

# United States Department of the Interior Bureau of Land Management

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Environmental Assessment  
DOI-BLM-UT-9100-2011-0005

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September 2011

## February 2012 Oil and Gas Lease Sale

*Location:* Canyon Country District  
Moab and Monticello Field Offices

*Applicant/Address:* U.S. Department of the Interior  
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## **February 2012 Oil and Gas Lease Sale DOI-BLM-UT-9100-0005**

### **1.0 PURPOSE & NEED**

#### **1.1 Introduction**

The Bureau of Land Management (BLM) has prepared this environmental assessment (EA) to disclose and analyze the environmental consequences of the sale of 17 parcels during the February 2012 oil and gas lease sale. The EA is a site-specific analysis of potential impacts that could result from the implementation of a proposed action or alternatives to the proposed action. The EA assists the 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). A FONSI statement, for this EA would document 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 (Moab RMP; BLM, 2008a) and the Monticello Field Office Resource Management Plan (Monticello RMP, BLM 2008b). 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, whether the proposed action or another alternative.

#### **1.2 Background**

The BLM policy is to make mineral resources available for use and to encourage their orderly development to meet national, regional, and local needs. This policy is based in various laws, including the Mineral Leasing Act of 1920 and the Federal Land Policy and Management Act of 1976. The Federal Onshore Oil and Gas Leasing Reform Act of 1987 (Sec. 5102(a)(b)(1)(A)) directs the BLM to conduct quarterly oil and gas lease sales in each state whenever eligible lands are available for leasing.

Expressions of Interest (EOI) to nominate parcels for leasing by the BLM are submitted by the public. From these EOIs, the BLM Utah State Office forwards a preliminary parcel list to the Canyon Country District Office, the Moab Field Office and the Monticello Field Office for review and processing. Each Field Office determines whether or not the existing analyses in the land use plans provide an adequate basis for leasing recommendations or that additional NEPA analysis is needed before making a leasing recommendation. In most instances an EA will be initiated for the parcels within the District or Field Office to meet the requirements of Washington Office (WO) Instruction Memorandum (IM) 2010-117. After the EA is complete, it is available to the public along with the list of available lease parcels and stipulations for a 30-day public comment period on the BLM webpage and the Utah Environmental Notification Bulletin Board (ENBB). After the end of the public comment period, the BLM analyzes and incorporates the comments where appropriate and changes to the document and/or lease parcels list are made, if necessary. The final parcel list with stipulations and notices is made available to the public through a Notice of Competitive Lease Sale which starts the protest period (30 days)

with a copy of the EA. The protest period ends 60 days before the scheduled lease sale. The Utah BLM resolves any protests within the 60 days between the end of the protest period and the lease sale when possible. If any changes are needed to the parcels or stipulations/notices, an erratum is posted to the BLM website to notify the public of the change.

The parcels would be available for sale at an oral auction at the UTSO tentatively scheduled for February 21, 2012. If a parcel of land is not purchased at the lease sale by competitive bidding, it may still be leased within two years after the initial offering. A lease may be held for ten years, after which the lease expires unless oil or gas is produced in paying quantities. A producing lease can be held indefinitely by economic production.

There are four leases that would not be offered at the oral auction for competitive bidding. They are parcels 004, 011, 021 and 024. These are parcels consisting of the railroad right-of-way and will be offered in accordance with the Rights-of Way Act of May 21, 1931 and 43 CFR 3109.1-1 that includes that area under the right-of-way owned by Utah Railway Company. 43 CFR 3109.1-3 states that after the BLM has considered the application of the lease (through this EA), the adjoining land owner or lessee shall be allowed reasonable time, as provided in the notice, to submit a bid for the amount or compensatory royalty, the owner or lessee shall pay for the extraction of the oil and gas underlying the right-of-way through wells on adjoining lands. The owner of the right-of way shall be given the same time period to submit a bid for the sale. The BLM will award the lease to the owner of the right-of-way or a contract for the payment of compensatory royalty by the owner or lessee of the adjoining lands shall be made to the bidder whose offer is determined, by the authorized officer to be the best advantage of the United States, considering the amount of royalty to be received and the better development under the respective means of production and operation (43 CFR 3109.1-4). The term of these leases shall be for no more than 20 years instead of the regular lease which is 10 years unless oil or gas is produced in paying quantities.

A lessee must submit an Application for Permit to Drill (APD) (Form 3160-3) to the BLM for approval and must possess an approved APD prior to any surface disturbance in preparation for drilling. Any stipulations attached to the standard lease form must be complied with before an APD may be approved. Following BLM approval of an APD, a lessee may produce oil and gas from the well in a manner approved by BLM in the APD or in subsequent sundry notices. The operator must notify the appropriate authorized officer, 48 hours before starting any surface disturbing activity approved in the APD.

The preliminary parcel list originally contained 35 parcels. After an initial review 16 parcels were recommended for deferral because they are located in either the Moab Master Leasing Plan area or the Cisco Desert Leasing Plan area. The Utah State Office forwarded an amended preliminary parcel list of 19 parcels to the Canyon Country District and its field offices. This EA has been prepared to disclose and analyze the environmental consequences of leasing 19 parcels (16,542.27acres) located in the Moab and Monticello Field Offices of the Canyon Country District to be included as part of a competitive oil and gas lease sale tentatively scheduled to occur February 21, 2012. Appendix A contains the Preliminary February 2012 Oil and Gas Lease Sale Parcel List and Appendix B contains a map of the subject parcels. Deferred parcels are identified in Appendix D.

The EA is being used to determine the necessary administrative actions, stipulations, lease notices, special conditions, or restrictions that would be made a part of an actual lease at the time of issuance. Continued interdisciplinary support and consideration would be required to ensure on the ground implementation of planning objectives, including the proper implementation of stipulations, lease notices and Best Management Practices (BMPs) through the Application for Permit to Drill (APD) process.

Seventeen of the parcels (UT0212-002, UT0212-003, UT0212-004, UT0212-006, UT0212-011, UT0212-020, UT0212-021, UT0212-022, UT0212-024, UT0212-028 through UT0212-31 and UT0212-33 and UT0212-34) are entirely within the Moab Field Office while two parcels UT0212-032 and UT0212-35 overlap the Moab and Monticello Field Office boundary near the junction of highway 191 and the Lisbon Valley Road.

Parcel UT2012-31 has split estate where the minerals are federal and some of the surface estate is in private ownership or administered by the Utah School and Institutional Trust Lands Administration (SITLA). Fifty-seven (57) percent of the surface estate in Parcel UT2012-031 is privately owned.

### **1.3 Need for the Proposed Action**

The parcels proposed for leasing were nominated by the public or were bureau nominations. The need for the lease sale is to respond to the nomination requests. Offering parcels for competitive oil and gas leasing provides for the orderly development of fluid mineral resources under BLM's jurisdiction in a manner consistent with multiple use management and environmental consideration for the resources that may be present. The sale of oil and gas leases is needed to meet the growing energy needs of the United States public.

Utah is a major source of natural gas for heating and electrical energy production in the lower 48 states. Continued sale and issuance of lease parcels maintains options for production as oil and gas companies seek new areas for production or attempt to develop previously inaccessible or uneconomical reserves.

### **1.4 Purpose for the Proposed Action**

The purpose for analyzing the preliminary parcels for potential sale is to ensure that adequate provisions are included in the lease stipulations to protect public health and safety, and assure full compliance with the objectives of NEPA and other federal environmental laws and regulations designed to protect the environment and mandating multiple use of public lands. The BLM is required by law to review areas that have been nominated, and there has been ongoing interest in oil and gas exploration in the Canyon Country District Office (CCDO) area. Oil and gas leasing is a principal use of the public lands as identified in Section 102(a)(12), 103(1) of the Federal Land Policy and Management Act of 1976 (FLPMA), and it is conducted to meet requirements of the Mineral Leasing Act of 1920, as amended, the Mining and Minerals Policy Act of 1970, and the Federal Onshore Oil and Gas Leasing Reform Act of 1987 (Reform Act). Leases would be issued pursuant to 43 Code of Federal Regulations (CFR) Subpart 3100.

## 1.5 Conformance with BLM Land Use Plans

The Proposed Action and No Action alternatives described below are in conformance with the Moab Field Office Record of Decision and Resource Management Plan (Moab ROD/RMP) (BLM, 2008a) and Monticello Field Office Record of Decision and Resource Management Plan (Monticello RMP) (BLM, 2008b) because they are specifically provided for in the planning decision. They conform to the following Land Use Plan (LUP) decisions (Note: The appendices referenced in the decisions are found in the RMP for that field office and are not the appendices found directly in this document):

### 1.5.1 Moab RMP Decisions

#### MIN-12 (page 75)

**Leasable Minerals:** The plan will recognize and be consistent with the National Energy Policy Act and related BLM policy by adopting the following objectives: recognizing the need for diversity in obtaining energy supplies; encouraging conservation of sensitive resource values; improving energy distribution opportunities.

#### MIN-13 (page 75)

**Leasable Minerals:** In accordance with an UDEQ-DAQ letter dated June 6, 2008 (See Appendix J, Moab) requesting implementation of interim nitrogen oxide control measures for compressor engines; BLM will require the following as a Lease Stipulation and a Condition of Approval for Applications for Permit to Drill: (1) All new and replacement internal combustion oil and gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to oil and gas field engines of less than or equal to 40 design-rated horsepower; (2) All new and replacement internal combustion oil and gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.

#### MIN-14 (page 75)

**Leasable Minerals:** Lease stipulations have been developed to mitigate the impacts of oil and gas activity (see Appendix A and Map 12). The stipulations adhere to the Uniform Format prepared by the Rocky Mountain Regional Coordinating Committee in March 1989. Stipulations reflect the minimum requirements necessary to accomplish the desired resource protection and contain provisions/criteria to allow for exception, waiver and modification if warranted. Stipulations would be determined unnecessary if duplicative of Section 6 of the Standard Lease Terms. The BLM has identified Land-use Plan leasing allocations for all lands within the Moab Field Office. In addition, the Approved RMP describes specific lease stipulations and program related Best Management Practices (both found in Appendix A: Stipulations and Environmental Best Practices Application to Oil and Gas Leasing and Other Surface Disturbing Activities) that apply to a variety of different resources.

Appendices K (Surface Stipulations to all Surface Disturbing Activities), L (Utah's T&E and Special Status Species Lease Notices for Oil and Gas and BLM Committed Measures) and R (Fluid Mineral Best Management Practices) of the Moab's RMP/FEIS contain pertinent stipulations, lease notices and committed measures.

**MIN-19 (page 76)**

**Leasable Minerals:** Oil and Gas Leasing stipulations (see Map 12):

- Approximately 427,273 acres will be open to oil and gas leasing, subject to standard terms and conditions.
- Approximately 806,994 acres will be open to oil and gas leasing subject to controlled surface use (CSU) and timing limitation (TL) stipulations.
- Approximately 217,480 acres will be open to oil and gas leasing subject to a no surface occupancy (NSO) stipulation.
- Approximately 370,250 acres will be closed to oil and gas leasing, of which 25,306 acres are outside Wilderness or Wilderness Study Areas. About 25,306 acres are closed to oil and gas leasing because it is not reasonable to apply an NSO stipulation. This includes areas where the oil and gas resources are physically inaccessible by current directional drilling technology from outside the boundaries of the NSO areas. (These lands closed to oil and gas leasing will be managed to preclude all other surface-disturbing activities.) Should technology change, a Plan Amendment will be initiated to place these 25,306 acres under an NSO stipulation for oil and gas leasing.
- In addition, 8,078 acres of Federal minerals (split-estate lands) will be managed as open to oil and gas leasing with an NSO stipulation, and 1,539 acres of Federal minerals (split-estate lands) will be closed to oil and gas leasing (see Appendix A).

**1.5.2 Monticello RMP Decisions**

**MIN-6 (page 80)**

The plan will recognize and be consistent with the National Energy Policy Act and related BLM policy by adopting the following objectives:

- recognizing the need for diversity in obtaining energy supplies;
- encouraging conservation of sensitive resource values; and
- improving energy distribution opportunities.

**MIN-11 (page 81)**

In accordance with an UDEQ-DAQ letter dated June 6, 2008, (Appendix C) requesting implementation of interim nitrogen oxide control measures for compressor engines; the BLM will require the following as a Lease Stipulation and a Condition of Approval for Applications for Permit to Drill:

- All new and replacement internal combustion oil and gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to oil and gas field engines of less than or equal to 40 design-rated horsepower.
- All new and replacement internal combustion oil and gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.

**MIN-23 (page 83)**

- Approximately 484,217 acres are administratively available for oil and gas leasing, subject to standard lease terms.

**MIN-24 (page 83)**

- TL: Approximately 594,469 acres are administratively available for oil and gas leasing subject to TL.

**MIN-25 (page 83)**

- CSU: Approximately 60,741 acres are administratively available for oil and gas leasing subject to CSU.

**MIN-26 (page 84)**

- CSU and TL: Approximately 85,384 acres are administratively available for oil and gas leasing subject to TL and CSU.

**MIN-27 (page 84)**

- NSO: Approximately 66,108 acres are administratively available for oil and gas leasing subject to NSO.

The Proposed Action and No Action alternatives are also consistent with both RMP decisions and their corresponding goals and objectives related to the management of the following resources (including but not limited to): air quality, cultural resources, recreation, riparian, soils, water, vegetation, fish & wildlife, BLM natural areas and Areas of Critical Environmental Concern (ACEC).

Standard lease terms provide for reasonable measures to minimize adverse impacts to specific resource values, land uses, or users (Standard Lease Terms are contained in Form 3100-11, Offer to Lease and Lease for Oil and Gas, U.S. Department of the Interior, BLM, June 1988 or later edition). Although once the lease has been issued, the lessee has the right to use as much of the leased land as necessary to explore for, drill for, extract, remove, and dispose of oil and gas deposits located under the leased lands, unless it is leased under an NSO stipulation, operations must be conducted in a manner that avoids unnecessary or undue degradation of the environment and minimizes adverse impacts to the land, air, water, cultural, biological, and visual elements of the environment, as well as other land uses or users. Compliance with valid, nondiscretionary statutes (laws) is included in the standard lease terms and would apply to all lands and operations that are part of all of the alternatives.

Nondiscretionary actions include the BLM's requirements under federal environmental protection laws, such as the Clean Water Act, Clean Air Act, Endangered Species Act (ESA), National Historic Preservation Act (NHPA), and FLPMA, which are applicable to all actions on federal lands even though they are not reflected in the oil and gas stipulations in the RMP and would be applied to all potential leases regardless of their category. Also included in all leases are the two mandatory stipulations for the statutory protection of cultural resources (BLM WO IM-2005-03, Cultural Resources and Tribal Consultation for Fluid Minerals Leasing) and threatened or endangered species WO IM-2002-174, Endangered Species Act Section 7 Consultation), described in Sections 4.3.1.1 and 4.3.1.4, respectively.

## 1.6 Relationship to Statutes, Regulations, or Other Plans

The proposed action is consistent with federal environmental laws and regulations, Executive Orders, and Department of Interior and the BLM policies and is in compliance, to the maximum extent possible, with state laws and local and county ordinances and plans to the maximum extent possible, including the following:

- Federal Land Policy and Management Act (1976) as amended
- Taylor Grazing Act (1934) as amended
- Utah Standards and Guidelines for Rangeland Health (1997)
- BLM Utah Riparian Management Policy (2005)
- National Historic Preservation Act (1966) as amended
- Bald and Golden Eagle Protection Act (1962)
- Endangered Species Act (1973) as amended
- BLM Manual 6840- Special Status Species Management
- Migratory Bird Treaty Act (1918)
- Utah Partners in Flight Avian Conservation Strategy Version 2.0 (Parrish et al., 2002)
- Birds of Conservation Concern 2002 (USFWS 2008)
- Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds
- MOU between the USDI BLM and USFWS to Promote the Conservation and Management of Migratory Birds (April 2010)
- Utah Supplemental Planning Guidance: Raptor Best Management Practices (BLM UTSO IM 2006-096)
- BLM Vegetation Treatments Using Herbicides Final Programmatic EIS Record of Decision (U.S. Department of Interior, Bureau of Land Management, September 2007)
- Final Vegetation Treatments on BLM Lands in 17 Western States Programmatic Environmental Report. USDI BLM. FES 0721.
- Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement (U.S. Department of Interior, Bureau of Land Management, June 2007)
- Grand County Master Plan, as revised
- San Juan County Master Plan, as revised
- Cane Creek Modeling Report (2010)
- MOU Among the USDA, USDI and EPA Regarding Air Quality Analysis and Mitigation for Federal Oil and Gas Decisions Through the NEPA Process (2011)
- Oil and Gas Leasing Reform – Land Use Planning and Lease Parcel Reviews (BLM WO IM 2010-117)

These documents and their associated analysis and/or information are hereby incorporated by reference, based on their use and consideration by various authors of this EA. The attached Interdisciplinary (ID) Team Checklists, Appendix C, were also developed after consideration of these documents and their contents. Each of these documents is available for review upon request from the Moab or Monticello Field Offices. Utah's Standards for Rangeland Health address upland soils, riparian/wetlands, desired and native species and water quality. These resources are either analyzed later in this document or, if not impacted, are also listed in Appendix C.

## 1.7 Identification of Issues

The proposed action was reviewed by an Interdisciplinary Parcel Review Team (IDPRT) composed of resource specialists from the Moab and Monticello Field Offices. These teams identified resources in the parcel areas which might be affected and considered potential impacts using current office records and geographic information system (GIS) data, and site visits. The results of the ID team review, including a list of all resources/issues that are analyzed in detail within this EA are contained in the Interdisciplinary Team Checklists, which are included as Appendix C.

On May 10, 2011 the Utah BLM State Office sent letters to the Environmental Protection Agency (EPA), State of Utah, and National Park Service to notify them of the pending lease sale and to solicit their comments and concerns. These agencies are partners in the leasing process. On May 23, 2011 a letter was sent to the La Sal Livestock Company to solicit their comments and concerns about the pending lease sale. The La Sal Livestock Company owns a portion of the surface estate in Parcel UT0212-031.

On June 3, 2011 letters were mailed to 27 individuals from Grand and San Juan County Governments, Moab and Monticello City Governments, Fish and Wildlife Service, State Trust Lands, Utah Division of Wildlife Resources, National Park Service, National Forest Service, State Parks and one livestock company (surface owner over federal mineral estate) to participate in site visits. Site visits were held on June 20, 21, 22 and 23 to validate existing data and gather new information in order to make informed leasing recommendations. Table 1-1 lists the dates the parcels were visited and the agencies that were represented.

<b>Date</b>	<b>Parcels</b>	<b>Agencies Represented</b>
June 20, 2011	UT2012-029 through UT2012-035.	BLM ID team members from Moab and Monticello; San Juan County Planning.
June 21, 2011	UT2012-001, UT2012-007, UT2012-008, UT2012-12 through UT2012-018, UT2012-023.	BLM ID team members from Moab; National Park Service; SITLA; Grand County Council.
June 22, 2011	UT2012-002, UT2012-003 UT2012-004, UT2012-011, UT2012-019 through 2012-022, 2012-024.	BLM ID team members.
June 23, 2011	UT2012-025 through UT2012-027.	BLM ID team members.

On June 9, 2011 the BLM met with National Park Service personnel to initiate discussions regarding the lease sale and to begin identifying issues.

Conference calls among the BLM air quality specialist, National Park Service air quality specialists, National Park Service Resource Program Manager, and the BLM Canyon Country District personnel were held on June 29, 2011 to discuss the Park Service's draft comments regarding air quality and again on September 16, 2011 to discuss appropriate modeling.

Public notification was initiated by entering the project information on the Environmental Notification Bulletin Board (ENBB)<sup>1</sup>, a BLM environmental information internet site on April 21, 2011. In addition to the Utah State Office announcement, the Utah State Office (USO) posted this environmental assessment and unsigned FONSI onto the ENBB on September 26, 2011. Additional information for the public is maintained on the Utah BLM Oil and Gas Leasing Webpage<sup>2</sup>.

The BLM also placed legal notices in the following newspapers to notify the public of a 30-day scoping period for the EA: Moab's *Times Independent* on June 2, 2011; Monticello's *San Juan Record* newspaper on June 1, 2011; and Blanding's *Blue Mountain Panorama* on June 1, 2011. The public scoping period ended on July 6, 2011.

On August 15, 2011, the amended parcel list and geographic information system (GIS) shapefile was posted on the Moab Field Office's website. To notify the public that changes had been made to the list. The changes were made per direction from the Utah BLM State Office.

The BLM received six comment letters on the Proposed Action during the scoping period. These letters, presenting a range of information, allegations, and issues, were carefully considered and helped drive both issue identification of possible resource issues, alternative development and impact analysis. The focus of the comments were regarding impacts of oil and gas development on air quality, water quality (surface and ground), night skies, noise, proximity to communities and impacts to recreation. Not all of the comments presented during scoping are actual resource issues to be discussed in detail in this EA and are considered outside the scope of this effort.

Below is a list of the resources of concern that were identified by the public, other agencies and internally by the BLM:

- Air Quality: Emissions, NAAQS, and Air Quality Related Values
- Cultural Resources: Compliance and Protection of Historic Properties
- Migratory Birds: Application of Conservation Measures
- Native American Religious Concerns: Tribal Coordination and Protection of Traditional Cultural Properties
- Noise: Proximity to Communities and Quiet Landscapes
- Recreation: User Experiences and Public Safety
- Threatened, Endangered or Candidate Plant Species: Compliance and Species Protection
- Visual Resource Management: VRM Class II Areas and Night Skies

### **1.8 Issues Considered but Eliminated from Further Analysis**

The following issues were considered, but eliminated from further analysis:

- Areas of Critical Environmental Concern
- BLM Sensitive Species
- Environmental Justice
- Farmlands (Prime or Unique)
- Fish and Wildlife
- Floodplains
- Fuels/Fire Management

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<sup>1</sup> Accessed online at: <https://www.blm.gov/ut/enbb/index.php>

<sup>2</sup> Accessed online at: [http://blm.gov/ut/st/en/prog/energy/oil\\_gas\\_lease.html](http://blm.gov/ut/st/en/prog/energy/oil_gas_lease.html)

- Geology / Mineral Resources / Energy Production
- Invasive, Non-native Species
- Lands / Access
- Livestock Grazing
- Paleontology
- Rangeland Health Standards
- Riparian Areas
- Recreation
- Socio-Economics
- Soils
- Surface Water And Groundwater Quality
- Threatened, Endangered, or Proposed Animal Species
- Vegetation Excluding USFW Designated Species
- Wastes, Hazardous or Solid
- Wild and Scenic Rivers
- Wilderness Characteristics
- Wilderness and Wilderness Study Areas
- Woodland / Forestry

Issuing oil and gas leases for the parcels offered at a lease sale would have no environmental consequences as the act of leasing is an administrative action only with no associated on-the-ground activity. Within Appendix C, both field office checklists, the Determination and Rationale for Determination relates only to the part of the proposed action regarding the construction, drilling, completion, testing, and production of one oil and gas well on each parcel.

These issues were eliminated from analysis because they were either not applicable to the lands considered in the proposed action or the reviewing specialists did not consider the proposed action to represent a potential impact to these issues, under applicable leasing protective measures provided through the Moab Field Office RMP ROD, 2008 and the Monticello Field Office RMP ROD, 2008. Rationale as to why these resources or issues were not carried forward for analysis is also contained in the Interdisciplinary Team Checklists (Appendix C).

## **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

This environmental assessment focuses on the Proposed Action and No Action alternatives. Other alternatives were not considered because the issues identified during scoping did not indicate a need for additional alternatives or mitigation beyond those contained in the proposed action. The No Action alternative is considered and analyzed to provide a baseline for comparison of the impacts of the Proposed Action.

### 2.2 Alternative A – Proposed Action

The following seventeen parcels are nominated for the February 2012 oil and gas lease sale:

UT0212-002	UT0212-028
UT0212-003	UT0212-029
UT0212-004	UT0212-030
UT0212-006	UT0212-031
UT0212-011	UT0212-032
UT0212-020	UT0212-033
UT0212-021	UT0212-034
UT0212-022	UT0212-035
UT0212-024	

All parcels are under the jurisdiction of the Moab Field Office and portions of parcels UT0212-034 and UT0212-035 are located within the Monticello Field Office. The nominated parcels would be offered with additional resource protection measures consistent with the Moab RMP (BLM, 2008a) and the Monticello RMP (BLM 2008c). Legal descriptions of each nominated parcel can be found in Appendix A and map of the nominated parcels can be found in Appendix B.

Leasing is an administrative action that affects economic conditions but does not directly cause environmental consequences. However, leasing is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a NSO stipulation. Potential oil and gas exploration and production activities, committed to in a lease sale, could impact other resources and uses in the planning area. Direct, indirect, or cumulative effects to resources and uses could result from as yet undetermined and uncertain future levels of lease exploration or development.

Although at this time it is unknown when, where, or if future well sites or roads might be proposed on any leased parcel, should a lease be issued, site specific analysis of individual wells or roads would occur when a lease holder submits an Application for Permit to Drill (APD ). For the purposes of this analysis, the BLM assumed that one well pad with road and pipeline would be constructed on each lease subject to the terms, conditions, and stipulations of the lease. This would imply that over the next 10 years (the life of a lease that is not held by production) 19 locations could be drilled, with the potential surface disturbance of 200 acres (assuming 10 acres per drill pad, access road and pipeline). In general, activities are anticipated to take place as described in the following sections.

Standard lease terms would be attached to all issued leases. These terms provide for reasonable measures to minimize adverse impacts to specific resource values, land uses, or users (Standard Lease Terms are contained in Form 3100-11, Offer to Lease and Lease for Oil and Gas, U.S. Department of the Interior, BLM, June 1988 or later edition). Once the lease has been issued, the lessee has the right to use as much of the leased land as necessary to explore for, drill for, extract, remove, and dispose of oil and gas deposits located under the leased lands subject to lease stipulations, however, operations must be conducted in a manner that avoids unnecessary or undue degradation of the environment and minimizes adverse impacts to the land, air, water, cultural, biological, and visual elements of the environment, as well as other land uses or users.

Compliance with valid, nondiscretionary statutes (laws) is included in the standard lease terms and would apply to all lands and operations that are part of all of the alternatives. Nondiscretionary actions include the BLM's requirements under federal environmental protection laws, such as the Clean Water Act, Clean Air Act, ESA, NHPA, and FLPMA, which are applicable to all actions on federal lands even though they are not reflected in the oil and gas stipulations in the field office RMPs and would be applied to all potential leases regardless of their category. Also included in all leases are the two mandatory stipulations for the statutory protection of cultural resources (WO IM-2005-03, Cultural Resources and Tribal Consultation for Fluid Minerals Leasing) and threatened or endangered species (WO IM-2002-174, Endangered Species Act Section 7 Consultation).

BLM would also encourage industry to consider participating in EPA's Natural Gas STAR program under all alternatives. The program is a flexible, voluntary partnership between EPA and the oil and natural gas industry wherein EPA works with companies that produce, process, transmit and distribute natural gas to identify and promote the implementation of cost-effective technologies and practices to reduce emissions of methane, a greenhouse gas.

