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May 2013 Oil and Gas Lease Sale

Location: Color Country District, Richfield and Kanab Field Offices
Sanpete and Garfield Counties, Utah

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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 leasing twelve parcels totaling 14,660.26 acres during the May 2013 oil and gas lease sale and subsequent lease issuance to successful bidders. 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 Code of Federal Regulations (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 Richfield Field Office Record of Decision and Resource Management Plan (RFO ROD/RMP; BLM, 2008a) and Kanab Field Office (KFO) ROD/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 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. Leases would be issued pursuant to 43 CFR subpart 3100.

Expressions of Interest (EOI) are submitted by the public. These EOIs are then divided into logical parcels. In general, the BLM Utah State Office (USO) conducts a quarterly competitive lease sale to sell available oil and gas lease parcels in the state. Anyone submitting a formal EOI which includes split estate lands – private surface/Federal minerals – must provide, with the EOI, the name and address of the current private surface owners(s). When a split estate parcel is under consideration, the BLM sends an initial letter to the surface owners(s). This letter informs the landowner that an EOI has been received which involves their surface ownership. This initial notification provides notice of the scheduled auction and invites their participation on a site visit to the parcel. As described below, after a parcel has gone through an interdisciplinary review and is recommended for leasing, a second letter is sent which elaborates on BLM's regulations and procedures for Federal oil and gas leasing and development on split estate lands.

In the process of preparing a lease sale, the BLM USO compiles a list of lands nominated and legally available for leasing, and sends a preliminary parcel list the appropriate District Office

where the parcels are located. Field Office staff then review and verify that the parcels are in areas available for leasing and determine if any new information has become available, or any circumstances have changed. The parcels are then assessed to determine what level of analysis is required and the appropriate stipulations and notices to be included. Appropriate consultations are conducted, when necessary, and that any special resource conditions are identified for potential bidders. The Field Office then either determines that existing analyses 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 Field Office to meet the requirements of Washington Office (WO) Instruction Memorandum (IM) 2010-117.

After the EA is complete, it and an unsigned FONSI are made available to the public along with the parcel list and stipulations/notices for a 30-day public comment period on the Utah Environmental Notification Bulletin Board (ENBB). Additional information and instructions are also made available on the BLM's Oil and Gas Leasing Webpage. After analyzing and incorporating (where appropriate) comments received during the public comment period, changes to the document and/or lease parcels list are made, if necessary. The documents are made available again to the public in connection to the Notice of Competitive Lease Sale (NCLS) protest period (30 days). The protest period ends 60 days before the scheduled lease sale. Lease stipulations and notices applicable to each parcel are specified in the sale notice. If any changes are needed to NCLS parcels or stipulations/notices, an erratum is posted to the BLM oil and gas leasing 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 May 21, 2013. 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.

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 BLM received nominations for thirteen subject parcels (twelve on the Richfield Field Office and one on the Kanab Field Office) to be leased for oil and gas development (see Appendix A, May 2013 Preliminary Oil and Gas Lease Sale List; Appendix B, Map of Parcels). After an initial review one parcel (UT0513-013) was recommended to be deferred from the lease sale due to the presence of occupied greater sage-grouse habitat. This EA has been prepared to disclose and analyze the environmental consequences of the sale of twelve parcels during the May 2013 Oil and Gas Lease Sale. The mineral rights for these parcels are owned by the federal government and administered by the RFO (see Appendix B). Parcels UT0513-003, UT0513-004, UT0513-005, UT0513-006, UT0513-009, UT0513-010, UT0513-011, and UT0513-012 have split estate where all or part of these parcels have federal minerals and private surface ownership (see Appendix B for maps of the parcels).

This 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. Under all alternatives, 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.

1.3 Need of the Proposed Action

The parcels proposed for leasing were nominated by the public. The need for the sale is to respond to the public's 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.

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 of the Proposed Action

The purpose of the 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 sale of oil and gas leases is needed to meet the growing energy needs of the United States public. The BLM is required by law to review areas that have been nominated; additionally there has been ongoing interest in oil and gas exploration in the RFO area in recent years. 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 CFR subpart 3100.

1.5 Conformance with BLM Land Use Plan

The alternatives described below are in conformance with RFO ROD/RMP, as maintained (BLM, 2008) because they are specifically provided for in the planning decision.[1] They conform to the following Land Use Plan (LUP) decisions (RMP Table 19 pages 132-133):

MIN-1. Issue oil and gas leases and allow for oil and gas exploration and development.

MIN-6. Lease split-estate lands according to BLM RMP stipulations for adjacent or nearby public lands or plans of other surface management agencies as consistent with federal laws, 43 CFR 3101, and the surface owner's rights.

