to be surfaced and drained for all weather use. Designing the roads to meet the needs for the anticipated exploration activities minimizes the potential adverse environmental effects such as erosion and sediment production.

Also, according to the findings of the Utah District Court in *Utah v. Andrus*, 486 F. Supp. 995, 1979, there is a need for the BLM to grant access to the State that allows for the full economic development of the State land.

1.5 Conformance with BLM Land Use Plan(s)

The Proposed Action analyzed in this EA has been determined to be in conformance with the terms and conditions of the Moab RMP. The Proposed Action is in conformance with the approved RMP based on the following:

- 1) Lands and Realty, Goals and Objectives, page 65, which states: "Meet public needs for use authorizations such as rights-of-way (ROWs), alternative energy sources, and permits while minimizing adverse impacts to resource values."
- 2) Lands and Realty, Management Decision LAR-7, page 65, which states: "Right-of-way (ROW) avoidance and exclusion areas will be consistent with the stipulations identified in Appendix A for oil and gas leasing and other surface-disturbing activities. These stipulations have been developed to protect important resource values." Map 12 shows that the ROW applications are not located in a ROW avoidance or exclusion area.
- 3) Lands and Realty, Management Decision LAR-8, page 66, which states: As per the State of Utah v. Andrus, Oct. 1, 1979 (Cotter Decision), the BLM will grant the State of Utah reasonable access to State lands for economic purposes, on a case-by-case basis.

1.6 Relationship to Statutes, Regulations, or Other Plans

The Proposed Action would be consistent with all applicable BLM policy, and other Federal, State, and local laws, regulations and plans. Specifically, Section 501 of the Federal Land Policy and Management Act of 1976 (FLPMA) authorizes the Secretary of the Interior to issue regulations for the use, occupancy, and development of the public lands for ROWs. Road ROWs are regulated under 43 CFR 2800. The applications received for the ROWs are consistent with these Federal regulations.

The Proposed Action is consistent with the San Juan County Master Plan based on the following desired conditions:

- 1) It is the desire of San Juan County to have routes of travel accessible by motor vehicle for all users, including the elderly, physically handicapped and disabled, to gain access to the public lands.
- 2) It is San Juan County's desire to provide access throughout the county to meet the needs of both residents and visitors for a wide variety of purposes. These purposes range from consumptive (mining, oil, gas, etc.) to recreational uses (hiking, biking, ATVing, horseback riding, etc).
- 3) San Juan County desires to have a fully developed trails plan which will compliment the diverse landscape and balance access between consumptive, recreational, motorized and non-motorized uses.

1.7 Identification of Issues

Scoping is a process for identifying issues related to a proposed project. An issue is defined as a point of disagreement, debate, or dispute with a proposed action based on some anticipated environmental effect. Issues point to environmental effects and may lead to identification of design features incorporated into the proposed action, mitigation measures, or alternatives.

Internal scoping within the BLM was conducted between June and August of 2010 which consisted of onsite visits to the proposed ROW locations. The issues identified by the interdisciplinary team (IDT) are included in the IDT Checklist (Appendix A). The public was notified about the proposed ROWs on May 14, 2010 when the action was posted on BLM's Electronic Notification Bulletin Board (ENBB). The ENBB included the project description, maps, and a statement of the BLM's intent to prepare an EA thereby initiating external scoping to the public.

In response to the ENBB posting, the BLM received two letters; one from the Southern Utah Wilderness Alliance (SUWA) and one from the Utah Division of Air Quality (UDAQ). A summary of the comments within these letters and the BLM responses (including the relevant issues identified) is included in Appendix B.

The issues raised during the scoping process and carried forward for analysis within this EA are as follows:

1.7.1 Recreation

- How would the proposed road construction conflict with recreation users?
- To what extent would recreational users be disrupted in the vicinity of the proposed ROWs during the proposed road construction?
- What changes to the recreational setting and uses would result from the proposed road construction and road upgrades?

1.7.2 Soils

- What would be the impacts to soils resulting from the proposed road construction?
- Would the proposed road construction result in disturbance to biological soil crusts?

1.7.3 Vegetation

- How much vegetation would be lost due to the proposed road construction?
- Would noxious weeds spread to the areas disturbed by the proposed road construction?

1.7.4 Wildlife

- What would be the impact to pronghorn and their habitats due to construction activities and increased road use within the ROWs?
- What would be the displacement of wildlife and potential mortality from an increase in human activity, noise, and vehicle uses during the proposed road construction?
- Could the proposed road construction and increased vehicle use contribute to habitat fragmentation for raptors?
- Would construction activities and increased road use along the ROWs impact migratory birds and raptors and their habitats?

1.8 Issues Considered but Eliminated from Further Analysis

As previously mentioned, the IDT checklist (Appendix A) identifies those resources and issues that are either not present in the project area (i.e., NP), or would not be impacted by the Proposed Action or alternatives (NI). For those resources that are not present within the project area, no further rationale for dismissal within this EA is needed. For those resources that would not be impacted by the Proposed Action or alternatives, a brief rationale for this determination and dismissal from analysis within the EA is provided below:

Air Quality and Greenhouse Gases

On June 14, 2010, the BLM received a letter from the State of Utah, Division of Air Quality, stating that the proposed project will be subject to R307-205-5: Fugitive Dust, of the Utah Air Quality Rules, due to the fugitive dust that may be generated during soil disturbance for the project. These rules apply to construction activities that disturb an area greater than ¼ acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization.

Potential impacts to air quality from construction of the roads within proposed ROWs UTU-87967 and UTU-87966 would be small-scale and temporary in nature; limited to emissions from construction vehicles during the 10-day construction period anticipated for each road, and fugitive dust resulting from soil disturbance. However, potential fugitive dust would be abated through the use of water spraying during construction operations. Therefore, air quality and greenhouse gases are not carried forward for further analysis in this EA.

Floodplains

Portions of the road upgrade for proposed ROW UTU-87967 cross ephemeral drainages. The mitigation measures included in the Proposed Action for low water crossings would reduce the potential impacts to these drainages. Therefore, floodplains are not analyzed further in this EA.

Visual Resources

Proposed ROWs UTU-87967 and UTU-88102 are within an area managed to meet the objectives of VRM Class II and proposed ROW UTU-87966 is within an area managed for VRM Class III based on the Moab RMP. The VRM Class II areas include the Scenic Driving Focus Area along the corridor of the Needles Overlook Road (0.5 mile from center line). To meet VRM Class II objectives, management activities may be seen, but should not attract the attention of the casual observer. To meet VRM Class III objectives, management activities may attract the attention of the casual observer, but should not dominate the view of the casual observer.

In order to determine if the proposed ROWs would meet these objectives, the BLM completed screening analyses through the identification of two Key Observation Points (KOPs). The screening analysis was used to determine if surface disturbance and use of the proposed ROWs would be visible from the identified KOPs. KOP 1 was identified as the viewpoint located at Island in the Sky in Canyonlands, which sits on the edge of an escarpment overlooking a landscape of canyons carved by the Colorado and Green Rivers and their tributaries. This landscape is bordered to the east by another escarpment which is the edge of a plateau upon which the proposed ROWs are located at about the same elevation as that of Island in the Sky. KOP 2 was identified as the Needles Overlook Road, within Sections 26 & 27, T29S, R21E. A discussion of these KOP analyses is provided below:

- **KOP 1: Island in the Sky** - The proposed ROWs would not be visible from the Island in the Sky due to the considerable distance between the two areas. A viewer located at this KOP would be located approximately 16 miles northwest of the westernmost proposed ROW (UTU-87967). Due to this lengthy distance, upgrades to the ROW would not be visible from viewers at this KOP.
- **KOP 2: Needles Overlook** - The new road construction (0.2 mile) and portions of the road upgrades for ROW UTU-87967 would not be visible from the Needles Overlook Road due to screening by vegetation and topography. Therefore, the completed road upgrades within the ROW should not attract the attention of the casual observer.

Proposed ROW UTU-88102 involves the use of the Needles Overlook Road and would not result in any additional impacts to visual resources; therefore, the proposed ROW would meet the objectives for VRM Class II. The road upgrades associated with proposed ROW UTU-87966 would meet the objectives of VRM Class III because the completed road upgrades would appear to the casual observer as just another improved dirt road in the area and would not attract attention.

Therefore, the proposed ROWs would result in minimal impacts to the visual resources and would meet the VRM objectives in the area. As a result, visual resources are not analyzed further in this EA.

Socioeconomics

While K₂O intends to use local resources (e.g., road construction crews and dirt workers) to implement road upgrades along proposed ROWs UTU-87967 and UTU-87966, the socioeconomic impacts generated by this project would be short-term and negligible in terms of the economy of the overall region. Therefore, socioeconomics is not analyzed further in this EA.

Cultural Resources

A Class III cultural resources inventory and report was completed for portions of the ROWs that would require surface disturbance. The proposed project would not result in any adverse effects to cultural resources and therefore cultural resources are not analyzed further in this EA.

Native American Religious Concerns

Because the proposed ROWs would not result in any adverse effects to cultural resources, there would not be any impact to Native American religious concerns. Therefore Native American religious concerns are not analyzed further in this EA.

Threatened, Endangered, or Candidate Animal Species

There is no suitable Mexican Spotted Owl (*Strix occidentalis lucida*) breeding habitat within or adjacent to the proposed project area. The 1997 Willey-Spotskey Mexican Spotted Owl (MSO) Habitat Model depicts foraging habitat with no breeding habitat and the 1999 Willey-Spotskey MSO Habitat Model depicts no habitat. This area is basically rolling, flat, desert terrain with the occasional rock outcrops or rims. These rocky outcrops and rims are fairly rolling and non-complex and the environment is generally not mesic in nature. The lack of suitable breeding habitat makes this area unsuitable for MSO occupancy and therefore the proposed project will have *no effect* on the MSO or its habitat. Therefore, the MSO is not analyzed further in this EA.

The proposed project is located in historical Gunnison sage-grouse habitat and within an area identified as potentially suitable for winter and brooding habitat in the Moab RMP (2008). This information was developed through coordination with the Utah Division of Wildlife (UDWR) in 2003. In 2010 the UDWR evaluated areas previously identified as potentially suitable and/or currently occupied sage-grouse habitats. The sage-grouse habitats located in the Canyon Rims area, where the proposed project is located, have been removed from the UDWR suitable and occupied sage-grouse database due to lack of occupancy and low potential for future occupancy. Due to these habitat recommendations from the UDWR, the proposed project will not impact Gunnison sage-grouse or their habitats as there is no known sage-grouse occupancy or potential habitats in or near the project area. Therefore, the Gunnison-sage grouse is not analyzed further in this EA.

Livestock Grazing, Rangeland Health Standards

The three proposed ROWs are all within the Hatch Point grazing allotment, however, based on the limited surface disturbance that would occur as a result of road construction or upgrades, potential impacts from lost forage would be minimal and no impacts to the livestock grazing permittee would occur. Similarly, based on the small scale construction associated with these ROWs, there would be no effect on or change in rangeland health standards. Therefore, livestock grazing and rangeland health standards are not analyzed further in this EA.

Woodland/Forestry and Fuels/Fire Management

There would be no impacts to woodlands/forestry or fire management. Pinyon and juniper trees are sparsely scattered throughout the project area and there are no pending fuel treatment projects within the immediate vicinity of the project. As such, these resources are not analyzed further in this EA.

Geology/Mineral Resources/Energy Production

Surface disturbance associated with construction and/or upgrades of the proposed ROWs would have no adverse effect on geology, mineral resources, or energy production. Therefore, geology, minerals, and energy production are not analyzed further in this EA.

Lands/Access

The proposed ROWs include BLM administered lands which are not within a right-of-way avoidance or exclusion area according to the Moab RMP (2008). The proposed ROWs also involve existing roads that were designated for travel in the Moab RMP. Therefore, lands/access are not analyzed further in this EA.

Paleontology

Paleontological resources would not likely be affected because the surface of the proposed ROW areas consists of alluvium which has a low potential for the occurrence of these resources. As such, these resources are not analyzed further in this EA.