### **2.2.1 Well Pad and Road Construction**

Equipment for well pad construction would consist of dozers, scrapers, and graders. All well pads would be reclaimed. Topsoil from each well pad would be stripped to a maximum depth of six inches and stockpiled for future reclamation. The topsoil would be spread over the interim reclamation area, seeded, left in place for the life of the well, and then used during the final reclamation process. Disturbance for each well pad would be estimated at an area of approximately 350 feet by 250 feet (~2 acres of land), including topsoil piles. For this analysis, it was assumed that disturbance for well pads could be as high as 10 acres per well to account for any infrastructure (e.g., pipelines) that would be required if the wells were to go into production (see section 2.2.2). Disturbed land would be seeded with a mixture (certified weed free) and rate as recommended or required by the BLM.

Depending on the locations of the proposed wells, it is anticipated that some new or upgraded access roads would be required to access well pads and maintain production facilities. Any new roads constructed for the purposes of oil and gas development would be utilized year-round for maintenance of the proposed wells and other facilities, and for the transportation of fluids and/or equipment, and would remain open to other land users. Construction of new roads or upgrades to existing roads would require a 30-foot construction width and would be constructed of native material. After completion of road construction activities, the 30-foot construction width would be reclaimed to an 18-foot wide crowned running surface as well as drainage ditches. It is not possible to determine the distance of road that would be required because the location of the

wells would not be known until the APD stage. However, for purposes of analyses it is assumed that disturbance from access roads would be approximately 1.8 acres of disturbance for each well (0.5 mile of road/well).

### **2.2.2 Production Operations**

If wells were to go into production, facilities would be located at the well pad and typically include a well head, a dehydrator/separator unit, and storage tanks for produced fluids. The production facility would typically consist of two storage tanks, a truck load-out, separator, and dehydrator facilities. Construction of the production facility would be located on the well pad and not result in any additional surface disturbance.

All permanent surface structures would be painted a flat, non-reflective color (e.g., juniper green) specified by the BLM in order to blend with the colors of the surrounding natural environment. Facilities that are required to comply with the Occupational Safety and Health Act (OSHA) would be excluded from painting color requirements. All surface facilities would be painted immediately after installation and under the direction and approval of the BLM.

If oil is produced, the oil would be stored on location in tanks and transported by truck to a refinery. The volume of tanker truck traffic for oil production would be dependent upon production of the wells.

If natural gas is produced (which is more likely to occur than the production of oil), construction of a gas sales pipeline would be necessary to transport the gas. An additional Sundry Notice, right of way (ROW) and NEPA analysis would be completed, as needed, for any pipelines and/or other production facilities proposed across public lands. BLM BMPs (Best Management Practices), such as burying the pipeline or installing the pipeline within the road, would be considered at the time of the proposal.

All operations would be conducted following the “Gold Book”, *Surface Operating Standards for Oil and Gas Exploration and Development*. The Gold Book was developed to assist operators by providing information on the requirements for conducting environmentally responsible oil and gas operations on federal lands. The Gold Book provides operators with a combination of guidance and standards for ensuring compliance with agency policies and operating requirements, such as those found at 43 CFR 3000 and 36 CFR 228 Subpart E; Onshore Oil and Gas Orders (Onshore Orders); and Notices to Lessees. Included in the Gold Book are environmental BMPs; these measures are designed to provide for safe and efficient operations while minimizing undesirable impacts to the environment.

Exploration and development on split-estate lands is also addressed in the Gold Book, along with IM 2003-131, Permitting Oil and Gas on Split-Estate Lands and Guidance for Onshore Oil and Gas Order No. 1, and IM 2007-165, Split-Estate Report to Congress – Implementation of Fluid Mineral Leasing and Land Use Planning Recommendations. Proper planning and consultation, along with the proactive incorporation of these BMPs into the APD Surface Use Plan of Operations by the operator, would typically result in a more efficient APD and environmental review process, increased operating efficiency, reduced long-term operating costs, reduced final reclamation needs, and less impact to the environment.

### **2.2.3 Produced Water Handling**

Water is often associated with either produced oil or natural gas. Water is separated out of the production stream and can be temporarily stored in the reserve pit for 90 days. Permanent disposal options include discharge to evaporation pits or underground injection. Handling of produced water is addressed in Onshore Oil and Gas Order No. 7.

### **2.2.4 Maintenance Operations**

Traffic volumes during production would be dependent upon whether the wells produced natural gas and/or oil, and for the latter, the volume of oil produced. Well maintenance operations may include periodic use of work-over rigs and heavy trucks for hauling equipment to the producing well, and would include inspections of the well by a pumper on a regular basis or by remote sensing. The road and the well pad would be maintained for reasonable access and working conditions. Portions of the well pad not needed for production of the proposed well, including the reserve pit, would be recontoured and reclaimed, as an interim reclamation of the site.

### **2.2.5 Plugging and Abandonment**

If the wells do not produce economic quantities of oil or gas, or when it is no longer commercially productive, the well would be plugged and abandoned. The wells would be plugged and abandoned following procedures approved by a BLM Petroleum Engineer, which would include requiring cement plugs at strategic positions in the well bore. All fluids in the reserve pit would be allowed to dry prior to reclamation work. After fluids have evaporated from the reserve pit, sub-soil would be backfilled and compacted within 90 days. If the fluids within the reserve pit have not evaporated within 90 days (weather permitting or within one evaporation cycle, i.e. one summer), the fluid would be pumped from the pit and disposed of in accordance with applicable regulations. The well pad would be recontoured, and topsoil would be replaced, scarified, and seeded within 180 days of the plugging the well.

## **2.3 Alternative B – No Action**

Under the No Action alternative none of the nominated parcels would be offered for sale.

## **2.4 Alternatives Considered but Not Carried Forward**

### Leasing All Parcels Alternative

A total of 35 parcels were nominated for sale in the Canyon Country District Office. An alternative was considered that included leasing of all these parcels. However; portions of 3 parcels are involved in ongoing litigation, a portion of 1 parcel (006) occurs within a wilderness character area, 16 occur within Master Leasing Plan (MLP) areas and 2 occur within Rocky Mountain Bighorn Sheep (RM bighorn) habitat. In a memorandum from the State Director to the Canyon Country District Manager (August 12, 2011), it was decided to defer leasing of the portions of 3 parcels due to litigation and the 17 parcels until completion of the corresponding MLPs. In a memo dated August 12, 2011, the State Director deferred the portion of parcel 006. Lastly, parcels 090 and 010 were deferred in their entirety because of the presence of RM bighorn habitat and range improvements specifically for the species. During the analysis for the RMP, habitat for RM bighorn was not well defined and still is not although studies are planned. However, during the site visit for these parcels large amount of RM bighorn sign was observed on both parcels indicating that these parcels are within highly used by the species. There are not any stipulations identified for the RM bighorn in the Moab Field Office RMP ROD, 2008, therefore MFO determined more analysis is needed to determine the extent the RM bighorn are using the area and if stipulations are needed. The deferred parcels are contained in Appendix D.

## **3.0 AFFECTED ENVIRONMENT**

### **3.1 Introduction**

This chapter presents the potentially affected existing environment (i.e., the physical, biological, social, and economic values and resources) of the impact area as identified in the Interdisciplinary Team Checklist found in Appendix C 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 action would result in the leasing for oil and gas development of 17 parcels within the Canyon Country District. Seventeen of the parcels are within the Moab Field Office and two of the parcels overlap the Moab and Monticello Field Office boundary. One parcel has split estate where 57% (160 acres) of the surface estate is private and 43% (140 acres) of the surface estate is federal and managed by the Moab Field Office (Map 1 Appendix B).

The following information applies to Section 3.2 and is located in following Appendices:

- Map 1, Appendix B shows the nominated parcels.
- Deferred Parcel List, Appendix D

#### ***Parcel UT0212 - 002***

Parcel UT0210-002 occurs within portions of sections 7, 8, 23 and 26 of T. 21 S., R. 17 E. and totals 1,433.81 acres in Grand County. The parcel is approximately 3 miles east of the town of Green River and is located north of Interstate 70. The parcel is located on relatively level terrain in the Mancos Shale. The soils in this parcel are moderately saline. Access to the parcel is possible across existing spur routes from Grand County Class B roads. Additional routes would need to be constructed to planned drill pad sites within the parcel itself. The vegetation class is salt desert shrub.

#### ***Parcel UT0212 - 003***

Parcel UT0212-003 is located about six miles east of the town of Green River, in portions of Sections 20, 21, 22, 27 and 28 of T. 21 S., R. 17 E. in Grand County, Utah. The parcel is 1,765.50 acres in size. A Grand County class B road crosses the southern end of the parcel. This road parallels a railroad right-of-way. Access to the parcel is this county road. Spurs would need to be constructed to access areas within the parcel. The parcel is on gently rolling terrain in the Mancos Shale. The soils are moderately saline. The vegetation class is salt desert shrub.

#### ***Parcel UT0212 - 004***

Parcel UT0212-004 is located about six miles east of the town of Green River within the railroad right-of-way (U62502) in Sections 20, 21, 26, 27 and 28 of T. 21 S., R. 17 E., in Grand County, Utah. The parcel is 86.50 acres in size. Since this parcel is a railroad right-of-way it is accessed by a Grand County class B road that has maintenance spurs that access the tracks. The parcel was disturbed to construct the railroad. The disturbance has reclaimed with salt desert shrub vegetation. The lessee should be on notice that there is no room within the right-of-way to construct a location to drill a well. Access to the parcel is this county road which parallels this portion of the railroad right-of-way. The terrain in this parcel is relatively level. The soils in this parcel are moderately saline.

***Parcel UT0212 - 006***

Parcel UT0212-006 is located at the junction of Interstate 70 and the Ruby Ranch-Floy Exit (Exit 175) in portions of Section 4 in T. 22 S., R. 18 E., of Grand County, Utah. The parcel is 74.80 acres in size. Interstate 70 crosses east-west across the SESE quarter of Section 4 and the railroad right-of-way crosses east-west across the NESE quarter of Section 4 which is not part of this lease parcel. A Grand County Road accesses the parcel along its western side. The parcel is in salt desert shrub plant community and the terrain is relatively level. The soils in this parcel are moderately saline.

A portion of this parcel was part of UT1108-169 that was offered in the December 2008 lease sale. Parcel UT1108-169 was one of the 77 parcels from the December 2008 lease sale that were withdrawn in February 2009. All of the 77 parcels that were withdrawn were reviewed in the "Final BLM Review of 77 Oil and Gas Lease Parcels Offered in BLM-Utah's December 2008 Lease Sale" (Oct. 2009) prepared in response to the "Report to Secretary Ken Salazar Regarding the Potential Leasing of 77 Parcels in Utah" (June 2009). This report is referred to as the Stiles Report. Parcel UT1108-169 was reviewed in the "Stiles Report" (BLM 2009:10) under the "East of Green River Group". The only recommendation in the report was to lease this parcel.

***Parcel UT0212 - 011***

Parcel UT0212-011 is located about 0.5 miles northeast of the Crescent Junction within the railroad right-of-way (U62502) in portions of Sections 24, 25, 26 and 27 of T. 21 S., R. 19 E., in Grand County, Utah. The parcel is 66.00 acres in size. This parcel is a railroad right-of-way which is not accessed by a designated route. Maintenance access appears to be at Crescent Junction. The parcel was disturbed to construct the railroad. The disturbance has reclaimed with salt desert shrub vegetation. The lessee should be on notice that there is no room within the railroad right-of-way to construct a location to drill a well. Access to the parcel is this county road. Spurs would need to be constructed to access areas within the parcel. The terrain in this parcel is relatively level. The soils are moderately saline.

***Parcel UT0212 - 020***

Parcel UT0212-020 is located south of Thompson in portions of Sections 27, 28, 31 and 33 of T. 21 S., R. 20 E., in Grand County, Utah. The parcel is 947.65 acres in size. Parcel UT0212-020 consists of two portions. The western portion is approximately 160 acres in size and is located in Section 31. This portion is located about 1 mile southeast of the town of Thompson and is accessed by a Grand County B road that crosses diagonally from the northeast to the southwest. This portion occurs on the section of Thompson Wash that drains into the Valley City reservoir. The eastern portion is located about 1 mile south of the town of Thompson, in Sections 27, 28 and 33. Interstate 70 crosses in Sections 27 and 28. A Grand County B road accesses the very northeastern area in Section 27. The terrain is gently rolling. A wash crosses this portion and drains into the Valley City reservoir. The vegetation is salt desert shrub and the soils are moderately saline.

***Parcel UT0212 - 021***

Parcel UT0212-021 is located about one mile west of the town of Thompson within the railroad right-of-way (U62502) in portions of Sections 19, 20, 22, 23, 24, 25, 26 and 27 of T. 21 S., R. 20 E., in Grand County, Utah. The parcel is 131.70 acres in size. This parcel is accessed by Grand County class B roads. The parcel was disturbed to construct the railroad. The disturbance has been reclaimed with salt desert shrub vegetation. The lessee should be on notice that there is no room within the right-of-way to construct a location to drill a well. This road parallels a railroad right-of-way. The terrain has gentle slopes. The soils are moderately saline.

***Parcel UT0212 - 022***

Parcel UT0212-022 located south of Thompson in portion of Sections 1, 4 and 5 of T. 22 S., R. 20 E., in Grand County, Utah. The parcel is 896.20 acres in size. UT0212-022 consists of three portions. The western portion is about 2.5 miles south of the town of Thompson in Section 5. Access to this portion is by a Grand County B road. The central portion is located in Section 4 and also occurs about 2.5 miles south of Thompson. Access to this portion is by a Grand County B road. The eastern portion is located in Section 21 and is about 4 miles southeast of Thompson with no designated routes access. The terrain in Parcel UT0212-022 has gentle slopes. A wash crosses a portion of this parcel and drains into the Valley City reservoir. The vegetation is salt desert shrub and the soils are moderately saline.

***Parcel UT0212 - 024***

Parcel UT0212-024 is located about 4 miles east of the town of Thompson within the railroad right-of-way (62502) in portions of Sections 19, 20, 21 and 22, of T. 21 S., R. 21 E., in Grand County, Utah. The parcel is 98.90 acres in size. This parcel is which is accessed by a Grand County class B road. The parcel was disturbed to construct the railroad. The disturbance has been reclaimed with salt desert shrub vegetation. The lessee should be on notice that there is no room within the right-of-way to construct a location to drill a well. Access to the parcel is by a Grand County B road. The terrain is generally level. The soils are moderately saline.

***Parcel UT0212 - 028***

Parcel UT0212-028 is located about 15 miles southeast of the City of Moab and just east of the community of Brown's Hole in portions of Sections 15, 23, 24 and 25 of T. 28 S., R. 23 E., in San Juan County, Utah. The parcel is 2,122.72 acres in size. Access to the parcel is by San Juan County B and D roads. The vegetation class for the parcel is mainly piñon-juniper with portions of its southern end in the sagebrush vegetation class. The terrain is variable with rolling benches bisected by several drainages one of which is Buck Draw. The soils tend to be shallow and rocky.

***Parcel UT0212 - 029***

Parcel UT0212-029 is located about 14 miles southeast Moab along the southern base of Black Ridge in Sections 17 and 18 of T. 28 S., R. 23 E., in San Juan County, Utah. The parcel is 1,081.76 acres in size. Access to the parcel is by San Juan County B and D roads. The vegetation class for the parcel is mainly piñon -juniper with small area on top of Black Mesa that is in the sagebrush vegetation class. The terrain is variable with cliffs and benches bisected by several drainages. The soils tend to be shallow and rocky.

***Parcel UT0212 - 030***

Parcel UT0212-030 is located about 1 mile north of La Sal Junction in Sections 29, 30 and 31 of T. 28 S., R. 23 E., in San Juan County, Utah. The parcel is 880.00 acres in size. Parcel UT0212-030 and can be accessed from Highway 191 and San Juan County D roads. The vegetation class for this parcel is mostly piñon -juniper however there are areas that classify as sagebrush. The terrain in this parcel is bisected by several drainages and consists of rolling benches. The soils are shallow and rocky in some areas and in some areas covered by deeper eolian sand deposits.

***Parcel UT0212 - 031***

Parcel UT0212-031 is located near La Sal Junction in portions of Sections 4, 10 and 22 of T. 29 S., R. 23 E., in San Juan County, Utah. The parcel is 280.0 acres in size. Parcel UT0212-031 has three portions generally along Highway 191. The southernmost segment is located along the southeastern boundary between private land that is part of the Wilson Arch community and land managed by the BLM. Access to the parcel is along a San Juan County D road that parallels the property boundary between private and public land and then turns south and into a wash which is a tributary to Joe Wilson Canyon. This unnamed wash is located on the parcel appears to flow only when the area receives intense rainfall. The vegetation classes for this portion are piñon-juniper and sagebrush. The soils are shallow and rocky in some areas and in some areas covered by deeper eolian sand deposits. The middle portion is located about ¼- mile east of La Sal Junction and can be accessed from Highway 46. The vegetation class for this parcel is mostly sagebrush however there are areas that classify as piñon-juniper. The soils are sandy and rocky and tend to be a little deeper than those on the northern portion.

The northern portion is located just south of La Sal Junction and can be accessed via a San Juan County D road from both Highway 191 and Highway 46. This surface estate here is privately owned. The vegetation class for the portion is sagebrush. The terrain is relatively flat and it is dissected by shallow washes. The soils are deeper and consist of colluvium and eolian deposits.

***Parcel UT0212 - 032***

Parcel UT0212 – 032 is located about 19 miles north of Monticello in Sections 24, 25, 26 and 35 of T. 30 S., R. 23 E. in San Juan County, Utah. The parcel is 2,007.56 acres in size. The northeastern portion of this parcel is located in the Moab Field Office and the rest is located in the Monticello Field Office. Access is via the Lisbon Valley road which crosses the lower half of the parcel. The parcel is in gently rolling terrain. The vegetation classes for this parcel are sagebrush and piñon-juniper. The soils mainly consist of eolian deposits.

***Parcel UT0212 - 033***

Parcel UT0212-033 is located about 13 miles (farther by road) northwest of Harley Dome in Section 21 of T. 17 S., R. 24 E. in Grand County, Utah. The parcel is 160.00 acres in size. The access is via Grand County D roads. The terrain consists of cliffs and steep talus slopes. The vegetation class is piñon-juniper. The soils are moderately saline.

***Parcel UT0212 - 034***

Parcel UT0212-034 is located about 4 miles south of La Sal on the south side of a junction of San Juan county roads 191 and 115. This parcel is located in Section 22 of T. 29 S., R. 24 E., in San Juan County, Utah and is 120.0 acres in size. The parcel slopes gently down to the north-northwest. The vegetation class on the parcel is sagebrush. The soils consist of colluvium and eolian deposits.

***Parcel UT0212 - 035***

Parcel UT0212-035 is located about 19 miles north of Monticello in Sections 30 and 31 of T. 30 S., R. 24 E., in San Juan County, Utah. The parcel is 797.38 Acres. This parcel is accessed from the Lisbon Valley Road and San Juan County D roads. Most of this parcel is located in the Monticello Field Office with the very northwestern corner located within the Moab Field Office. This parcel has two portions, both are in rolling terrain and the vegetation class is sagebrush. Hatch Wash bisects both portions. The soils consist of colluvial, alluvial and eolian deposits.

**3.3 Resources Brought Forward for Analysis****3.3.1 Air Quality**

Air quality is affected by various natural and anthropogenic factors. Industrial sources such as power plants, mines, and oil and gas extraction activities in the Four Corners region contribute to local and regional air pollution. Urbanization and tourism create emissions that affect air quality over a wide area. Air pollutants generated by motor vehicles include tailpipe emissions and dust from travel over dry, unpaved road surfaces. Wildfires and controlled burns produce smoke that can affect communities and other sensitive areas. Strong winds, especially during the spring months can generate substantial amounts of windblown dust.

Air pollution emissions are characterized as point, area, or mobile. Point sources are large, stationary facilities such as power plants and manufacturing facilities and are accounted for on a facility by facility basis. Area sources are smaller stationary sources and, due to their greater number, are accounted for by classes. Production emissions from an oil and gas well and dust from construction of a well pad would be considered area source emissions. Mobile sources consist of non-stationary sources such as cars and trucks. Mobile emissions are further divided into on-road and off-road sources. Engine exhaust from truck traffic to and from oil and gas locations would be considered on-road mobile emissions. Engine exhaust from drilling operations would be considered off road mobile emissions.

The Clean Air Act required the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The Utah Division of Air Quality (UDAQ) is responsible to ensure compliance with the NAAQS within the state of Utah. Table 3-1 shows NAAQS for the EPA designated criteria pollutants (EPA 2008).

Table 3-1: National Ambient Air Quality Standards				
Pollutant	Primary Standards		Secondary Standards	
	Level	Averaging Time	Level	Averaging Time
Carbon Monoxide (CO)	9 ppm (10 mg/m <sup>3</sup> )	8-hour <sup>(1)</sup>	None	
	35 ppm (40 mg/m <sup>3</sup> )	1-hour <sup>(1)</sup>		
Lead (Pb)	0.15 µg/m <sup>3</sup> <sup>(2)</sup>	Rolling 3-Month Average	Same as Primary	
	1.5 µg/m <sup>3</sup>	Quarterly Average	Same as Primary	
Nitrogen Dioxide (NO <sub>x</sub> )	0.053 ppm (100 µg/m <sup>3</sup> )	Annual (Arithmetic Mean)	Same as Primary	
	100 ppb	1-hour	Same as Primary	
Particulate Matter (PM <sub>10</sub> )	150 µg/m <sup>3</sup>	24-hour <sup>(3)</sup>	Same as Primary	
Particulate Matter (PM <sub>2.5</sub> )	15.0 µg/m <sup>3</sup>	Annual <sup>(4)</sup> (Arithmetic Mean)	Same as Primary	
	35 µg/m <sup>3</sup>	24-hour <sup>(5)</sup>	Same as Primary	
Ozone (O <sub>3</sub> )	0.075 ppm (2008 std)	8-hour <sup>(6)</sup>	Same as Primary	
Sulfur Dioxide (SO <sub>2</sub> )	0.03 ppm	Annual (Arithmetic Mean)	0.5 ppm (1300 µg/m <sup>3</sup> )	3-hour <sup>(1)</sup>
	0.14 ppm	24-hour <sup>(1)</sup>		
	75 ppb	1-hour <sup>(1)</sup>	None	
<p>(1) Not to be exceeded more than once per year.  (2) Final rule signed October 15, 2008.  (3) Not to be exceeded more than once per year on average over 3 years.  (4) To attain this standard, the 3-year average of the weighted annual mean PM<sub>2.5</sub> concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m<sup>3</sup>.  (5) To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m<sup>3</sup> (effective December 17, 2006).  (6) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. (effective May 27, 2008).</p>				

Regional ozone concentrations are of concern in the lease area. Ozone monitoring data collected at Canyonlands National Park (Figure. 1) demonstrates that the area encompassing the February 2012 lease sale is approaching the current 8-hr NAAQS of 75 ppb for ozone. Figure 1 shows ozone trends at the Canyonlands monitoring site expressed in terms of the 4<sup>th</sup> maximum 8-hr value, the primary health-based standard, as well as the W-126 values, which represent a weighted average that is biologically relevant for evaluating impacts to sensitive vegetation. Studies show that some types of vegetation are more sensitive to the deleterious effects of ozone than humans are, and can exhibit injury or harm at ozone concentrations lower than the current

primary ozone standard. While Canyonlands and Arches have plant species known to be sensitive to ozone such as serviceberry (*Amelanchier* sp.), Goodding's willow (*Salix gooddingii*), and skunkbush (*Rhus aromatica*)<sup>3</sup>, no in-park surveys have been completed that document ozone injury. In general, risk to vegetation from ozone injury may be low due to climatic conditions (i.e. low soil moisture); however, vegetation in riparian areas may be vulnerable.

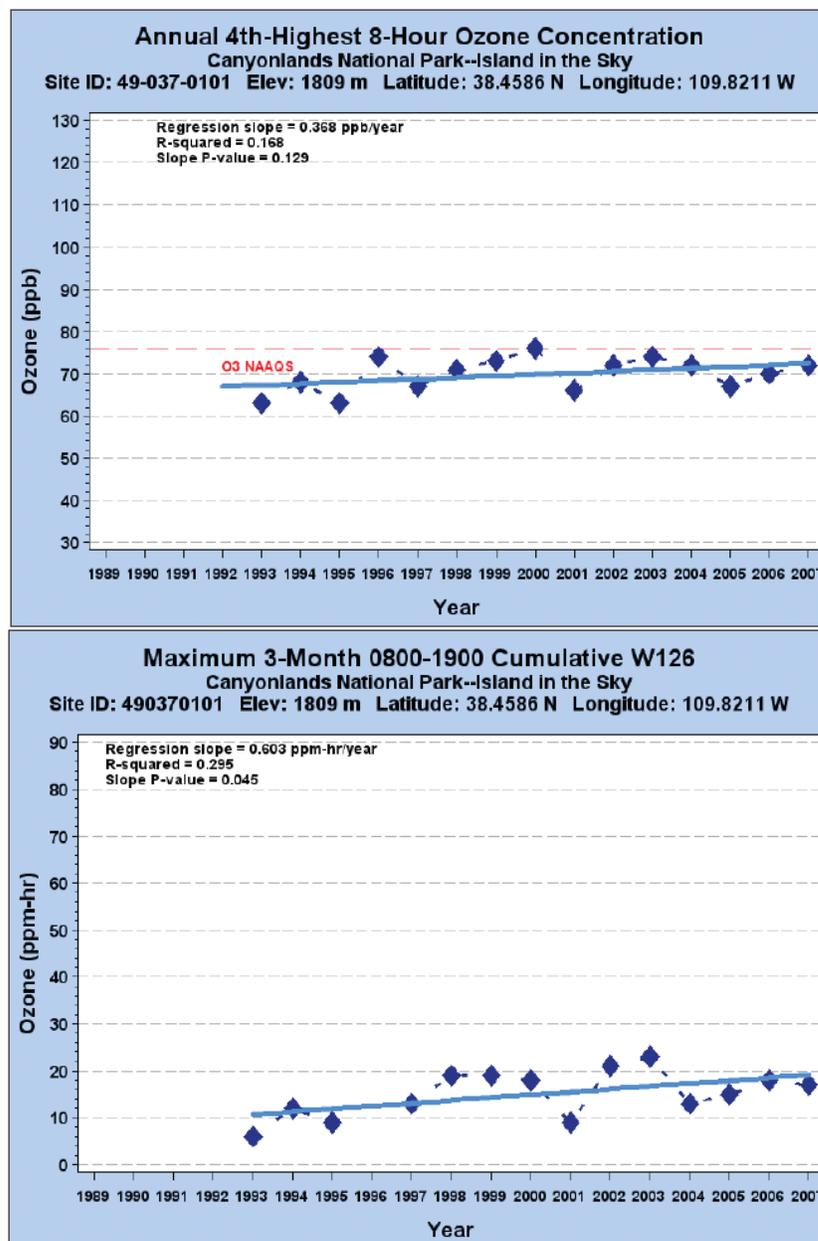


Figure 1. Trends in the annual 4<sup>th</sup> highest 8-hr ozone concentration (current primary standard, top panel) and the cumulative W126 ozone metric measured at Canyonlands National Park, Island in the Sky. (Figures excerpted from Perkins 2010.).

<sup>3</sup> A complete list of ozone sensitive species by park is available at <http://www.nature.nps.gov/air/permits/aris/networks/ozonerisk.cfm>.