MIN-9. In accordance with an UDEQ-DAQ letter dated June 6, 2008, (see Appendix 13) requesting implementation of interim nitrogen oxide control measures for compressor

[1] Because the Garfield County Parcel was deferred, additional discussion of the Kanab ROD/RMP is not necessary here.

engines; 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 gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NOx per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NOx per horsepower-hour.

MIN-10. Area closed to leasing: 447,300 acres

MIN-11. Manage fluid mineral leases as shown on Map 23:

- Areas open to leasing with standard lease terms: 608,700 acres
- Areas open to leasing subject to Controlled Surface Use (CSU) and/or timing limitations: 917,500 acres
- Areas open to leasing subject to No Surface Occupancy (NSO): 154,500 acres

It is also consistent with RMP decisions and their corresponding goals and objectives related to the management of, including but not limited to, air quality, BLM natural areas, cultural resources, recreation, riparian, soils, water, vegetation, fish & wildlife, and Areas of Critical Environmental Concern (ACEC) as well as the Surface Stipulations Applicable to Oil and Gas Leasing and Other Surface Disturbing Activities (Appendix 11 of the RMP/ROD).

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, October 2008). 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 a 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 (BLM WO IM-2002-174, Endangered Species Act Section 7 Consultation).

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 and associated regulations found at 43 CFR 2800
- Taylor Grazing Act (1934) as amended
- Utah Standards and Guidelines for Rangeland Health (1997)
- National Historic Preservation Act (1966) as amended and associated regulations at 36 CFR Part 800
- 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 (4/2010)
- National Sage-grouse Habitat Conservation Strategy (BLM 2004)
- Strategic Management Plan for Sage-grouse 2002 (UDWR 2002)
- Western Association of Fish and Wildlife Agencies, Conservation Assessment of Greater Sage-grouse and Sagebrush Habitats (Connelly et al. 2004)
- WO IM 2012-043 Greater Sage-Grouse Interim Management Policies and Procedures
- WO IM 2012-044 BLM National Greater Sage-Grouse Land Use Planning Strategy
- Utah Supplemental Planning Guidance: Raptor Best Management Practices (BLM UTSO IM 2006-096)
- Oil and Gas Leasing Reform – Land Use Planning and Lease Parcel Reviews (BLM WO IM 2010-117)
- UTSO IM 2010-055 - Protection of Ground Water Associated with Oil and Gas Leasing, Exploration and Development
- Determining Conformity of Federal Actions to State or Federal Implementation Plans (40 CFR Part 93 Subpart E)
- MOU Among the USDA, USDI and EPA Regarding Air Quality Analysis and Mitigation for Federal Oil and Gas Decisions Through the NEPA Process (2011)
- Richfield Field Office Visual Resource Inventory (2011)
- Sanpete County Master Plan as revised.

These documents, and their associated analysis, are hereby incorporated by reference, based on their use and consideration by various authors of this document. The attached Interdisciplinary Team Checklist, Appendix C, was also developed after consideration of these documents and their contents. Each of these documents is available for review upon request from the RFO. 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 (IDPR) team composed of resource specialists from the RFO. This team 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 UTSO specialists for air quality, wildlife, cultural resources, special designations, visual resources and solid minerals reviewed the proposal.

On August 28, 2012, the UTSO sent letters to the National Park Service (NPS), United States Fish and Wildlife Service (USFWS), United States Forest Service (USFS) and the State of Utah's Public Lands Policy Coordination Office (PLPCO), Utah Division of Wildlife Resources (UDWR) and the State Institutional Trust Lands Administration (SITLA) to notify them of the pending lease sale, solicit comments and concerns on the preliminary parcel list and invite them to participate in site visits. The IDPR team conducted site visits to validate existing data and gather new information in order to make an informed leasing recommendation on September 26, 2012. None of the other agencies or private londowners participated in the site visits with the RFO IDPR team. The results of the IDPR team review are contained in the Interdisciplinary Team Checklist, Appendix C.

Public notification was initiated by entering the project information on the ENBB[2] on October 22, 2012. The EA and unsigned FONSI will be posted for public review and comment from December 14, 2012 through January 25, 2013. Additional information for the public is maintained on the Utah BLM Oil and Gas Leasing Webpage.[3] Additional information on public participation is available in Section 5.3.