1.9 Summary

This chapter has presented the purpose and need of the proposed project, as well as the relevant issues, i.e., those elements of the human environment that could be affected by the implementation of the proposed project. In order to meet the purpose and need of the proposed project in a way that resolves the issues, the BLM has considered and/or developed a range of action alternatives. These alternatives are presented in Chapter 2. The potential environmental impacts or consequences resulting from the implementation of each alternative considered in detail are analyzed in Chapter 4 for each of the identified issues.

2.0 DESCRIPTION OF ALTERNATIVES, INCLUDING PROPOSED ACTION

2.1 Introduction

The BLM IDT rigorously explored for all reasonable alternatives that meet the underlying purpose and need for the proposed project and that respond to the issues. Two alternatives are carried forward for full analysis within this EA; Alternative A, which is the Proposed Action and consists of K₂O's ROW proposals, and Alternative B, the No Action alternative, which is required by the CEQ regulations (40 CFR 1502.14) and provides important baseline information. Alternative A is described in Section 2.2. Alternative B is described in Section 2.3. Four

additional alternatives were considered but eliminated from detailed analysis either because they did not meet the purpose and need for the project, or they resulted in greater impacts than under the Proposed Action. The alternatives considered but eliminated from analysis are described in Sections 2.4.1 - 2.4.3.

2.2 Alternative A – Proposed Action

Under the Proposed Action, K₂O has applied for three ROWs (Map 1) which would allow for the construction and use of roads across BLM owned lands to mineral leases located on interspersed State owned lands in the Canyon Rims area. The proposed ROWs are referred to as UTU-87967, UTU-87966, and UTU-88102. Actual use of the proposed ROWs would only occur when K₂O decides to proceed with exploration on the State mineral leases and obtains the required State permits. The following sections provide details regarding K₂O's proposed ROWs.

Proposed ROW UTU-87967

Proposed ROW UTU-87967 would provide about 2.6 miles of access across BLM lands to a mineral lease (ML-51279) on State land (Map 1). Heading toward the State land the proposed ROW would include the following:

- 1) Use of about 0.7 miles of a BLM hard surfaced road, the Needles Overlook Road, beginning at the intersection with the county maintained Anticline Overlook Road and running in a southwest direction to an unimproved road (two-track) which intersects the Needles Overlook Road from the northwest.
- 2) Upgrading about 1.7 miles of the unimproved dirt road (two track) stated above beginning at the intersection with the Needles Overlook Road and running in a northwest direction to the east side of the State land.
- 3) Constructing about 0.2 miles of new road beginning at the end of the road upgrades stated above and running in a west direction to the State land.

To access the Needles Overlook Road at the beginning of the proposed ROW, K₂O would utilize the county maintained Anticline Overlook Road, Eightmile Road, and Looking Glass Road.

No upgrades are proposed for the Needles Overlook Road. Any unintended damage to the Needles Overlook Road as a result of K₂O's use would be repaired at K₂O's sole expense. As a safety measure, K₂O would post signs, when necessary, along the short section of the Needles Overlook Road within the ROW to warn the public of heavy truck traffic. K₂O would instruct their employees and contractors to avoid the remainder of the Needles Overlook Road outside of the ROW and they would post signs to ensure that project related traffic utilizes the existing county maintained roads.

Proposed ROW UTU-87966

Proposed ROW UTU-87966 would provide about 1.7 miles of access across BLM lands to a mineral lease (ML-51732) on State land (Map 1). The proposed ROW would include about 1.7 miles of an unimproved dirt road (two track) which begins at the intersection with the Eightmile Road (SE $\frac{1}{4}$ Section 19, T. 29 S., R. 22 E.) and then runs in a northeast direction to the State land. About 1.5 miles of this unimproved road would require upgrading and about 0.2 miles of this road would require rerouting. The approach from the unimproved dirt road to the Eightmile Road would require upgrading. One cattleguard/cow gate combination would be installed at the existing gate location along the unimproved dirt road. To access the unimproved road at the beginning of the proposed ROW, K₂O would utilize the county maintained Eightmile Road and Looking Glass Road.

The same upgrades to this road have been proposed by Stone Energy Corporation in order to provide access to the State land where they plan to drill a hole for oil and gas. K₂O and Stone Energy have entered into an agreement on the use and maintenance of this road. The BLM has determined that the two actions by K₂O and Stone Energy are unconnected actions and therefore are being considered in separate environmental documents.

Proposed ROW UTU-88102

Proposed ROW UTU-88102 would allow use of about 1.8 miles of a BLM hard surfaced road, the Needles Overlook Road, to access a mineral lease (ML-51731) on State land (Map 1). Most of this road is located on BLM land except for about 0.2 miles which is located on State land through an easement to the BLM. The ROW would begin at the intersection of the Needles Overlook Road with an unimproved dirt road, located entirely on State land (section 32, T. 29 S., R. 22 E.), and then runs in a northwest direction to the State land leased by K₂O. To access the proposed ROW, K₂O would utilize the unimproved dirt road on State land, the Eightmile Road, and the Looking Glass Road.

The mitigation applied to the Needles Overlook Road for proposed ROW UTU-87967 would also be applied to the use of the Needles Overlook Road for proposed ROW UTU-88102.

2.2.1 Construction Operations

All project activities would follow the road construction guidelines in the BLM/USFS 2007 edition of Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development ("The Gold Book"), and would utilize existing disturbance corridors to the fullest

extent possible. The proposed new and upgraded access road segments would consist of a 14-foot travel surface within a 30-foot wide disturbance corridor, with maximum grades of 10% to be maintained. The travel surface for proposed ROWs UTU-87967 and UTU-87966 would include up to 13 turnouts (200 feet long x 10 feet wide) which would allow for vehicle passage at a specified interval after site-specific field placement to maximize use of existing disturbance along each upgraded access road corridor. Surface disturbance and vehicular traffic would be limited to the approved access road with signs installed reminding traffic to remain only on the road surface.

Proposed construction of new road and upgrades of existing unimproved roads could require the use of a backhoe, motor graders, dozer, water trucks, gravel trucks and pick-up trucks. The standard methodology for building new roads involves the use of a crawler tractor or backhoe to windrow vegetation to one side of the ROW, remove topsoil to the side of the ROW, and rough-in the roadway. This is followed by the use of a grader or bulldozer to establish barrow ditches and crown the road surface according to BLM guidelines.

The entire travel surface would be graveled if it becomes necessary for road stability. Similar ROW improvement projects within the sandy type soils found in the project area have used water application during low-precipitation cycles, thereby allowing the unimproved travel surface to remain intact without the use of gravel. If however, gravel is needed, only certified weed-free gravel sources would be used. Gravel would be placed approximately two inches deep for the entire travel surface and for the length of the road. Gravel would be obtained from a permitted, private source of gravel in Moab, Utah (LeGrand Johnson) and transported over approved access roads utilizing belly-dump trucks. The belly-dump trucks would deliver the gravel to the prepared road surface and a motor grader would spread the gravel to a consistent depth across the entire road surface.

It is expected that it would take approximately 10 days to complete the road construction for each ROW where surface disturbing work is necessary (i.e., for UTU-87967 and UTU-87966). Vehicle traffic during the ten-day period would include the transportation of materials and heavy equipment, the commuting of the workforce, and the daily operation of the construction equipment. One road construction crew would work to achieve this schedule. Members of the project workforce would commute from surrounding towns and cities. Road construction would begin following BLM approval of the proposal and granting of the associated ROWs. Construction is anticipated in late winter/early spring 2011.

2.2.2 Erosion and Sedimentation Control

The road upgrades associated with proposed ROWs UTU-87967 and UTU-87966 would include appropriate erosion and sedimentation control measures. Proposed upgrades of the road for proposed ROW UTU-87967 would require the installation of two low-water crossings where the road crosses drainages. The crossings would involve dipping the road down to the bed of the drainage and capping it as necessary with gravel or rip rap so that water is not impounded. K₂O would be responsible for the maintenance of the water crossings.

No vehicles would be operated during periods of saturated soil conditions when surface ruts greater than four inches would occur along travel routes. This measure would reduce potential soil disturbance and erosion potential.

As necessary during construction operations within the ROWs, appropriate, site-specific sedimentation controls (e.g., erosion blankets, hay bales, earthen berms) would be utilized at areas susceptible to erosion. This measure would reduce erosion potential in disturbed areas.

2.2.3 Disturbance

A 30-foot wide disturbance corridor is proposed for new road construction within ROW UTU-87967 and the road upgrades along existing two-track portions of ROWs UTU-87967 and UTU-87966. While K₂O does not anticipate having to blade the entire width of this corridor, the disturbance calculations conservatively assume that the entire width of the corridor could be disturbed during the construction phase. Following construction, the disturbance would be pulled back to a 14-foot wide running surface with turnouts; K₂O would reclaim the remaining 16-foot width of the corridor, thereby reducing long-term surface disturbance by more than 40 percent.

For proposed ROW UTU-87967, the initial surface disturbance for road upgrading (1.7 miles) and new road construction (0.2 mile) for a 30-foot width is estimated at about 6.9 acres of Federal land. Following construction, K₂O would reclaim the disturbance to a 14-foot wide running surface with turnouts (totaling about 0.67 acres). This would reduce the initial, short term disturbance by more than 40 percent (about a 16-foot width reclaimed out of the 30-foot width). The remaining 14-foot wide running surface with turnouts would result in long term surface disturbance of about 3.9 acres.

For proposed ROW UTU-87966 the initial surface disturbance for road upgrading (1.7 miles) for a 30 foot width is estimated at about 6.2 acres of Federal land. Following construction, K₂O would reclaim the disturbance to a 14 foot wide running surface with turnouts. This would reduce the initial, short term disturbance by more than 40 percent (about a 16-foot width reclaimed out of the 30 foot width). The remaining 14 foot wide running surface with turnouts would result in long term surface disturbance of about 3.6 acres.

For proposed ROW UTU-88102, no new surface disturbance of Federal land would occur.

Road construction associated with the ROWs in the Proposed Action would result in a total initial surface disturbance of about 13.1 acres. A summary of the surface disturbance pertaining to each ROW is provided in Table 2-1. Assuming reclamation is successful (about a sixteen-foot width out of the original 30-foot width of surface disturbance), residual/long-term surface disturbance under the Proposed Action would be about 7.5 acres. Residual disturbance includes the 14-foot running surface with turnouts and is expected to remain long term throughout the potash exploration project and possibly indefinitely depending on potential development.

Table 2-1. Summary of Surface Disturbance Pertaining to each ROW under the Proposed Action

ROW	# / Miles	Initial (ac)	Residual (ac)¹
UTU-87967	1.9	6.9	3.9
UTU-87966	1.7	6.2	3.6
UTU-88102 (no upgrades or construction)	0	0	0
Total	3.6	13.1	7.5²

¹ Residual disturbance calculations are based on the assumption that reclamation would be initiated and successful.

² Residual disturbance assumes that about a sixteen foot width out of the original 30-foot wide corridor of surface disturbance could be reclaimed following construction, leaving a 14-foot wide long-term disturbance corridor with turnouts.

2.2.4 Reclamation

Following road construction within the ROWs, reclamation (including seed mixes, application requirements, and weed monitoring and control requirements) efforts would be implemented and conducted in accordance with BLM guidelines. Specifically, a sixteen-foot width of the 30-foot wide disturbance corridor would be reclaimed along proposed ROWs UTU-87967 and UTU-87966, leaving a 14-foot wide travel corridor.

Reclamation would be completed as soon as possible after road construction is completed. Reclamation would involve re-contouring of a sixteen-foot wide portion of two ROWs to the original contour or a contour that blends with the surrounding topography and revegetating all disturbed areas. Following re-contouring, seeding would be completed during either the spring or fall planting season, when weather conditions are most favorable. Seed mixes would be determined by the BLM.

Upon termination of the ROWs, the roads would be reclaimed to the original width.

2.2.5 Applicant Committed Environmental Protection Measures

The following applicant committed environmental protection measures (ACEPMs) would be implemented to avoid or minimize negative effects to resources in the project area during the construction of the corridors.

Visual Resources

Cuts and fills would be kept at a minimum and blend with the natural environment. This ACEPM would minimize contrast and minimize disturbance to or changes in visual resources.