The UDAQ issued the Division of Air Quality 2010 Annual Report (UDAQ 2011) that includes information on areas of the state where monitoring data shows that levels of criteria pollutants exceed NAAQS. These areas are referred to as non-attainment areas. At present, San Juan and Grand Counties are considered in attainment or unclassified for all criteria pollutants. An “unclassified” designation indicates that sufficient air monitoring is not available to make a determination as to attainment status. For regulatory purposes an unclassified county is considered the same as attainment. The UDAQ 2010 annual report also includes an emissions inventory (conducted in 2008) by county. Table 3-2 shows the emissions inventory for Grand and San Juan counties in tons per year (tpy).

<b>Grand County</b>		<b>San Juan County</b>	
<b>Pollutant</b>	<b>Tons per Year (tpy)</b>	<b>Pollutant</b>	<b>Tons per Year (tpy)</b>
PM <sub>10</sub>	3,276.87	PM <sub>10</sub>	2,962
PM <sub>2.5</sub>	780.37	PM <sub>2.5</sub>	993
SOx	129.14	SOx	47
NOx	3,749.03	NOx	1,521
VOC	37,308.71	VOC	66,066
CO	19,815.59	CO	24,839

Although not listed as a NAAQS criteria pollutant, volatile organic compounds (VOC) are also considered in this EA as they, along with NOx, are precursors to the formation of ozone and are listed by UDAQ as a pollutant that, if the threshold is exceeded, would require an approval order.

This EA addresses mobile off road engine exhaust emissions from drilling activities, venting and flaring emissions from completion and testing activities, emissions from ongoing production activities, and fugitive dust emissions, specifically emissions of total particulate matter of less than 10 micrometers (PM<sub>10</sub>), from heavy construction operations. PM<sub>10</sub> emissions are converted from total suspended particulates by applying a conversion factor of 25%. PM<sub>2.5</sub> is not specifically addressed as it is included as a component of PM<sub>10</sub>. PM<sub>2.5</sub> is converted from PM<sub>10</sub> by applying a conversion factor of 15% (BLM 2008d, p. 4-14). This EA does not consider mobile on road emissions as they are dispersed, sporadic, temporary, and not likely to cause or contribute to an exceedance of the NAAQS.

### **3.3.2 Cultural Resources**

Other cultural resource projects completed in the nominated parcels include Class I and Class III resource surveys and paleontological resource surveys for electrical transmission lines, pipelines, oil and gas development, mining, geophysical surveys projects and livestock grazing permit renewals. These data available identifies 76 archaeological sites located within the nominated parcels. These 76 cultural sites known to exist inside nominated the parcels are unevaluated for the National Register of Historic Places (NRHP).

Based on topography in and surrounding the nominated lease parcels, and known cultural summary information, it was determined that inventory considerations could be deferred until a specific development is proposed. A professional assessment of the lease parcels’ potential for cultural resources eligible to the NRHP would be conducted during on-the-ground inventories of proposed developments prior to issuance of a permit for development. In all cases, the standard

lease notice and the following stipulation identified in IM-2005-003 should be attached to the leases:

*“This lease may be found to contain historic properties and/or resources protected under the National Historic Preservation Act (NHPA), American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O. 13007, or other statutes and executive orders. The BLM will not approve any ground disturbing activities that may affect any such properties or resources until it completes its obligations under applicable requirements of the NHPA and other authorities. The BLM may require modification to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized or mitigated.”*

### **3.3.3 Migratory Birds**

A variety of migratory song bird species use habitats within the nineteen parcels 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 Memorandum of Understanding (MOU) between the BLM and United States Fish and Wildlife Service (USFWS) (BLM MOU WO-230-2010-04) 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, identify potential measurable negative effect on migratory bird populations, focusing first on species of concern, priority habitats, and key risk factors. In such situations, BLM would 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 Utah Partners in Flight American Landbird Conservation Plan. The Utah Partners in Flight (UPIF) Working Group completed a statewide avian conservation strategy identifying “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 (Utah Division of Wildlife Resources 2011) were used to identify potential habitat for priority species that could utilize habitats within the Canyon Country District Office and within the seventeen parcels. Table 3-4 lists the UPIF Priority Species list and the FWS BCC species.

Table 3-4: Canyon Country District Office UPIF & FWS BCC Species 2008 (Region 16)						
Species	BCC\$	UPIF‡	DWR Habitats†	1st Breeding Habitat‡	2nd Breeding Habitat‡	Winter Habitat‡
American Avocet		X	Critical	Wetland	Playa	Migrant
<i>Bald Eagle</i>	X		Winter	Lowland Riparian	Agriculture	Lowland Riparian
Band-tailed Pigeon			Critical/Substantial	Ponderosa pine	Mixed conifer	Migrant
Black Rosy-finch	X	X	Substantial/ Critical	Alpine	Alpine	Grassland
Black-necked Stilt		X	Critical	Wetland	Playa	Migrant
Black-throated Gray Warbler		X	Prime Breeding	Pinyon-Juniper	Mountain Shrub	Migrant
<i>Bobolink</i>		X	Prime Breeding/Winter	Wet Meadow	Agriculture	Migrant
Brewer's Sparrow	X	X	Critical/High	Shrubsteppe	High Desert Shrub	Migrant
Broad-tailed Hummingbird		X	Critical/ Substantial	Lowland Riparian	Mountain Riparian	Migrant
<i>Burrowing Owl</i>	X		Primary Breeding	High Desert Shrub	Grassland	Migrant
Cassin's Finch	X		Critical/Substantial	Aspen	Sub-Alpine conifer	Lowland Riparian
<i>Ferruginous Hawk</i>	X	X	Prime Breeding	Pinyon-Juniper	Shrubsteppe	Grassland
Flammulated Owl	X		Critical	Ponderosa pine	Sub-Alpine conifer	Migrant
Gambel's Quail		X	High	Low Desert Shrub	Lowland Riparian	Low Desert Shrub
Golden Eagle	X		Critical/High	Cliff	High Desert Shrub	High Desert Shrub
Grace's Warbler	X		Critical	Ponderosa pine	Mixed conifer	Migrant
Gray Vireo	X	X	Prime Breeding/Winter	Pinyon-Juniper	Oak	Migrant
<i>Greater Sage-grouse</i>		X	Historical/Potential	Shrubsteppe	Shrubsteppe	Shrubsteppe
<i>Gunnison Sage-grouse</i>	X		Historical/Potential	Shrubsteppe	Shrubsteppe	Shrubsteppe
Juniper Titmouse	X		Critical/High	Pinyon-Juniper	Pinyon-Juniper	Pinyon-Juniper
<i>Lewis's Woodpecker</i>	X	X	Prime Breeding	Ponderosa pine	Lowland Riparian	Oak
<i>Long-billed Curlew</i>	X	X	Substantial/Prime Breeding	Grassland	Agriculture	Migrant
Peregrine Falcon	X		Prime Breeding	Cliff	Lowland Riparian	Wetlands

Table 3-4: Canyon Country District Office UPIF & FWS BCC Species 2008 (Region 16)						
Species	BCC§	UPIF†	DWR Habitats†	1st Breeding Habitat‡	2nd Breeding Habitat‡	Winter Habitat‡
Pinyon Jay	X		Critical/High	Pinyon-Juniper	Ponderosa pine	Pinyon-Juniper
Prairie Falcon	X		Critical/High	Cliff	High Desert Shrub	Agriculture
Sage Sparrow		X	Critical	Shrubsteppe	High Desert Shrub	Low Desert Shrub
<i>Southwestern Willow Flycatcher*</i>	X		Migrant			
Snowy Plover	X		Critical	Playa	Playa	Migrant
<i>Three-toed Woodpecker</i>		X	Winter	Sub-Alpine Conifer	Lodge-pole pine	Sub-Alpine Conifer
Verry	X		High	Lowland Riparian	Lowland Riparian	Migrant
Virginia's Warbler		X	Prime Breeding/Winter	Oak	Pinyon-Juniper	Migrant
Willow Fly-catcher	X		Migrant	Lowland Riparian	Mountain Riparian	Migrant
<i>Yellow-billed Cuckoo*</i>	X	X	Not Known	Lowland Riparian	Agriculture	Migrant

‡Utah Partners in Flight Avian Conservation Strategy Version 2.0 (Parrish et al., 2002), §Birds of Conservation Concern 2008 (USFWS, 2008)  
†Utah Conservation Data Center (UDWR 2011), \*= BBC Species, Italic= UPIF Species

### 3.3.4 Native American Religious Concerns

The BLM's management of Native American Religious concerns is guided through its 8120 Manual: *Tribal Consultation Under Cultural Resources Authorities* and 8120 Handbook: *Guidelines for Conducting Tribal Consultation*. Further guidance for consideration of fluid minerals leasing is contained in WO IM-2005-003: Cultural Resources, Tribal Consultation, and Fluid Mineral Leasing. The 2005 memorandum notes oil and gas leasing is considered an undertaking as defined in the National Historic Preservation Act. Generally areas of concern to Native Americans are referred to as "Traditional Cultural Properties" (TCPs) which are defined as cultural properties eligible for the National Register because of its association with cultural practices or beliefs that (a) are rooted in that community's history and (b) are important in maintaining the continuing cultural identity of the community.

Consultation letters were mailed on June 10, 2011 to the following groups: Ute Mountain Ute Tribe, Hopi Tribe, Navajo Nation, Paiute Tribe, Southern Ute Tribe, Ute Indian Tribe, Zuni Pueblo, and White Mesa Ute. This initial consultation letter was an invitation for the tribes to participate in on site visits to the proposed lease parcels. A follow up letter was sent on July 20, 2010 addressing concerns expressed by the Hopi Tribe.

The Hopi response letter expressed an appreciation for the BLM Moab Field Office's continuing efforts to solicit their inputs and the BLM's efforts to address their concerns. The recommendation from the Hopi was that we not lease parcels with high densities of prehistoric sites, "since the co-mingling of energy development and cultural resource protection has been demonstrated to result in indirect and direct adverse effects to cultural resources." The Hopi have requested an inventory of known prehistoric sites within the lease parcels for review and further comment.

The Monticello Field Office mailed consultation letters on September 21, 2011 to the Jemez, Acoma, Santa Clara, Laguna and Zia Pueblos. Responses from the Pueblos are pending.

### **3.3.5 Noise**

The parcels nominated for lease sale are located in areas on the landscape that are generally unoccupied. Nearby residences include Wilson Arch and La Sal Junction. These areas are considered to be quiet. Ambient sounds tend to be natural (i.e. birds and wind) with the occasional noise from airline traffic (i.e. jets and scenic flight tours) and noise from vehicles traveling on Interstate 70, US Highway 191 and OHV's using designated routes. The people living in these communities and the visitors recreating in the area value the quiet soundscape found throughout the CCDO area.

### **3.3.7 Recreation**

Recreation use in the CCDO area is very high, with over 1.8 million visits occurring per year. Recreation use in the area is of many types, and includes hiking, bicycling, and OHV'ing (off highway vehicle driving). Only one of the parcels in this sale is located in a Special Recreation Management Area (SRMA). None of the parcels are located within Recreation Management Zones (focus areas).

Eighty-five acres of parcel UT0212-031 are located within the Cameo Cliffs Special Recreation Management Area (SRMA). This SRMA was designated specifically for OHV recreational use and experiences. The recreation use in this area is OHV use mainly by all-terrain vehicles (ATVs). Though the recreation use in near the Cameo Cliffs is light OHV use, additional roads and truck traffic would create a safety concern for riders.

### **3.3.8 Threatened, Endangered or Candidate Plant Species**

Jones Cycladenia (*Cycladenia humilis* var. *jonesii*) is a federally listed threatened plant restricted to the canyon country of the Colorado Plateau in Grand County. A member of the dogbane family, this taxon is a rhizomatous herb with round, somewhat succulent leaves, and small rose-pink hairy flowers that bloom from mid-April to early June. Jones' cycladenia grows in gypsiferous soils that are derived from the Summerville, Cutler, and Chinle formations; they are shallow, fine textured, and intermixed with rock fragments. The species can be found in Eriogonum-Ephedra, mixed desert shrub, and scattered piñon-juniper communities, at elevations ranging from 4,000 to 6800 feet.

### 3.3.9 Visual Resource Management

There are 155 acres within the lease parcels that are managed as VRM II (see Map 31, 2008 Moab RMP). Table 3-5 shows which lease parcels have lands managed as VRM II.

<b>Parcel Number</b>	<b>Acreage of VRM II</b>
UT0212-029	131
UT0212-030	24
Total Acreage of VRM II	155

The management objectives for VRM II are to project the high level of quality of the visual resources in by only allowing minor changes to the landscape that repeat the basic elements of form, line, color and texture found in the predominant natural features of the characteristic landscape. Management activities may be seen but should not attract the attention of the casual observer. The remaining acreages are managed as VRM III and IV.

The natural night skies throughout the CCDO are notably dark due to the absence of development (i.e. residences, lit expressways).

Using GIS applications, a viewshed study was completed for the lease sale. This analysis shows that parcels 002, 003, 004, 006, 011, 020, 022, and 033 are outside of the viewshed of Arches National Park. Approximately 2 miles of a central piece of parcel 024 is visible from Arches National Park. This visible area is approximately 10 miles north of the park.

The viewshed study shows that parcels 028 and 029 are within the viewshed of Canyonlands National Park. These parcels are located 20 miles east of this park. Parcels, 030, 031, 032, 033 and 034 are outside the viewshed for Canyonlands National Park.

## **4.0 ENVIRONMENTAL IMPACTS**

### **4.1 Introduction**

This chapter discusses the environmental consequences of implementing the alternatives described in Chapter 2. Under NEPA, actions with the potential to affect the quality of the human environment must be disclosed and analyzed in terms of direct and indirect effects (whether beneficial or adverse and short or long term) as well as cumulative effects. Direct effects are caused by an action and occur at the same time and place as the action. Indirect effects are caused by an action but occur later or farther away from the resource. Beneficial effects are those that involve a positive change in the condition or appearance of a resource or a change that moves the resource toward a desired condition. Adverse effects involve a change that moves the resource away from a desired condition or detracts from its appearance or condition. Cumulative effects are the effects on the environment that result from the incremental effect of the action when added to other past, present, and reasonably foreseeable future actions.

The No Action alternative (offer none of the nominated parcels for sale), serves as a baseline against which to evaluate the environmental consequences of the Proposed Action alternative (offer 19 nominated parcels for lease sale with additional resource protective measures). For each alternative, the environmental effects are analyzed for the resources that were carried forward for analysis in Chapter 3.

### **4.2 Direct and Indirect Impacts**

#### **4.2.1 Alternative A – Proposed Action**

##### **4.2.1.1 Air Quality**

The act of leasing would not result in changes to air quality. However, should the leases be issued, development of those leases could impact air quality conditions. It is not possible to accurately estimate potential air quality impacts by computer modeling from the project due to the variation in emission control technologies as well as construction, drilling, and production technologies applicable to oil versus gas production and utilized by various operators, so this discussion will remain qualitative. Prior to authorizing specific proposed projects on the subject lease parcels quantitative computer modeling using project specific emission factors and planned development parameters (including specific emission source locations) may be conducted to adequately analyze direct and indirect potential air quality impacts. In conducting subsequent project specific analysis BLM will follow the policy and procedures of the National Interagency MOU Regarding Air Quality Analysis and Mitigation for Federal Oil and Gas Decisions through NEPA, and the FLAG 2010 air quality guidance document. Air quality dispersion modeling which may be required includes impact analysis for demonstrating compliance with the NAAQS, plus analysis of impacts to Air Quality Related Values (i.e. deposition, visibility), particularly as they might affect nearby Class 1 areas (National parks and Wilderness areas).

An oil or gas well, including the act of drilling, is considered to be a minor source under the Clean Air Act. Minor sources are not controlled by regulatory agencies responsible for implementing the Clean Air Act. In addition, control technology is not required by regulatory agencies at this point, since San Juan and Grand counties are considered to be in attainment of the NAAQS. Different emission sources would result from the two site specific lease development phases: well development and well production.

Well development includes emissions from earth-moving equipment, vehicle traffic, drilling, and completion activities. NO<sub>x</sub>, SO<sub>2</sub>, and CO would be emitted from vehicle tailpipes. Fugitive dust concentrations would increase with additional vehicle traffic on unpaved roads and from wind erosion in areas of soil disturbance. Drill rig and fracturing engine operations would result mainly in NO<sub>x</sub> and CO emissions, with lesser amounts of SO<sub>2</sub>. These temporary emissions would be short-term during the drilling and completion times.

During well production there are continuous emissions from separators, condensate storage tanks, and daily tailpipe and fugitive dust emissions from operations traffic. During the operational phase of the Proposed Action, NO<sub>x</sub>, CO, VOC, and HAP emissions would result from the long-term operation of condensate storage tank vents, and well pad separators. Additionally, road dust (PM<sub>10</sub> and PM<sub>2.5</sub>) would be produced by vehicles servicing the wells.

Project emissions of ozone precursors, whether generated by construction and drilling operations, or by production operations, would be dispersed and/ or diluted to the extent where any local ozone impacts from the Proposed Action would be indistinguishable from background or cumulative conditions. The primary sources of HAPs are from oil storage tanks and smaller amounts from other production equipment. Small amounts of HAPs are emitted by construction equipment. However, these emissions are estimated to be less than 1 ton per year. Based on the negligible amount of project-specific emissions, the Proposed Action is not likely to violate, or otherwise contribute to any violation of any applicable air quality standard, and may only contribute a small amount to any projected future potential exceedance of any applicable air quality standards.

Lease stipulation UT-S-01 Air Quality, which regulates the amounts of NO<sub>x</sub> emission per horsepower hour based on internal combustion engine size, would be attached to all parcels. However, additional air impact mitigation strategies have recently been developed in the Uinta Basin, and are presented in the cumulative impacts section.

The construction, drilling, completion, testing, and production of an oil and gas well results in various emissions that affect air quality. Construction activities result in emissions of particulate matter (PM<sub>10</sub>). Well drilling activities result in engine exhaust emissions of oxides of nitrogen (NO<sub>x</sub>), carbon monoxide (CO), and volatile organic compounds (VOC). Completion and testing of the well result in emissions of VOC, NO<sub>x</sub>, and CO. Ongoing production results in the emission of NO<sub>x</sub>, CO, VOC, and PM<sub>10</sub>.

Due to the very small level of anticipated development, an emissions inventory (EI) has not been conducted for the February 2012 Oil and Gas Lease Sale. A “typical oil and gas well” emissions inventory is estimated for the purpose of this analysis. This “typical well” is based on the following analysis assumptions contained in the Monticello Field Office Proposed Resource Management Plan/Final Environmental Assessment (PRMP/FEIS) (BLM 2008d: 4-10 to 4-15), the Monticello RFD (Vandenberg 2005) and previous oil and gas development in the Monticello Field Office is applied for this analysis for all parcels in the CCDO because it holds true for both offices:

- Each oil and gas well would cause 9.6 acres of surface disturbance. This acreage is divided into 5.5 acres for road and pipeline construction and 4.1 acres for well pad construction.

- Construction activity for each well is assumed to be 10 days. It is further assumed that, based on the acreage disturbed, 4.5 days would be spent in well pad construction and 5.5 days would be spent in road and pipeline construction.
- Control efficiency of 25% for dust suppression would be achieved as a result of compliance with Utah Air Quality regulation R307-205.
- Post construction particulate matter (dust) emissions are likely to occur on a short term basis due to loss of vegetation within the construction and staging areas. Assuming appropriate interim reclamation, these emissions are likely to be minimal to negligible and will not be considered in this EA.
- Drilling operations would require 14 days.
- Completions and testing operations would require 3 days.
- Well pad, road, and pipeline construction activity emissions (PM<sub>10</sub>) will be considered. Off road mobile exhaust emissions from drilling activities will be considered.
- Off road mobile exhaust emissions from heavy equipment and on road mobile emissions will not be considered as they are dispersed, sporadic, temporary, and not likely to cause or contribute to exceedance of the NAAQS.

The estimated EI for a typical well includes particulate matter of less than 10 micrometers in diameter (PM<sub>10</sub>), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), and volatile organic compounds (VOC). Emissions of sulfur dioxide (SO<sub>2</sub>) and lead (Pb) from oil and gas development activities are minor and are not included. PM<sub>2.5</sub> is not specifically included as it is a component of PM<sub>10</sub>.

Emission factors for activities of the proposed action were based on information contained in the EPA's Emission Factors & AP 42, Volume I, Fifth Edition (EPA.1995), available at: <http://www.epa.gov/ttn/chief/ap42/index.html>. The production emissions from oil storage tanks was estimated based on the emission factor contained in the Colorado Department of Public Health and Environment PS Memo 05-01, Oil & Gas Atmospheric Condensate Storage Tank Batteries Regulatory Definitions and Permitting Guidance (CDPHE 2009), available at: <http://www.cdphe.state.co.us/ap/down/ps05-01.pdf>. The Monticello RFD (p.15) predicted that 14% of wells drilled would be non-productive dry holes. Ongoing annual production emissions displayed in the table are based on this percentage.

A project specific modeling analysis was also conducted in 2010 for a project with similar likely development characteristics as would be expected from these lease sales (Cane Creek Modeling Report, 2010). This modeling analysis analyzed the expected impacts from a 17 well project to NO<sub>2</sub> and PM<sub>10</sub> Class I PSD Increment Consumption using AERMOD, nitrogen deposition within nearby national parks using CALPUFF-lite, and visibility impacts within nearby national parks using VISCREEN. The project area for this modeling analysis was located closer to the National Parks than any of the parcels under this lease sale, so can be considered a conservative air quality analysis for purposes of tiering. No adverse impacts to Class I related air quality related values were predicted through this modeling analysis.

Table 4-1: Emissions inventory summary (per well)											
Construction Emissions (Tons)	Drilling Emissions (Tons)			Completions Emissions (Tons)				Ongoing Production Emissions (tpy)			
	PM10	NOx	CO	VOC	VOC	NOx	CO	PM10	NOx	CO	VOC
0.34	13.31	1.83	0.23	0.85	0.07	0.07	0.00	0.01	0.01	6.44	0.00
Summary											
				PM10	NOx	CO	VOC				
Activity Emissions (Total emissions for construction, drilling and completion of a well)				0.34	13.37	1.89	1.08	Tons			
Activity Emissions X 19 wells (10 year period)				6.5	254	36	21	Tons			
Per year Activity Emissions (next 10 years)				0.65	25.4	3.6	2.1	Tons			
Ongoing Annual Production Emissions (Assume 86% production success = 16 well productive wells.)				0.00	0.16	0.16	103	tpy			

Based on the EI for a typical oil and gas well, the Cane Creek modeling analysis tiered to for this EA, the air quality analysis in the PRMP/FEIS, UBAQS, and the FC CAMx study; the emissions from the February 2012 Oil and Gas Lease Sale are not likely to result in major impacts to air quality nor are they likely to cause a violation of the NAAQS.

#### 4.2.1.2 Cultural Resources

The issuance of leases would not directly impact cultural resources on the nominated parcels. Based on past surveys, some cultural sites are present. Project-specific impacts relating to future authorizations cannot be analyzed until an exploration or development application is received. At that time site specific surveys would be completed.

Appropriate lease stipulations and notices have been included within the Proposed Action to protect cultural resources (Appendix A). Impacts to cultural resources are not expected to reach a level that would require adding a lease notice to the Moab parcels. A lease notice is applied to the Monticello Field Office parcels.

#### 4.2.1.4 Migratory Birds

Migratory birds are protected the Migratory Bird Act and Executive Order 13186. 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 incidental 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.

Construction and development activities during the nesting season (May 1st through July 31st) would create the greatest impacts to migratory birds if surface disturbing activities occur during the nesting season. Impacts to nesting migratory birds could include nest site abandonment, nest failure and chick mortality and may also may cause premature fledging which may also lead to chick mortality. These impacts would be specific to that nesting season, as parent birds would re-nest in following years in more suitable locations.

Parcels UT0212 – 002, 003, 004, 006, 011, 020, 021, 022, 024, 032 and 033 have a stipulation in place that precludes surface-disturbing activities from December 1 to May 31 to minimize watershed damage on saline soils derived from the Mancos Shale. This restriction includes heavy equipment traffic on existing roads associated with drilling operations. This stipulation also protects the critical nesting period from disturbance and therefore eliminates the greatest impacts to migratory birds from surface disturbing activities.

Parcels Surface UT0212 – 028, 029, 030, 031, 034 and 035 may incur impacts to migratory birds if surface disturbing activities occur during the nesting season. A lease notice informing the potential lessee that surveys for nesting migratory birds may be required during migratory bird breeding season whenever surface disturbances and/or occupancy is proposed in association with fluid mineral exploration and development within priority habitats has been attached to all of the lease parcels. The surveys would be determined on a site-specific basis.

Disturbing activities outside of migratory bird breeding and nesting season may cause temporary, short distance and short term displacement that would have minimal to no impacts to birds, as birds can easily move to other suitable areas. Immeasurable indirect impacts may include fragmentation and loss of unoccupied suitable habitats in the developed area but there are sufficient suitable habitats in surrounding areas, therefore impacts would be minimal.

#### **4.2.1.5 Native American Religious Concerns**

The issuance of leases would not directly impact Native American Religious Concerns. Project-specific impacts relating to future authorizations cannot be analyzed until an exploration or development application is received. At that time site specific surveys and further consultation would be completed and conditions of approval to protect Native American Religious concerns could be added to the APD.

#### **4.2.1.6 Noise**

Generally, the issuance of leases would not directly impact the natural soundscape within the nominated parcels. However, residents in Wilson Arch and La Sal junction would experience sound above the ambient noises. This sound would be from drilling equipment and would be temporary. If a well on this parcel goes into production, it would most likely be a natural gas well and would not require the installation of a pump jack to remove hydrocarbons. Project-specific impacts to noise relating to future authorizations cannot be analyzed until an exploration or development application is received and approved. Noise is generated during oil and gas drilling and development. This noise is caused by the heavy equipment used to construct the well pad and road access, the generators that run the drill rig and truck traffic that delivers equipment, supplies and workers to and from the drilling location. The sounds are considered to be temporary and would occur during drilling.

The issuance of leases would not directly impact the natural soundscape within the nominated parcels. Project-specific impacts to noise relating to future authorizations cannot be analyzed until an exploration or development application is received and approved. Noise is generated during oil and gas drilling and development. This noise is caused by the heavy equipment used to construct the well pad and road access, the generators that run the drill rig and truck traffic that delivers equipment, supplies and workers to and from the drilling location. The sounds are considered to be temporary and would occur during drilling.

The residents at Wilson Arch would temporarily be disturbed by the drilling activity as would visitors recreating in the area.

The issuance of leases would not directly impact the residences at Wilson Arch. Project-specific impacts to the residents of Wilson Arch relating to future authorizations cannot be analyzed until an exploration or development application is received. Effects from exploration and production would be the noise and lighting generated from these activities. The activities would be relatively short in duration.

#### **4.2.1.7 Recreation**

The issuance of leases would not directly impact the recreation within the nominated parcels. Project-specific impacts to noise relating to future authorizations cannot be analyzed until an exploration or development application is received and approved. The effects on visitors would include noise, and increased truck traffic on roads. Lease notice to minimize light and sound have been added to all of the nominated parcels (Appendix A).