1.8 Summary

This chapter has presented the purpose and need of the proposed project, as well as the process for identifying issues and resources 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 alternatives. These alternatives are presented in Chapter 2. The affected environment will be described in Chapter 3 for the issues analyzed. 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] The ENBB is a BLM environmental information internet site and can be accessed online at: https://www.blm.gov/ut/enbb/index.php
[3] Accessed online at: http://www.blm.gov/ut/st/en/prog/energy/oil_and_gas/oil_and_gas_lease.html

2.0 DESCRIPTION OF ALTERNATIVES, INCLUDING THE PROPOSED ACTION

2.1 Introduction

This environmental assessment focuses on the Proposed Action and No Action alternatives. Other alternatives were not considered in detail 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

Twelve parcels within the jurisdiction of the RFO have been proposed for sale in the May 2013 Oil and Gas Lease Sale to be held at the Utah BLM State Office. The nominated parcels would be offered with additional resource protection measures consistent with the RFO RMP (BLM, 2008). Legal descriptions of each parcel can be found in Appendix A, and maps of the nominated parcels can be found in Appendix B. All of the acreage proposed to be leased has been identified as being either open to leasing subject to standard lease terms, or open to leasing subject to minor constraints such as seasonal restrictions in the RFO RMP (RMP; see Map 23).

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 access road 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) 12 locations could be drilled, with the potential surface disturbance of approximately 144 acres (assuming approximately 12 acres per drill pad and access road). These figures are estimated in the Reasonably Foreseeable Development Scenario (Appendix 12 of the RMP/ROD). 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, October 2008). 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, Endangered Species Act (ESA), National Historic Preservation Act (NHPA), and Federal Land Policy and Management Act (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 (BLM WO IM-2002-174, Endangered Species Act Section 7 Consultation).

2.2.1 Well Pad and Road Construction

Equipment for well pad construction would consist of dozers, trackhoes, and graders. All well pads would be reclaimed. Topsoil from each well pad would be stripped to a minimum depth of six inches and stockpiled for future reclamation. Interim reclamation of the pad would occur if the well produces commercial quantities of oil or gas. Interim reclamation involves a reduction of the drill pad to a size that accommodates the functions of a producing well. 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. If the well is not productive final reclamation of the pad and constructed road would begin. Disturbance for each well pad would be estimated at an area of approximately 4 acres of land, including topsoil piles. 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 12-24 foot travelway width and would be constructed of native material. 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 8 acres (2 miles of road at 4 acres per mile) per well site.

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 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.

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.

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.

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 re-contoured 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 re-contoured, 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 Eliminated from Further Analysis

A total of thirteen parcels were nominated and forwarded to the Color Country District for review. An alternative was considered that included leasing of all these parcels. As introduced in Section 1.2 Background, parcel UT0513-013 contains identified priority habitat for the greater

sage-grouse. After considerable dialogue with the USFWS and several state wildlife management agencies, BLM issued two instruction memoranda (IM) regarding its management of the greater sage-grouse [IM 2012-043 (Greater Sage-Grouse Interim Management Policies and Procedures) and IM 2012-044 (BLM National Greater Sage-Grouse Land Use Planning Strategy)] (issued December 22, 2011 and December 27, 2011, respectively). While the BLM considers amendments or revisions to its governing land use plans, the agency's interim conservation policies and procedures for the greater sage-grouse are outlined in IM 2012-043. Under the subtitle Fluid Mineral Leasing, field offices retain the discretion to not move forward with a nomination or defer making a final decision on a leasing decision until the completion of the land use planning process described in the National Greater Sage-Grouse Planning Strategy for the affected area. For this reason it is recommended that parcel UT0513-013 be deferred (Appendix E).

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. This chapter provides the baseline for comparison of impacts/consequences described in Chapter 4. Only those aspects of the affected environment that are potentially impacted are described in detail (see Appendix C).

3.2 General Setting

The proposed action would result in the leasing for oil and gas development of twelve parcels within the RFO. All of the parcels are located on BLM administered lands. See Appendix A for legal descriptions and Appendix B for maps of the parcels. Additional information is also contained in the Interdisciplinary Team Checklist (Appendix C).

These parcels range in size from 120 to 2,560 acres for a total of 14,660.26 acres. Eleven parcels are located east of Fountain Green and one parcel is west of Manti, in Sanpete County, Utah. The landscape is composed of gently rolling hills and no major drainages or floodplains exist within the parcels. The area is covered in a mixture of grass and shrubs. Some of the dominant vegetation species are: Wyoming sagebrush, shadscale, needle and thread grass, Indian ricegrass and greasewood. Areas that have been disturbed or burned from a wildfire are predominantly cheatgrass. High densities of Class B roads crisscross the area. The area is utilized by grazing cattle for a portion of the year.

3.3 Resources/Issues 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 and mines 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. Strong winds 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 1 shows NAAQS for the EPA designated criteria pollutants (EPA 2008).