Human Health and Safety

Trash containers and a portable toilet would be located within the approved ROW during construction. Upon completion of road construction, the toilet and its contents would be transported to Moab, Utah's municipal sewage facility in accordance with applicable rules and regulations regarding sewage treatment and disposal. Accumulated trash and nonflammable waste materials would be hauled to the San Juan County landfill. All debris and waste materials not contained in the trash containers would be cleaned up, removed from the ROWs, and disposed of at the landfill. No potentially harmful materials or substances would be left on the ROWs or vicinity. Scrap metal and other recyclable refuse would be hauled to the K₂O yard or an approved recycling facility.

To protect and minimize the possibility of fires during the construction phase, all construction equipment utilized within the proposed ROWs, including welding trucks, would be equipped with fire extinguishers.

Air Quality and Dust Control

As feasible, members of the road construction crew would car pool to and from Moab or surrounding cities and towns to minimize vehicle-related emissions and fugitive dust from vehicle traffic.

Potential fugitive dust would be abated through the use of water spraying during construction operations.

Noxious and Invasive Weeds

To reduce the likelihood of the introduction of noxious and invasive weed species via project-related vehicles and equipment entering the project area, the following measures would be implemented:

- K₂O and their contractors would power-wash all construction equipment and vehicles prior to the start of construction. Any vehicles traveling between the project location and outside areas would be power-washed on a weekly basis.
- K₂O would implement an intensive weed control program at the beginning of the first growing season after road construction within the proposed ROWs. Weed control along proposed ROWs UTU- 87967 or UTU-87966 would be conducted through an Approved Pesticide Use and Weed Control Plan from the BLM.

Raptor Protection

Prior to any road construction between March 1 and August 15, all areas within 0.5 miles of UTU-87967 and UTU-87966 would be surveyed for the presence of raptor nests by a BLM-approved biologist at the company's expense.¹ If occupied raptor nests are found within 0.5 miles of the proposed ROWs, construction would not occur within that 0.5-mile buffer during the nesting season for that species.

Should BLM biologists determine it necessary, any prairie dog towns within 0.25 miles of the proposed construction would be surveyed for the presence of ground-nesting burrowing owls, and, if burrowing owls are present, construction would not occur between March 1 and August 15 within the 0.25-mile buffer.

Pronghorn

In order to protect pronghorn antelope during the fawning period, no road construction would occur within the proposed ROWs between May 1 and June 15 unless an exception is authorized by the Authorized Officer for the BLM Moab Field Office.

2.3 Alternative B – No Action Alternative

Under the No Action Alternative, the proposed ROWs would not be granted. Therefore, the proposed upgrades, construction, and use of the roads within the ROWs would not occur.

2.4 Alternatives Considered but Eliminated from Further Analysis

2.4.1 No Upgrades to Existing Roads and Minimizing Surface Disturbance

The public scoping letter submitted by the Southern Utah Wilderness Alliance (SUWA) asserts that the BLM must analyze the need for upgrading the access roads for the exploration phase (boreholes) and consider an alternative that would allow K₂O to use BLM designated routes, pursuant to Moab field office's Travel Plan, with no upgrading, widening, or surface enhancements. If K₂O eventually begins production at the SITLA lease site, it can request a right-of-way or permission to upgrade the access roads at that time. In addition, the BLM must consider alternatives that would minimize the amount of new surface disturbance, minimize the impacts to scenic and wildlife resources, minimize impacts to air quality, and minimize impacts to America's Red Rock Wilderness Act.

An alternative that does not allow upgrading of the existing roads would not meet the need for the proposed project as stated in Section 1.3. To reiterate, K₂O's proposal would involve the transport of heavy drilling equipment utilizing semi trucks and low average daily traffic. Based on this use, the roads would need to be built as low volume, single-lane roads which may be

¹ As discussed more in Chapter 3, a raptor nest inventory was conducted in July of 2010. No raptor nests were identified within 0.5 miles of proposed ROWs UTU-87967 or UTU-87966. If construction within the ROWs is delayed until the next nesting season, or a subsequent nesting season, another survey would be completed prior to surface disturbing activities in accordance with this ACEPM.

reclaimed after the use terminates. The roads would also need to be surfaced and drained for all weather use. Designing the roads to meet the needs for the anticipated exploration activities minimizes the potential adverse environmental effects such as erosion and sediment production. Therefore, this alternative is not analyzed further in this EA.

2.4.2 Alternative Access Routes to State Mineral Lease ML-51729

SUWA's public scoping letter asserts that the BLM must also consider reasonable alternative access routes including the designated route that enters State mineral lease ML-51279 from the northeast.

The route suggested by SUWA could provide access to the State mineral lease from the northeast. This route is an unimproved dirt road and is included in the BLM's Travel Plan. To access the State lease along this route, the route would require about 1.9 miles of upgrading beginning at the intersection with the Anticline Overlook Road. The access route to the State lease in the Proposed Action also involves about 1.9 miles of road upgrades and new construction. Therefore, the two routes would have similar impacts involving soils and vegetation. However, the route from the northeast has the potential for more adverse impacts because it is within critical habitat for the Mexican Spotted Owl and within Desert Bighorn Sheep Lambing and Rutting Habitat. Because the route from the northeast would potentially result in more adverse environmental impacts than the route included in the Proposed Action, this alternative is not analyzed further in this EA.

Another access route to the State mineral lease (ML-51279) was originally proposed by K₂O. This access route involves a continuation of the route included in the Proposed Action. In the Proposed Action the access route begins at the intersection of the Needles Overlook Road and heads in a northwesterly direction along an existing unimproved dirt road for about 1.7 miles. At this point the Proposed Action involves constructing about 0.2 miles of new road in a westerly direction to access the State mineral lease. However, in the original K₂O proposal, rather than constructing new road, the access route would continue in a northerly direction along the existing route for about another 0.7 miles to where it crosses into the State mineral lease. This alternative route would require about 0.7 miles of road upgrades as compared to 0.2 miles of new road construction in the Proposed Action which amounts to about 2.5 acres and 0.72 acres of surface disturbance, respectively. In addition K₂O's original proposal breaches into critical habitat for the Mexican Spotted Owl. Consequently, because K₂O's original proposal would result in more environmental impacts than the route included in the Proposed Action, this alternative is not analyzed further in this EA.

2.4.3 Allowing K₂O to Utilize Access Routes Without Acquiring a ROW

SUWA states in their scoping letter that the BLM must also analyze the need for issuing a right-of-way for the entire length of the designated routes that access K₂O's leases. The ENBB notice states that 100% of UTU-87966 would be along a designated route and 80% of UTU-87967 would be along a designated route. There is no explanation as to why K₂O needs a right-of-way along designated route portions of the proposed access roads. K₂O can use these designated routes without acquiring a right-of-way.

A ROW grant is an authorization to use a specific piece of public land for a certain project, such as roads, pipelines, transmission lines, and communication sites. A ROW grant authorizes rights and privileges for a specific use of the land for a specific period of time. Normally, a BLM ROW is granted for a term appropriate for the life of the project.

As a general rule, a ROW is required whenever building or construction is necessary. As stated in the need for the proposed project (Section 1.3), construction of the roads is necessary in order to accommodate the intended use. Designing the roads to meet the needs for the anticipated exploration activities minimizes the potential adverse environmental effects such as erosion and sediment production. In addition to the routes requiring upgrades and construction, the BLM has determined that a ROW is necessary for the use of BLM's hard surfaced road, the Needles Overlook Road, because the proposed use may result in damages to this road which K₂O would be required to repair. Therefore, an alternative for not issuing a ROW to K₂O for the BLM designated routes is not analyzed further in this EA.

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

This chapter presents the potentially affected existing environment of the impact area as identified in the IDT Checklist found in Appendix A and presented in Chapter 1 of this assessment. This chapter provides the baseline for comparison of impacts/consequences described in Chapter 4.

3.2 General Setting

The proposed ROWs are located about 30 miles northwest of the town of Monticello and 20 miles south of the town of Moab in San Juan County, Utah in the Canyon Rims area. The Canyon Rims area consists of flat lying terrain on the top of a plateau bounded by steep cliffs to the west (Lockhart Basin), the northeast (Kane Springs), and the southwest (Hart Draw). The elevation of the Canyon Rims area is about 6,100 feet. The cliff line to the west provides popular overlooks down into the Colorado River drainage, Lockhart Basin, and Canyonlands National Park.

The Canyon Rims area has been historically utilized for recreation activities, livestock grazing, and oil and gas operations. The primary recreation activity is driving to one of the overlooks and enjoying the wide open views along the way. Oil and gas operations have consisted of seismic activity and exploration drilling. Recently, there is interest to conduct exploration drilling for potash resources.

The average precipitation in the vicinity of Canyon Rims 9.2 inches per year. Most of this moisture comes in the form of melting winter snows. Dry air, high elevations, and winter snowfall combine to create a cold desert climate. Most precipitation falls in late summer and early autumn thunderstorms. Maximum summer temperatures in the higher elevations range from 85° F to 100° F. Winters are cold and relatively dry, with highs around 40° F and lows in the low to mid teens.

The primary public access to the Canyon Rims area is provided by the Needles Overlook Road, a BLM hard surfaced road, which connects with U.S. Highway 191 about 32 miles south of Moab. K₂O would access the area by the Looking Glass Road, a county maintained dirt road, which connects with U.S. Highway 191 about 20 miles south of Moab.

3.3 Resources/Issues Brought Forward for Analysis

The resources/issues brought forward for analysis include those identified in Section 1.7. These resources are as follows:

3.3.1 Recreation

The proposed ROWs are located within the Moab Field Office's Canyon Rims Special Recreation Management Area (CRSRMA), which covers an area west of U.S. Highway 191, south of Kane Springs Canyon, and north of Harts Draw and Wind Whistle Draw (Map 2).

The goals of the CRSRMA are to protect, manage and improve the natural resources of the area while allowing for recreation activities. The CRSRMA includes about 101,531 acres containing two campgrounds and four overlooks.

According to the Moab RMP (2008), the CRSRMA is within an area where OHV travel is limited to designated routes. The designated routes were also specified in the RMP. As a result, OHVs are required to stay on designated routes and no cross-country travel is allowed. The designated routes in the area include county maintained roads (Anticline Overlook Road, Eightmile Road, Looking Glass Road, and others), a BLM hard surfaced road (Needles Overlook Road), and numerous unnamed and unimproved dirt roads.

Roads in the CRSRMA were constructed in association with livestock, mineral, and recreation development over the past 70 years. The primary roads within the CRSRMA include several scenic turnouts and two Utah Scenic Backways (the Anticline Overlook Road and the Needles Overlook Road). In addition, the CRSRMA contains a network of dirt roads that lead to various view points. Several of these are used as OHV or mountain bike routes.

The high-use season for the CRSRMA begins in March and lasts through October. Based on BLM traffic counter data, 82,500 visitors toured the CRSRMA in 2009. Visitation levels in the CRSRMA have increased slightly during the last five years. Recent upgrades at the Needles Overlook and along the scenic backway (Needles Overlook Road) are expected to attract more visitors in the future. It is estimated that approximately 15 percent of the total visitation engages in recreation activities other than going to the overlooks or camping at developed campgrounds. This would mean that approximately 12,375 people enjoyed dispersed recreation activities in the CRSRMA in 2009.

Dispersed recreational activities that take place within the CRSRMA include scenic auto tours, viewing the scenery from any or all of the four overlooks, camping at one of the two developed campgrounds, camping in dispersed sites, hiking and backpacking, bicycling, Off highway

vehicle riding, motorcycle touring, horseback riding, nature study, and hunting. There are typically very few bighorn sheep and deer in the project area, and there is very little hunting for bighorn sheep and deer in the area of the proposed ROWs.

The majority of CRSRMA visitors come to observe the Colorado River's canyon from the overlooks at the edge of the plateau. The overlook in closest proximity to the proposed ROWs is Needles Overlook. This overlook provides a view of Canyonlands National Park, and is approximately 16 miles from the proposed ROWs. Visitors often compare this overlook to that of the Grand Canyon. The facilities at the overlook include toilets, a parking lot, a walking path, an accessible overlook, and a picnic area (including accessible sites). Additionally, Looking Glass Rock, an easy to reach rock outcropping resembling an arch that looks like a looking glass, is located on the Looking Glass Road, which would be used to access the proposed ROWs.