#### **4.2.1.8 Threatened, Endangered or Candidate Plant Species**

The issuance of leases would not directly impact threatened, endangered, candidate, or sensitive on the nominated parcels. The effects on threatened, endangered, candidate, or sensitive on the nominated parcels could be analyzed on a site-specific basis after a proposal for a project was received. Jones Cycladenia (*Cycladenia humilis* var. *jonesii*) is the only federally listed threatened plant present on these parcels. For the parcels on federally managed surface, application of the appropriate species-specific lease notices and application species specific lease notice (T&E 19) to the appropriate parcels would be adequate for the leasing stage to disclose potential restrictions against future authorizations. As the BLM's consultation requirements under Section 7 (a) (2) of the Endangered Species Act of 1973 as Amended apply to all actions that are authorized funded, or carried out by the BLM, the appropriate species-specific lease notice will be required for the parcels on private surface and future developments on these leases will be required to survey for and avoid or mitigate the impacts to the species. The site specific impacts to the identified species and their respective habitats resulting from future authorizations connected to the proposed leases cannot be analyzed until an exploration or development application is received, individual species surveys are completed, and avoidance and mitigation measures developed for any identified occupied habitat.

#### **4.2.1.9 Visual Resource Management**

Portions of parcels 029 and 030 located within the area known as Muleshoe Canyon are classified as VRM II. Lease stipulation UT-S-158 protects lands classified as VRM II by applying a controlled surface use stipulation and specifies that any approved activity must meet VRM class II objectives has been applied to the two parcels.

The issuance of leases would not directly impact night skies. Project-specific impacts to local residents including Wilson Arch, La Sal Junction or travelers along highways, relating to future authorizations cannot be analyzed until an exploration or development application is received. Some light pollution during the drilling and development states would occur for up to six months. After the drilling locations are completed they will blend back into the nightscape as they will not emit any sources of light. Flaring during development would be kept to a minimum and would end once the well location is put into production. Flaring of natural gas is not

expected to occur as there is a pipeline infrastructure in place near the nominated parcels to transport the gas. A lighting and sound lease notice would be applied to all parcels.

The effects on nighttime lighting of drilling activities would have a temporary affect and would impact those in close proximity to the drilling activity. In most instances, the light from the operation would be visible as a point of light in the landscape, similar to headlights of passing vehicles. The most effect on night lighting is on residences in Wilson Arch and La Sal Junction. The expected duration of drilling activities is three to six months.

A portion of Parcel 024 is visible from Arches National Park which is about 10 miles away and parcels 028 and 029 which are visible from Canyonlands National Park, which is about 20 miles away. Drilling and completion activities would be of short duration, 3 to 6 months. Lighting on the landscape would be visible, but small in scale.

#### **4.2.1.10 Mitigation**

Application of stipulations and lease notices (including those identified in Appendix A and C) to each of parcels on federal surface would be adequate for the leasing stage to disclose potential future restrictions and to facilitate the reduction of potential impacts upon receipt of a site specific APD.

#### **4.2.2 Alternative B - No Action Alternative**

This alternative (not to offer any of the nominated parcels for sale) may not meet the need for the proposed action. All parcels may be subject to drainage of Federal reserves by development on adjacent state or private leases.

Although drilling and production activities on federal land surfaces are restricted to leased parcels, oil and gas exploration may also be authorized on unleased public lands, on a case-by-case basis, pursuant to 43 CFR 3150.0-1. Accordingly, this alternative would not prevent direct, indirect or cumulative environmental impacts relating to oil and gas exploration activities through denial of the proposed action. Additionally, this alternative would not prevent indirect impacts relating to rights of way authorizations to support oil and gas operations on adjacent leased lands.

##### **4.2.2.1 Air Quality**

The No Action alternative would not result in potential impacts relating to development because the parcels would not be leased.

##### **4.2.2.2 Cultural Resources**

The No Action alternative would not result in potential impacts relating to development because the parcels would not be leased.

##### **4.2.2.4 Migratory Birds**

The No Action alternative would not result in potential impacts relating to development because the parcels would not be leased.

##### **4.2.2.5 Native American Religious Concerns**

The No Action alternative would not result in potential impacts relating to development should the parcels be leased.

#### **4.2.2.6 Noise**

Residences and visitors recreating in the area are subject to ambient noise from OHV use on roads and vehicles traveling the highway. At night, residences at Wilson Arch and La Sal Junction are subject to indirect lighting from the headlights of passing vehicles traveling along the highway. The No Action alternative would not result in potential impacts relating to development because the parcels would not be leased.

#### **4.2.2.7 Recreation**

The No Action alternative would not result in potential impacts relating to development because the parcels would not be leased.

#### **4.2.2.8 Threatened, Endangered or Candidate Plant Species**

The No Action alternative would not result in potential impacts relating to development because the parcels would not be leased.

#### **4.2.2.9 Visual Resource Management**

The No Action alternative would not result in potential impacts relating to development because the parcels would not be leased.

### **4.3 Cumulative Impacts**

A cumulative impact is defined in Council on Environmental Quality (CEQ) regulations (40 CFR §1508.7) as —the impact on the environment that 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 major actions taking place over a period of time. Past and present actions and reasonably foreseeable future actions with the potential to contribute to cumulative effects are discussed below followed by an analysis of cumulative effects. All resource values addressed in Chapter 3 have been evaluated for cumulative effects. If, through the implementation of mitigation measures or project design features, no net effect to a particular resource results from an action, then no cumulative effects result.

A variety of activities, such as sightseeing, biking, camping, and hunting, have occurred and are likely to continue to occur near or within some or all of the nominated parcels; these activities likely result in negligible impacts to resources because of their dispersed nature. Other activities, such as farming, livestock grazing, vegetation projects, and wildland fire, have also occurred within some or all of the nominated parcels and are likely to occur in the future. These types of activities are likely to have a greater impact on resources in the project area because of their more concentrated nature. Because these activities are occurring within the nominated parcel boundaries, they have the potential to contribute to cumulative effects.

The cumulative impacts as described in the Moab RMP/FEIS and the Monticello RMP/FEIS are incorporated by reference to Chapter 4. The proposed action would contribute to these cumulative impacts by making 19 parcels available for lease sale and mineral development, with the potential for future surface disturbance should the leases be developed. It is assumed that the proposed action would add one well pad with road and pipeline on each lease. The No Action alternative would not contribute any cumulative impacts. The past, present, and foreseeable future actions with the potential to contribute to surface disturbance include development of new

and existing mineral rights or realty actions (for example, pipeline or road rights of way) or the continuation of agricultural activities.

#### 4.3.1 Air Quality

The Cumulative Impact Analysis Area (CIAA) for air quality is the Four Corners area of southeast Utah and the adjoining states of Arizona, New Mexico, and Colorado. As described in the Affected Environment chapter, regional ozone is a recognized pollutant of concern in the Four Corners region, with ambient concentrations near, but not over, the relevant NAAQS. Oil and gas development does not directly emit ozone, however the formation of ozone at the lower levels of the atmosphere is related to emissions of NO<sub>x</sub> and VOC, which are pollutants emitted by oil and gas operations. The Uinta Basin Air Quality Study (UBAQS), June 30, 2009 (EIC 2009a) was prepared to predict the impact of oil and gas development on air quality primarily in the Uinta Basin of northeastern Utah. However, as stated in the overview (ECI 2009: OV-10), the 2012 future emissions projections apply the entire 12-km modeling domain, which includes Grand and San Juan counties (ECI. 2009: OV-7). The UBAQS estimated that ozone levels for the 12-km modeling domain would continue to meet the NAAQS standard through 2012. Additionally, the Air Quality Modeling Study for the Four Corners Region (FC CAMx) (EIC 2009b) was prepared to model the air quality impacts of potential alternative mitigation strategies being developed by various Four Corners Air Quality Task Force work groups. The 4 km modeling domain (EIC 2009b, Figure ES-1) for this study included much of San Juan County, Utah. Ozone predictions in this study indicate that NAAQS ozone levels would not be exceeded.

There are other regional modeling studies currently underway that will be able to better inform any future subsequent development on these leases, and these should be able to be used to further evaluate potential lease devolvement impacts on regional ozone formation in the Four Corners area once project specific proposals are made. These include the West Jump study, which will provide source apportionment estimates for ozone formation in the Four Corners area, and the BLM Utah ARMS modeling study, which will evaluate future development scenarios across Utah.

To mitigate any potential impact oil and gas development emissions may have on regional ozone formation in the CIAA the following Best Management Practices (BMPs) would be required through a lease notice for any development projects related to this lease sale:

- Tier II or better drilling rig engines
- Stationary internal combustion engine standard of 2g NO<sub>x</sub>/bhp-hr for engines <300HP and 1g NO<sub>x</sub>/bhp-hr for engines >300HP
- Low bleed or no bleed pneumatic pump valves
- Dehydrator VOC emission controls to +95% efficiency
- Tank VOC emission controls to +95% efficiency

Based on the modeling referenced in this section, and the application of these BMP's, it is unlikely emissions from any subsequent development of the proposed leases would contribute majorly to regional ozone formation in the Four Corners area, nor is it likely to contribute or cause exceedences of any NAAQS.

#### **4.3.2 Cultural Resources**

The CIAA for cultural resources will be the Moab and Monticello Planning Areas. Cumulative impacts are incorporated by reference to 4.33 to 4.38 in the Moab RMP/FEIS and 4.36 to 4.38 Monticello RMP/FEIS.

#### **4.3.4 Migratory Birds**

The CIAA for Migratory Birds will be the Moab and Monticello Planning Areas. Cumulative impacts are incorporated by reference to 4.21.2.6, and 4.23.18 in the Moab RMP and Monticello RMP. Cumulative impacts include loss of their habitat, habitat fragmentation, and disruption or alteration of seasonal migration routes.

#### **4.3.5 Native American Religious Concerns**

The CIAA for the Native American Religious Concerns is the entire planning areas for the Moab and Monticello Field Offices. Cumulative impacts are incorporated by reference to Chapter 4 in the Moab RMP/FEIS and the Monticello RMP/FEIS. Cumulative impacts to Native American Religious Concerns could be increased visitation and vandalism as access through road construction to well pads is developed.

#### **4.3.6 Noise**

The CIAA for the noise is the entire planning areas for the Moab and Monticello Field Offices specifically surrounding residences such as Wilson's Arch or La Sal Junction. The increased noise from exploration and development would be temporary. Cumulative impacts to would be the sounds and lights of exploration and drilling activities added to the ambient noises already within the landscape. Property values could see a temporary drop during drilling, but once activity the well goes into production, the well pad would blend back into the landscape bringing the property values back up to pre-exploration and development levels.

#### **4.3.7 Recreation**

The CIAA for the recreation areas is the entire planning areas for the Moab and Monticello Field Offices. Cumulative impacts are incorporated by reference to Chapter 4 in the Moab RMP/FEIS and the Monticello RMP/FEIS. Cumulative impacts to recreation areas could be the temporary noise and lighting at night, and traffic or hazards on designated routes.

#### **4.3.8 Threatened, Endangered or Candidate Plant Species**

The CIAA for Jones Cycladenia is the known range of the species. The potential habitat has not been fully explored and mapped and total population estimates for the species are currently unknown. Existing data reveals populations of are found on Jones Cycladenia in sandstone outcrops of the Summerville, Cutler and Chinle Formations. Currently, populations are known to occur along west of Arches National Park and near Fisher Tower. As this species is found in steep, difficult to reach locations, direct impacts to the species from development, grazing, and recreation have been limited. Indirect anthropogenic caused impacts to the species may include the loss of pollinators due to habitat disturbance and fragmentation resulting from widespread energy development; increased competition with non-native plant species introduced during the course of development, grazing, or recreation; loss of suitable habitat resulting from soil destabilization or the dumping of clean fill following upslope development; and altered photosynthesis, respiration, and transpiration due to increased fugitive dust resulting from the surface disturbance and project related traffic.

Beyond the potential loss or damage to individuals these impacts could include: the loss of suitable habitat for the species and its pollinators; increased competition for space, light, and nutrients with invasive and noxious weed species introduced and spread due to surface disturbing activities; accidental spray or drift of herbicides used during invasive plant control; altered photosynthesis, respiration, and transpiration due to increased fugitive dust resulting from the surface disturbance and project related traffic.

#### **4.3.9 Visual Resource Management**

The CIAA for lands with night skies is the entire planning areas for the Moab and Monticello Field Offices. The effects on nighttime lighting of drilling activities would have a temporary affect and would impact those in close proximity to the drilling activity. In most instances, the light from the operation would be visible as a point of light in the landscape, similar to headlights of passing vehicles. The most effect on night lighting is on residences in Wilson Arch and La Sal Junction. The expected duration of drilling activities is three to six months.

## 5.0 CONSULTATION AND COORDINATION

### 5.1 Introduction

The issue identification section of Chapter 1 identifies those issues analyzed in detail in Chapter 4. The ID Team Checklist 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

Table 5-1 lists the persons, groups and agencies consulted for this EA.

<b>Table 5-1: List of all Persons, Agencies and Organizations Consulted for Purposes of this EA.</b>		
<b>Name</b>	<b>Purpose &amp; Authorities for Consultation or Coordination</b>	<b>Findings &amp; Conclusions</b>
Kate Cannon	Superintendent, National Park Service	Issues related to oil and gas leasing that were used to develop issues for analysis in the EA.
Mark Miller	National Park Service	Issues related to oil and gas leasing that were used to develop issues for analysis in the EA. Attended one day of site visit. Comments were received and incorporated into the EA UTSO BLM mailed the preliminary list on April 10, 2010 with a follow-up email transmitting the corresponding shapefiles..
Lori Hunsaker	State Historic Preservation Office	Consultation letter was sent 9/23/2011. No effect determination was made at this time as there is not site specific surface disturbing activities to analyze. A professional assessment for the lease parcel's potential for cultural resources eligible to the NRHP will be conducted during on-the ground inventories of proposed developments prior to issuance of permits for development.
Ernest House, Sr. Chairman Ute Mountain Ute Tribe	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	The BLM did not receive a response.
Leigh Kuwanwisisma Director, Hopi Tribe	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	The BLM received a response on July 15, 2011, requesting more information on the location of sites relative to the parcels. This information was mailed on September 8, 2011.

<b>Table 5-1: List of all Persons, Agencies and Organizations Consulted for Purposes of this EA.</b>		
<b>Name</b>	<b>Purpose &amp; Authorities for Consultation or Coordination</b>	<b>Findings &amp; Conclusions</b>
Terry Mogart Hopi Tribe	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	The BLM received a response on July 15, 2011, requesting more information on the location of sites relative to the parcels. This information was mailed on September 8, 2011.
Joe Shirley, President, Navajo Nation	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	No comments were received.
Kelly Francis, Cultural Specialist, Navajo Nation	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	No comments were received.
Jeanie Borchardt Chairwoman, Paiute Tribe	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	No comments were received.
Dorena Martineau, Cultural Resource Director, Paiute Tribe	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	No comments were received.
Matthew Box Chairman, Southern Ute Tribe	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	No comments were received.
Neil Cloud NAGPRA Coordinator, Southern Ute Tribe	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	No comments were received.
Curtis Cheespooch Chairman, Ute Indian Tribe	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	No comments were received.
Betsy Chappoose Director, Ute Indian Tribe	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	No comments were received.
Kurt Dongoske, Director, Zuni Pueblo	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	No comments were received.
Norman Coeoyate Governor, Zuni Pueblo	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	No comments were received.

<b>Table 5-1: List of all Persons, Agencies and Organizations Consulted for Purposes of this EA.</b>		
<b>Name</b>	<b>Purpose &amp; Authorities for Consultation or Coordination</b>	<b>Findings &amp; Conclusions</b>
Terry Knight Tribal Historic Preservation Officer, Ute Mountain Ute Tribe	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	No comments were received.
Leona Eyetoo Council Member, White Mesa Ute	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	No comments were received.
Michael Toledo, Governor Jemez Pueblo	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	Comments pending as of September 26, 2011.
Christopher Toya Department of Resource Protection	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	Comments pending as of September 26, 2011.
Walter Dasheno, Governor Pueblo of Santa Clara	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	Comments pending as of September 26, 2011.
Gilbert Tafoya Office of Cultural Preservation Pueblo of Santa Clara	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	Comments pending as of September 26, 2011.
Marcellus Medina, Governor Pueblo of Zia	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	Comments pending as of September 26, 2011.
Peter Pino, Cultural Resources Director Pueblo of Zia	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	Comments pending as of September 26, 2011.
Randall Vicente, Governor Pueblo of Acoma	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	Comments pending as of September 26, 2011.
Theresa Pasqual, Director Historic Preservation Office	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	Comments pending as of September 26, 2011.
Richard Luarkie, Governor Pueblo of Laguna	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	Comments pending as of September 26, 2011.

<b>Table 5-1: List of all Persons, Agencies and Organizations Consulted for Purposes of this EA.</b>		
<b>Name</b>	<b>Purpose &amp; Authorities for Consultation or Coordination</b>	<b>Findings &amp; Conclusions</b>
Robert Mooney, NAGPRA and Cultural Coordinator Pueblo of Laguna	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	Comments pending as of September 26, 2011.
Utah Division of Wildlife Resources	Interested Party Coordination	UTSO BLM mailed the preliminary list on April 10, 2010 with a follow-up email transmitting the corresponding shapefiles and parcel list.
One Private Land Owners of for Parcel UT0212-031	Interested Party Coordination	Letters were sent informing them of the proposal and the date of the site visit. No comments or response was received.
Utah School and Institutional Trust Lands Administration	Interested Party Coordination	Attended one day of site visit, but no comments were received.
Grand County Council	Interested Party Coordination	Attended one day of site visit, but no comment was received.
San Juan County Commissioners	Interested Party Coordination	Attended one day of site visit, comments were received in support of leasing.
City of Moab	Interested Party Coordination	Comments received and incorporated into the EA.
U.S. Fish & Wildlife Service	Information on Consultation, under Section 7 of the Endangered Species Act (16 USC 1531)	Formal consultation was completed as part of the RMP/ROD in the form of the Biological Opinion. UTSO BLM mailed the preliminary list on April 10, 2010 with a follow-up email transmitting the corresponding shapefiles and parcel list
US Forest Service	Consult as USFS as a leasing program partner.	UTSO BLM mailed the preliminary list on April 10, 2010 with a follow-up email transmitting the corresponding shapefiles and parcel list.
School and Institutional Trust Lands Administration	Coordinated with as leasing program partner.	UTSO BLM mailed the preliminary list on April 10, 2010.
Public Lands Policy Coordination Office	Coordinated with as leasing program partner.	UTSO BLM mailed the preliminary list on April 10, 2010.
Utah Air Resources Technical Advisory Group	Collaboration as per the AQ MOU (2011)	Ongoing.

### **5.3 Summary of Public Participation**

Section 1.7 Identification of Issues of this EA, describes the public participation process used to identify the issues that are analyzed. The public participation process included a notification posted on the ENBB (<https://www.blm.gov/ut/enbb>) and 30 day public scoping period on issue identification and alternative development.

A 30-day public review and comment period for the EA and unsigned FONSI is scheduled from September 26, 2011 to October 24, 2011.

### 5.3.1 Modifications Based on Public Comment and Internal Review

Reserved.

### 5.3.2 Response to Public Comment

Reserved.

### 5.4 List of Preparers

Table 5-2 the preparers of this environmental analysis.

<b>Table 5-2 List of Preparers</b>		
<b>Name</b>	<b>Title</b>	<b>Responsible for the Following Section(s) of this Document</b>
Rebecca Doolittle	Geologist – Project Lead-Moab Field Office	Paleontology, Environmental Analysis
Clifford Giffen	Natural Resource Specialist, Project Lead for Monticello Field Office	Air quality, soils and vegetation ,riparian and floodplains.
Leonard Herr	Air Quality Specialist, Utah BLM State Office	Air Quality
Donald Montoya	Archaeologist Moab Field Office	Cultural Resources (Moab and Monticello), Native American Religious Concerns
Pamela Riddle	Wildlife Biologist Moab Field Office	Wildlife, Migratory Birds, Utah BLM Sensitive Species, Threatened and Endangered Animal Species
Amanda Scott	Wildlife Biologist, Monticello Field Office	Wildlife, Migratory Birds, Utah BLM Sensitive Species, Threatened and Endangered Animal Species
Katie Stevens	Recreation Planner Moab Field Office	Recreation, Areas of Environmental Critical Concern, Wild and Scenic Rivers, Visual Resource Management, NEPA Coordination
Bill Stevens	Recreation Planner Moab Field Office	Socioeconomics, Wilderness, Lands with Wilderness Character, Natural Areas, Environmental Justice
Ann Marie Aubry	Hydrologist Moab Field Office	Air Quality, Soil, Water Resources, Floodplains, Wetlands/Riparian Areas.
Kim Allison	Rangeland Management Specialist Moab Field Office	Livestock Grazing; Rangeland Health Standards; Vegetation
Dave Williams	Rangeland Management Specialist Moab Field Office	Threatened, Endangered or Candidate Plant Species

<b>Table 5-2 List of Preparers</b>		
<b>Name</b>	<b>Title</b>	<b>Responsible for the Following Section(s) of this Document</b>
Jordan Davis	Rangeland Management Specialist Moab Field Office	Invasive Species/Noxious Weeds; Woodlands/Forestry
Jed Carling	Rangeland Management Specialist Monticello Field Office	Vegetation and Soils
Jan Denney	Realty Specialist Moab Field Office	Lands/Access

## 6.0 REFERENCES, ACRONYMS AND APPENDICIES

### 6.1 References Cited

- Bureau of Land Management, 2009, Final BLM Review of 77 Oil and Gas Lease Parcels Offered in BLM-Utah's December 2008 Lease Sale, Report from Deputy Secretary Hayes, "Stiles Report", 39 p.
- . 2008a., Record of Decision and Approved Resource Management Plan (RMP), Bureau of Land Management, Moab Field Office, Moab, Utah. October, 2008.
- . 2008b, Moab Field Office Proposed Resource Management Plan and Final Environmental Impact Statement (FEIS), Bureau of Land Management, Utah State Office, Salt Lake City, Utah. Prepared by the Moab Field Office, August 2008.
- .2008c, Record of Decision and Approved Resource Management Plan (RMP), Bureau of Land Management, Monticello Field Office, Moab, Utah. November, 2008.
- . 2008d. Moab Field Office Proposed Resource Management Plan and Final Environmental Impact Statement (FEIS), Bureau of Land Management, Utah State Office, Salt Lake City, Utah. Prepared by the Monticello Field Office, August 2008.
- Bureau of Land Management, 1998, A User Guide to Assessing Proper Functioning Condition and the Supporting Science for Lotic Areas. Technical Reference 1737-15.
- Department of Interior, 1993, Final Rule, Endangered and Threatened Plants; Removal of *Echinocereus triglochidiatus* var. *inermis* (Spineless Hedgehog Cactus) from the list of Endangered and Threatened Plants *in* Federal Register, Volume 58, Number 182, Wednesday, September 22, 1993, Fish and Wildlife Service, Government Printing Office, pg. 49242.
- Environmental Protection Agency, 2008, National Ambient Air Quality Standards website accessed on September 10, 2011, website address: <http://www.epa.gov/air/criteria.html>
- McClure, R., Northrup, B., Fouts J., 2005, Reasonably Foreseeable Development Scenario for Oil and Gas, Bureau of Land Management, Moab Field Office. 51 p.
- National Resource Conservation Service, 1991, Soil Survey of Canyonlands Area, Utah, Parts of Grand and San Juan Counties, U.S. Department of Agriculture, 293 p.
- , 1989, Soil Survey of Grand County, Central Part, U.S. Department of Agriculture, 200 p.
- Parrish, J. R., F. P. Howe, and R. Norvell. 2002. The Utah avian conservation strategy, version 2.0. Salt Lake City, UT: Utah Partners in Flight Program, Utah Division of Wildlife Resources.
- Vanden Berg, M. D., 2005, Reasonably Foreseeable Development Scenario (RFD) for Oil and Gas, Monticello Planning area, Bureau of Land Management, Monticello Field Office 18 p.
- U.S. Fish and Wildlife Service website accessed on September 2, 2011, <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q1W1>

- 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/>>]
- Utah Division of Air Quality, 2011, Annual Report for the Year 2010, 26 p.
- Utah Division of Wildlife Resource, 2011. Utah Conservation Data Center. State of Utah Department of Natural Resources, UDWR Salt Lake City, Utah. [Last accessed September 8, 2011.] Available at: <http://dwrcdc.nr.utah.gov/ucdc>.
- Willey, D. and D. Spotskey. 1997. Unpublished GIS Model for Mexican spotted owl breeding habitat. Final Report. Arizona Heritage Program. Phoenix, AZ
- Willey, D. and D. Spotskey. 2000. field test of a habitat model for Mexican spotted owl breeding habitat. Final Report. Arizona Heritage Program. Phoenix, AZ
- BLM. 1991a. Final Environmental Impact Statement: Vegetation Treatment on BLM Lands in Thirteen Western States. BLM-WY-91-022-4320. Bureau of Land Management, Wyoming State Office, Cheyenne. May.
- BLM 2007b. Final Vegetation Treatments on BLM Lands in 17 Western States Programmatic Environmental Report. USDI BLM. FES 0721.
- BLM 2007. Final Vegetation Treatments on BLM Lands in 17 Western States Programmatic Environmental Impact Statement and Associated Record of Decision. USDI BLM. FES 07-21.

### 6.3 List of Acronyms

APD	Application for Permit to Drill
ATV	All-Terrain Vehicle
BCC	Birds of Conservation Concern
BLM	Bureau of Land Management
BMP	Best Management Practice
CFR	Code of Federal Regulations
CCDO	Canyon Country District Office
COA	Conditions of Approval
DR	Decision Record
EA	Environmental Assessment
EI	Emissions Inventory
EIS	Environmental Impact Statement
EOI	Expressions of Interest
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FLPMA	Federal Land Policy and Management Act of 1976
FONSI	Finding of No Significant Impact
GIS	Geographic Information System
ID	Interdisciplinary
IDPRT	Interdisciplinary Parcel Review Team
IM	Instruction Memorandum
LUP	Land Use Plan
MBTA	Migratory Bird Treaty Act of 1918
MOU	Memorandum of Understanding
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NSO	No Surface Occupancy
OHV	Off Highway Vehicle
SITLA	School and Institutional Trust Lands Administration
SRMA	Special Recreation Management Area
UDAQ	Utah Division of Air Quality
UDEQ	Utah Division of Environmental Quality
UDWR	Utah Division of Wildlife Resources
UPIF	Utah Partners in Flight
USFWS	United States Fish and Wildlife Service
WO	Washington Office

## 6.4 Appendices

**Appendix A – Preliminary Parcel List**

In addition to the Stipulations listed below, the direction provided in Washington Office Memorandums WO-IM-2005-003 (Cultural Resources Stipulation) and WO-IM-2002-174 (Endangered Species Act Stipulation) should be applied to all parcels.