Table 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^3)	8-hour [(1)]	None	
	35 ppm (40 mg/m^3)	1-hour [(1)]		
Lead (Pb)	0.15 µg/m^3	Rolling 3-Month Average	Same as Primary	
	1.5 µg/m^3	Quarterly Average	Same as Primary	
Nitrogen Dioxide (NOx)	0.053 ppm (100 µg/m^3)	Annual (Arithmetic Mean)	Same as Primary	
	100 ppb	1-hour	Same as Primary	
Particulate Matter (PM_{10})	150 µg/m^3	24-hour [(2)]	Same as Primary	
Particulate Matter ($PM_{2.5}$)	15.0 µg/m^3	Annual [(3)](Arithmetic Mean)	Same as Primary	
	35 µg/m^3	24-hour [(4)]	Same as Primary	
Ozone (O_3)	0.075 ppm (2008 std)	8-hour [(5)]	Same as Primary	
Sulfur Dioxide (SO_2)	0.03 ppm	Annual (Arithmetic Mean)	0.5 ppm (1300 µg/m^3)	3-hour [(1)]
	0.14 ppm	24-hour [(1)]		
	75 ppb	1-hour [(1)]	None	

(1) Not to be exceeded more than once per year.
(2) Not to be exceeded more than once per year on average over 3 years.
(3) To attain this standard, the 3-year average of the weighted annual mean PM2.5 concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m3.
(4) 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/m3.
(5) 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.

Air quality in San Pete County is currently designated as attainment or unclassified for all the NAAQS (State Department of Environmental Quality and the Division of Air Quality Standards (Utah Division of Air Quality 2011 Annual Report).[4] An unclassified designation means sufficient air monitoring has not been conducted to make an attainment determination for the county, but the county regulated under the Clean Air Act is in attainment.

The UDAQ 2011 annual report includes a 2008 emissions inventory (EI) (Table 5 Triennial Inventory). 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.

[4] Accessed on 10/22/2012 from http://www.airquality.utah.gov/Public-Interest/annual-report/.pdf/2011%20Annual%20Report.pdf

Table 2: Sanpete County Triennial Inventory (2008) (Tons Per Year)			
PM_{10}	1,360.66	NOx	853.47
$PM_{2.5}$	301.44	VOC	19,415.89
SOx	98.17	CO	10,593.21

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_{10}), from heavy construction operations. PM_{10} emissions are converted from total suspended particulates by applying a conversion factor of 25%. $PM_{2.5}$ is not specifically addressed as it is included as a component of PM_{10}. $PM_{2.5}$ is converted from PM_{10} by applying a conversion factor of 15%. 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 Soils/Watershed

All soils are within the Sanpitch Watershed (HUC 16030004). The majority of the soils in the Fountain Green area are in the Deer Creek-Bagard-Yates Hollow association which are well drained, moderately sloping to very steep, deep cobbly, stony, and very stony clays and clay loams on mountain foot slopes. This association is in canyons and on plateaus that extend from Fountain green north to Thistle. The soils are moderately slopping to very steep, deep, and well drained. They formed in alluvium and colluvium derived from sandstone, quartzite, shale, mixed igneous material, and limestone.

The Deer Creek soils are extensive west of Hilltop but are throughout the association. They have a surface layer of stony silt loam, a subsoil of stony and cobbly clay, and a substratum of cobbly clay loam. Bagard soils are east of Fountain Green. They have a surface layer of very stony clay loam, a subsoil of cobbly and very cobbly clay, and a substratum of very cobbly loam and sandy clay loam. Yeates Hollow soils are at the highest elevations. They have a surface layer of stony silt loam and silty clay loam and a subsoil of stony and very stony clay.

The soils west of Gunnison Reservoir are in the Amtoft-Sanpete-Rock land association that are somewhat excessively drained, gently sloping to very steep, shallow and deep flaggy loams and very gravelly sandy loams and Rock land on alluvial fans and foot-hills. The soils are gently sloping to very steep, shallow and deep, and somewhat excessively drained. They formed in alluvium, residuum and colluvium derived mainly from limestone.

Amtoft soils are common throughout the association. They are shallow and have a surface layer of flaggy loam and very flaggy loam and a substratum of flaggy loam that is 10 to 20 inches deep over limestone. Sanpete soils are common on the alluvial fans throughout the association. They are deep and have a surface layer of gravelly fine sandy loam and gravelly loam that is underlain by very gravelly sandy loam. Rock land is on the ridges and points. It is mainly rock outcrop, and in places a thin mantle of soil covers the bedrock.

The lease parcels do not occur within any Sole Source Aquifers or Drinking Water Source Protection Zones (DWSPZs). Although parcel 010 is outside of protection zones; it is in proximity to 2 water supply wells.