3.3.2 Soils

The soil resources present within the vicinity of proposed ROWs UTU-89766 and UTU-89767 are nearly identical and are classified by the Begay, Ignacio-Lenato, and Windwhistle series. All soils within these series are well drained, and typically found on structural benches and broad mesas. Begay soils are deep, fine sandy loam, ranging from 0 to 30 percent slopes. Those present in the project area are 2 to 6 percent slopes, located at elevations between 5,500 and 6,300 feet. The parent material is eolian deposits derived from sedimentary rocks, such as sandstone. Ignacio-Lenato soils are also fine sandy loams with 2 to 6 percent slopes, are derived from the same parent material as the Begay series, located at elevations between 5,800 to 6,800 feet. Windwhistle soils are very fine sandy loam, located on at elevations between 5,700 to 6,300 feet, with slopes ranging between 1 to 6 percent. Windwhistle soils are only present within proposed ROW UTU-89766 (NRCS 2010).

Biological soil crusts (also known as cryptogamic, cryptobiotic, microbiotic, and microphytic soils) are composed of a symbiotic association of cyanobacteria, lichens, mosses, green algae, microfungi, and bacteria that form a rough carpet on the surface and a soil-binding matrix below. Biological soil crusts typically occur as brownish or black soil crusts that appear on the surface of sandy desert soils. Since biological soil crusts are highly adaptable, they occur in the full range of arid soil types from shallow to deep, heavy to light textures, and moist to drier conditions. Small pockets of biological soil crusts were observed during the on-site visit of proposed ROW UTU-87967.

3.3.3 Vegetation

The proposed ROWs are located in a sagebrush/grassland vegetative community with scattered pinyon-juniper. The greater project area (i.e., the area encompassing all three proposed ROWs and surrounding habitats) is dominated by sagebrush, which varies from 12 to 36 inches in height. Blue grama, galleta, Indian ricegrass, and needle-and-thread comprise the primary grasses and forbs along the proposed ROWs. Russian thistle, cheatgrass, other annual plants, and snakeweed are also present in isolated areas.

3.3.4 Wildlife

General Wildlife Species

General (meaning non-sensitive or not of economic importance) wildlife species likely to occur in the K₂O project area include coyote, red fox, raccoon, badger, black-tailed jackrabbit, desert cottontails, and various species of rodents and bats. Bird species include numerous species of migratory birds and raptors. Reptiles and amphibians that may be present in the project area include short-horned lizard, sagebrush lizard, western whiptail, gopher snake, midget-faded rattlesnake, and the Great Basin spadefoot toad.

Migratory Birds and Raptors

A variety of migratory song bird species may use the K₂O project area for breeding, nesting, foraging, and migratory habitats. Migratory birds are protected under the Migratory Bird Treaty Act of 1918 (MBTA). Unless permitted by regulations, the MBTA makes it unlawful to pursue, hunt, kill, capture, possess, buy, sell, purchase, or barter any migratory bird, including the feathers or other parts, nests, eggs, or migratory bird products. In addition to the MBTA, Executive Order 13186 sets forth the responsibilities of Federal agencies to further implement the provisions of the MBTA by integrating bird conservation principles and practices into agency activities and by ensuring that Federal actions evaluate the effects of actions and agency plans on migratory birds.

A draft Memorandum of Understanding (MOU) (BLM MOU WO-230-2010-04) between the BLM and the United States Fish and Wildlife Service (USFWS) provides direction for the management of migratory birds to promote their conservation. At the project level, the MOU direction includes evaluating the effects of the BLM's actions on migratory birds during the NEPA process and to identify potential measurable negative effect on migratory bird populations, focusing first on species of concern, priority habitats, and key risk factors. In such situations, the BLM will implement approaches to lessen such take. Identifying species of concern, priority habitats, and key risk factors includes identifying species listed on the USFWS Birds of Conservation Concern (BCC) that are most likely to be present in the project area and evaluating and considering management objectives and recommendations for migratory birds resulting from comprehensive planning efforts such as the Utah Partners in Flight American Landbird Conservation Plan. The Utah Partners in Flight (UPIF) Working Group completed a statewide avian conservation strategy indentifying "priority species" for conservation due to declining abundance distribution, or vulnerability to various local and/or range-wide risk factors. One application of the strategy and priority list is to give these birds specific consideration when analyzing effects of proposed management actions and to implement recommended conservation measures where appropriate.

The UPIF Priority Species List, the BCC list for Region 16 (Colorado Plateau) and the Utah Conservation Data Center database were used to identify potential habitat for priority species that could utilize habitat within the project area. Table 3-1 lists the species that occur on both the BCC 2008 list and the UPIF Priority list and lists their potential for occurrence in the project area.

Table 3-1. Avian Species on both the Utah Partners in Flight (UPIF) Priority Species and USFWS Birds of Conservation Concern (BCC) 2008 List.

Species ¹	Scientific Name	1 st Breeding Habitat ²	2 nd Breeding Habitat ²	Potential in K ₂ O ROW Project Area ³
Bald Eagle		Lowland Riparian	Agriculture	Moderate – Winter Habitat
Black-throated Gray Warbler		Pinyon-Juniper	Mountain Scrub	Low-Moderate
Broad-tailed hummingbird		Lowland Riparian	Mountain Riparian	Very Low
Burrowing Owl		High Desert Scrub	Grassland	Low
Brewer's Sparrow	<i>Spizella breweri</i>	Shrubsteppe	High Desert Scrub	High
Ferruginous Hawk	<i>Buteo regalis</i>	Pinyon-Juniper	Shrubsteppe	Low
Golden Eagle		Cliff	High Desert Scrub	Moderate
Gray Vireo	<i>Vireo vicinior</i>	Pinyon-Juniper	Northern Oak	High
Pinion Jay		Pinyon-Juniper	Ponderosa Pine	Low
Prairie Falcon		Cliff	High Desert Scrub	Moderate
Sage Sparrow		Shrubsteppe	High Desert Scrub	High
Virginia Warbler		Oak	Pinyon-Juniper	Low
Long-billed Curlew	<i>Numenius americanus</i>	Grassland	Agriculture	Moderate

¹(USFWS 2008a, UPIF 2002)¹, (UPIF 2002)², (UDWR 2011)³

Of the BCC and UPIF priority species that have the potential to be found in these areas, most of these species would typically use the area to forage and migrate through. The Brewer's sparrow and sage sparrow may utilize the sagebrush steppe found in the project area for nesting. The broad-tailed hummingbird utilizes riparian areas for nesting, the golden eagle and the prairie falcon nests on cliff faces and tall trees and snags; the pinyon jay utilizes pinyon/juniper and ponderosa pine communities for nesting and the warblers typically utilize denser pinyon/juniper and oak communities. There are no riparian areas and limited cliff topography, tall trees, snags or dense pinyon/juniper, or pine communities in or near the project area therefore broad-tailed humming birds, golden eagles, prairie falcons, pinyon jays and warblers would not be expected to nest within the project area, though they may forage in the area. Bald eagles are a winter resident and there is no nesting habitat in the area. Nesting season for most songbirds is May 1st through July 31st.

Habitats within the project area also may have the potential to support breeding, nesting, and foraging raptors and wintering bald eagles, golden eagles, and other raptor species. Currently there are no known winter roosts in or near the project area. A nesting raptor survey was conducted within the project area on July 20, 2010. No active raptor nests were identified within 0.5 mile of proposed ROWs UTU-87967 or UTU-87966. As no surface disturbance is proposed along proposed ROW UTU-88102 to State lease parcel ML-51731 (i.e., southernmost lease parcel), the raptor nest inventory did not include this area. Data from these surveys are not adequate to identify trends of raptor populations, but do identify the likely presence of nesting raptors in the project area. Raptor species with the potential to occur in the vicinity of the project area are identified in Table 3-2 with a description of their nesting and foraging habitats.

Table 3-2. Raptor Species with the Potential to Occur in the Vicinity of the Proposed K₂O ROWs¹

Common Name	Scientific Name	General Habitat and Potential in Project Area
Sharp-shinned Hawk	<i>Accipiter striatus</i>	Low potential to nest in pinyon-juniper woodlands. Low potential to forage in desert shrub and pinyon-juniper woodlands.
Cooper's Hawk	<i>Accipiter cooperii</i>	Low potential to nest in pinyon-juniper woodlands. Moderate potential to forage in pinyon-juniper woodlands.
Golden Eagle	<i>Aquila chrysaetos</i>	Commonly nests on cliff ledges and rock outcrops. Moderate potential to forage in desert shrub and pinyon-juniper woodlands.
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Winter habitat typically includes areas of open water, adequate food sources, and sufficient diurnal perches and night roosts. Low potential for nesting or roosting.
Burrowing Owl		Low potential to nest in the project area due to lack of prairie dog colonies in the area. Commonly utilizes prairie dog burrows for nesting.
Long-eared Owl	<i>Asio otus</i>	Low potential to nest in pinyon-juniper woodlands. Moderate potential to forage in desert shrub and pinyon-juniper woodlands.
Great-horned Owl	<i>Bubo virginianus</i>	Cliff ledges, pinyon-juniper, or nests of other species. Moderate potential to forage in desert shrub and pinyon-juniper woodlands.
Mexican Spotted Owl (MSO)	<i>Strix occidentalis lucida</i>	Various forest types and steep rocky canyons, this last habitat being the primary habitat used in Utah. No potential for nesting, low to no potential for foraging due to lack of suitable nesting habitat in the area.
Ferruginous Hawk	<i>Buteo regalis</i>	Commonly nests on ground, in pinyon-juniper woodlands, and on rock outcrops. No potential to forage or nest in this area due to lack of suitable habitat and no known occurrences.
Red-tailed Hawk	<i>Buteo jamaicensis</i>	Moderate potential to nest on cliffs and low potential to nest in pinyon-juniper woodlands. High potential to forage in desert shrub and pinyon-juniper woodlands.
Swainson's Hawk	<i>Buteo swainsoni</i>	Not likely to nest in the project area. Low potential to forage in desert shrub and pinyon-juniper woodlands.
Northern Harrier		Moderate potential to forage and nest in sagebrush/grassland vegetative community and desert scrublands. Low potential to nest in pinyon-juniper woodlands. Utilizes open habitats such as marshes, fields, and grasslands.
Prairie Falcon	<i>Falco mexicanus</i>	High potential to nest on cliffs and ledges. Moderate potential to forage in desert shrub moderate in pinyon-juniper woodland.
American Kestrel	<i>Falco sparverius</i>	Moderate potential to nest on cliffs, and ledges. Moderate potential to forage from cliffs and ledges and low potential in desert shrub and pinyon-juniper woodland.

(UDWR, 2011)¹

Pronghorn and other Big Game

The general project area is utilized by pronghorn year-round and is classified by the Utah Division of Wildlife Resources (UDWR) and within the Moab Field Office RMP as crucial year-long fawning habitat (Map 3). The fawning season extends from May 1 to June 15. According to population trend count data for pronghorn within the Hatch Point subunit, numbers have held fairly steady from 168 in 1999 to 166 in 2009 (UDWR 2008b). Pronghorn antelope typically inhabit grasslands and semi-desert shrublands of the western and southwestern United States. This species is most abundant in short- and mixed-grass habitats between 4,000 and 6,000 ft. Pronghorn are typically less abundant in xeric habitats, preferring areas that average 12 to 15 inches of precipitation per year. Home ranges for pronghorn can

vary between 400 and 5,600 acres, based on various factors, including season, habitat quality, population characteristics, and local livestock occurrence. Typically, daily movements do not exceed six miles. Some pronghorn make seasonal migrations between summer and winter habitats, but these migrations are often triggered by availability of succulent plants rather than weather conditions (Fitzgerald et al. 1994).

While mule deer and elk have the potential to migrate through the project area, no other crucial, substantial, or year-long big game habitats have been identified by the UDWR or BLM in the vicinity of the proposed ROWs.

4.0 ENVIRONMENTAL IMPACTS

4.1 Introduction

This section provides an analysis of the predicted environmental impacts to the resources identified in Section 1.7 resulting from the alternatives described in Chapter 2. Because all known mitigating measures have been included in the description of the alternatives, the environmental impacts described below are unavoidable.

4.2 Direct and Indirect Impacts

Direct impacts are caused by the action and occur at the same time and place. Indirect impacts are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.