**UT0212 – 002**

T. 21 S., R. 17 E., Salt Lake

Sec. 7: Lot 4, SESW, SE;

Sec. 8: NWSW;

Sec. 23: All;

Sec. 26: S2NW, N2SW excluding RR ROW U62502

1,061.94 Acres

Grand County, Utah

Moab Field Office

**STIPULATIONS**

UT-S-01: Air Quality

UT-S-108: Timing Limitation – 30% Slopes or Greater Bookcliffs

UT-S-109: Timing Limitation – Fragile Soils – Mancos Shale

UT-S-224: Timing Limitation – Pronghorn Fawning Grounds

UT-S-229: Timing Limitation – Crucial Deer and Elk Winter Range

UT-S-272: Conditional Surface Use/Timing Limitation-Burrowing Owl and Ferruginous Hawk Nesting

UT-S-298: Kit Fox

**NOTICES**

UT-LN-43: Raptor Habitat

UT-LN-45: Migratory Birds

UT-LN-49: Utah Sensitive Species

UT-LN-72: Paleontological Resources

UT-LN-98: Light and Sound

UT-LN-99: Regional Ozone Formation Controls

T&E-11: California Condor

T&E-19: Jones Cycladenia

**UT0212 – 003**

T. 21 S., R. 17 E., Salt Lake

- Sec. 20: N2NE, SENE, NENW;
- Sec. 21: All excluding RR ROW U62502;
- Sec. 22: SWNW, W2SW, SESW, S2SE;
- Sec. 27: All excluding the RR ROW U62502.
- Sec. 28: NE: Excluding RR ROW U62502.

1,765.50 Acres

Grand County, Utah

Moab Field Office

**STIPULATIONS**

- UT-S-01: Air Quality
- UT-S-109: Timing Limitation – Fragile Soils –Mancos Shale
- UT-S-224: Timing Limitation – Pronghorn Fawning Grounds
- UT-S-272: Conditional Surface Use/Timing Limitation-Burrowing Owl and Ferruginous Hawk Nesting
- UT-S-298: Kit Fox

**NOTICES**

- UT-LN-43: Raptor Habitat
- UT-LN-45: Migratory Birds
- UT-LN-49: Utah Sensitive Species
- UT-LN-72: Paleontological Resources
- UT-LN-98: Light and Sound
- UT-LN-99: Regional Ozone Formation Controls
- T&E-11: California Condor
- T&E-19: Jones Cycladenia

**UT0212 – 004**

T. 21 S., R. 17 E., Salt Lake

- Railroad Right-of-Way U62502 in Secs. 20, 21, 27 and 28.
- Railroad Right-of-Way U62502 in Sec. 26 in portions of the NW.

86.50 Acres

Grand County, Utah

Moab Field Office

**STIPULATIONS**

- UT-S-01: Air Quality
- UT-S-109: Timing Limitation – Fragile Soils –Mancos Shale
- UT-S-224: Timing Limitation – Pronghorn Fawning Grounds
- UT-S-272: Conditional Surface Use/Timing Limitation-Burrowing Owl and Ferruginous Hawk Nesting
- UT-S-298: Kit Fox

NOTICES

- UT-LN-43: Raptor Habitat
- UT-LN-45: Migratory Birds
- UT-LN-49: Utah Sensitive Species
- UT-LN-72: Paleontological Resources
- UT-LN-98: Light and Sound
- UT-LN-99: Regional Ozone Formation Controls
- T&E-11: California Condor
- T&E-19: Jones Cycladenia

**UT0212 – 006**

(UT1108-169 Stiles parcel number)  
T. 22 S., R. 18 E., Salt Lake  
Sec. 4: E2SE excluding RR ROW U62502.

80.00 Acres

Grand County, Utah  
Moab Field Office

STIPULATIONS

- UT-S-01: Air Quality
- UT-S-109: Timing Limitation – Fragile Soils – Mancos Shale
- UT-S-224: Timing Limitation – Pronghorn Fawning Grounds
- UT-S-272: Conditional Surface Use/Timing Limitation – Burrowing Owl and Ferruginous Hawk Nesting
- UT-S-298: Kit Fox

NOTICES

- UT-LN-25: White-tailed and Gunnison Prairie Dog
- UT-LN-43: Raptor Habitat
- UT-LN-45: Migratory Birds
- UT-LN-49: Utah Sensitive Species
- UT-LN-72: Paleontological Resources
- UT-LN-98: Light and Sound
- UT-LN-99: Regional Ozone Formation Controls
- T&E-11: California Condor
- T&E-19: Jones Cycladenia

**UT0212 – 011**

T. 21 S., R. 19 E., Salt Lake

Railroad Right-of-Way U62502 in Secs. 24, 25, 26 and 27.

66.00 Acres

Grand County, Utah

Moab Field Office

**STIPULATIONS**

- UT-S-01: Air Quality
- UT-S-109: Timing Limitation – Fragile Soils – Mancos Shale
- UT-S-122: No Surface Occupancy – Floodplains, Riparian Areas, Springs and Public Water Resources
- UT-S-218: Controlled Surface Use – White Tailed Prairie Dog
- UT-S-272: Conditional Surface Use/Timing Limitation-Burrowing Owl and Ferruginous Hawk Nesting
- UT-S-275: Controlled Surface Use/Timing Limitation – Bald Eagles
- UT-S-298: Kit Fox

**NOTICES**

- UT-LN-25: White-tailed and Gunnison Prairie Dog Habitat
- UT-LN-43: Raptor Habitat
- UT-LN-45: Migratory Birds
- UT-LN-49: Utah Sensitive Species
- UT-LN-72: Paleontological Resources
- UT-LN-98: Light and Sound
- UT-LN-99: Regional Ozone Formation Controls
- T&E-11: California Condor
- T&E-19: Jones Cycladenia

**UT0212 – 020**

T. 21 S., R. 20 E., Salt Lake

Sec. 27: S2;

Sec. 28: Lots 9, 10, W2SE, SESE;

Sec. 31: NE;

Sec. 33: E2.

947.65 Acres

Grand County, Utah

Moab Field Office

**STIPULATIONS**

- UT-S-01: Air Quality
- UT-S-109: Timing Limitation – Fragile Soils – Mancos Shale
- UT-S-224: Timing Limitation – Pronghorn Fawning Grounds
- UT-S-272: Conditional Surface Use/Timing Limitation-Burrowing Owl and Ferruginous Hawk Nesting
- UT-S-273: Conditional Surface Use/Timing Limitation – Golden Eagle Nesting Sites and Territories
- UT-S-298: Kit Fox

NOTICES

- UT-LN-25: White-tailed and Gunnison Prairie Dog Habitat
- UT-LN-43: Raptor Habitat
- UT-LN-45: Migratory Birds
- UT-LN-49: Utah Sensitive Species
- UT-LN-72: Paleontological Resources
- UT-LN-98: Light and Sound
- UT-LN-99: Regional Ozone Formation Controls
- UT-LN-100: Fragile Soils – Mancos Shale
- T&E-11: California Condor
- T&E-19: Jones Cycladenia

**UT0212 – 021**

T. 21 S., R. 20 E., Salt Lake

Railroad Right-of-Way U62502 in Secs. 19, 20, 22, 23, 24, 25, 26 and 27.

131.70 Acres

Grand County, Utah

Moab Field Office

STIPULATIONS

- UT-S-01: Air Quality
- UT-S-109: Timing Limitation – Fragile Soils –Mancos Shale
- UT-S-122: No Surface Occupancy – Floodplains, Riparian Areas, Springs and Public Water Resources
- UT-S-224: Timing Limitation – Pronghorn Fawning Grounds
- UT-S-272: Conditional Surface Use/Timing Limitation-Burrowing Owl and Ferruginous Hawk Nesting
- UT-S-298: Kit Fox

NOTICES

- UT-LN-25: White-tailed and Gunnison Prairie Dog Habitat
- UT-LN-43: Raptor Habitat
- UT-LN-45: Migratory Birds
- UT-LN-49: Utah Sensitive Species
- UT-LN-72: Paleontological Resources
- UT-LN-98: Light and Sound
- UT-LN-99: Regional Ozone Formation Controls
- UT-LN-100: Fragile Soils – Mancos Shale
- T&E-11: California Condor
- T&E-19: Jones Cycladenia

**UT0212 – 022**

T. 22 S., R. 20 E., Salt Lake

Sec. 1: SW;

Sec. 4: Lots 2, 4, SWNE, SWNW, E2SW, S2SE;

Sec. 5: Lots 1-4, S2NW, SW.

896.20 Acres

Grand County, Utah

Moab Field Office

**STIPULATIONS**

UT-S-01: Air Quality

UT-S-109: Timing Limitation – Fragile Soils –Mancos Shale

UT-S-122: No Surface Occupancy – Floodplains, Riparian Areas, Springs and Public Water Resources

UT-S-272: Conditional Surface Use/Timing Limitation-Burrowing Owl and Ferruginous Hawk Nesting

UT-S-298: Kit Fox

**NOTICES**

UT-LN-25: White-tailed and Gunnison Prairie Dog Habitat

UT-LN-43: Raptor Habitat

UT-LN-45: Migratory Birds

UT-LN-49: Utah Sensitive Species

UT-LN-72: Paleontological Resources

UT-LN-98: Light and Sound

UT-LN-99: Regional Ozone Formation Controls

UT-LN-100: Fragile Soils – Mancos Shale

T&E-11: California Condor

T&E-19: Jones Cycladenia

**UT0212 – 024**

T. 21 S., R. 21 E., Salt Lake

Railroad Right-of-Way U62502 in Secs. 19 through 22.

98.90 Acres

Grand County, Utah

Moab Field Office

**STIPULATIONS**

UT-S-01: Air Quality

UT-S-109: Timing Limitation – Fragile Soils –Mancos Shale

UT-S-122: No Surface Occupancy – Floodplains, Riparian Areas, Springs and Public Water Resources

UT-S-224: Timing Limitation – Pronghorn Fawning Grounds

UT-S-272: Conditional Surface Use/Timing Limitation-Burrowing Owl and Ferruginous Hawk Nesting

UT-S-298: Kit Fox

NOTICES

- UT-LN-25: White-tailed and Gunnison Prairie Dog Habitat
- UT-LN-43: Raptor Habitat
- UT-LN-45: Migratory Birds
- UT-LN-49: Utah Sensitive Species
- UT-LN-72: Paleontological Resources
- UT-LN-98: Light and Sound
- UT-LN-99: Regional Ozone Formation Controls
- UT-LN-100: Fragile Soils – Mancos Shale
- T&E-11: California Condor
- T&E-19: Jones Cycladenia

**UT0212 – 028**

- T. 28 S., R. 23 E., Salt Lake
  - Sec. 15: W2, SE;
  - Sec. 23: N2, N2SW, SE;
  - Sec. 24: ALL;
  - Sec. 25: Lots 1-4, W2NE, NW, NWSE.

2,122.72 Acres

San Juan County, Utah

Moab Field Office

STIPULATIONS

- UT-S-01: Air Quality
- UT-S-122: No Surface Occupancy – Floodplains, Riparian Areas, Springs and Public Water Resources
- UT-S-215: Controlled Surface Use – Gunnison Sage Grouse Lek Sites
- UT-S-220: Controlled Surface Use – Gunnison Prairie Dog
- UT-S-224: TIMING LIMITATION – PRONGHORN FAWNING GROUNDS
- UT-S-229: Timing Limitation – Crucial Deer and Elk Winter Range
- UT-S-272: Conditional Surface Use/Timing Limitation-Burrowing Owl and Ferruginous Hawk Nesting
- UT-S-275: Controlled Surface Use/Timing Limitation – Bald Eagles
- UT-S-298: Kit Fox

NOTICES

- UT-LN-25: White-tailed and Gunnison Prairie Dog
- UT-LN-33: Yellow billed cuckoo
- UT-LN-43: Raptor Habitat
- UT-LN-45: Migratory Birds
- UT-LN-49: Utah Sensitive Species
- UT-LN-72: Paleontological Resources
- UT-LN-98: Light and Sound
- UT-LN-99: Regional Ozone Formation Controls
- T&E-06: Mexican Spotted Owl
- T&E-08: Southwestern Willow Flycatcher
- T&E-11: California Condor
- T&E-19: Jones Cycladenia

**UT0212 – 029**

T. 28 S., R. 23 E., Salt Lake

Sec. 17: ALL

Sec. 18: Lot 1, E2, E2NW.

1,081.76 Acres

San Juan County, Utah

Moab Field Office

**STIPULATIONS**

UT-S-01: Air Quality

UT-S-158: Controlled Surface Use – VRM II Areas (Those portions within Muleshoe Canyon)

UT-S-122: No Surface Occupancy – Floodplains, Riparian Areas, Springs and Public Water Resources

UT-S-215: Controlled Surface Use – Gunnison Sage Grouse Lek Sites

UT-S-229: Timing Limitation – Crucial Deer and Elk Winter Range

UT-S-272: Conditional Surface Use/Timing Limitation-Burrowing Owl and Ferruginous Hawk Nesting

UT-S-273: Conditional Surface Use/Timing Limitation – Golden Eagle Nesting Sites and Territories

UT-S-275: Controlled Surface Use/Timing Limitation – Bald Eagles

UT-S-298: Kit Fox

**NOTICES**

UT-LN-43: Raptor Habitat

UT-LN-45: Migratory Birds

UT-LN-49: Utah Sensitive Species

UT-LN-72: Paleontological Resources

UT-LN-98: Light and Sound

UT-LN-99: Regional Ozone Formation Controls

T&E-06: Mexican Spotted Owl

T&E-11: California Condor

T&E-19: Jones Cycladenia

**UT0212 – 030**

T. 28 S., R. 23 E., Salt Lake

Sec. 29: ALL

Sec. 30: E2E2, NWNE;

Sec. 31: NENE.

880.00 Acres

San Juan County, Utah

Moab Field Office

**STIPULATIONS**

UT-S-01: Air Quality

UT-S-122: No Surface Occupancy – Floodplains, Riparian Areas, Springs and Public Water Resources

- UT-S-158: Controlled Surface Use – VRM II Areas (Those portions within Muleshoe Canyon)
- UT-S-215: Controlled Surface Use – Gunnison Sage Grouse Lek Sites
- UT-S-229: Timing Limitation – Crucial Deer and Elk Winter Range
- UT-S-272: Conditional Surface Use/Timing Limitation-Burrowing Owl and Ferruginous Hawk Nesting
- UT-S-273: Conditional Surface Use/Timing Limitation – Golden Eagle Nesting Sites and Territories
- UT-S-275: Controlled Surface Use/Timing Limitation – Bald Eagles
- UT-S-298: Kit Fox

NOTICES

- UT-LN-25 White-Tailed and Gunnison Prairie Dog
- UT-LN-43: Raptor Habitat
- UT-LN-45: Migratory Birds
- UT-LN-49: Utah Sensitive Species
- UT-LN-72: Paleontological Resources
- UT-LN-98: Light and Sound
- UT-LN-99: Regional Ozone Formation Controls
- T&E-06: Mexican Spotted Owl
- T&E-11: California Condor
- T&E-19: Jones Cycladenia

**UT0212 – 031**

T. 29 S., R. 23 E., Salt Lake  
Sec. 4: SENW;  
Sec. 10: N2NE, E2NW;  
Sec. 22: N2SE.

280.00 Acres

San Juan County, Utah  
Moab Field Office

STIPULATIONS

- UT-S-01: Air Quality
- UT-S-122: No Surface Occupancy – Floodplains, Riparian Areas, Springs and Public Water Resources
- UT-S-215: Controlled Surface Use – Gunnison Sage Grouse Lek Sites
- UT-S-220: Controlled Surface Use – Gunnison Prairie Dog
- UT-S-229: Timing Limitation – Crucial Deer and Elk Winter Range
- UT-S-272: Conditional Surface Use/Timing Limitation-Burrowing Owl and Ferruginous Hawk Nesting
- UT-S-275: Controlled Surface Use/Timing Limitation – Bald Eagles
- UT-S-298: Kit Fox
- UT-S-317: LaSal Unit Joinder

NOTICES

- UT-LN-25 White-Tailed and Gunnison Prairie Dog
- UT-LN-43: Raptor Habitat
- UT-LN-45: Migratory Birds
- UT-LN-49: Utah Sensitive Species
- UT-LN-72: Paleontological Resources
- UT-LN-98: Light and Sound
- UT-LN-99: Regional Ozone Formation Controls
- T&E-06: Mexican Spotted Owl
- T&E-11: California Condor
- T&E-19: Jones Cycladenia

**UT0212 – 032**

- T. 30 S., R. 23 E., Salt Lake
  - Secs. 24 and 25: ALL;
  - Sec. 26: Lots 1-4, W2E2, E2NW;
  - Sec. 35: Lots 1-4, W2E2.

2,007.56 Acres

San Juan County, Utah

Moab and Monticello Field Offices

STIPULATIONS

- UT-S-01: Air Quality
- UT-S-109: Timing Limitation – Fragile Soils –Mancos Shale (Portion within Moab Field Office)
- UT-S-122: No Surface Occupancy – Floodplains, Riparian Areas, Springs and Public Water Resources (Moab Field Office Portion)
- UT-S-128: No Surface Occupancy – Floodplains, Riparian Areas, Springs and Public Water Resources (Monticello Field Office Portion)
- UT-S-215: Controlled Surface Use – Gunnison Sage Grouse Lek Sites
- UT-S-223: Timing Limitation - Pronghorn Fawning Grounds (Monticello Field Office)
- UT-S-224: Timing Limitation - Pronghorn Fawning Grounds (Moab Field Office)
- UT-S-229: Timing Limitation – Crucial Deer and Elk Winter Range
- UT-S-272: Conditional Surface Use/Timing Limitation-Burrowing Owl and Ferruginous Hawk Nesting
- UT-S-275: Controlled Surface Use/Timing Limitation – Bald Eagles
- UT-S-298: Kit Fox

NOTICES

- UT-LN-25: White-tailed and Gunnison Prairie Dog
- UT-LN-43: Raptor Habitat
- UT-LN-45: Migratory Birds
- UT-LN-49: Utah Sensitive Species
- UT-LN-98: Light and Sound
- UT-LN-99: Regional Ozone Formation Controls
- T&E-11: California Condor
- T&E-19: Jones Cycladenia

**UT0212 – 033**

T. 17 S., R. 24 E., Salt Lake  
Sec. 21: NE.

160.00 Acres

Grand County, Utah  
Moab Field Office

**STIPULATIONS**

- UT-S-01: Air Quality
- UT-S-108 Timing Limitations – 30% Slopes or Greater – Bookcliffs
- UT-S-109: Timing Limitation – Fragile Soils – Mancos Shale
- UT-S-122: No Surface Occupancy – Floodplains, Riparian Areas, Springs and Public Water Resources
- UT-S-298: Kit Fox

**NOTICES**

- UT-LN-43: Raptor Habitat
- UT-LN-45: Migratory Birds
- UT-LN-49: Utah Sensitive Species
- UT-LN-72: Paleontological Resources
- UT-LN-98: Light and Sound
- UT-LN-99: Regional Ozone Formation Controls
- T&E-06: Mexican Spotted Owl
- T&E-11: California Condor
- T&E-19: Jones Cycladenia

**UT0212 – 034**

T. 29 S., R. 24 E., Salt Lake  
Sec. 22: NESE, S2SE.

120.00 Acres

San Juan County, Utah  
Moab Field Office

**STIPULATIONS**

- UT-S-01: Air Quality
- UT-S-215: Controlled Surface Use – Gunnison Sage Grouse Lek Sites
- UT-S-220: Controlled Surface Use – Gunnison Prairie Dog
- UT-S-229: Timing Limitation – Crucial Deer and Elk Winter Range
- UT-S-272: Conditional Surface Use/Timing Limitation-Burrowing Owl and Ferruginous Hawk Nesting
- UT-S-275: Controlled Surface Use/Timing Limitation – Bald Eagles
- UT-S-298: Kit Fox
- UT-S-317: Middle Mesa Unit Joinder

NOTICES

- UT-LN-25: White-tailed and Gunnison Prairie Dog
- UT-LN-43: Raptor Habitat
- UT-LN-45: Migratory Birds
- UT-LN-49: Utah Sensitive Species
- UT-LN-72: Paleontological Resources
- UT-LN-98: Light and Sound
- UT-LN-99: Regional Ozone Formation Controls
- T&E-11: California Condor
- T&E-19: Jones Cycladenia

**UT0212 – 035**

T. 30 S., R. 24 E., Salt Lake  
Sec. 30: ALL;  
Sec. 31: Lots 1, 2, S2SE.  
797.38 Acres  
San Juan County, Utah  
Moab and Monticello Field Offices

STIPULATIONS

- UT-S-01: Air Quality
- UT-S-122: No Surface Occupancy – Floodplains, Riparian Areas, Springs and Public Water Resources (Monticello Portion)
- UT-S-128: No Surface Occupancy – Floodplains, Riparian Areas, Springs and Public Water Resources (Moab Portion)
- UT-S-215: Controlled Surface Use – Gunnison Sage Grouse Lek Sites
- UT-S-223: Timing Limitation - Pronghorn Fawning Grounds
- UT-S-224: Timing Limitation - Pronghorn Fawning Grounds
- UT-S-272: Conditional Surface Use/Timing Limitation-Burrowing Owl and Ferruginous Hawk Nesting
- UT-S-275: Controlled Surface Use/Timing Limitation – Bald Eagles
- UT-S-298: Kit Fox

NOTICES

- UT-LN-25: White-tailed and Gunnison Prairie Dog
- UT-LN-43: Raptor Habitat
- UT-LN-45: Migratory Birds
- UT-LN-49: Utah Sensitive Species
- UT-LN-98: Light and Sound
- UT-LN-99: Regional Ozone Formation Controls
- T&E-11: California Condor
- T&E-19: Jones Cycladenia

<b>LEASE STIPULATIONS</b>	
<b>UT-S-01</b>	<p style="text-align: center;"><b>AIR QUALITY</b></p> <p>All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 grams of NO<sub>x</sub> per horsepower-hour.</p> <p><b>Exception:</b> This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.</p> <p><b>Modification:</b> None</p> <p><b>Waiver:</b> None</p> <p><b>AND</b></p> <p>All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gram of NO<sub>x</sub> per horsepower-hour.</p> <p><b>Exception:</b> None</p> <p><b>Modification:</b> None</p> <p><b>Waiver:</b> None</p>
<b>UT-S-108 MOAB</b>	<p style="text-align: center;"><b>TIMING LIMITATION – 30% SLOPES OR GREATER – BOOKCLIFFS</b></p> <p>No surface-disturbing activities are allowed from <b>November 1 to April 30</b> where slopes are greater than 30% in the Bookcliffs to minimize watershed damage in fragile soils on steep slopes. This restriction includes heavy equipment traffic on existing roads associated with drilling operations.</p> <p><b>Exception:</b> An exception could be granted if the operator can provide a plan of development demonstrating that the proposed action would be properly designed and constructed to support the anticipated types and levels of use. Roads must be designed to meet BLM road standards for drainage control and surfaced to support heavy equipment and tractor trailers. Adjustments to the timing restriction could be considered by the authorized officer on a case-by-case basis, depending on current soil and weather conditions.</p> <p><b>Modification:</b> None</p> <p><b>Waiver:</b> None</p>
<b>UT-S-109 MOAB</b>	<p style="text-align: center;"><b>TIMING LIMITATION – FRAGILE SOILS – MANCOS SHALE</b></p> <p>No surface-disturbing activities allowed during <b>December 1 to May 31</b> to minimize watershed damage including compaction, rutting, and topsoil loss on saline soils derived from the Mancos Shale. This restriction includes heavy equipment traffic on existing roads associated with drilling operations.</p> <p><b>Exception:</b> An exception could be granted if the operator can provide a plan of development demonstrating that the proposed action would be properly designed and constructed to support the anticipated types and levels of use. Roads must be designed to meet BLM road standards for drainage control and surfaced to support heavy equipment and tractor trailers. Adjustments to the timing restriction could be considered by the authorized officer on a case-by-case basis, depending on current soil and weather conditions.</p> <p><b>Modification:</b> None</p> <p><b>Waiver:</b> None</p>
<b>UT-S-122 MOAB</b>	<p style="text-align: center;"><b>NO SURFACE OCCUPANCY – FLOODPLAINS, RIPARIAN AREAS, SPRINGS AND PUBLIC WATER RESOURCES</b></p> <p>No surface-disturbing activities within 100 year floodplains or within 100 meters of riparian areas. Also, no surface-disturbing activities within public water reserves or within 100 meters of springs.</p> <p><b>Exception:</b> An exception could be authorized if: (a) there are no practical alternatives,</p>

	<p>(b) impacts could be fully mitigated, or (c) the action is designed to benefit and enhance the resource values.</p> <p><b>Modification:</b> None</p> <p><b>Waiver:</b> None</p>
<p><b>UT-S-128</b> <b>MONTICELLO</b></p>	<p><b>NO SURFACE OCCUPANCY – FLOODPLAINS, RIPARIAN AREAS, SPRINGS, AND PUBLIC WATER RESERVES</b></p> <p>No surface-disturbing activities are allowed in active floodplains, public water reserves or within 100 meters of riparian areas along perennial streams and springs.</p> <p><b>Exception:</b> An exception could be authorized if: (a) there are no practical alternatives, (b) impacts could be fully mitigated, or (c) the action is designed to enhance the riparian resource values.</p> <p><b>Modification:</b> None</p> <p><b>Waiver:</b> None</p>
<p><b>UT-S-158</b> <b>MOAB</b></p>	<p><b>CONTROLLED SURFACE USE – VRM II AREAS</b></p> <p>Surface-disturbing activities must meet the objectives of VRM II class objectives.</p> <p><b>Exception:</b> The level of change to the landscape should be low; management activities may be seen, but should not attract attention of the casual observer. Any change to the landscape must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. Surface-disturbing activities that are determined to be compatible and consistent with the protection or enhancement of the resource values are exempted. Also, recognized utility corridors are exempted only for utility projects which would be managed according to VRM III objectives.</p> <p><b>Modification:</b> None</p> <p><b>Waiver:</b> None</p>
<p><b>UT-S-215</b> <b>MOAB</b></p>	<p><b>CONTROLLED SURFACE USE – GUNNISON SAGE GROUSE LEK SITES</b></p> <p>No surface disturbing activities will be allowed within 0.6 miles of a lek where Gunnison sage-grouse leks are discovered within sage-grouse habitat.</p> <p><b>Exception:</b> An exception may be granted by the authorized officer if the operator submits a plan which demonstrates that impacts from the proposed action can be adequately mitigated.</p> <p><b>Modification:</b> The authorized officer may modify the boundaries of the stipulation area if (1) portions of the area do not include lek sites, or (2) the lek site(s) have been completely abandoned or destroyed, or (3) occupied lek site(s) occur outside the current defined area, as determined by the BLM.</p> <p><b>Waiver:</b> A waiver may be granted if there are no active lek site(s) in the leasehold and it is determined the site(s) have been completely abandoned or destroyed or occur outside current defined area, as determined by the BLM.</p>
<p><b>UT-S-218</b> <b>MOAB</b></p>	<p><b>CONTROLLED SURFACE USE – WHITE-TAILED PRAIRIE DOG</b></p> <p>No surface-disturbing activities within 660 feet of prairie dog colonies identified within prairie dog habitat. No permanent aboveground facilities are allowed within the 660 feet buffer.</p> <p><b>Exception:</b> An exception may be granted, by the authorized officer if the applicant submits a plan that indicates that impacts of the proposed action can be adequately mitigated or, if due to the size of the town, there is no reasonable location to develop a lease and avoid colonies the authorized officer will allow for loss of prairie dog colonies and/or habitat to satisfy terms and conditions of the lease.</p> <p><b>Modification:</b> The authorized officer may modify the boundaries of the stipulation area if portions of the area does not include prairie dog habitat or <i>active</i> colonies are found outside current defined area, as determined by BLM.</p>