3.3.3 Socio-Economics

Sanpete County has a rural, agricultural-based economy. The US Census Bureau shows Sanpete County's population is 27,822 (based on the 2010 census). The U.S. Census Bureau projected a 1.9 percent increase in population from April 1, 2010 to July 1, 2011, which would bring the current population to about 27,988. The population is mostly dispersed into small communities. Manti, the county seat, has a population of approximately 3,200 (2010 census), and Ephraim is the largest town in the county with a population of 6,135 people. The county's economy is currently based on livestock, manufacturing, and trade.

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 (defer one of the nominated parcels and offer twelve of the parcels for 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

This section analyzes the impacts of the proposed action to those potentially impacted resources described in the Affected Environment (Chapter 3).

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 remains 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 regional 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 the majority of the parcels occur in NAAQS attainment areas. 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_X, SO_2, 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_X and CO emissions, with lesser amounts of SO_2. 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_X, CO, Volatile Organic Compounds (VOC), and Hazardous Air Pollutants (HAP) emissions would result from the long-term operation of condensate storage tank vents, and well pad separators. Additionally, road dust (PM_{10} and $PM_{2.5}$) 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.

The construction, drilling, completion, testing, and production of an oil and gas well could result in various emissions that affect air quality. Construction activities result in emissions of PM_{10}. Well drilling activities result in engine exhaust emissions of NOx, CO, and VOC. Completion and testing of the well result in emissions of VOC, NO_X, and CO. Ongoing production results in the emission of NOx, CO, VOC, and PM_{10}.

Due to the very small level of anticipated development, an emissions inventory (EI) has not been conducted for this lease sale. A typical oil and gas well EI is estimated for the purpose of this analysis and is based on the following assumptions:

- Each oil and gas well would cause 12 acres of surface disturbance. This acreage includes access.
- 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 30-60 days.
- Completions and testing operations would require 3 days.
- Off road mobile exhaust emissions from heavy equipment during construction activities and on road mobile emissions would not be considered as they are dispersed, sporadic, temporary, and not likely to cause or contribute to exceedence of the NAAQS.

If exploration occurs, short-term impacts would be stabilized or managed (within two to five years), and long-term impacts are those that would substantially remain for more than five years. An air quality Best Management Practice (BMP) which discusses the amounts of NO_X emission per horse-power hour based on internal combustion engine size, would be attached to all parcels. Stipulation UT-S-101, Air Quality, would consist of the following provisions:

- 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 NOx per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- 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 NOx per horsepower-hour.

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.

Table 3: Emissions Estimate

	Construction Emissions (Tons)	Drilling Emissions (Tons)			Completions Emissions (Tons)				Ongoing Production Emissions (Tons/year)			
	PM_{10}	NO_X	CO	VOC	VOC	NO_X	CO	PM_{10}	NO_X	CO	VOC	PM_{10}
Typical Well	0.34	13.31	1.83	0.23	0.85	0.07	0.07	0.00	0.01	0.01	6.44	0.00000
Sub Total	0.34	13.31	1.83	0.23	0.85	0.07	0.07	0.00	0.01	0.01	6.44	0.00000
					PM_{10}	NO_X	CO	VOC				
Activity Emissions (Total emissions for drilling and completion the well)					0.34	13.37	1.89	1.08	Tons			
Production Emissions (Ongoing annual emissions for the well)					0.00000	0.01	0.01	6.44	tpy			

Based on the emissions estimates contained in Table 3, and considering the location of the proposed leasing relative to population centers and Class 1 areas, substantial air resource impacts are not anticipated as a result of this leasing action, and no further analysis or modeling is warranted. Emissions resulting from the lease sale are not likely to result in major impacts to air quality nor are they likely to cause a violation of the NAAQS.

Additional air quality control measures may be warranted and imposed at the APD stage. These control measures are dependent on future regional modeling studies, other analysis or changes in regulatory standards. As such, a lease notice would be appropriate to inform an operator or the general public that additional air quality control measures would be pursued. Lease notices UT-LN-99 (Regional Ozone Formation Controls) and UT-LN-102 (Air Quality Analysis) would be attached to all lease parcels.

To address oil and gas development emissions may have on regional ozone formation, the following Best Management Practices (BMPs) would be required through a lease notice (UT-LN-99, Regional Ozone Formation Controls) for any development projects related to this lease sale:

- Tier II or better drilling rig engines
- Stationary internal combustion engine standard of 2g NOx/bhp-hr for engines <300HP and 1g NOx/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

4.2.1.2 Soils/Watershed

The Proposed Action would result in the disturbance of approximately 144 acres of soil due to construction of one well pad and access road improvement and new road construction per potential lease development.