4.2.1 Alternative A – Proposed Action

4.2.1.1 Recreation

The Proposed Action would temporarily result in increased vehicle traffic, noise, dust, and human activity during the construction period of approximately 10 days each for proposed ROWs UTU-87967 and UTU-87966. Recreation activities could be displaced to other locations in the vicinity of the proposed ROWs during this time.

The Proposed Action would not alter the recreational character of the project area enough to lose the general natural setting of the area. The Proposed Action could increase social interactions (e.g., likelihood of meeting others), decreasing opportunities for semi-primitive recreation (i.e., non-motorized recreation such as hiking, and wildlife viewing). However, the Proposed Action would not necessarily change the variety of experience and activity opportunities that occur or that are appropriate on public lands.

The use of the Needles Overlook Road by K₂O associated with proposed ROWs UTU-88102 (about 1.7 miles) and UTU-87967 (about 0.2 mile) would increase recreational contact with K₂O employees and contractors. To reduce the potential for road and traffic related impacts, the Proposed Action provides mitigation measures which includes signs warning recreation traffic of heavy truck traffic and trucks turning during the road construction phase. There is also a commitment in the Proposed Action to post signs for project related personnel to utilize

only the authorized portions of the Needles Overlook Road. Road congestion and the potential for conflicts on these segments of the Needles Overlook Road in addition to the Anticline Overlook Road, Eightmile Road, and Looking Glass Road would likely occur from March through October, and would peak around holidays, such as Easter week, Memorial Day weekend, and Columbus Day weekend.

Both short term (construction) and long term (utilization and maintenance) activities would cause minor changes in the physical and social recreation setting, but not enough to change the natural setting, the recreation setting or the CRSRMA characteristics of the project area. During the short term, recreationists would be temporarily displaced, but would be able to shift their activities to surrounding public lands. Recreationalists seeking the backcountry experiences of the CRSRMA may be adversely impacted by the increased use of the area. However, by going deeper into the backcountry, these users would be able to gain this experience. These same recreationists may also benefit from the increased access opportunity for backcountry experiences.

4.2.1.2 Soils

Implementation of the Proposed Action would initially disturb up to about 13.1 acres of soils; about 6.9 acres from construction of the roads within proposed ROW UTU-87967 and about 6.2 acres from construction of the road within proposed ROW UTU-87966. Following reclamation activities, long-term soil disturbance along UTU-87967 and UTU-87966 would be reduced to about 6.1 acres.

Road construction activities and associated loss and disturbance of project area soils would result in increased wind and water-induced soil erosion rates. Soil erosion rates would be highest during the first year after construction. Assuming reclamation efforts are successful, soil erosion rates would decrease by reestablishing vegetation on 7.0 acres out of the 13.1 acres of total initial disturbance for proposed ROWs UTU-87967 and UTU-87966. For the remaining travel corridor within these ROWs (about 6.1 acres), soil erosion rates would continue to be higher than adjacent reclaimed areas.

Potential impacts of the Proposed Action on biological soil crusts include loss of physical crust, soil compaction, a decrease in nitrogen fixation ability, set back in development stage of the soil, and burial by blowing sands or ROW grading. However, based on the minimal presence of biological soil crusts within the project area, these potential effects would be small or negligible.

No construction or surface disturbing activities would occur from issuance of proposed ROW UTU-88102; therefore there would be no direct or indirect effects on soil resources from issuance of this ROW.

4.2.1.3 Vegetation

There would be up to about 13.1 acres of vegetation initially disturbed as a result of the Proposed Action; about 6.9 acres from construction of roads within proposed ROW UTU-87967, and about 6.2 acres from construction the road within proposed ROW UTU-87966. Following successful reclamation activities, long-term vegetative disturbance along proposed ROWs UTU-87967 and UTU-87966 would be reduced to about 6.1 acres.

No construction or surface disturbing activities would occur from issuance of proposed ROW UTU-88102; therefore, there would be no direct or indirect impacts on vegetation resources from issuance of this ROW.

The success of re-vegetation during reclamation efforts would depend on the type of soil in the reclamation area, the replacement of topsoil, proper re-seeding, and rainfall. The presence of weeds and cheatgrass could also affect the success of reclamation efforts. Overall, re-establishing vegetation during interim or final reclamation efforts, including sagebrush, could take 7 to 10 years.

Implementation of the Proposed Action also has the potential to increase weed dispersal, and establishment along disturbance areas. Weed seeds could be transported to the proposed ROWs on the undercarriage or wheels of construction vehicles and equipments. As a mitigation measure incorporated into the Proposed Action, power-washing of project-related vehicles and equipment prior to entering the project area would reduce this potential impact. In addition, reclamation and weed control efforts taken along the areas disturbed by road construction within proposed ROWs UTU-87967 and UTU-87966 would also help reduce the spread of noxious and invasive weeds. However, weeds may continue to be dispersed and established along the ROWs even after reclamation activities have been completed due to inadvertent weed seed transport by public vehicle use.

4.2.1.4 Wildlife

General Wildlife

There would be up to about 13.1 acres of vegetation initially disturbed as a result of the Proposed Action; about 6.9 acres from construction of roads within proposed ROW UTU-87967, and about 6.2 acres from construction the road within proposed ROW UTU-87966. Following successful reclamation activities, long-term vegetative disturbance along proposed ROWs UTU-87967 and UTU-87966 would be reduced to about 6.1 acres. Habitat loss along the proposed ROWs could displace individual animals, but the availability of adjacent habitat would allow for individuals to relocate to other areas.

Wildlife could be temporarily displaced due to the increase in human activity, noise, and vehicle use during construction and reclamation of the surface disturbance within proposed ROWs UTU-87967 and UTU-87966. Increased vehicular traffic and road grading activities during road construction could potentially cause direct mortality of slow moving small mammals, reptiles, or amphibians within the construction corridors, and could impede daily

activities of wildlife in the immediate vicinity of those ROWs. An immeasurable indirect effect could occur if human vehicular activity increases along the ROWs within or near suitable, unused habitat. New disturbance created by increased activity may make habitat undesirable by various wildlife species into the future.

No direct or indirect effects on wildlife are anticipated from issuance of proposed ROW UTU-87967.

Migratory Birds and Raptors

An intentional take under the MBTA is the deliberate taking of migratory birds with the take as the primary purpose of an action. An unintentional take is the accidental taking of a species as a result of other management actions. No actions considered in this analysis involve the intentional take of migratory birds. This analysis would focus on the potential for unintentional take.

Numerous migratory bird species may utilize the project area for a portion of the year as noted in the affected environment. Approximately 13.1 acres of potential foraging and nesting habitat would be initially disturbed or removed as a result of construction activities for proposed ROWs UTU-87967 and UTU-87966. However, a decrease in foraging and nesting opportunity is not expected based on the surrounding areas that contain abundant acreages of suitable sage-steppe habitat which would not be disturbed.

Surface disturbance associated with this Proposed Action would present the greatest impacts to migratory birds if surface disturbing activities occur during the nesting season. These impacts would be specific to the nesting season during which road construction occurs, as birds could nest in adjacent areas in subsequent seasons. Surface disturbing activities where nesting activity is occurring may lead to nest abandonment and chick mortality if nests are destroyed. The most likely species of concern that would be impacted would be the sage sparrow and the Brewer's sparrow. Surface disturbing activities taking place outside of the migratory bird breeding and nesting season (typically May 1 through July 31) may cause temporary, short-distance and short-term displacement that would have minimal to no impacts to birds.

All raptors (eagles, hawks and owls) are given federal protection under the Migratory Bird Act and Executive Order 13186. Extra precautions would be taken to ensure adequate protection is given to nesting raptors throughout the project area. Nesting raptors would be given both seasonal and spatial protection throughout the implementation of this project according to the U.S. Fish and Wildlife Service's 2002 Raptor Protection Guidelines and through the Bureau of Land Management's Best Management Practices for Raptor Protection. There would be no direct effects to nesting raptors by the implementation of this project as breeding season surveys would be conducted and impacts to nesting raptors would be avoided. Breeding season surveys completed prior to commencement of construction activities indicate there are no raptors nesting in the vicinity of the proposed project area. If construction activities continue into future years, breeding season surveys will again be conducted and nest territories avoided.

Individual raptors and wintering raptors and eagles may avoid the areas immediately surrounding proposed ROWs UTU-87967 and UTU-87966 while construction activities are on-going. However, this is not likely to adversely impact raptors as adjacent areas could be used for foraging and roosting. Impacts during construction would be short-term with proposed construction activities scheduled to be approximately 10 working days at each ROW. Small-scale raptor habitat degradation or fragmentation may potentially occur as an indirect effect of the Proposed Action. Foraging habitat impacts would be limited to the disturbance footprint, as prey species may be displaced but individuals would be able to relocate to surrounding suitable habitat within the project area.

Big Game

Pronghorn antelope reside in the project area and may be temporarily displaced due to activities associated with the Proposed Action. However, displacement is not likely to occur during the fawning period (May 1 to June 15) based on the timing limitation incorporated into the Proposed Action which precludes surface disturbing activities during the fawning period unless and an exception, waiver, or modification is granted by the Authorized Officer of the BLM.

4.2.2 Alternative B – No Action

4.2.2.1 Recreation

Under the No Action alternative, the proposed ROWs on Federal surface as described in the Proposed Action would not be issued and there would be no effect on recreation resources from project-related activities.

4.2.2.2 Soils

Under the No Action alternative, the proposed ROWs on Federal surface as described in the Proposed Action would not be issued, therefore soil resources would not be affected by project-related activities.

4.2.2.3 Vegetation

Under the No Action alternative, the proposed ROWs on Federal surface as described in the Proposed Action would not be issued and there would be no effect on vegetation resources from project-related activities.

4.2.2.4 Wildlife

Under the No Action alternative, the proposed ROWs on Federal surface as described in the Proposed Action would not be implemented and wildlife resources would not be affected by project-related activities.

4.3 Cumulative Impacts Analysis

Federal Regulations at 40 CFR 1508.7, define a cumulative impact as: "...the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." The following sections describe past, present and reasonably foreseeable actions in the vicinity of the proposed project.

4.3.1 Recreation, Soils, Vegetation, and Wildlife

4.3.1.1 Cumulative Impact Area

The cumulative impact area (CIA) for the subject resources is the Canyon Rims Special Recreation Management Area (CRSRMA) which includes about 101,531 acres. The CIA is appropriate for recreation and the other resources as well because the CRSRMA largely coincides with the pronghorn habitat along with the vegetation and soils associated with this habitat.

4.3.1.2 Past and Present Actions

Past and present actions in the CIA consist of livestock grazing; recreational activities; sparse mining exploration; exploratory drilling for oil and gas; and geophysical surveys for oil and gas.

Livestock grazing has taken place in the CIA for more than the last 100 years. Both cattle and sheep have been grazed on the allotment. Range improvements in the CIA include 1 corral, 2 pump houses, 103 reservoirs (about 0.25 acres each), 3 water storage tanks, 4 water troughs, 4 water wells, and fences between pastures. These improvements have resulted in minimal surface disturbance amounting to less than an estimated 50 acres.

The CRSRMA receives moderately heavy recreation use, with over 100,000 visitors per year. Recreation facilities were constructed by the BLM in the 1960s to provide for visitor use and have been maintained by the BLM up to the present. The majority of visitors camp in either of the two developed campgrounds and visit one or more of the four developed overlooks by automobiles. The surface disturbance associated with these facilities is minor and totals approximately 10 acres. The primary access to the CRSRMA is provided by the hard surfaced Needles Overlook Road along with the county maintained Anticline Overlook Road, Eightmile Road, Looking Glass Road, and other roads. These roads amount to about 540 acres of surface disturbance. A smaller number of visitors enjoy a semi-primitive motorized experience by touring the backcountry in four wheel drive vehicles and occasionally by mountain bike. This backcountry vehicle touring utilizes the extensive system of unpaved routes originally created by the oil and gas and livestock industries. Hiking occurs on two developed hiking trails. Dispersed camping occurs occasionally along the unpaved routes scattered across the CRSRMA. These roads amount to about 1,170 acres of surface disturbance.