	<p><b>Waiver:</b> May be granted if in the leasehold if is determined that habitat no longer exists or has been destroyed.</p>
<p><b>UT-S-220 MOAB</b></p>	<p align="center"><b>CONTROLLED SURFACE USE – GUNNISON PRAIRIE DOG</b></p> <p>No surface-disturbing activities within 660 feet of active prairie dog colonies identified within prairie dog habitat. No permanent aboveground facilities are allowed within the 660 feet buffer.</p> <p><b>Exception:</b> An exception may be granted by the authorized officer if the applicant submits a plan that indicates that impacts of the proposed action can be adequately mitigated or, if due to the size of the town, there is no reasonable location to develop a lease and avoid colonies the authorized officer will allow for loss of prairie dog colonies and/or habitat to satisfy terms and conditions of the lease.</p> <p><b>Modification:</b> The authorized officer may modify the boundaries of the stipulation area if portions of the area does not include prairie dog habitat or <i>active</i> colonies are found outside current defined area, as determined by BLM.</p> <p><b>Waiver:</b> May be granted if it is determined that the habitat no longer exists or has been destroyed within the leasehold.</p>
<p><b>UT-S-223 MONTICELLO</b></p>	<p align="center"><b>TIMING LIMITATION – PRONGHORN FAWNING GROUNDS</b></p> <p>No surface-disturbing activities from <b>May 1 to June 15</b> within pronghorn fawning grounds.</p> <p><b>Exception:</b> The authorized officer may grant an exception after an analysis the authorized officer determines that the animals are not present in the project area or the activity can be completed so as to not adversely affect the animals. Routine operation and maintenance is allowed.</p> <p><b>Modification:</b> The authorized officer may modify the boundaries of the stipulation area if a portion of the area is not being used as pronghorn fawning grounds.</p> <p><b>Waiver:</b> May be granted if the fawning grounds are determined to be unsuitable or unoccupied and there is no reasonable likelihood of future use of the fawning grounds.</p>
<p><b>UT-S-224 MOAB</b></p>	<p align="center"><b>TIMING LIMITATION – PRONGHORN FAWNING GROUNDS</b></p> <p>No surface-disturbing activities from <b>May 1 to June 15</b> within Cisco Desert and Hatch Point pronghorn fawning grounds to minimize stress and disturbance during critical pronghorn birthing time.</p> <p><b>Exception:</b> May be granted to these dates by the authorized officer if the operator submits a plan which demonstrates that impacts from the proposed action can be adequately mitigated or if it is determined the habitat is not being utilized for fawning in any given year.</p> <p><b>Modification:</b> The authorized officer may modify the boundaries of the stipulation area if a portion of the area is not being used as fawning grounds or if habitat is being utilized outside of stipulation boundaries as crucial fawning grounds and needs to be protected.</p> <p><b>Waiver:</b> May be granted if the fawning grounds are determined to be unsuitable or unoccupied and there is no reasonable likelihood of future use of the fawning grounds.</p>
<p><b>UT-S-229 MOAB</b></p>	<p align="center"><b>TIMING LIMITATION – CRUCIAL DEER AND ELK WINTER RANGE</b></p> <p>No surface disturbing activities from <b>November 15 to April 15</b> in crucial deer and/or elk winter range to minimize stress and disturbance to deer and elk during critical winter months.</p> <p><b>Exception:</b> This stipulation does not apply to the maintenance and operation of existing and ongoing facilities. An exception may be granted by the authorized officer if the operator submits a plan which demonstrates that impacts from the proposed action can be adequately mitigated or it is determined the habitat is not being utilized during the winter period for any given year.</p>

	<p><b>Modification:</b> The authorized officer may modify the boundaries of the stipulation area (1) if a portion of the area is not being used as winter range by deer/elk or (2) if habitat is being utilized outside of stipulation boundaries as winter range and needs to be protected or (3) if the migration patterns have changed causing a difference in the season of use.</p> <p><b>Waiver:</b> May be granted if the winter range habitat is unsuitable or unoccupied during winter months by deer/elk and there is no reasonable likelihood of future winter range use.</p>
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<p><b>UT-S-272 MOAB</b></p>	<p align="center"><b>CONDITIONAL SURFACE USE/TIMING LIMITATION – BURROWING OWL AND FERRUGINOUS HAWK NESTING</b></p> <p>No surface disturbances or occupancy will be conducted during the breeding and nesting season (March 1 to August 31 for burrowing owl and March 1 – August 1 for ferruginous hawk) within spatial buffers (0.25 mile for burrowing owl and 0.5 mile for ferruginous hawk) of known nesting sites.</p> <p><b>Exception:</b> An exception would be granted if protocol surveys determine that nesting sites, breeding territories, and winter roosting areas are not occupied.</p> <p><b>Modification:</b> The authorized officer may modify the boundaries of the stipulation area if portions of the area do not include habitat or are outside the current defined area, as determined by the BLM.</p> <p><b>Waiver:</b> May be granted if it is determined the habitat no longer exists or has been destroyed.</p>
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<p><b>UT-S-273 MOAB</b></p>	<p align="center"><b>CONDITIONAL SURFACE USE AND TIMING LIMITATION – GOLDEN EAGLE NESTING SITES AND TERRITORIES</b></p> <p>No surface-disturbing activities will be allowed within a 0.5 miles radius of documented Golden Eagle nest sites within nesting territories from February 1 to July 15th or until fledgling and dispersal of young. Any access created by the action will be outside of nesting season and will be eliminated once action is complete.</p> <p><b>Exception:</b> An exception may be granted by the authorized officer if authorization is obtained from USFWS and UDWR. The authorized officer may also grant an exception if an environmental analysis indicates that the nature or the conduct of the actions, as proposed or conditioned, would not impair the primary constituent element determined necessary for the survival and recovery of the Golden Eagle.</p> <p><b>Modification:</b> The authorized officer may modify the boundaries of the stipulation area if an environmental analysis indicates and USFWS and UDWR determine a portion of the area is not being used as Golden Eagle nesting territories.</p> <p><b>Waiver:</b> A waiver may be granted if an individual Golden Eagle nest has been inactive (unoccupied) for at least a period of 3 years. Nest-monitoring data for a 3-year period would be required before the waiver could be granted.</p>
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<p><b>UT-S-275 MOAB &amp; MONTICELLO</b></p>	<p align="center"><b>CONTROLLED SURFACE USE /TIMING LIMITATION – BALD EAGLES</b></p> <p>In areas that contain habitat for the Bald Eagle, actions will be avoided or restricted that may cause stress and disturbance during roosting and/or nesting and rearing of their young. Appropriate measures will depend on whether the action is temporary or permanent, and whether it occurs within or outside the Bald Eagle breeding or roosting season. A temporary action is completed prior to the following breeding or roosting season leaving no permanent structures and resulting in no permanent habitat loss. A permanent action continues for more than one breeding or roosting season and/or causes a loss of eagle habitat or displaces eagles through disturbances, i.e., creation of a permanent structure.</p> <p>Current avoidance and minimization measures include the following: Surveys will be required prior to operations unless species occupancy and distribution information is complete and available. All surveys must be conducted by qualified</p>
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	<p>individual(s), and be conducted according to protocol.</p> <p>Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures would be evaluated. Water production will be managed to ensure maintenance or enhancement of riparian habitat.</p> <p>Temporary activities within 1.0 mile of nest sites will not occur during the breeding season of <b>January 1 to August 31</b>, unless the area has been surveyed according to protocol and determined to be unoccupied.</p> <p>Temporary activities within 0.5 miles of winter roost areas, e.g., cottonwood galleries, will not occur during the winter roost season of <b>November 1 to March 31</b>, unless the area has been surveyed according to protocol and determined to be unoccupied.</p> <p>No permanent infrastructure will be placed within 1.0 mile of nest sites.</p> <p>No permanent infrastructure will be placed within 0.5 miles of winter roost areas.</p> <p>Remove big game carrion within 100 feet of lease roadways occurring within Bald Eagle foraging range.</p> <p>Avoid loss or disturbance to large cottonwood gallery riparian habitats.</p> <p>Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable habitat. Utilize direction drilling to avoid direct impacts to large cottonwood gallery riparian habitats. Ensure that such direction drilling does not intercept or degrade alluvial aquifers.</p> <p>All areas of surface disturbance within riparian areas and/or adjacent uplands should be re-vegetated with native species.</p> <p>Additional measures may also be employed to avoid or minimize effects to the species between the lease stage and lease development stage. These additional measures will be developed and implemented in coordination with the USFWS to ensure continued compliance with the Bald Eagle Protection Act.</p> <p><b>Exception:</b> An exception may be granted by the authorized officer if authorization is obtained from USFWS. The authorized officer may also grant an exception if an analysis indicates that the nature of the conduct of the actions, as proposed or conditioned, would not impair the habitat and physical requirements determined necessary for the survival of the Bald Eagles.</p> <p><b>Modification:</b> The authorized officer may modify the boundaries of the stipulation area if an analysis indicates, and USFWS determines that a portion of the area is not being used as Bald Eagle nesting or roosting territories.</p> <p><b>Waiver:</b> May be granted if there is no reasonable likelihood of site occupancy over a minimum 10 year period.</p>
<p><b>UT-S-298 MOAB</b></p>	<p style="text-align: center;"><b>CONDITIONAL SURFACE USE – KIT FOX</b></p> <p>No surface disturbances within 200 meters of a kit fox den.</p> <p><b>Exception:</b> An exception could be granted if protocol surveys determine that kit fox dens are not present.</p> <p><b>Modification:</b> The authorized officer may modify the stipulation area if portions of the area do not contain habitat.</p> <p><b>Waiver:</b> A waiver may be granted if it is determined that the habitat no longer exists.</p>
<p><b>UT-S-317 STATEWIDE</b></p>	<p style="text-align: center;"><b>UNIT JOINDER</b></p> <p>The successful bidder will be required to join the _____ Unit Agreement or show reason why a joiner should not be required.</p>

<b>LEASE NOTICES</b>	
<b>UT-LN-25 MOAB &amp; MONTICELLO</b>	<p style="text-align: center;"><b>WHITE-TAILED AND GUNNISON PRAIRIE DOG</b></p> <p>The lessee/operator is given notice that this lease parcel has been identified as containing white-tailed or Gunnison prairie dog habitat. Modifications to the Surface Use Plan of Operations may be required in order to protect white-tailed or Gunnison prairie dog from surface disturbing activities in accordance with the Endangered Species Act and 43 CFR 3101.1-2</p>
<b>UT-LN-33 MOAB</b>	<p style="text-align: center;"><b>CONDITIONAL SURFACE USE AND TIMING LIMITATIONS – YELLOW-BILLED CUCKOO HABITAT</b></p> <p>No surface-disturbing activities would be conducted within 100 meters of Yellow-billed Cuckoo habitat (riparian areas) from <b>May 15 through July 20 to protect</b> Yellow-billed cuckoo habitat.</p> <p><b>Exception:</b> An exception may be granted by the authorized officer if authorization is obtained from USFWS (through applicable provisions of the ESA). The authorized officer may also grant an exception if an environmental analysis indicates that the nature of the conduct of the actions, as proposed or conditioned, would not impair the primary constituent element determined necessary for the survival and recovery of the Yellow-billed cuckoo and USFWS concurs with this determination.</p> <p><b>Modification:</b> The authorized officer may modify the boundaries of the stipulation area if an environmental analysis indicates, and USFWS (through applicable provisions of the ESA) determines that a portion of the area is not being used as Yellow-billed cuckoo habitat.</p> <p><b>Waiver:</b> May be granted if the Yellow-billed cuckoo is de-listed and if USFWS determines it is not necessary for the survival and recovery of the Yellow-billed cuckoo.</p>
<b>UT-LN-43 STATEWIDE</b>	<p style="text-align: center;"><b>RAPTORS</b></p> <p>The lessee/operator is given notice that this lease has been identified as containing raptor habitat. Surveys will be required whenever surface disturbances and/or occupancy is proposed in association with fluid mineral exploration and development within potential raptor nesting areas. Field surveys will be conducted as determined by the authorized officer of the Bureau of Land Management. Based on the result of the field survey, the authorized officer will determine appropriate buffers and timing limitations. Modifications to the Surface Use Plan of Operations may be required in accordance with section 6 of the lease terms and 43CFR3101.1-2.</p>
<b>UT-LN-45 ALL OFFICES</b>	<p style="text-align: center;"><b>MIGRATORY BIRD</b></p> <p>The lessee/operator is given notice that surveys for nesting migratory birds may be required during migratory bird breeding season whenever surface disturbances and/or occupancy is proposed in association with fluid mineral exploration and development within priority habitats. Surveys should focus on identified priority bird species in Utah. Field surveys will be conducted as determined by the authorized officer of the Bureau of Land Management. Based on the result of the field survey, the authorized officer will determine appropriate buffers and timing limitations. This notice may be waived, excepted, or modified by the authorized officer if either the resource values change or the lessee/operator demonstrates that adverse impacts can be mitigated.</p>
<b>UT-LN-49 ALL OFFICES</b>	<p style="text-align: center;"><b>UTAH SENSITIVE SPECIES</b></p> <p>The lessee/operator is given notice that no surface use or otherwise disruptive activity would be allowed that would result in direct disturbance to populations or individual special status plant and animal species, including those listed on the BLM sensitive species list and the Utah sensitive species list. The lessee/operator is also given notice that lands in this parcel have been identified as containing potential habitat for species on the Utah Sensitive Species List. Modifications to the Surface Use Plan of Operations may be required in order to protect these resources from surface disturbing</p>

	activities in accordance with Section 6 of the lease terms, Endangered Species Act, Migratory Bird Treaty Act and 43 CFR 3101.1-2.
<b>UT-LN-51 ALL OFFICES</b>	<p align="center"><b>SPECIAL STATUS PLANTS – NOT FEDERALLY LISTED</b></p> <p>The lessee/operator is given notice that lands in this lease have been identified as containing special status plants, not federally listed, and their habitats. Modifications to the Surface Use Plan of Operations may be required in order to protect the special status plants and/or habitat from surface disturbing activities in accordance with Section 6 of the lease terms, Endangered Species Act, and 43 CFR 3101.1-2.</p>
<b>UT-LN-72 ALL OFFICES</b>	<p align="center"><b>HIGH POTENTIAL PALEONTOLOGICAL RESOURCES</b></p> <p>The lessee/operator is given notice that lands in this lease have been identified as having high potential for paleontological resources. Planned projects should be consistent with BLM Manual and Handbook H8270-1, Chapter III (A) and III (B) to avoid areas where significant fossils are known or predicted to occur or to provide for other mitigation of possible adverse effects (RX, NF, ESR). Modifications to the Surface Use Plan of Operations may be required in order to protect paleontological resources from surface disturbing activities in accordance with Section 6 of the lease terms and 43 CFR 3101.1-2.</p>
<b>UT-LN-98 MOAB &amp; MONTICELLO</b>	<p align="center"><b>VISUAL RESOURCES AND NATURAL SOUNDSCAPES</b></p> <p>Minimize noise and light pollution in areas adjacent to communities and/or within the viewshed of National Park units using best available technology such as installation of multi-cylinder pumps, hospital sound reducing mufflers, and placement of exhaust systems to direct noise away from communities or National Park units. Reduce light pollution by using methods such as limiting height of light poles, timing of lighting operations (meaning limiting lighting to times of darkness associated with drilling and work over or maintenance operations), limiting wattage intensity, and constructing light shields. However, this is not applicable if it affects human health and safety. Modifications to the Surface Use Plan of Operations may be required in accordance with section 6 of the lease terms and 43CFR3101.1-2.</p>
<b>UT-LN-99 MOAB &amp; MONTICELLO</b>	<p align="center"><b>REGIONAL OZONE FORMATION CONTROLS</b></p> <p>To mitigate any potential impact oil and gas development emissions may have on regional ozone formation, the following Best Management Practices (BMPs) would be required through a lease notice for any development projects:</p> <ul style="list-style-type: none"> <li>• Tier II or better drilling rig engines</li> <li>• Stationary internal combustion engine standard of 2g NOx/bhp-hr for engines &lt;300HP and 1g NOx/bhp-hr for engines &gt;300HP</li> <li>• Low bleed or no bleed pneumatic pump valves</li> <li>• Dehydrator VOC emission controls to +95% efficiency</li> <li>• Tank VOC emission controls to +95% efficiency</li> </ul>
<b>UT-LN-100 MOAB</b>	<p align="center"><b>FRAGILE SOILS – MANCOS SHALE</b></p> <p>The lessee is given notice that these parcels fall within areas known to have Mancos shale and therefore operations and surface-disturbing activities are not allowed during <b>December 1 to May 31</b> to minimize watershed damage including compaction, rutting, and topsoil loss on saline soils derived from the Mancos Shale. This restriction includes heavy equipment traffic on existing roads associated with drilling operations. If the operator can provide a plan of development demonstrating that the proposed action would be properly designed and constructed to support the anticipated types and levels of use the project might be allowed. Roads must be designed to meet BLM road standards for drainage control and surfaced to support heavy equipment and tractor trailers. Adjustments to the timing restriction could be considered by the authorized officer on a case-by-case basis, depending on current soil and weather conditions. Modifications to the Surface Use Plan of Operations may be required in accordance with section 6 of the lease terms and 43CFR3101.1-2.</p>

<p><b>T&amp;E-05</b></p>	<p style="text-align: center;"><b>LISTED PLANT SPECIES</b></p> <p>The Lessee/Operator is given notice that the lands in this parcel contain suitable habitat for federally listed plant species under the Endangered Species Act. The following avoidance and minimization measures have been developed to facilitate review and analysis of any submitted permits under the authority of this lease</p> <p>Site inventories:          Must be conducted to determine habitat suitability,          Are required in known or potential habitat for all areas proposed for surface disturbance prior to initiation of project activities, at a time when the plant can be detected, and during appropriate flowering periods,          Documentation should include, but not be limited to individual plant locations and suitable habitat distributions, and          All surveys must be conducted by qualified individuals.</p> <p>Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated.</p> <p>Project activities must be designed to avoid direct disturbance to populations and to individual plants:          Designs will avoid concentrating water flows or sediments into plant occupied habitat.          Construction will occur down slope of plants and populations where feasible; if well pads and roads must be sited upslope, buffers of 100 feet minimum between surface disturbances and plants and populations will be incorporated.          Where populations occur within 200 ft. of well pads, establish a buffer or fence the individuals or groups of individuals during and post-construction.          Areas for avoidance will be visually identifiable in the field, e.g., flagging, temporary fencing, rebar, etc.          For surface pipelines, use a 10 foot buffer from any plant locations:          If on a slope, use stabilizing construction techniques to ensure the pipelines don't move towards the population.          For riparian/wetland-associated species, e.g. Ute ladies-tresses, avoid loss or disturbance of riparian habitats:          Ensure that water extraction or disposal practices do not result in change of hydrologic regime.          Limit disturbances to and within suitable habitat by staying on designated routes.          Limit new access routes created by the project.          Place signing to limit ATV travel in sensitive areas.          Implement dust abatement practices near occupied plant habitat.          All disturbed areas will be re-vegetated with native species comprised of species indigenous to the area.          Post construction monitoring for invasive species will be required.          Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in plant habitat.          Ensure that such directional drilling does not intercept or degrade alluvial aquifers.          Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated.          Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the U.S. Fish and Wildlife Service between the lease sale stage and lease development stage to ensure continued compliance with the ESA.</p>
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<p style="text-align: center;"><b>T&amp;E-06</b></p>	<p style="text-align: center;"><b>MEXICAN SPOTTED OWL</b></p> <p>The Lessee/Operator is given notice that the lands in this lease contain suitable habitat for Mexican spotted owl, a federally listed species. The Lessee/Operator is given notice that the lands in this lease contain Designated Critical Habitat for the Mexican spotted owl, a federally listed species. Critical habitat was designated for the Mexican spotted owl on August 31, 2004 (69 FR 53181-53298). Avoidance or use restrictions may be placed on portions of the lease. Application of appropriate measures will depend whether the action is temporary or permanent, and whether it occurs within or outside the owl nesting season. A <u>temporary</u> action is completed prior to the following breeding season leaving no permanent structures and resulting in no permanent habitat loss. A <u>permanent</u> action continues for more than one breeding season and/or causes a loss of owl habitat or displaces owls through disturbances, i.e. creation of a permanent structure. The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the Endangered Species Act. Integration of, and adherence to these measures, will facilitate review and analysis of any submitted permits under the authority of this lease. Following these measures could reduce the scope of Endangered Species Act, Section 7 consultation at the permit stage.</p> <p>Current avoidance and minimization measures include the following:</p> <p>Surveys will be required prior to operations unless species occupancy and distribution information is complete and available. All Surveys must be conducted by qualified individual(s).</p> <p>Assess habitat suitability for both nesting and foraging using accepted habitat models in conjunction with field reviews. Apply the conservation measures below if project activities occur within 0.5 mile of suitable owl habitat. Determine potential effects of actions to owls and their habitat.</p> <ol style="list-style-type: none"> <li>a. Document type of activity, acreage and location of direct habitat impacts, type and extent of indirect impacts relative to location of suitable owl habitat.</li> <li>b. Document if action is temporary or permanent.</li> </ol> <p>Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated.</p> <p>Water production will be managed to ensure maintenance or enhancement of riparian habitat.</p> <p>Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in canyon habitat suitable for Mexican spotted owl nesting.</p> <p>For all temporary actions that may impact owls or suitable habitat:</p> <ol style="list-style-type: none"> <li>a. If the action occurs entirely outside of the owl breeding season (March 1 – August 31), and leaves no permanent structure or permanent habitat disturbance, action can proceed without an occupancy survey.</li> <li>b. If action will occur during a breeding season, survey for owls prior to commencing activity. If owls are found, activity must be delayed until outside of the breeding season.</li> <li>c. Rehabilitate access routes created by the project through such means as raking out scars, re-vegetation, gating access points, etc.</li> </ol> <p>For all permanent actions that may impact owls or suitable habitat:</p> <p>Survey two consecutive years for owls according to accepted protocol prior to commencing activities.</p> <p>If owls are found, no actions will occur within 0.5 mile of identified nest site. If nest site is unknown, no activity will occur within the designated Protected Activity Center (PAC).</p> <p>Avoid drilling and permanent structures within 0.5 mi of suitable habitat unless</p>
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	<p>surveyed and not occupied.</p> <p>Reduce noise emissions (e.g., use hospital-grade mufflers) to 45 dBA at 0.5 mile from suitable habitat, including canyon rims. Placement of permanent noise-generating facilities should be determined by a noise analysis to ensure noise does not encroach upon a 0.5 mile buffer for suitable habitat, including canyon rims.</p> <p>Limit disturbances to and within suitable habitat by staying on approved routes.</p> <p>Limit new access routes created by the project.</p> <p>Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the U.S. Fish and Wildlife Service between the lease sale stage and lease development stage to ensure continued compliance with the ESA.</p>
<p><b>T&amp;E-08 MOAB</b></p>	<p style="text-align: center;"><b>SOUTHWESTERN WILLOW FLYCATCHER</b></p> <p>In areas that contain riparian habitat within the range for the Southwestern Willow Flycatcher, actions would be avoided or restricted that may cause stress and disturbance during nesting and rearing of their young. Appropriate measures will depend on whether the action is temporary or permanent, and whether it occurs within or outside the nesting season. A temporary action is completed prior to the following breeding season leaving no permanent structures and resulting in no permanent habitat loss. A permanent action continues for more than one breeding season and/or causes a loss of habitat or displaces flycatchers through disturbances, i.e., creation of a permanent structure. The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the Endangered Species Act. Integration of, and adherence to these measures, will facilitate review and analysis of any submitted permits under the authority of this lease. Following these measures could reduce the scope of Endangered Species Act, Section 7 consultation at the permit stage.</p> <p>Current avoidance and minimization measures include the following:</p> <ol style="list-style-type: none"> <li>1. Surveys would be required prior to operations unless species occupancy and distribution information is complete and available. All surveys must be conducted by qualified individual(s) and be conducted according to protocol.</li> <li>2. Activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures would be evaluated and, if necessary, Section 7 consultation reinitiated.</li> <li>3. Water production would be managed to ensure maintenance or enhancement of riparian habitat.</li> <li>4. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable riparian habitat. Ensure that such directional drilling does not intercept or degrade alluvial aquifers.</li> <li>5. Activities would maintain a 300 feet buffer from suitable riparian habitat year long.</li> <li>6. Activities within 0.25 mile of occupied breeding habitat would not occur during the breeding season of <b>May 1 to August 15</b>.</li> <li>7. Ensure that water extraction or disposal practices do not result in change of hydrologic regime that would result in loss or degradation of riparian habitat.</li> <li>8. Re-vegetate with native species all areas of surface disturbance within riparian areas and/or adjacent land.</li> </ol> <p>Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the USFWS between the lease sale stage and lease development stage to ensure continued compliance with the ESA.</p> <p><b>Exception:</b> An exception may be granted by the authorized officer if authorization is obtained from USFWS (through applicable provisions of the ESA). The authorized officer may also grant an exception if an environmental analysis indicates that the nature of the conduct of the actions, as proposed or conditioned, would not impair the primary constituent element determined necessary for the survival and recovery of the</p>