Direct impacts to soils would include soil exposure due to vegetation removal, mixing of soil horizons, loss of topsoil productivity, soil compaction, and increased susceptibility to wind and water erosion. These impacts may consequently result in increased erosion, runoff, and sedimentation. Most erosion would occur on steeper cut and fill slopes and in areas where runoff is concentrated, such as within roadway ditches. However, these impacts would be reduced by rehabilitating disturbed lands. Cut and fill, stockpiles, and other disturbances would be seeded for re-growth of vegetation to stabilize slopes and to reduce erosion. If the well pad is needed for production, the well pad could be reduced in size, and this interim reclamation would restore part of the disturbed lands to natural conditions to the extent practicable with ongoing, oil and gas operations.

Soil and vegetation would be stripped and alluvial/colluvial material and bedrock to a certain degree would be excavated in the part of the project that involves construction. The loosening of earthen material and the removal of soil and vegetation could contribute sediment and total dissolved solids to the watershed. However, the increase in sediment load or total dissolved solids is anticipated to be relatively minor and localized. Most sediment within the project area would be transported by surface runoff from precipitation, which includes occasional winter snow falls and summer storms. Snowfall is relatively light in this setting. Thunderstorms can produce runoff during the summer monsoonal storm patterns. Sediment contributed to the associated local drainages is anticipated to be relatively low. Potential impacts would be mitigated by requiring stabilization of cut and fill slopes, interim reclamation if the well is productive, and final reclamation when the project is terminated.

The potential for increased erosion and sedimentation would be greatest in the short-term immediately after construction, when the disturbed soils are loose and would decline over time in

areas where reclamation is implemented, and in other areas as natural stabilization occurs through particle aggregation, soil structure development and armoring. The potential for erosion and short-term surface runoff would be decreased through design features described in a subsequent Surface Use Plan prepared for the Application for Permit to Drill (APD) and through application of Stipulation UT-S-102. Also, Lease Notice UT-LN-91 should be applied to parcel UT0513-010 due to the proximity of 2 water supply wells.

4.2.1.3 Socio-Economics

The social and economic environments of Sanpete County would be positively affected by the proposed project. Exploratory drilling of oil and gas in the project area would contribute to the local economy by providing several benefits: short-term employment opportunities for construction, drilling and completion; monies to local contractors; and revenues recycled into the area's local economy. Additional revenues would be generated in the form of sales taxes and income taxes. Local workers would potentially be used in much of the project work, and they would likely spend much of their income in local economies, thus producing a "multiplier effect" that could be at least 1.5 times the revenues generated from the proposed project.

The Proposed Action would add to the short-term opportunities for employment in Sanpete County, especially for workers associated with the support of the oil and gas industry. The average cost to construct, drill and complete an individual well is approximately $3,500,000.

If the proposed well is productive, long-term employment opportunities would likely be generated for at least one pumper and three tanker truck drivers. If the well is productive, income to the federal government, State of Utah and Sanpete County would be generated in the form of royalties, sales taxes, income taxes, and property taxes for the producing well. Furthermore, if the well is productive, field development would likely be pursued by the applicant, thereby potentially resulting in additional short-term and long-term employment opportunities, royalties, sales taxes, income taxes, and property taxes.

If production is established from a well and/or additional wells, the development of oil and gas could lead to long-term impacts to the social structure of the communities, changes in the economic base, and an increased demand for local government services. These impacts could include increased revenues in the local economy, an increase in the tax base, change in the social structure of the local community, and increased demand for community services and strain on the infrastructure (schools, hospitals, law enforcement, fire protection, and other community needs. These possible social and economic changes are beyond the scope of this document and to make those projections would be speculative at best.

4.2.1.4 Design Features

Application of stipulations and lease notices (including those identified in Appendix A and C) to each of the parcels 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

This alternative (not to offer any of the nominated parcels for sale) may not meet the need for the proposed action.

4.2.2.1 Air Quality

The No Action alternative would prevent future potential impacts relating to lease operations. Other exploration and development activities on surrounding areas that are currently leased would continue.

4.2.2.2 Soils/Watershed

Under the No Action alternative, soil disturbance, erosion and sediment yield would not occur within the immediate project area.

4.2.2.3 Socio-Economics

Under the No Action alternative, potential short-term beneficial impacts of increased employment and income and revenues generated from construction, drilling and completion of the wells would not be realized since this proposed wells would not be drilled. Not drilling the proposed wells would reduce the likelihood of finding oil and gas resources. Local economies would not realize any added incomes.

4.3 Cumulative Impacts Analysis

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.