There has been some past exploration for uranium in the CIA but there are no existing mines. Oil and gas exploration in the area has involved the drilling of 20 wells. Out of these wells, 13 wells have been plugged and abandoned, 3 wells are shut in and may be capable of production, 2 wells are producing, and 2 wells are currently being drilled. For the plugged and abandoned wells, the disturbed areas have been reclaimed. Therefore, there is about 105 acres of surface disturbance for the 7 remaining wells. Geophysical surveys have been conducted in the CIA. A large geophysical survey was conducted in 2006 which resulted in 289 acres of initial surface disturbance but over the last 4 years the vegetation has been reestablished for most of this area.

K₂O's present proposal to upgrade and construct roads within the proposed ROWs in the CIA would result in approximately 6 acres of residual surface disturbance.

4.3.1.3 Reasonably Foreseeable Action Scenario (RFAS)

Continuation of livestock grazing, recreational use, oil and gas operations, and potash exploration are reasonably foreseeable activities within the CIA. These activities are discussed in terms of an approximate 15-year time frame which is the time frame that was used to project activities in the Final Environmental Impact Statement for the Moab RMP.

Livestock grazing would continue in a similar manner as the current operation. The numbers of cattle and range structures are expected to remain at about the current levels. No additional range structures are anticipated at this time. Maintenance of the existing range structures would continue.

Recreational use in the CIA consists primarily of visitation to the two developed campgrounds and four developed overlooks and this use is expected to increase over the next 15 years. Off-highway vehicle use has increased substantially throughout the Moab region and is expected to have a steady increase in the CIA. This additional use would utilize the existing surface disturbance in the area.

The projections for future oil and gas operations are based on the BLM's Reasonably Foreseeable Development (RFD) Scenario for Oil and Gas (2005). The RFD projected an average of 3 to 5 wells drilled annually in the Big Flat-Hatch Point (Canyon Rims) area over 15 years, or approximately 45 to 75 wells. The projection includes the Big Flat area which has experienced more interest in drilling due to favorable drilling results. Therefore, it is reasonable to assume that there would be an average of 1-2 wells drilled annually in the CIA for a total of 15 to 30 wells over the next 15 years. The initial surface disturbance associated with this drilling would amount to about 225 to 450 acres (15 acres per well) for roads, and drill pads. It is assumed that 50 percent of the wells drilled would not be productive and would be abandoned and reclaimed; and that revegetation would be successful within the scope of ten years. Therefore, about 17% (37.5 to 75 acres) of the initial surface disturbance resulting from drilling would be successfully reclaimed over the next 15 years.

Future disturbance limited to the Big Flat - Hatch Point area was not specifically quantified within BLM's RFD (2005) scenario for geophysical exploratory surveys. However, it is reasonable to assume that two geophysical surveys will be conducted in the next 15 years that are comparable in size and scope to the one conducted in 2006. For these geophysical surveys, it is assumed that reclamation would be completed within the 15 year time frame.

While K₂O has not yet identified or applied for potash exploration permits with the State of Utah, it is reasonable to assume that potash exploration will occur in Hatch Point area (Canyon Rims) over the next 15 years. For purposes of this analysis, it is assumed that K₂O would drill one exploratory potash bore hole per State lease, totaling three exploratory potash bore holes in the project area. Surface disturbing activities associated with reasonably foreseeable potash exploration on these State lease parcels include the construction of drilling areas or pads. Estimated surface disturbance for drilling areas would be approximately 3.8 acres. In addition, additional road construction would likely be needed within each State lease parcel to access the drilling area, resulting in an estimated 5 acres of disturbance per State lease parcel. Thus, surface disturbance associated with each reasonably foreseeable potash bore hole is estimated at about 5 acres, for a total of 15 acres. Exploratory core hole testing would involve the use of a standard drill rig, which would likely operate on a 24 hour/7 day per week basis for 20 to 30 days to extract potash core.

4.3.1.4 Cumulative Impact Analysis

As described in Sections 4.4.1.2 and 4.4.1.3, past, present, and reasonably foreseeable actions within the CIA include livestock grazing, recreational use, oil and gas operations, proposed road development, and potash exploration. For purposes of this analysis, these actions are quantifiable in terms of surface disturbance (acres) as shown in Table 4-1.

Table 4-1 Past, Present, and Reasonably Foreseeable Actions and Associated Surface Disturbance (acres) within the CIA

Alternative	Total Acres within CIAA	Past Actions (Acres of Disturbance)	Present Actions (Acres of Disturbance)	RF Actions (Acres of Disturbance)	% of CIA Total Disturbance from all Actions
	101,531	Livestock - 50		Livestock - 0	
		Recreation - 10		Recreation - 0	
		Roads - 1,710			
		Oil and Gas - 105		Oil and Gas - 188/375 avg 282	
				Potash - 15	
		Total - 1,875		Total - 297	
Alt A		1,875	Roads - 6 ¹	297	2.2% - 2,178 acres
Alt B		1,875	Roads - 0	297	2.1% - 2,172 acres

¹ After successful reclamation efforts

As shown in Table 4.1, the total surface disturbance in the CIA resulting from past, present, and reasonably foreseeable actions amounts to about 2,178 acres or about 2.2 percent of the CIA. This surface disturbance is associated with the cumulative impacts for soils, vegetation, and wildlife habitat. The disturbed areas contribute to reduced soil productivity, soil compaction, erosion, and subsequent sedimentation. The disturbed areas increase the

opportunity for weed invasions and disrupt the spatial continuity of vegetation communities and hence habitat for wildlife. Fragmentation of wildlife habitat results from increased roads and changes in OHV use. However, these cumulative impacts are considered minor because the disturbances only amount to a small portion of the CIA (2.2 percent) and are widely dispersed. The Proposed Action (Alternative A) adds only an incremental amount (less than 0.1 percent) to the total surface disturbance and the associated cumulative impacts for soils, vegetation, and wildlife habitat.

Foreseeable development for oil and gas and potash in the CIA includes drilling wells and geophysical surveys. This mineral activity can have adverse impacts to recreational activities and negatively affect visitor expectations. Visitors may also avoid areas where mineral operations are being conducted. The traffic associated with construction and drilling of wells can result in some short term impacts to access and conflicts with recreational users on the roads utilized by these operations. However, it is anticipated that only a small number of the roads in the area would be affected by the projected drilling operations at any given time. These potential cumulative impacts to recreation and visual resources would be substantially mitigated by applying the special mineral lease stipulations established in the Moab RMP (2008) for protecting visual resources. The Proposed Action would not appreciably contribute to the cumulative impacts to recreation.

5.0 CONSULTATION AND COORDINATION

5.1 Introduction

The issue identification section of the EA (Section 1.7) identifies those issues analyzed in detail in Section 4. Section 1.8 provides the rationale for issues that were considered but not analyzed further. The issues were identified through the public and agency involvement process described in Sections 5.2 and 5.3 below.

5.2 Persons, Groups, and Agencies Consulted

A list of all persons, agencies and organizations consulted for purposes of this EA is provided in Table 5-1.

Table 5-1. List of all Persons, Agencies, and Organizations Consulted

Name	Purpose and Authorities for Consultation or Coordination	Finding and Conclusions
Utah State Historic Preservation Office	Consultation for undertakings as required by National Historic Preservation Act (NHPA) (16 USC 470)	Consultation will occur during the public comment period for the EA.
Native American Tribes	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	Consultation will occur during the public comment period for the EA.
U.S. Fish and Wildlife Service (USFWS)	Information on Consultation, under Section 7 of the Endangered Species Act (16 USC 1531)	Not consulted because the Proposed Action would have no adverse affect on listed species.
Utah Division of Wildlife Resources (UDWR)	Consult with UDWR regarding their expertise on raptors and sage grouse.	Information incorporated into Chapters 3 and 4.

5.3 Summary of Public Participation

The proposed project was posted on the Environmental Notification Bulletin Board (ENBB) on May 14, 2010 as part of the scoping process. Two scoping letters were received by the BLM in response to the ENBB posting. Refer to Section 1.7 for details regarding the scoping process.

5.4 List of Preparers

Table 5-2 provides the list of all preparers and the sections of their resources/responsibilities in preparation of the EA.

Table 5-2. List of Preparers

Name of Specialist	Resources/Responsibilities
Ann Marie Aubry	Air Quality; Greenhouse Gas Emissions; Floodplains; Soils; Water Resources/Quality; Wetlands/Riparian Zones
Katie Stevens	Areas of Critical Environmental Concern; Recreation; Wild and Scenic Rivers; Visual Resources
William Stevens	BLM Natural Areas; Socio-Economics; Wilderness/WSA; Areas with Wilderness Characteristics
Leigh Grench	Cultural Resources; Native American Religious Concerns
Ben Kniola	Environmental Justice; Wastes
Pamela Riddle	Threatened, Endangered or Candidate Animal Species; Migratory Birds; Utah BLM Sensitive Species; Fish and Wildlife Excluding USFW Designated Species
David Williams	Invasive Species/Noxious Weeds; Threatened, Endangered or Candidate Plant Species; Livestock Grazing; Rangeland Health Standards; Vegetation Excluding USFWS Designated Species; Woodland/Forestry
Brian Keating	Fuels/Fire Management
Eric Jones	Geology/Mineral Resources/Energy Production; Paleontology
Jan Denney	Lands/Access

6.0 REFERENCES AND ACRONYMS

6.1 References Cited

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- 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>
- U.S. Fish and Wildlife Service (USFWS). 2010. Fact Sheet – Endangered Species Act Listing Decision for the Greater Sage-grouse. Retrieved March 8, 2010, from <http://www.fws.gov/mountain-prairie/species/birds/sagegrouse/FactSheet03052010.pdf>.
- Wilson, D.E. and S. Ruff. 1999. The Smithsonian Book of North American Mammals. Smithsonian Institute Press. Washington and London. 750pp.

6.2 List of Acronyms

ACEC	Areas of Critical Environmental Concern
ARPA	Archaeological Resources Protection Act of 1979
BCC	Birds of Conservation Concern (USFWS)
BLM	Bureau of Land Management
BMP	Best Management Practices
CA	Cooperating Agencies
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CIA	Cumulative Impact Area
COA	Condition of Approval
CR	County Road
CRSRMA	Canyon Rims Special Recreation Management Area
DEIS	Draft Environmental Impact Statement
DR	Decision Record
EA	Environmental Assessment
EIS	Environmental Impact Statement
ENBB	Electronic Notification Bulletin Board
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
FLPMA	Federal Land Policy Management Act
FONSI	Finding of No Significant Impact
FR	Federal Register
FWS	Fish and Wildlife Service
GIS	Geographic Information System
GPS	Global Positioning System
IDT	Interdisciplinary Team
K ₂ O	K ₂ O Utah, LLC
KOP	Key Observation Points
ML	Mineral Lease
MBTA	The Migratory Bird Treaty Act
MOU	Memorandum of Understanding
MSO	Mexican spotted owl
N/A	Not Applicable or Not Available
NAGPRA	Native American Graves Protection and Repatriation Act of 1990

NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NOI	Notice of Intent
NPS	National Park Service
NRHP	National Register of Historic Places
NWP	Nationwide Permit
OHV	Off Highway Vehicles
PLPCO	Public Lands Policy Coordination Office
POD	Plan of Development
RFAS	Reasonable Foreseeable Action Scenario
RMP	Resource Management Plan
RN	Roaded Natural
ROS	Recreation Opportunity Spectrum
ROW	Right of Way
SHPO	State Historic Preservation Office
SITLA	State Institutional Trust Lands Administration
SRMA	Special Recreation Management Area
SUWA	Southern Utah Wilderness Alliance
T&E	Threatened and Endangered
TL	Timing Limitation
UDWR	Utah Division of Natural Resources
UDWR	Utah Division of Wildlife Resources
UPIF	Utah Partners in Flight
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USDI	United States Department of the Interior
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
VRM	Visual Resource Management
WSA	Wilderness Study Area

INTERDISCIPLINARY TEAM CHECKLIST

Project Title: K2O Utah, Access Road Right-of-Way Grants

NEPA Log Number: DOI-BLM-UT-Y010-2010-0172-EA

File/Serial Number: UTU-87966, UTU-87967 & UTU-88102

Project Leader: Jan Denney

DETERMINATION OF STAFF: (Choose one of the following abbreviated options for the left column)

NP = not present in the area impacted by the proposed or alternative actions

NI = present, but not affected to a degree that detailed analysis is required

PI = present with potential for relevant impact that need to be analyzed in detail in the EA

NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form. The Rationale column may include NI and NP discussions.