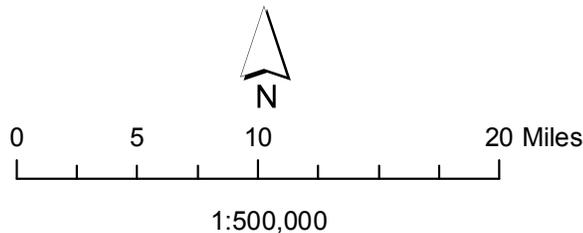
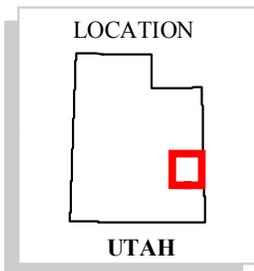
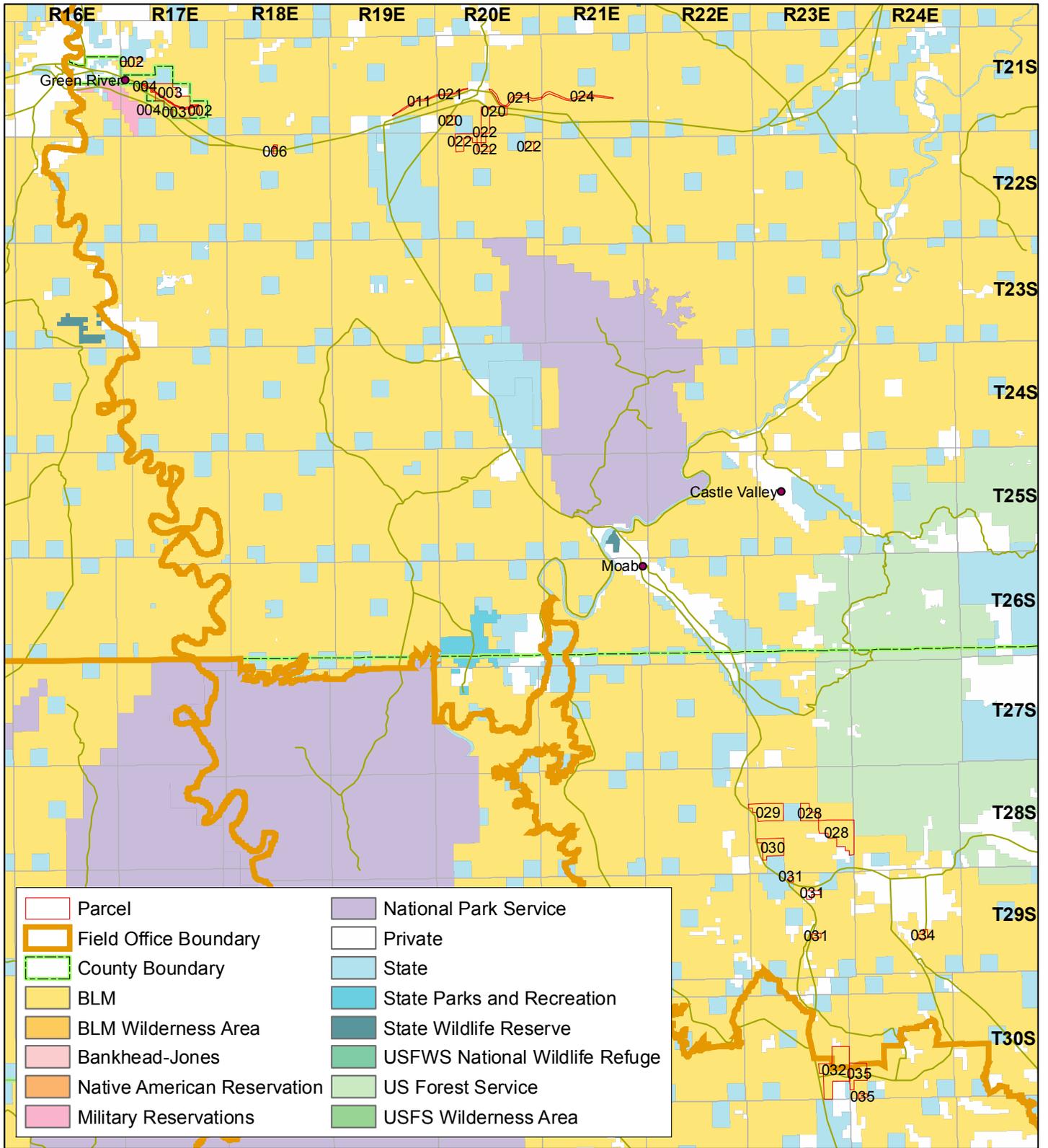
	<p>Southwestern Willow Flycatcher and USFWS concurs with this determination.</p> <p><b>Modification:</b> The authorized officer may modify the boundaries of the stipulation area if an environmental analysis indicates, and USFWS (through applicable provisions of the ESA) determines that a portion of the area is not being used as Southwestern Willow Flycatcher habitat.</p> <p><b>Waiver:</b> May be granted if the Southwestern Willow Flycatcher is de-listed and if USFWS determines or the Critical Habitat is determined by USFWS as not necessary for the survival and recovery of the Southwestern Willow Flycatcher.</p>
<p>T&amp;E-11</p>	<p style="text-align: center;"><b>CALIFORNIA CONDOR</b></p> <p>The Lessee/Operator is given notice that the lands located in this parcel contain potential habitat for the California Condor, a federally listed species. Avoidance or use restrictions may be placed on portions of the lease if the area is known or suspected to be used by condors. Application of appropriate measures will depend on whether the action is temporary or permanent, and whether it occurs within or outside potential habitat. A <u>temporary</u> action is completed prior to the following important season of use, leaving no permanent structures and resulting in no permanent habitat loss. This would include consideration for habitat functionality. A <u>permanent</u> action continues for more than one season of habitat use, and/or causes a loss of condor habitat function or displaces condors through continued disturbance (i.e. creation of a permanent structure requiring repetitious maintenance, or emits disruptive levels of noise).</p> <p>The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the Endangered Species Act. Integration of, and adherence to these measures will facilitate review and analysis of any submitted permits under the authority of this lease. Following these measures could reduce the scope of Endangered Species Act, Section 7 consultation at the permit stage.</p> <p>Current avoidance and minimization measures include the following:</p> <p>Surveys will be required prior to operations unless species occupancy and distribution information is complete and available. All Surveys must be conducted by qualified individual(s) approved by the BLM, and must be conducted according to approved protocol.</p> <p>If surveys result in positive identification of condor use, all lease activities will require monitoring throughout the duration of the project to ensure desired results of applied mitigation and protection. Minimization measures will be evaluated during development and, if necessary, Section 7 consultation may be reinitiated.</p> <p>Temporary activities within 1.0 mile of nest sites will not occur during the breeding season.</p> <p>Temporary activities within 0.5 miles of established roosting sites or areas will not occur during the season of use, August 1 to November 31, unless the area has been surveyed according to protocol and determined to be unoccupied.</p> <p>No permanent infrastructure will be placed within 1.0 mile of nest sites.</p> <p>No permanent infrastructure will be placed within 0.5 miles of established roosting sites or areas.</p> <p>Remove big game carrion 100 feet from lease roadways occurring within foraging range.</p> <p>Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable habitat Utilize directional drilling to avoid direct impacts to large cottonwood gallery riparian habitats. Ensure that such directional drilling does not intercept or degrade alluvial aquifers.</p> <p>Reinitiation of section 7 consultation with the Service will be sought immediately if mortality or disturbance to California condors is anticipated as a result of project activities. Additional site-specific measures may also be employed to avoid or</p>

	<p>minimize effects to the species. These additional measures will be developed and implemented in consultation with the U.S. Fish and Wildlife Service to ensure continued compliance with the ESA.</p> <p>Additional measures may also be employed to avoid or minimize effects to the species between the lease sale and lease development stages. These additional measures will be developed and implemented in consultation with the U.S. Fish and Wildlife Service to ensure continued compliance with the Endangered Species Act.</p>
<p><b>T&amp;E-19</b></p>	<p style="text-align: center;"><b>JONES CYCLADENIA (<i>Cycladenia hymilis</i> var <i>jonesii</i>)</b></p> <p>In order to minimize effects to the federally threatened Jones Cycladenia, the Bureau of Land Management (BLM), in coordination with the U.S. Fish and Wildlife Service (Service), has developed the following avoidance and minimization measures. Implementation of these measures will help ensure the activities carried out during oil and gas development (including but not limited to drilling, production, and maintenance operations) are in compliance with the endangered Species Act (ESA). For the purposes of this document, the following terms are so defined:</p> <p><i>Potential habitat</i> is defined as areas which satisfy the broad criteria of the species habitat description; usually determined by preliminary, in-house assessment.</p> <p><i>Suitable habitat</i> is defined as areas which contain or exhibit the specific components or constituents necessary for plant persistence; determined by field inspection and/or surveys; may or may not contain Jones Cycladenia; habitat descriptions can be found in Federal Register Notice and species recovery plan links at <a href="http://www.fws.gov/endangered/wildlife.html">http://www.fws.gov/endangered/wildlife.html</a>.</p> <p><i>Occupied habitat</i> is defined as areas currently or historically known to support Jones Cycladenia; synonymous with “known habitat.”</p> <p>The following avoidance and minimization measures should be included in the Plan of Development:</p> <ol style="list-style-type: none"> <li>1. Pre-project habitat assessments will be completed across 100% of the project disturbance area within potential habitat<sup>1</sup> prior to any ground disturbing activities (including ATV use) to determine if suitable Jones Cycladenia habitat is present.</li> <li>2. Site inventories will be conducted within suitable habitat to determine occupancy. Where standard surveys are technically infeasible and otherwise hazardous due to topography, slope, etc., suitable habitat will be assessed and mapped for avoidance (hereafter, “avoidance areas”); in such cases, in general, 300’ buffers will be maintained between surface disturbance and avoidance areas. However, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat. Where conditions allow, inventories:             <ol style="list-style-type: none"> <li>a. Must be conducted by qualified individuals(s) and according to BLM and Service accept survey protocols,</li> <li>b. Will be conducted in suitable and occupied habitat for all areas proposed for surface disturbance prior to initiation of project activities and within the same growing season, at a time when the plant can be detected (usually April 15<sup>th</sup> to June 5<sup>th</sup>, however, surveyors should verify that the plant is flowering by contacting a BLM or FWS botanist or demonstrating that the nearest known population is in flower),</li> <li>c. Will occur within 300’ from the centerline of the proposed right-of-way for surface pipelines or roads; and within 300’ from the perimeter of disturbance for the proposed well pad including the well pad,</li> <li>d. Will include, but not be limited to, plant species lists and habitat characteristics, and</li> <li>e. Will be valid until April 15<sup>th</sup> the following year.</li> </ol> </li> <li>3. Design project infrastructure to minimize impacts within suitable habitat: Where standard surveys are technically infeasible, infrastructure and activities will avoid all suitable habitat (voidance areas) and incorporate 300’ buffers, in general;</li> </ol>

	<p>however, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat,</p> <p>Reduce well pad size to the minimum needed, without compromising safety,</p> <p>Where technically and economically feasible, use directional drilling or multiple wells from the same pad,</p> <p>Limit new access routes created by the project, Roads and utilities should share common right-of-ways where possible, Reduce the width of right-of-ways and minimize the depth of excavation needed for the road bed; where feasible, use the natural ground surface for the road within habitat, Place signing to limit off-road travel in sensitive areas, and Stay on designated routes and other cleared/approved areas,</p> <p>All disturbed areas will be revegetated with native species comprised of species indigenous to the area and non-native species that are not likely to invade other areas.</p> <p>4. Within occupied habitat, project infrastructure will be designed to avoid direct disturbance and minimize indirect impacts to populations and to individual plants: Follow the above recommendations (#3) for project design within suitable habitats, To avoid water flow and/or sedimentation into occupied habitat and avoidance areas, silt fences, hay bales, and similar structures or practices will be incorporated into the project design; appropriate placement of fill is encouraged,</p> <p>Construction of roads will occur such that the edge of the right of way is at least 300' from any plant and 300' from avoidance areas,</p> <p>Roads will be graveled with occupied habitat; the operator is encouraged to apply water for dust abatement to such areas from April 15<sup>th</sup> to June 5<sup>th</sup> (flowering period); dust abatement applications will be comprised of water only,</p> <p>The edge of the well pad should be located at least 300' away from plants and avoidance areas, in general; however, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat,</p> <p>Surface pipelines will be laid such that a 300' buffer exists between the edge of the right of way and plants and 300' between the edge of right of way and avoidance areas; use stabilizing and anchoring techniques when the pipeline crossed suitable habitat to ensure pipelines don't move towards the population; site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat,</p> <p>Construction activities will not occur from April 15<sup>th</sup> through June 5<sup>th</sup> within occupied habitat, Before and during construction, areas for avoidance should be visually identifiable in the field, e.g., flagging temporary fencing, rebar, etc.,</p> <p>Place produced oil, water, or condensate tanks in centralized locations, away from occupied habitat, and Minimize the disturbed area of producing well locations through interim and final reclamation. Reclaim well pads following drilling to the smallest area possible.</p> <p>5. Occupied Jones Cycladenia habitats within 300' of the edge of the surface pipelines' right-of-ways, 300' of the edge of the roads' right-of-ways, and 300' from the edge of the well pad shall be monitored for a period of three years after ground disturbing activities. Monitoring will include annual plant surveys to determine plant and habitat impacts relative to project facilities. Annual reports shall be provided to the BLM and the Service. To ensure desired results are being achieved, minimization measures will be evaluated and may be changed after a thorough review of the monitoring results and annual reports during annual meetings between the BLM and the Service.</p> <p>6. Reinitiation of section 7 consultation with the Service will be sought immediately if any loss of plants or occupied habitat for the Jones Cycladenia is anticipated as a result of project activities. Additional site-specific measures may also be employed to avoid or minimize effects to the species. These additional measures will be developed and implemented in consultation with the U.S. Fish and Wildlife Service to ensure continued compliance with the ESA.</p>
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## Appendix B – Map

# Map 1: Parcels Nominated for the February 2012 Oil and Gas Lease Sale



U.S. DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
UTAH STATE OFFICE



This product may not meet BLM standards for accuracy and content. Different data sources and input scales may cause misalignment of data layers.

## **Appendix C – Interdisciplinary Team Checklists**

## MOAB FIED OFFICE INTERDISCIPLINARY TEAM CHECKLIST

Project Title: February 2012 Oil and Gas Lease Sale

NEPA Log Number: DOI-BLM-UT-9100-2011-0005

File/Serial Number: NA

Project Leader: Rebecca Doolittle

### DETERMINATION OF STAFF

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.

Determination	Resource	Rationale for Determination	Signature	Date
RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)				
PI	Air Quality	Activities which may be authorized on these parcels subsequent to the lease sale may produce emissions of regulated air pollutants and/or pollutants that could impact air quality related values at nearby Class 1 areas. Emissions from earth-moving equipment, vehicle traffic, drilling and completion activities, separators, oil storage tanks, dehydration units, and daily tailpipe and fugitive dust emissions could affect air quality. Application of stipulation UTSO-S-01 is warranted.	Ann Marie Aubry/ Leonard Herr	
NP	Areas of Critical Environmental Concern	There are no Areas of Critical Environmental Concern within any of the lease parcels (see Map 21, 2008 Moab RMP). However some parcels are located within Potential ACECs. Though these areas were not designated as ACECs in the 2008 Moab RMP, stipulations for oil and gas leasing have been applied in these areas. These stipulations continue to protect the relevant and important values found within the Potential ACECs.	Katie Stevens	
NP	BLM Natural Areas	There are no BLM Natural Areas within any of the lease parcels (See Map 16, 2008 Moab RMP).	Bill Stevens	
NI	BLM/State Sensitive Fish and Wildlife Species	Detailed information on the inclusion of the appropriate lease notices and stipulations are contained in the 2008 Moab RMP. Sensitive species habitat and criteria were identified for these species from GIS data layers developed by the BLM, Utah Division of Wildlife Resources/Utah Natural Heritage Program data and field office records. These habitats are addressed in the RMP and provided needed protections through stipulations or notices. Burrowing owls habitat is on parcels 002, 003, 004, 006, 011, 020, 021, 022, 024, 028, 029, 030, 031, 032, 034 and 035. Stipulation UT-S-272 is sufficient to protect burrowing owl at the leasing stage. Kit fox habitat can be found on parcels 002, 003, 004, 006, 011, 020, 021, 022, 024, 028, 029, 030, 031, 032, 033, 034 and 035. Stipulation UT-S-298 is used to protect kit fox habitat. White-tailed and/or Gunnison prairie dog habitat may be	Pam Riddle	

Determination	Resource	Rationale for Determination	Signature	Date
		<p>found on parcels 006, 011, 020, 021, 022, 024, 028, 030, 031, 032, 034 and 035. A lease notice (UT-LN-25) will be applied to all these parcels. However a stipulation (UT-S-218) is applied to parcel 011. This notice and stipulation are used to protect prairie dogs or notify the lessee of the possible presence of prairie dogs at the leasing stage.</p> <p>Bald eagle winter habitat can be found on parcels 011, 028, 029, 030, 031, 032, 034 and 035. Stipulation number UT-S-275 has been attached to the above parcels for bald eagles winter habitat.</p> <p>Ferruginous hawk habitat can be found on parcels 011, 020, 021, 022, 024 and UT-S-272 protects them sufficiently for the leasing stage.</p> <p>Golden eagle habitat can be found on parcels 020, 029, 030. Stipulation UT-S-273 has been attached for the address golden eagles.</p> <p>Currently all suitable Gunnison sage grouse habitats within the Moab Field Office have been unoccupied for over 15 years, however unoccupied Gunnison sage-grouse habitat is present on parcels 028, 029, 030, 031, 032, 034 and 035, therefore a stipulation has been attached to address this species (UT-S-215).</p> <p>Raptors habitat, either foraging or nesting, may be found on all of the parcels, therefore a raptor habitat lease notice (UT-LN-43) has been attached to all of the leases.</p> <p>Other sensitive species may also be found on all leases therefore the Utah sensitive Species lease notice (UT-LN-49) has been attached to all parcels.</p> <p>The appropriate stipulation or notice has been attached to each of the above listed parcel for each of the named species addressed above. Therefore leasing will not impact the species.</p> <p>Site-specific effects cannot be analyzed until an exploration or development application is received, after leasing has occurred.</p>		
NP	BLM/State Sensitive Plant Species	Resource not present.	Dave Williams	
PI	Cultural Resources	<p>As it authorizes no ground disturbance, the proposed lease sale will have no direct effect on cultural resources. A Class I survey (existing literature review) of the proposed sale (project number DOI-BLM-UT-9100-00005) indicated that the areas around each offered parcel are of sufficiently low site density that the avoidance of historic properties potentially Eligible for the National Register of Historic Places will not preclude surface development within the parcel and extraction of the leased minerals.</p> <p>Application of the Cultural Resources Stipulation from WO IM 2005-003 is warranted.</p>	Don Montoya	
NI	Greenhouse Gas Emissions	Emissions from earth-moving equipment, vehicle traffic, drilling and completion activities, separators, oil storage tanks, dehydration units, and daily tailpipe and fugitive dust emissions could affect air quality.	Ann Marie Aubry/ Leonard Herr	
NI	Environmental Justice	Minority and low income populations do exist in the Moab FO area. The PRMP/FEIS, 2008 adequately assessed	Bill Stevens	

Determination	Resource	Rationale for Determination	Signature	Date
		impacts to environmental justice populations as defined in Executive Order 12898 and it was determined that no BLM action proposed across all alternatives or the Proposed Plan would target or cause any disproportionate impacts to any minority or low income segments of the population (PRMP/FEIS, 2008 p. 4-253).		
NI	Fish and Wildlife Excluding Special Status Species	<p>Detailed information on the appropriate lease notices and stipulations are contained in the 2008 Moab RMP. The BLM works with Utah Division of Wildlife Resources along with others to develop the stipulations and notices as mitigation for the leasing stage. Further analysis and mitigation may be required at the project stage. Wildlife habitat and criteria were identified for these species from GIS data layers developed by the BLM, Utah Division of Wildlife Resources/Utah Natural Heritage Program data and field office records. These habitats are addressed in the RMP and provided certain protections through stipulations or notices.</p> <p>Habitat for antelope fawning has been identified on the following parcels: 002, 003, 004, 006, 020, 021, 024, 028, 032 and 035. The above parcels have UT-S-224 attached to them to protect pronghorn fawning grounds from May 1 through June 15.</p>	Pam Riddle	
NP	Farmlands (Prime or Unique)	The Moab Field Offices FEIS did not identify any Prime or unique farmland with the field office area. FEIS pg. 4.8.	Rebecca Doolittle	
NI	Floodplains	<p>At this stage (lease sale) there is no potential to affect floodplains. Floodplains could be impacted by surface disturbance (APD stage) within or adjacent to floodplain, including roads, well pads and pipelines. These floodplains and parcel number include Black Canyon (UT0212-029), Bootlegger Wash (UT0212-024), Buck Hollow (UT0212-028), Cottonwood Wash (UT0212-028), East Canyon (UT0212-033), Hatch Wash (UT0212-032, UT0212-035), Muleshoe Canyon (UT0212-029), Thompson Wash/Whipsaw Flat (UT-0212-011, UT0212-020 &amp; UT0212-022), Sagers Wash (UT0212-024) and area within parcel UT0212-021.</p> <p>A No Surface Occupancy stipulation applies to all floodplains located within the nominated parcels. Requirements for pipelines crossing stream channels are also provided for in the RMP. Project-specific impacts relating to future authorizations cannot be analyzed until an exploration or development application is received. At that time site specific surveys would be completed and additional measures to project floodplains would be applied as necessary.</p> <p>Appropriate lease stipulations and notices have been to protect Floodplains (Appendix A). Impacts to Floodplains are not expected to reach a level that would require adding a lease notice to the parcels.</p> <p>Stipulation UT-S-122 does not allow surface disturbing activity within the 100 year floodplains or within 100 meters of riparian areas. Also, no surface-disturbing activities within public water reserves or within 100 meters of springs. This stipulation should adequately protect floodplains for the leasing stage.</p> <p>Application of stipulation UT-S-122 is warranted for these</p>	Ann Marie Aubry	

Determination	Resource	Rationale for Determination	Signature	Date
		identified parcels.		
NI	Fuels/Fire Management	The lease parcels occur within vegetation that consists primarily of greasewood, sagebrush, and grass communities. The fuel loading is light and the risk of fire is low.	Rebecca Doolittle	
NI	Geology / Mineral Resources/Energy Production	The parcels are located within the Paradox Fold and Fault Belt. Oil and gas resources in this area of the paradox basin occur primarily in the Porous Carbonate Buildup Play within the Paradox Formation and have a high potential for occurrence. Depending on the success of oil and gas well drilling, non-renewable natural gas and/or oil would be extracted and delivered to market. Production of oil and/or gas would result in the irretrievable loss of these resources. A Reasonably Foreseeable Development Scenario (RFD, 2005) was prepared as part of the MFO RMP. Environmental impacts of the RFD were analyzed and are documented in the RMP/EIS. The proposed action (one well on each lease parcel) would not exceed the level of activity predicted in the RFD.	Rebecca Doolittle	
NI	Groundwater	At this stage (lease sale) there is no potential to affect groundwater. Groundwater resources could be impacted by drilling (APD stage) near springs, drinking water protection zones, public water reserves and within the Seven Mile- Courthouse Wash aquifer system. Standard operating procedures (SOPs) required by regulation and site specific mitigation contained in an approved APD would be sufficient to isolate and protect all usable groundwater zones. The SOPs include the requirements for disposal of produced water contained in Onshore Oil and Gas Order (OOGO) No. 7 and the requirements for drilling operations contained in OOGO No. 2. Potential fresh water aquifers would be cased and cemented. The casing would be pressure tested to ensure integrity prior to drilling out the surface casing shoe plug. The lease parcels are not within any Sole Source Aquifers or Drinking Water Source Protection Zones (DWSPZs). These potential impacts will be addressed and mitigated utilizing IM No. UT 2010-055 prior to APD approval. The southernmost portion of UT0212-031 is adjacent the community of Wilson Arch's public drinking water source protection zone (DWSPZ). The protection area is located in the SWNE Section 22 of T. 29 S. R. 23 E. and covers most of this quarter-quarter section. The parcel is outside of the protection zone in the N2SE of the same section. The Glen Canyon aquifer that is the municipal water supply for Moab is located 4 to 6 miles north-northeast of parcels UT0212-028, UT0212-0212-029 and UT0212-030.	Ann Marie Aubry	
NI	Invasive Species/Noxious Weeds (EO 13112)	No known noxious plants occur within the parcels. Invasive plants that occur throughout these parcels in isolated pockets are cheatgrass ( <i>Bromus tectorum</i> ), Russian thistle ( <i>Salsola kali</i> ), Salt Cedar ( <i>Tamarix</i> spp.) and halogeton ( <i>Halogeton glomeratus</i> ). At this stage (lease sale) there would be no impact (direct or indirect) to Invasive Species/Noxious Weeds. However, there is an expectation that development will occur in the future, at which time additional NEPA would be conducted. At the development stage, mitigation measures	Jordan Davis	

Determination	Resource	Rationale for Determination	Signature	Date
		and best management practices would be incorporated to avoid the spread of undesirable non-native plant species. Therefore, invasive species/noxious weeds would be addressed in more detail during the APD process as a COA.		
NI	Lands/Access	The ROD allows for oil and gas development with associated road, pipeline and power line right-of-ways. Oil and gas leasing is not expected to affect access to public lands. Leasing would be subject to all valid pre-existing rights. Any proposals for future projects within the oil and gas lease area would be reviewed on a site-specific basis and other right-of-way holders in the area would also be notified, as per regulations, when an application for right-of-way is received by this office.	Jan Denney	
NP	Lands With Wilderness Characteristics	Resource is not present..	Bill Stevens	
NI	Livestock Grazing	At this stage (lease sale) there is no potential to affect (both direct and indirect) current livestock operations. Existing range improvements and studies within the proposed lease parcels would need to be avoided by 200 meters during the development of oil and gas facilities. In the future the proposed action might include mitigation to avoid harassment of livestock, stock watering facilities and the repair of any fences damaged during the APD or exploration processes.	Jordan Davis	
PI	Migratory Birds	Migratory birds are present within all of the proposed parcels. Migratory birds would not be impacted by the act of leasing itself but it implies that development may follow which may have an impact on migratory birds. Lease notice (UT-LN-45) for migratory birds is warranted for all parcels.	Pam Riddle	
PI	Native American Religious Concerns	Consultation letters were sent to the Tribes on June 10, 2011. Responses were received from none of the Tribes. Native American Religious Concerns were not identified by these tribes.	Donald Montoya	
NI	Paleontology	No documented occurrences of valuable paleontological resources occur within the any of the parcels with BLM surface. Paleontology surveys would need to be conducted for parcels on BLM land before any exploratory or operational surface disturbance can take place. If these paleo surveys discover any substantial fossils appropriate mitigation measures will be followed to protect valuable paleontological resources. Attach the Paleontology Lease Notice UT-LN-72 to with a high potential for paleontological resources. The need for survey work is site specific. Leasing would have no effect on paleo resources.	Rebecca Doolittle	
NI	Rangeland Health Standards	At this stage (lease sale) there is no impact (direct or indirect). The potential to remove vegetation, disturb soils, damage water resources, and affect water quality would be addressed during the exploration and APD operations, and would be analyzed during the exploration/APD processes.	Jordan Davis	
PI	Recreation	The area of the parcels is used for dispersed recreation such as hunting and hiking and does not occur within SRMAs.	Katie Stevens	

Determination	Resource	Rationale for Determination	Signature	Date
		Leasing activity would not limit existing use or impede management of SRPs and is consistent with recreation goals and objectives in the area.		
NI	Socio-Economics	<p>Oil and gas leases on Federal lands contribute to local government revenues through mineral lease payments. In Utah, these payments consist of bonus lease payments, annual lease rentals and royalties based on production. Of the total amount of mineral lease payments remitted to BLM, approximately 50 per cent is returned to the state. The state then remits approximately one half of these payments back to the counties in the form of direct appropriations and grants and loans for specific projects funded by the Permanent Community Impact Board.</p> <p>Bonus payments are one-time payments to the Federal government for a leased parcel of BLM land for a ten-year period. These payments contribute to state and local economies because a proportion of the payments are disbursed to state and local governments. Annual rental payments—\$1.50 per acre for the first 5 years and \$2.00 per acre each subsequent year—would also contribute to state and local government revenues. Future production on the proposed leases, should any occur, could contribute additional revenues to local governments in the form of production royalties. The lease action, itself, however, produces no such royalties.</p>	Bill Stevens	
NI	Soils including Biological Soil Crusts	<p>Leasing the parcels, per se, would not affect the soil resource. However, there is some expectation that drilling and development could occur, at which time additional NEPA would be conducted. BMPs and SOPs are defined in the Gold Book.</p> <p>Parcels that contain slopes greater than 30% slopes or are within the Bookcliffs include parcels 002 and 033 and have stipulation UT-S-108 attached to them to protect the soils from November 1 to April 30 there is no surface disturbing activities allowed to minimize watershed damage on fragile soils.</p> <p>The following parcels contain fragile soils in the form of Mancos shale: 002, 003, 004, 006, 011, 020, 021, 022, 024, 032 and 033. These parcels contain a stipulation (UT-S-109) restricting activities (no surface disturbance) between December 1 and May 31 to minimize overall watershed damage (see Appendix A for full stipulation language). In addition, a lease notice (UT-LN-100) is added to parcels 020, 021, 022, and 024).</p>	Ann Marie Aubry	
NI	Surface Water	<p>At this stage (lease sale) there is no potential to affect (both direct and indirect) surface. Surface water could be impacted by surface disturbance (APD stage) in or near perennial streams or springs. Surface disturbance from well pads, roads and pipelines could affect water quality and quantity.</p> <p>In addition to riparian resources, parcels with surface and groundwater resources include: UT0212-028 (Buck Hollow Springs, Buck Hollow Perennial Stream), UT0212-029 (Muleshoe and Black Canyon Springs, Muleshoe and Black Canyon Perennial Stream), UT0212-030 (Muleshoe tributary Springs, Muleshoe tributary intermittent stream), UT0212-031 (One large spring), UT0212-032 (One large</p>	Ann Marie Aubry	