Reasonably Foreseeable Action Scenario (RFAS)

The Cumulative Impact Analysis Area (CIAA) for air quality is Sanpete County. Based on the relatively minor levels of emissions associated with this proposed development, and the application of these BMP's, it is unlikely emissions from any subsequent development of the proposed leases would contribute to regional ozone formation in the project area, nor is it likely to contribute or cause exceedences of any NAAQS.

Based on the relatively minor levels of emissions associated with this proposed development, and the application of BMPs and lease notices, it is unlikely emissions from any subsequent development of the proposed leases would contribute to regional ozone formation in the project area, nor is it likely to contribute or cause exceedences of any NAAQS.

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 positive impacts to the socio-economics of Sanpete County. 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 Richfield RMP/FEIS are incorporated by reference to Chapter 4. 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 & recreational activities.

5.0 CONSULTATION AND COORDINATION

5.1 Introduction

Public and agency involvement has occurred as described in sections 5.2 and 5.3 below.

5.2 Persons, Groups, and Agencies Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
U.S. Fish & Wildlife Service	Section 7 ESA	A letter was sent to the USFWS on August 28, 2012 which provided the preliminary list and notified them of the May 2013 lease sale. Formal consultation was completed as part of the RMP/ROD in the form of the Biological Opinion. Threatened and endangered species are not present on the subject parcels. However, informal consultation is ongoing.
Utah State Historic Preservation Office	Section 106 NHPA	A consultation request letter was sent on October 11, 2012 with a determination of no historic properties affected. SHPO concurrence was received on October 25, 2012 and October 31, 2012.
State of Utah's Public Lands Policy Coordination Office	Coordinated with as leasing program partner.	A letter was sent on August 28, 2012 which provided the preliminary list and notified them of the May 2013 lease sale. Coordination is ongoing.
Utah Division of Wildlife Resources	Agency with expertise.	A response was received from the UDWR on October 26, 2012 identifying crucial deer and elk habitat and stating that the areas do not contain any current sage grouse habitat values. On October 10, 2012, UDWR confirmed that parcel 013 is entirely within occupied greater-sage grouse habitat.
National Park Service, Salt Lake City Office	Coordinated with as leasing program partner.	A letter was sent on August 28, 2012 which provided the preliminary list and notified them of the May 2013 lease sale. Coordination is ongoing.
U.S. Forest Service, Intermountain Region	Coordinated with as leasing program partner.	A letter was sent on August 28, 2012 which provided the preliminary list and notified them of the May 2013 lease sale.
Utah School and Institutional Trust Lands Administration	Coordinated with as leasing program partner.	A letter was sent on August 28, 2012 which provided the preliminary list and notified them of the May 2013 lease sale.
Paiute Indian Tribe of Utah Ute Indian Tribe Hopi Tribe Navajo Nation Utah Navajo Commission Southern Ute Tribe Ute Mountain Ute White Mesa Ute San Juan Southern Paiute Kaibab Paiute Tribe	American Indian Religious Freedom Act (1978) NHPA	Consultation request letters were sent October 11, 2012. The Hopi Tribe responded back to the Field Office with a letter (November 1, 2012) recommending that the BLM conduct additional surveys prior to leasing. Note: Additional consultation will be conducted should site-specific use authorization requests be received. As the proposal becomes more site-specific, tribes will again be notified and given further opportunity for comment. Intensive

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Moapa Band of Paiute Indians Northwest Band of Shoshone Tribe Fallon Paiute-Shoshone Tribe.		cultural resource surveys would be completed prior to authorizing a well. Consultation is ongoing.
Sanpete County Commissioners	Coordination	Proposed project was discussed at a County Commissioners meeting on October 30, 2012. Commissioners are in favor of leasing parcels.
Split Estate Owners	Coordination	A letter was sent to surface land owners on November 29, 2012 notifying them of the May 2013 sale and inviting them to participate in the parcel site visit. None of these parties participated in the site visits. Several parties have contacted the RFO requesting additional information. Coordination is ongoing.

5.3 Summary of Public Participation

In order to meet the intent of the CEQ regulations that require an "early and open process for determining the scope of issues to be addressed and for identifying significant issues related to a Proposed Action" (40 CFR 1501.7) several actions were taken to involve the public.

On October 22, 2012, the public was notified of the proposed action by posting on the Utah BLM ENBB (https://www.blm.gov/ut/enbb). The process used to involve the public also includes a 30-day public review and comment period for the EA and unsigned FONSI currently projected to be from December 14, 2012 to January 25, 2013. In addition, the EA and unsigned FONSI were posted on the BLM Utah's Oil and Gas Lease Sale webpage (http://www.blm.gov/ut/st/en/prog/energy/oil_and_gas/oil_and_gas_lease.html).