The following elements are not present in the Moab Field Office and have been removed from the checklist:
Farmlands (Prime or Unique), Wild Horses and Burros.

Determination	Resource	Rationale for Determination*	Signature	Date
RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)				
NI	Air Quality Greenhouse Gas Emissions	Potential fugitive dust would be abated through the use of water spraying during construction.	AM Aubry ^{ANA}	4/5/11
NI	Floodplains	The road upgrades would include appropriate erosion and sedimentation control measures.	AM Aubry ^{ANA}	4/5/11
PI	Soils	Surface disturbance increases soil erosion (both wind and water), these impacts can be minimized through mitigation and interim reclamation	AM Aubry ^{ANA}	4/5/11
NP	Water Resources/Quality (drinking/surface/ground)	Perennial water is not within or near the project area	AM Aubry ^{ANA}	4/5/11
NP	Wetlands/Riparian Zones	No riparian resources present within the project area	AM Aubry ^{ANA}	4/5/11
NP	Areas of Critical Environmental Concern	There are no ACECs within the project area (see Map 21, 2008 Moab RMP)	Katie Stevens ^{KS}	4/5/11
PI	Recreation	Recreation users could be disrupted during the construction phase of the project. Recreational setting and uses could change as a result of construction and road upgrades.	Katie Stevens ^{KS}	4/5/11
NP	Wild and Scenic Rivers	There are no suitable Wild and Scenic Rivers within the project area (see Map 22, 2008 Moab RMP)	Katie Stevens ^{KS}	4/5/11
NI	Visual Resources	Although part of the project is in VRM II, the project site is not visible from the Needles Overlook Road, which is the Key Observation Point in the area. Furthermore, the rerouting of the access road would not be substantially noticeable to the casual observer.	Katie Stevens ^{KS}	4/5/11
NP	BLM Natural Areas	There are no Natural Areas (Wild Lands) within the project area (see Map 16, 2008 Moab RMP)	Bill Stevens ^{BS}	4-5-11
NI	Socio-Economics	The action on State Lands is a non-connected action; therefore there are no economic impacts from the proposed action; expenditures on BLM road construction would have minimal impacts on the local economy.	Bill Stevens ^{BS}	4-5-11

Appendix A

Determination	Resource	Rationale for Determination*	Signature	Date
NP	Wilderness/WSA	There are no Wilderness Areas or WSAs within the project area (see Map 23, 2008 Moab RMP).	Bill Stevens <i>BS</i>	4-5-11
NP	Lands with Wilderness Characteristics	The entirety of proposed ROW UTU-87967 and a small portion of proposed ROW UTU-87966 are within the Lockhart Basin and Hatch Canyon units of the Utah Wilderness Coalition's wilderness proposal America's Red Rock Wilderness Act. In compliance with Secretarial Order 3310, the BLM has evaluated the proposed action to determine whether the proposal overlaps any areas that potentially have wilderness characteristics. The BLM has determined that lands in the area clearly lack wilderness characteristics because they do not meet the size criteria and/or they lack the appearance of naturalness due to existing development.	Bill Stevens <i>BS</i>	4-5-11
	Cultural Resources	A Class III cultural resources inventory and report was completed for portions of the ROWs that would require surface disturbance. A determination of "no historic properties affected" has been made for the proposed ROWs. Therefore, no further analysis of cultural resources is warranted in this EA.	Aron King <i>AK</i>	4/11/11
	Native American Religious Concerns	Due to the determination of "no historic properties affected", Native American consultation is not necessary for this undertaking. However, should this project inadvertently discover habitation sites, plan gathering areas and/or objects of culture patrimony, the appropriate tribes will be notified in accordance with the Native American Graves Protection and Repatriation Act.	Aron King <i>AK</i>	4/11/11
NP	Environmental Justice	The proposed action and alternatives would not result in disproportionately high and adverse human health or environmental effects to minority or low income populations.	David Skinner	4/5/11
NP	Wastes (hazardous or solid)	Exploration drilling would not require or produce hazardous or solid wastes as defined by the Resource Conservation and Recovery Act (RCRA) or the Comprehensive Environmental Response Compensation and Liability Act (CERCLA).	David Skinner	4/5/11
NI	Threatened, Endangered or Candidate Animal Species	Modeled as MSO forging habitat, no potential for nesting occupancy-proposed activity will not impact nesting suitability. The proposed project is located in an area identified as historical Gunnison sage-grouse habitat and within an area identified as potentially suitable for winter and brooding habitat in the Moab RMP (2008). This information was developed through coordination with the Utah Division of Wildlife (UDWR) in 2003. In 2010 the UDWR evaluated areas previously identified as potentially suitable and/or currently occupied sage-grouse habitats. The sage-grouse habitats located in the Canyon Rims area, where the proposed project is located, have been removed from the UDWR suitable and occupied sage-grouse database due to lack of occupancy and low potential for future occupancy.	Pam Riddle	4/8/11
PI	Migratory Birds	Seasonal potential for impacts to nesting birds and their habitat.	Pam Riddle	4/11/11
NP	Utah BLM Sensitive Species	No known occupancy or suitable habitats within the project area.	Pam Riddle	4/11/11
PI	Fish and Wildlife Excluding USFW Designated Species	Antelope and other wildlife species could be displaced during construction activities.	Pam Riddle	4/11/11
PI	Invasive Species/Noxious Weeds	With an increased disturbance on the road weed species (i.e. Russian Thistle) would expect to increase and occupy the	Jordan Davis	4/5/11

Determination	Resource	Rationale for Determination*	Signature	Date
		disturbed areas. Equipment could be transporters of noxious weeds and could allow them to become established on site.		
NP	Threatened, Endangered or Candidate Plant Species	Based on site visits by BLM biologists, review of the Utah Natural Heritage database, and review of the inventories conducted for threatened and endangered (T&E) and sensitive plants completed for the Moab Field Office; no threatened, endangered, or sensitive plant species are known to occur in the project area.	David Williams	DW 4/5/11
NI	Livestock Grazing	Lost forage would be minimal due to limited surface disturbance.	Kim Allison	KA 4/5/11
NI	Rangeland Health Standards	No effect or change in rangeland health standards due to minimal surface disturbance.	Kim Allison	KA 4/5/11
PI	Vegetation Excluding USFW Designated Species	Loss of vegetation due to construction activities.	David Williams	DW 4-5-11
NI	Woodland / Forestry	The upgraded road would not be expected to impact the PJ woodlands around the area. There is a possibility of one or two scant and scattered juniper trees that may be removed. The area overall is more of a grass and shrubland, therefore the woodlands would not be likely to be affected by the proposed action.	Jordan Davis	JD 4-5-11
NI	Fuels/Fire Management	No increase to fire/fuels danger with the proposed activity.	Brian Keating	BK 4/5/11
NI	Geology / Mineral Resources/Energy Production	No adverse effect on geology, mineral resources or energy production.	Rebecca Doolittle	RD 4/5/11
NI	Lands/Access	Project area is not within a right-of-way avoidance or exclusion area. The proposed ROWs involve existing roads that were designated for travel in the Moab RMP.	Jan Denney	JD 4/5/11
NI	Paleontology	Proposed right-of-way areas have low potential for the occurrence of these resources.	Rebecca Doolittle	RD 4/5/11

FINAL REVIEW:

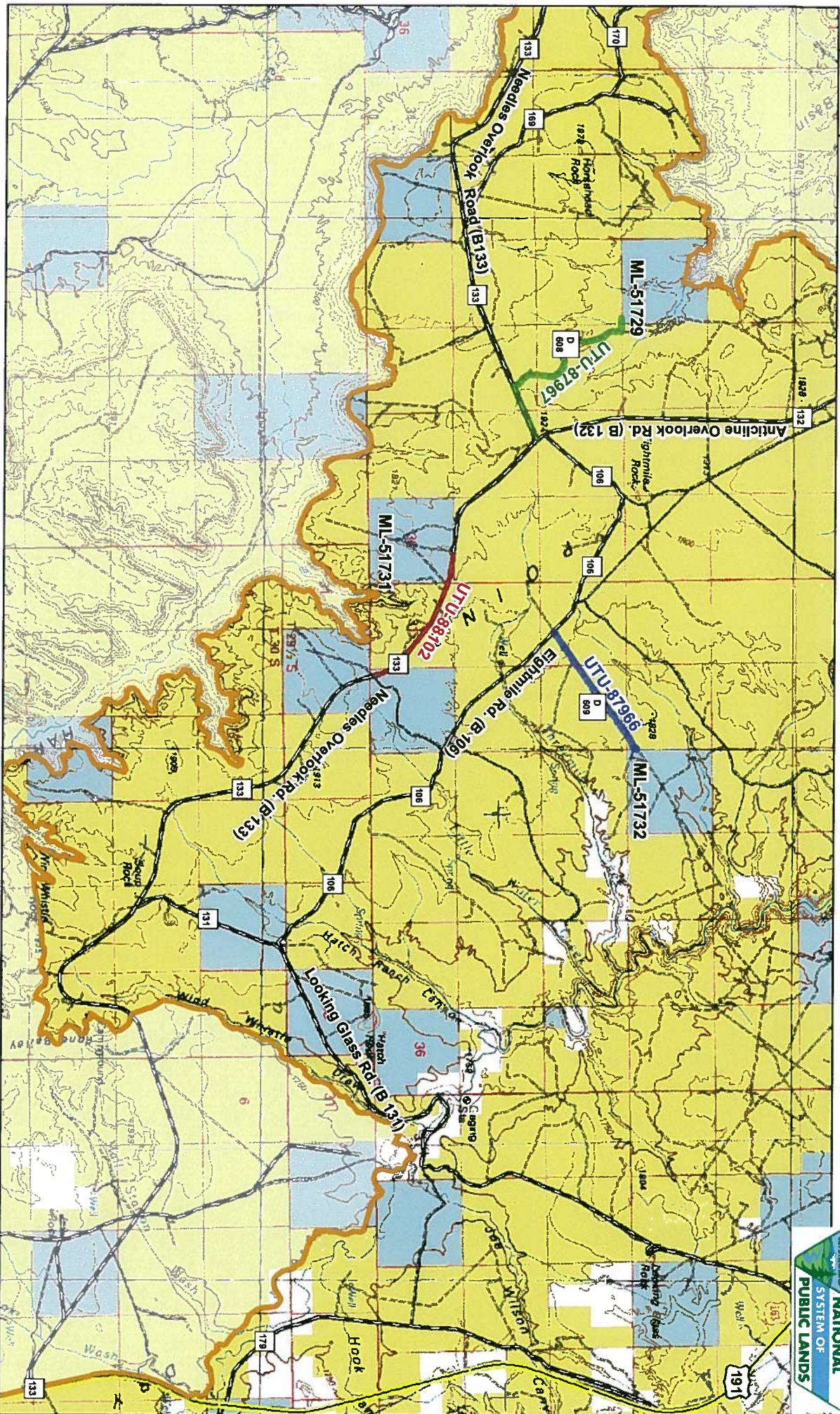
Reviewer Title	Signature	Date	Comments
Environmental Coordinator	Katu Stevens	4/11/11	
Authorized Officer	Jennifer Smith	4/13/11	

**Appendix B
Summary of Public Scoping Comments and Responses**

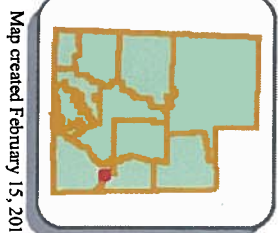
Comment Number	Commenter	Comment	Response to Comment
1	SUWA	The BLM must consider alternatives that would minimize the amount of new surface disturbance, minimize the impacts to scenic and wildlife resources, minimize impacts to air quality, and minimize impacts to America's Red Rock Wilderness Act.	The BLM will consider all reasonable alternatives that respond to the issues and meet the purpose and need.
2	SUWA	The BLM must analyze the need for upgrading the access roads for the exploration phase (bore holes) and consider an alternative that would allow K20 to use BLM designated routes, pursuant to Moab field office's Travel Plan, with no upgrading, widening, or surface enhancements. If K20 eventually begins production at the SITLA lease site, it can request a right-of-way or permission to upgrade the access roads at that time.	This alternative will be considered in the EA.
3	SUWA	The BLM must also analyze the need for issuing a right-of-way for the entire length of the designated routes that access K20's leases. The ENBB notice states that 100% of UTU-87966 would be along a designated route and 80% of UTU-87967 would be along a designated route. There is no explanation as to why K20 needs a right-of-way along designated route portions of the proposed access roads. K20 can use these designated routes without acquiring a right-of-way. If, after analysis, BLM determines that there is a compelling need to upgrade and widen these designated routes to allow K20 to develop its leases on SITLA lands, BLM should consider approving the upgrade work, under a maintenance agreement or other agreement, and not solely as a right-of-way grant.	Same as response to comment number 2.