Determination	Resource	Rationale for Determination	Signature	Date
		<p>spring), UT0212-033 (East Canyon springs), and area within parcel UT0212-021.</p> <p>The issuance of leases would not directly impact surface and groundwater quality. Project-specific impacts to the surface and groundwater quality relating to future authorizations cannot be analyzed until an exploration or development application is received.</p> <p>Management guidance and stipulations in both field office RMPs provide for the protection of surface water resources. A No Surface Occupancy stipulation has been added to all nominated parcels with these resources.</p> <p>Surface water quality could be affected by oil and gas well development activities. Standard operating procedures including interim and final reclamation required by regulation, and BMP and COA for site specific APD approvals would provide mitigation for potential impacts to surface water quality.</p> <p>Stipulation UT-S-122 does not allow surface disturbing activity within the 100 year floodplains or within 100 meters of riparian areas. Also, no surface-disturbing activities within public water reserves or within 100 meters of springs.</p> <p>Application of stipulation UT-S-122 to these parcels is warranted.</p>		
PI	Threatened, Endangered or Candidate Plant Species	The <i>Jones cylcladenia</i> may occur in all parcels nominated for the lease sale; therefore, the T&E lease notice from the BO in the RMP has been attached to all lease parcels nominated for the sale	Dave Williams	
NI	Threatened, Endangered or Candidate Animal Species	<p>The Moab Field Office has concurrence from the U.S. Fish and Wildlife Service that leasing may move forward without further consultation. The Biological Opinion issued on October 16, 2008 by the USFWS concluded with a determination “not likely to adversely affect” (ROD, Appendix B) with the application of the appropriate lease notices.</p> <p>Consultation may be required at the time surface disturbing activities are proposed either through an APD, pipeline right-of-way or other oil and gas related surface disturbing proposal. Site-specific effects cannot be analyzed until an exploration or development application is received, after leasing has occurred. Until there is a site-specific proposal, there is no action directly or indirectly causing modifications to the land, water, or air, therefore “no effect” on any listed animal species or designated critical habitat.</p> <p>The California condor lease notice (T&amp;E-11) has been attached to all leases since it is a possibility that the entire area could be foraging habitat. They are considered part of the nonessential experimental population for the purpose of Section 7, as a proposed species for listing if they are east of I-15 and south of I-70. If they are outside of this area, they are considered an endangered species with full protection.</p> <p>Mexican owl habitat is modeled and therefore may be present on parcels 028, 029, 030, 031, and 033 T&amp;E-06 will be attached to these parcels to address Mexican spotted owl.</p>	Pam Riddle	

Determination	Resource	Rationale for Determination	Signature	Date
		Southwestern willow flycatcher habitat may be provided by the riparian habitat in parcel 028. Lease notice T&E-08 has been attached to address southwestern willow flycatcher concerns.		
NP	Wastes (hazardous or solid)	Wastes are not present.	Rebecca Doolittle	
NI	Wetlands/Riparian Zones	<p>At this stage (lease sale) there is no potential to affect (both direct and indirect) current riparian areas. Riparian resources may be impacted by surface disturbance including roads, well pads and pipelines. Riparian areas and associated parcel number include Black Canyon (UT0212-029), Bootlegger Wash (UT0212-024), Buck Hollow (UT0212-028), Cottonwood Wash (UT0212-028), East Canyon (UT0212-033), Hatch Wash (UT0212-032, UT0212-035), Muleshoe Canyon (UT0212-029), Thompson Wash/Whipsaw Flat (UT-0212-011, UT0212-020 &amp; UT0212-022), and Sagers Wash (UT0212-024).</p> <p>A No Surface Occupancy stipulation applies to all Riparian Areas located within the nominated parcels. Requirements for pipelines crossing stream channels are also provided for in the RMP. Project-specific impacts relating to future authorizations cannot be analyzed until an exploration or development application is received. At that time site specific information would be gathered and additional measures to project Riparian Areas would be applied as necessary.</p> <p>Appropriate lease stipulations and notices have been included to protect Riparian Areas (Appendix A). Impacts to Riparian Areas are not expected to reach a level that would require adding a lease notice to the parcels.</p> <p>Application of stipulation UT-S-122 is warranted for these identified parcels,</p>	Ann Marie Aubry	
NP	Wild and Scenic Rivers	Resource not present.	Katie Stevens	
NP	Wilderness/WSA	There are no Wilderness Areas or Wilderness Study Areas within any of the lease parcels. Designated Wilderness and Wilderness Study Areas are closed to mineral leasing per Federal Onshore Oil and Gas Leasing Reform Act of 1987 and 43 CFR 3100.0-3(2). Parcels proposed for sale are not located within designated wilderness or wilderness study areas and activity outside of these areas will not affect wilderness characteristics within the areas.	Bill Stevens	
NI	Woodland / Forestry	At this stage (lease sale) there are no impacts to Woodland / Forestry. Impacts (both direct and indirect) would occur when the lease is developed in the future. The potential impacts would be analyzed on a site-specific basis at the APD stage prior to development.	Jordan Davis	
NI	Vegetation Excluding Special Status Species	At this stage (lease sale) there are no impacts to vegetation resources. Impacts (both direct and indirect) would occur when the lease is developed in the future. The potential impacts would be analyzed on a site-specific basis at the APD stage prior to development.	Jordan Davis	
PI	Visual Resources	There are no lands managed as VRM I within any of the lease parcels. Approximately 2,245 acres of lands managed as VRM II are within the lease parcels 029 and 030 (UT-S-	Katie Stevens	

Determination	Resource	Rationale for Determination	Signature	Date
		<p>158) within the area known as Muleshoe Canyon. However, controlled surface use stipulations have been applied to those acres which would result in negligible impacts to their visual resources.</p> <p>Using GIS applications, a viewshed study was completed for the lease sale. This analysis shows that parcels 002, 003, 004, 006, 011, 020, 022, and 033 are outside of the viewshed of Arches National Park. Approximately 2 miles of a central piece of parcel 024 is visible from Arches National Park. This visible area is approximately 10 miles north of the park.</p> <p>The viewshed study shows that parcels 028 and 029 are within the viewshed of Canyonlands National Park. These parcels are located 20 miles east of this park. Parcels, 030, 031, 032, 033 and 034 are outside the viewshed for Canyonlands National Park.</p>		

FINAL REVIEW:

Reviewer Title	Signature	Date	Comments
Environmental Coordinator			
Authorized Officer			

## MONTICELLO FIELD OFFICE INTERDISCIPLINARY TEAM CHECKLIST

Project Title: February 2012 Competitive Oil and Gas Lease Sale

NEPA Log Number: DOI-UT-BLM-9100-2011-0005

File/Serial Number: NA

Project Leader: Cliff Giffen

**DETERMINATION OF STAFF:**

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.

Determination	Resource	Rationale for Determination	Signature	Date
RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)				
-	Air Quality	Compiled by the Moab FO.	-	-
NP	Areas of Critical Environmental Concern	The parcels to be offered for oil and gas lease sale are not within any ACEC.		
NP	BLM Natural Areas	The parcels are not within any areas designated by the RMP/EIS to be managed as BLM Natural Areas for their wilderness characteristics.		
-	Cultural Resources	Compiled by the Moab FO.	-	-
NI	Environmental Justice	Minority and low income populations do exist in the Monticello FO area. The PRMP/FEIS, 2008 adequately assessed impacts to environmental justice population as defined in Executive Order 12898 and it was determined that no BLM action proposed across all alternatives or the Proposed Plan would target or cause any disproportionate impacts to any minority or low income segments of the population (PRMP/FEIS, 2008 p. 4-421).		
NP	Farmlands (Prime or Unique)	The lease parcels do not include any prime or unique farmlands.		
NI	Fish and Wildlife Excluding USFW Designated Species	The construction, drilling, completion, testing, and production of an oil and gas well could impact wildlife species and habitat. The parcels within the Monticello FO are available for oil and gas leasing subject to standard terms and conditions, TL, and CSU. The TL and CSU categories, as designated by the MFO RMP, relate to management decisions to protect Pronghorn antelope and raptors. Portions of the lease parcels are habitat for Gunnison prairie dogs and migratory birds.  Applicable RMP required lease stipulations (UT-S-275-Bald Eagle, UT-S-223-Pronghorn Antelope Fawning Habitat UT-S-229) would be attached to the appropriate lease parcels. Best Management Practices for Raptors and their Habitat, which requires surveys and appropriate spatial and timing buffers, is a RMP requirement of all oil and gas development activities (UT-LN-43). In addition, a lease notice (UT-LN-25) would be attached to		

Determination	Resource	Rationale for Determination	Signature	Date
		protect Gunnison prairie dogs and their habitat. These requirements would be adequate to mitigate impacts from oil and gas exploration, development, and production operations to wildlife resources.		
NI	Floodplains	<p>At this stage (lease sale) there is no potential to affect floodplains. Floodplains could be impacted by surface disturbance (APD stage) within or adjacent to floodplain, including roads, well pads and pipelines. Floodplains and parcel numbers include Hatch Wash (UT0212-032 and UT0212-035).</p> <p>A No Surface Occupancy stipulation applies to all floodplains located within the nominated parcels. Requirements for pipelines crossing stream channels are also provided for in the RMP. Project-specific impacts relating to future authorizations cannot be analyzed until an exploration or development application is received. At that time site specific surveys would be completed and additional measures to project floodplains would be applied as necessary.</p> <p>Appropriate lease stipulations and notices have been to protect Floodplains (Appendix A). Impacts to Floodplains are not expected to reach a level that would require adding a lease notice to the parcels.</p> <p>Hatch Wash, a large drainage subject to ephemeral flows, runs through parcels 32 &amp; 35. The MFO RMP designates floodplains, riparian areas, and public water reserves as no surface occupancy. Lease stipulation UT-S-128 would be attached to lease parcels 032 and 035. This stipulation would prohibit surface disturbing activity in the Hatch Wash floodplain.</p>		
NI	Fuels/Fire Management	The lease parcels occur within vegetation that consists primarily of greasewood, sagebrush, and grass communities. The fuel loading is light and the risk of fire is low.		
NI	Geology / Mineral Resources/Energy Production	The parcels are located within the Paradox Fold and Fault Belt. Oil and gas resources in this area of the paradox basin occur primarily in the Porous Carbonate Buildup Play within the Paradox Formation and have a high potential for occurrence. Depending on the success of oil and gas well drilling, non-renewable natural gas and/or oil would be extracted and delivered to market. Production of oil and/or gas would result in the irretrievable loss of these resources. A Reasonably Foreseeable Development Scenario (RFD, 2005) was prepared as part of the MFO RMP. Environmental impacts of the RFD were analyzed and are documented in the RMP/EIS. The proposed action (one well on each lease parcel) would not exceed the level of activity predicted in the RFD.		
-	Greenhouse Gases	Compiled by the Moab FO.	-	-
NI	Invasive Species/Noxious Weeds (EO 13112)	At this stage (lease sale) there would be no impact (direct or indirect) to Invasive Species/Noxious Weeds. The construction, drilling, completion, testing, and production of an oil and gas well could cause the spread of noxious and invasive weeds by vehicles and earth moving		

Determination	Resource	Rationale for Determination	Signature	Date
		<p>equipment that routinely move between construction locations within large regional areas. The potential exists for the inadvertent spread of seeds and plant materials between sites. Site specific oil and gas development proposals/authorizations contain best management practices and/or conditions of approval to mitigate the spread of weeds. These BMPs/COAs include pressure washing earth moving equipment prior to moving onto a new construction location, and ongoing treatment and control of weeds using integrated pest management techniques according to the BLM protocols. Invasive/noxious weed mitigation would be included and analyzed in future specific oil and gas APDs.</p>		
NI	Lands/Access	<p>Portions of the parcels are included within utility ROW corridors designated in the MFO RMP. At this stage (lease sale) there would be no impact (direct or indirect) to lands/access. Oil and gas leasing of lands within these ROW corridors is consistent with the MFO RMP management decisions. Impacts to individual ROW/holders would be determined at the time a specific development proposal is received and any required modification or mitigation would be included in the authorization. Both parcels are accessed by designated transportation routes. Any new road construction in a future site specific proposal, would likely originate from a designated transportation route, and could occur upon BLM lands within the lease or adjacent BLM lands available for oil and gas development. Impacts to lands/access would be analyzed in project specific NEPA documentation and modification and/or mitigation included in the project specific approved APD.</p>		
NI	Livestock Grazing	<p>At this stage (lease sale) there is no potential to affect (both direct and indirect) current livestock operations. Existing range improvements and studies within the proposed lease parcels would need to be avoided by 200 meters during the development of oil and gas facilities. The lease parcels are within Dry Valley-Deer Neck and the Monticello Cowboy grazing allotments. If livestock grazing use were occurring at the time of construction, drilling, completion, and testing of an oil and gas well; livestock could be temporarily displaced along the access roads and the well pad. Generally, the area impacted by specific oil and gas development projects is small when compared to the entire grazing allotment. Standard operating procedures required by regulation, and BMP/COA included in specific APD approvals would mitigate impacts to livestock grazing.</p>		
PI	Migratory Birds/Raptors	<p>The construction, drilling, completion, testing, and production of an oil and gas well could impact migratory birds and raptors. The area of the lease parcels is potential habitat for multiple species. The MFO RMP includes management decisions to protect raptors (RMP SSP-19, p. 138 and FWL-8, p. 153), and migratory birds (RMP FWL-1, p. 152). Best Management Practices for Raptors and their Habitat, which requires surveys and appropriate spatial and timing buffers, is a RMP requirement of all oil and gas development activities (UT-LN-43). Lease notice 45 is attached to all leases within the Monticello Field</p>		

Determination	Resource	Rationale for Determination	Signature	Date
		Office also. The application of these RMP decisions and Raptor BMPs to oil and gas development activities will mitigate impacts to migratory birds and raptors.		
PI	Native American Religious Concerns	Letters were sent to the Tribes on September 21, 2011. As of September 26, no responses have been received.		
NI	Paleontology	The MFO RMP management decision PAL-10 requires on-site evaluation of surface-disturbing activities for all Class 5 areas. The parcels occur in Class 2 and 3 areas. The potential for paleontological resources to occur is low.		
NI	Rangeland Health Standards	At this stage (lease sale) there is no impact (direct or indirect) to rangeland health standards. The construction, drilling, completion, testing, and production of an oil and gas well are subject to standard operating procedures required by regulation, and BMP and COA included in specific APD approvals. SOP, BMP, and COA mitigate impacts to vegetation and soils resources that affect rangeland health. These SOPs and other site specific mitigation applied as COAs, including reclamation standards, would be sufficient to meet Rangeland Health Standards.		
NI	Recreation	The area of the parcels is used for dispersed recreation such as hunting and hiking. This use is not intensive. Leasing activity would not limit existing use or impede management of SRPs and is consistent with recreation goals and objectives in the area.		
NI	Socio-Economics	Impacts from oil and gas leasing and development to socio-economics were analyzed in the PRMP/FEIS. The amount of lands available and offered for oil and gas leasing and the amount of new oil and gas development could impact socio-economic conditions, primarily in the form of increases or decreases in royalties and production taxes in proportion to the amount of oil and gas production (PRMP/FEIS p. 4-434). Under all alternatives, local employment resulting from oil and gas activity would continue to have a negligible impact on the San Juan county job base (PRMP/FEIS p. 4-434). The impacts from oil and gas leasing and development were adequately assessed in the MFO RMP.		
NI	Soils	Leasing the parcels, per se, would not affect the soil resource. However, there is some expectation that drilling and development could occur, at which time additional NEPA would be conducted. BMPs and SOPs are defined in the Gold Book.  The construction, drilling, completion, testing, and production of an oil and gas well could impact the soil resource. Well pad and access road construction activities could displace and mix soils leaving them susceptible to accelerated erosion from wind and precipitation. The MFO RMP prescribes management actions and places stipulations on surface disturbing activities related to sensitive soils and steep slopes (SOLW 13, 14, and 15, p. 117). There are saline soils within parcel 32. There are no steep slopes with engineering design requirements. Application of stipulation UT-S-109 on parcel 32 is		

Determination	Resource	Rationale for Determination	Signature	Date
		warranted at the leasing stage.		
NP	Threatened, Endangered or Candidate Plant Species	Based on existing inventories, no listed T&E, candidate, or sensitive plant species or their habitat is known to occur within the parcels.		
NI	Threatened, Endangered or Candidate Animal Species and Sensitive Species	The construction, drilling, completion, testing, and production of an oil and gas well could impact T&E and candidate animal species or their habitat. The MFO RMP contains management decisions and actions to protect T&E, candidate, or sensitive animal species and potential habitat. The parcels provide habitat bald eagle and Gunnison prairie dog. RMP designated stipulation UT-S-275 (Bald Eagle CSU/TL) and lease notice UT-LN-25 (White tailed and Gunnison prairie dog) would be attached to the lease parcels. This stipulation and notice will adequately mitigate impacts to sensitive species. No threatened, endangered or candidate species were identified.		
NI	Wastes (hazardous or solid)	The construction, drilling, completion, testing, and production of an oil and gas well produce waste products including drilling and completion fluids and produced water. Standard operating procedures required by regulation, BMP, and COAs attached to approved APD would mitigate impacts and ensure proper containment and disposal of wastes generated from oil and gas activities.		
NI	Water Resources/Quality (drinking/surface/ground)	Standard operating procedures (SOPs) required by regulation and site specific mitigation contained in an approved APD would be sufficient to isolate and protect all usable ground water zones. The SOPs include the requirements for disposal of produced water contained in Onshore Oil and Gas Order (OOGO) No. 7 and the requirements for drilling operations contained in OOGO No. 2. Potential fresh water aquifers would be cased and cemented. The casing would be pressure tested to ensure integrity prior to drilling out the surface casing shoe plug. The lease parcels are not within any Sole Source Aquifers or Drinking Water Source Protection Zones. Surface water quality could be affected by oil and gas well development activities. Standard operating procedures including interim and final reclamation required by regulation, and BMP and COA for site specific APD approvals would mitigate impacts to surface water quality. Refer also to the Moab ID team checklist discussions.		
NI	Wetlands/Riparian Zones	At this stage (lease sale) there is no potential to affect (both direct and indirect) current riparian areas. Riparian resources may be impacted by surface disturbance including roads, well pads and pipelines. Hatch Wash runs through parcel 35 and adjacent to parcel 32. The stream is ephemeral in character and does not support riparian or wetland vegetation. RMP designated lease stipulation UT-S-128 (NSO in floodplains, riparian areas, springs and Public Water Reserves) would be attached to lease parcels 32 and 35 to protect the Hatch Wash floodplain.		

Determination	Resource	Rationale for Determination	Signature	Date
NP	Wild and Scenic Rivers	There are no MFO RMP designated wild and scenic river segments within the parcels.		
NP	Wilderness/WSA	The parcels are not within any designated BLM Wilderness Study Areas (WSA) or designated wilderness areas. Designated Wilderness and Wilderness Study Areas are closed to mineral leasing per Federal Onshore Oil and Gas Leasing Reform Act of 1987 and 43 CFR 3100.0-3(2). Parcels proposed for sale are not located within designated wilderness or wilderness study areas and activity outside of these areas will not affect wilderness characteristics within the areas.		
NP	Woodland / Forestry	The parcels contain no woodland or forestry resources.		
NI	Vegetation Excluding USFW Designated Species	At this stage (lease sale) there are no impacts to vegetation resources. The construction, drilling, completion, testing, and production of an oil and gas well could impact the vegetative resource. Well pad and access road construction activities will remove the existing vegetative cover, exposed the soil to accelerated erosion, and reduce productivity. Standard operating procedures required by regulation, and BMPs and COAs included in or attached to approved APDs can mitigate impacts from oil and gas activity to vegetation resources.		
NI	Visual Resources	The construction, drilling, completion, testing, and production of an oil and gas well would cause impacts to visual resources. The MFO RMP designates the area of the parcels as VRM Class III. Any change to the landscape should be moderate. Oil and gas development activities may attract the attention of the casual observer but the change should not dominate the view (MFO RMP p. 3-175). Visual resources would be analyzed in a future site specific NEPA analysis and modifications may be required to the SUPO to meet VRM Class III objectives. Refer also to the Moab ID team checklist discussions.		
NP	Wild Horses and Burros	There are no wild horses or burros in the Monticello FO area.		
NP	Areas with Wilderness Characteristics	The parcels do not occur within any Areas with Wilderness Characteristics.		

## FINAL REVIEW:

Reviewer Title	Signature	Date	Comments
Environmental Coordinator			
Authorized Officer			

**Appendix D – Deferred Parcel List**

Date Nominated	Parcel Number	Legal Description	Acres	Reason Tract Postponed	Land Use Plan
May 10, 2011	<b>UT0212 - 001</b> Grand County, Utah Moab Field Office	T. 24 S., R. 16 E., Salt Lake Sec. 13: NE, NESE.	200.00	Within Moab Master Leasing Plan Area	Moab RMP
May 10, 2011	<b>UT0212 – 002- partial</b> Grand County, Utah Moab Field Office	T. 21 S., R. 17 E., Salt Lake Sec. 1: Lots 3-6, 11- 14, S2NW; Sec. 26: E2, N2NW, S2SW: Excluding Railroad ROW U62502	442.0	Subject to current litigation	Moab RMP
May 10, 2011	<b>UT0212 – 003- partial</b> Grand County, Utah Moab Field Office	T. 21 S., R. 17 E., Salt Lake Sec. 28: W2, SE, Excluding Railroad ROW U62502	471.50	Subject to current litigation	Moab RMP
May 10, 2011	<b>UT0212 - 004 -partial</b> Grand County, Utah Moab Field Office	T. 21 S., R. 17 E., Salt Lake Sec. 26: Railroad ROW U62502 within portions of the NE.	13.0	Subject to current litigation	Moab RMP
May 10, 2011	<b>UT0212 – 005</b> Grand County, Utah Moab Field Office	T. 12 S., R. 9 E., Salt Lake Sec. 8: E2, N2NW; Sec. 9: W2NE, W2.	800.00	Within Moab Master Leasing Plan Area	Moab RMP
May 10, 2011	<b>UT0212 – 006</b> Grand County, Utah Moab Field Office	T. 22 S., R. 18 E., Salt Lake Sec. 4: Lot 5, E2SE	110.37	Deferred as per memorandum received from State Director on August 12, 2011.	Moab RMP
May 10, 2011	<b>UT0212 - 007</b> Grand County, Utah Moab Field Office	T. 25 S., R. 18 E., Salt Lake Secs. 33 and 34: ALL.	1,280.00	Within Moab Master Leasing Plan Area	Moab RMP
May 10, 2011	<b>UT0212 - 008</b> Grand County, Utah Moab Field Office	T. 26 S., R. 18 E., Salt Lake Secs. 3, 4 and 5: All.	2,148.00	Within Moab Master Leasing Plan Area	Moab RMP

Date Nominated	Parcel Number	Legal Description	Acres	Reason Tract Postponed	Land Use Plan
May 10, 2011	<b>UT0212 – 009</b> Grand County, Utah Moab Field Office	T. 21 S., R. 19 E., Salt Lake Sec. 6: Lots 5-7, SESW; Sec. 7: Lots 1-8, E2W2; Secs. 18 and 19: ALL.	2,106.59	Within Rocky Mountain Bighorn Sheep Habitat	Moab RMP
May 10, 2011	<b>UT0212 – 010</b> Grand County, Utah Moab Field Office	T. 21 S., R. 19 E., Salt Lake Sec. 10: SENE, SW, NESE, S2SE; Sec. 11: SWNW, W2SW; Sec. 14: W2NW, SW, S2SE; Sec. 15: ALL; Sec. 17: S2SE	1,480.00	Within Rocky Mountain Bighorn Sheep Habitat	Moab RMP
May 10, 2011	<b>UT0212 - 012</b> Grand County, Utah Moab Field Office	T. 24 S., R. 19 E., Salt Lake Secs. 1 and 11: All; Sec. 12: S2NE, W2, SE.	1,841.04	Within Moab Master Leasing Plan Area	Moab RMP
May 10, 2011	<b>UT0212 - 013</b> Grand County, Utah Moab Field Office	T. 24 S., R. 19 E., Salt Lake Secs. 3, 9 and 10: All.	1,918.60	Within Moab Master Leasing Plan Area	Moab RMP
May 10, 2011	<b>UT0212 - 014</b> Grand County, Utah Moab Field Office	T. 24 S., R. 19 E., Salt Lake Secs. 4, 7 and 8: All.	2,060.08	Within Moab Master Leasing Plan Area	Moab RMP
May 10, 2011	<b>UT0212 - 015</b> Grand County, Utah Moab Field Office	T. 24 S., R. 19 E., Salt Lake Secs. 13, 14, 15 and 20: All	2,560.00	Within Moab Master Leasing Plan Area	Moab RMP
May 10, 2011	<b>UT0212 - 016</b> Grand County, Utah Moab Field Office	T. 24 S., R. 19 E., Salt Lake Secs. 17 and 18: All.	1,423.12	Within Moab Master Leasing Plan Area	Moab RMP

Date Nominated	Parcel Number	Legal Description	Acres	Reason Tract Postponed	Land Use Plan
May 10, 2011	<b>UT0212 - 017</b> Grand County, Utah Moab Field Office	T. 24 S., R. 19 E., Salt Lake Secs. 21, 22, 23 and 24: All.	2,560.00	Within Moab Master Leasing Plan Area	Moab RMP
May 10, 2011	<b>UT0212 - 018</b> Grand County, Utah Moab Field Office	T. 24 S., R. 19 E., Salt Lake Secs. 25, 28, 34 and 35: All.	2,560.00	Within Moab Master Leasing Plan Area	Moab RMP
May 10, 2011	<b>UT0212 - 023</b> Grand County, Utah Moab Field Office	T. 24 S., R. 20 E., Salt Lake Secs. 17, 18, 19 and 20: All.	2,214.24	Within Moab Master Leasing Plan Area	Moab RMP
May 10, 2011	<b>UT0212 - 025</b> Grand County, Utah Moab Field Office	T. 20 S., R. 22 E., Salt Lake Secs. 12, 13, 14 and 15: ALL.	2,560.00	Within the Cisco Desert Master Leasing Plan (MLP) area	Moab RMP
May 10, 2011	<b>UT0212 - 026</b> Grand County, Utah Moab Field Office	T. 20 S., R. 22 E., Salt Lake Sec. 17: All; Sec. 18: E2; Sec. 20: N2NE, SENE; Secs. 21 and 22: All.	2,360.00	Within the Cisco Desert Master Leasing Plan (MLP) area	Moab RMP
May 10, 2011	<b>UT0212 - 027</b> Grand County, Utah Moab Field Office	T. 20 S., R. 22 E., Salt Lake Secs. 27 and 28: All.	1,280.00	Within the Cisco Desert Master Leasing Plan (MLP) area	Moab RMP

## **Appendix E – Comment Response Table**

Reserved.