4	SUWA	BLM must also consider other reasonable alternative access routes to K2O's lease 1-18-28-21, in T29S, R21E, Sec15, including the designated route that enters the section from the northeast corner.	Same as response to comment number 2.
5	SUWA	BLM must catalogue the past, present, and reasonably foreseeable projects in the area that might impact the environment. BLM must also analyze these impacts in light of the Proposed Action. BLM must analyze these impacts in light of the proposed action. If BLM determines that certain actions are not relevant to the cumulative impacts analysis, it must "demonstrate the scientific basis for this assertion." A failure to include a cumulative impact analysis of actions within a larger region will render NEPA analysis insufficient.	This information will be considered in the EA under Cumulative Impacts Analysis.
6	SUWA	For K2O's right-of-way applications to access exploration bore holes, BLM must fully consider and take a hard look at the impacts of the proposed right-of-way areas' visual resources, wildlife resources, cultural resources, air quality, the Scenic Driving Focus Area and surrounding lands in America's Red Rock Wilderness Act.	These issues will be considered in the EA.
7	SUWA	In order to prevent unnecessary and undue degradation as required by the Federal Land Policy and Management Act, BLM must minimize the upgrades and construction to the designated routes. Thus BLM must fully analyze the need for the proposed upgrades and for granting rights-of-way for these designated routes for the purpose of K2O's exploratory bore holes.	Same as response to comment number 2.
8	State of Utah	K2O must comply with all relevant air quality regulations promulgated by the State of Utah, Division of Air Quality. K2O should minimize	The issue of air quality will be considered in the EA.

		fugitive dust that may be generated during soil disturbance by watering and/or chemical stabilization, and providing vegetative cover or windbreaks, as required by the BLM and State of Utah Public Lands Policy Coordination Office (PLPCO).	
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Utan BLM Field Office Boundaries
Location Map

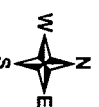


Map created February 15, 2011

- Field Office Boundary
- State and Federal Highways
- B Roads (Maintained)
- D Roads (Unmaintained)



Scale = 1:1100,000



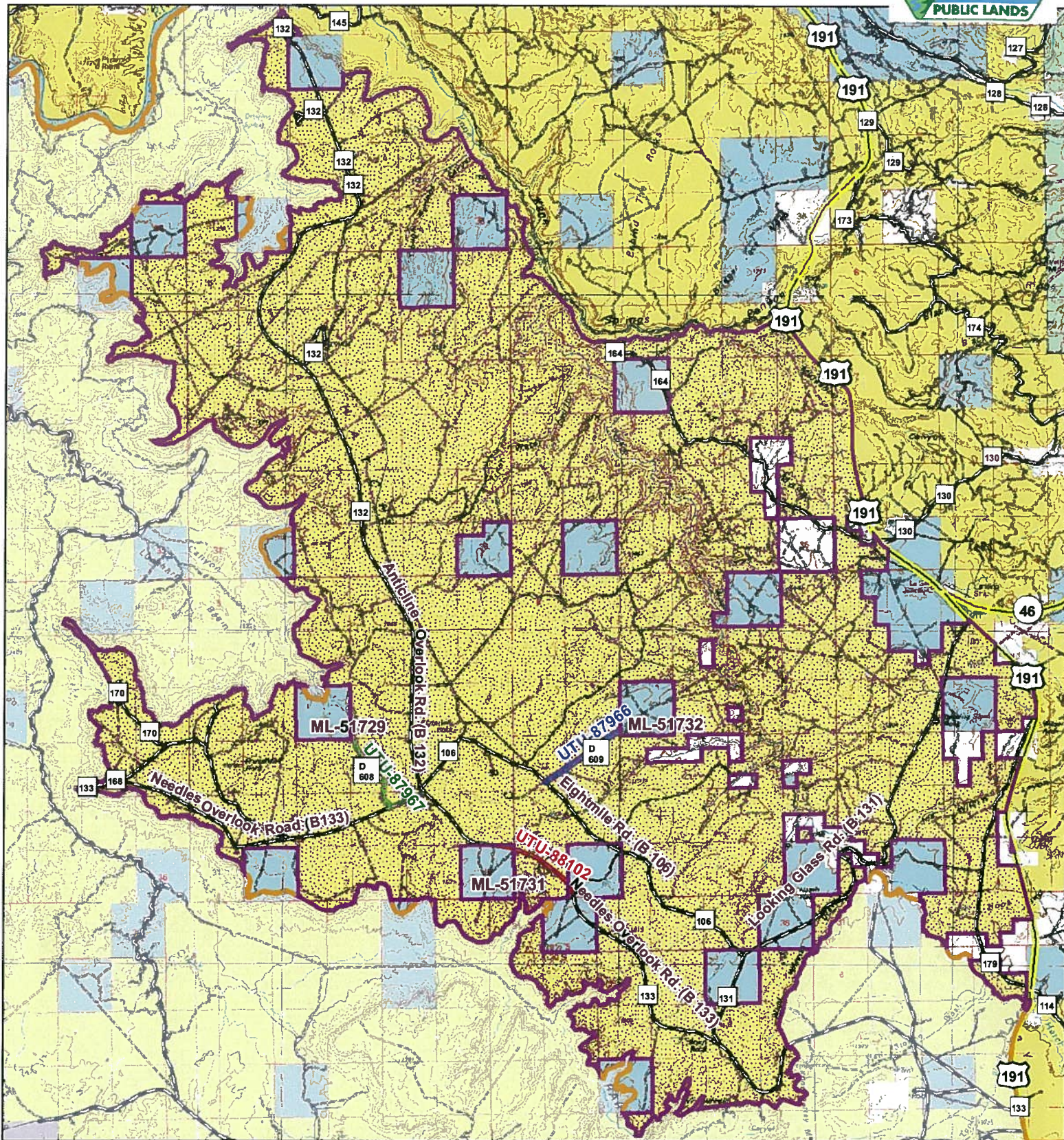
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- ROW UTU-87967
- ROW UTU-88102

- Bureau of Land Management
- State Lands
- Private

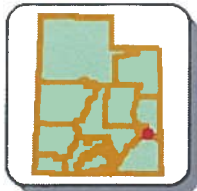
DOI-BLM-UT-Y010-2010-0172 EA
Bureau of Land Management
Moab Field Office

CAUTION:
Land ownership data is derived from less accurate data than the 1:24000 scale base map. Therefore, land ownership may not be shown for parcels smaller than 40 acres, and land ownership lines may have plotting errors due to source data.
No warranty is made by the Bureau of Land Management for the use of the data for purposes not intended by the BLM.

Map 2 - Canyon Rims Special Recreation Management Area



Location Map
Utah BLM Field Office Boundaries



Map created February 15, 2011

- Field Office Boundary
- Canyon Rims SRMA
- State and Federal Highways
- B Roads (Maintained)
- D Roads (Unmaintained)

0 0.5 1 2 Miles

Scale = 1:155,000



Land Status

- Bureau of Land Management
- US Forest Service
- State
- Private

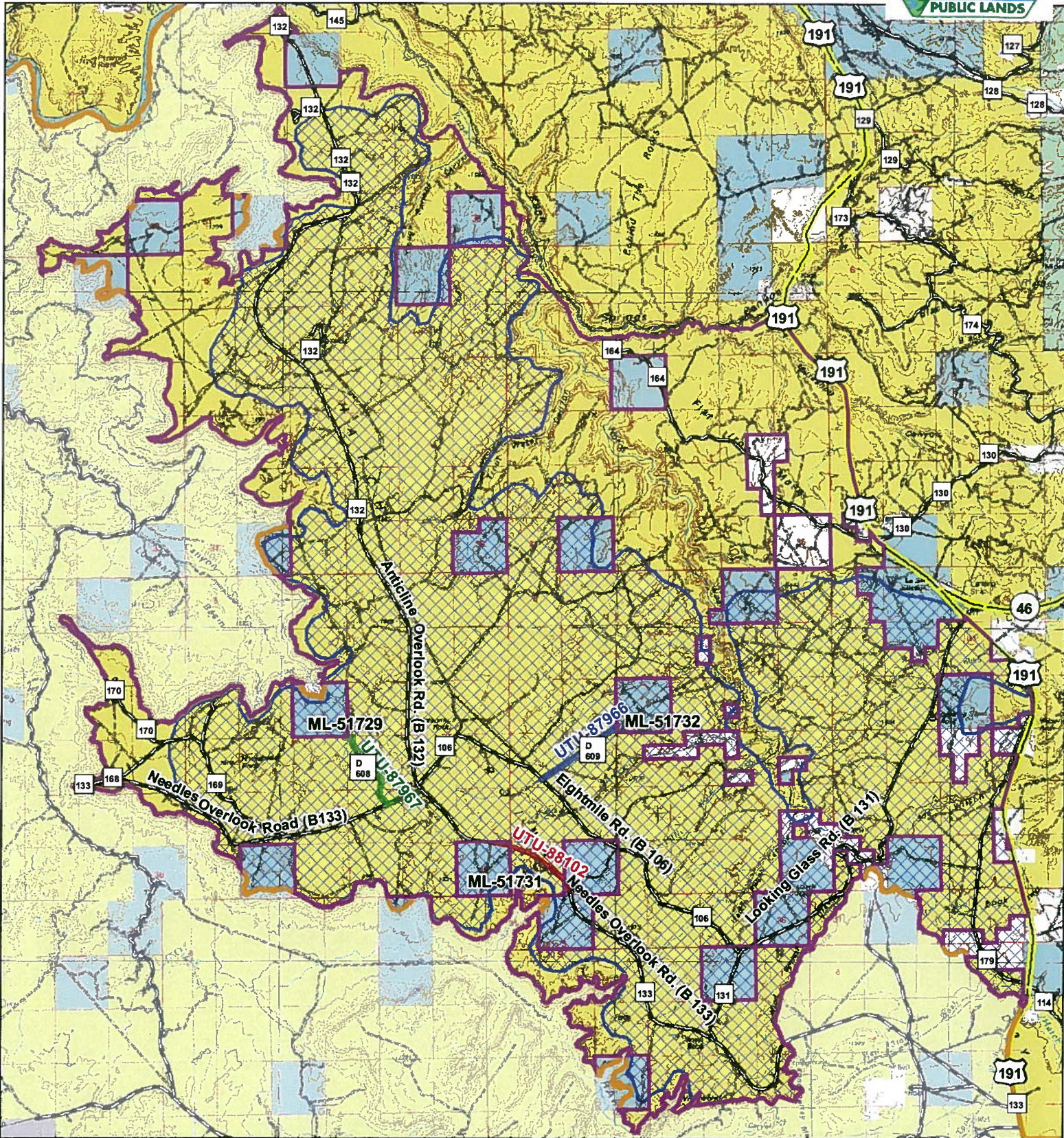
DOI-BLM-UT-Y010-2010-0172 EA
Bureau of Land Management
Moab Field Office

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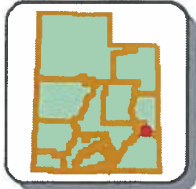
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Map 3 - Pronghorn Habitat



Location Map
Utah BLM Field Office Boundaries



Map created February 15, 2011

- Field Office Boundary
- Canyon Rims Special Recreation Management Area
- Pronghorn Kidding Habitat
- State and Federal Highways
- B Roads (Maintained)
- D Roads (Unmaintained)

0 0.5 1 2 Miles Scale = 1:155,000

Land Status

- Bureau of Land Management
- US Forest Service
- State
- Private



DOI-BLM-UT-Y010-2010-0172 EA
Bureau of Land Management
Moab Field Office

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