The BLM also refers to the public involvement processes utilized in developing the RFO and KFO RODs/RMPs.

All the information related to this EA is maintained on the identified websites (ENBB and Oil and Gas Leasing).

BLM utilized and coordinated the NEPA public participation requirements to assist the agency in satisfying the public involvement requirements under Section 106 of the National Historic Preservation Act (NHPA) (16 U.S.C. 470(f) pursuant to 36 CFR 800.2(d)(3). The information about historic and cultural resources within the area potentially affected by the proposed project/action/approval will assist the BLM in identifying and evaluating impacts to such resources in the context of both NEPA and Section 106 of the NHPA. BLM consulted with Indian tribes on a government-to-government basis in accordance with Executive Order 13175 and other policies. Tribal concerns, including impacts on Indian trust assets and potential impacts to cultural resources, were given due consideration. Federal, State, and local agencies, along with tribes and other stakeholders that may be interested in or affected by the proposed project/action/approval were invited to participate in the scoping process.

5.3.1 Modifications Based on Public Comment and Internal Review

Reserved.

5.3.2 Response to Public Comment

The Hopi Tribe responded back to the Field Office with a letter (November 1, 2012) recommending that the BLM conduct additional surveys prior to leasing.

Response: Additional consultation will be conducted should site-specific use authorization requests be received in an Application for Permit to Drill (APD). As the proposal becomes more site-specific, tribes will again be notified and given further opportunity for comment. Intensive cultural resource surveys would be completed prior to authorizing a well.

5.4 List of Preparers

Name[5]	Title	Responsible for the Following Section(s) of this Document
Stan Andersen	Supervisory Natural Resource Specialist	Team Lead, Environmental Justice, and Socio-Economics
Leonard Herr	Physical Scientist	Air Quality, and Greenhouse Gas Emissions/Climate Change
Colin Schwartz	Physical Science Tech.	Air Quality and Climate Change
Phil Zieg	Hydrologist	Water Resources/Water Quality/Water Rights
Noelle Glines-Bovio	Outdoor Recreation Specialist	ACEC's, BLM Natural Areas, Recreation, Visual Resources, Wild and Scenic Rivers, and Wilderness/WSA
Craig Harmon	Archeologist	Cultural Resources and Native American Religious Concerns
Brant Hallows	Soil Scientist	Floodplains, Farmlands (Prime or Unique), and Soils/Watershed
Larry Greenwood	Wildlife Biologist	Fish and Wildlife, Migratory Birds, Utah Sensitive Plant and Animal Species other than FWS Candidate or Listed Species, Vegetation, Wetlands/Riparian Zones, and Threatened, Endangered, or Candidate Animal Species, and Threatened, Endangered, or Candidate Plant Species
Bob Bate	Fuels Specialist	Fuels/Fire Management and Woodland/Forestry
John Reay	Geologist	Geology/Mineral Resources/Energy Production, and Paleontology
Mike Utley	Realty Specialist	Lands/Access
Burke Williams	Range Specialist	Invasive Species/Non-Native Species (Noxious Weeds), Livestock Grazing/Range, Rangeland Health Standards and Guidelines
Randy Peterson	Safety Coordinator	Wastes (Hazardous or Solid)
Chris Colton	Range Specialist	Wild Horse and Burros

[5] Refer also to the Interdisciplinary Team Checklist (Appendix C).

6.0 REFERENCES, ACRONYMS AND APPENDICES

6.1 References Cited

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UDWR. 2002. Strategic Management Plan for Sage-grouse.

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6.2 List of Acronyms

ACEC	Areas of Critical Environmental Concern
APD	Application for Permit to Drill
BLM	Bureau of Land Management
BMP	Best Management Practice
BCR	Bird Conservation Region
CFR	Code of Federal Regulations
CIA	Cumulative Impact Area
CSU	Controlled Surface Use
CWCS	Comprehensive Wildlife Conservation Strategy
DR	Decision Record
EA	Environmental Assessment
EIS	Environmental Impact Statement
ENBB	Environmental Notification Bulletin Board
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FLPMA	Federal Land Policy and Management Act of 1976
FONSI	Finding of No Significant Impact
IDPR	Interdisciplinary Parcel Review

IM	Instruction Memorandum
KFO	Kanab Field Office
LN	Lease Notice
LUP	Land Use Plan
NCLS	Notice of Competitive Lease Sale
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NSO	No Surface Occupancy
OSHA	Occupational Safety and Health Act
RFAS	Reasonably Foreseeable Action Scenario
RFD	Reasonably Foreseeable Development
RFO	Richfield Field Office
ROD	Record of Decision
ROW	Right-of-Way
SHPO	State Historic Preservation Office
UDWR	Utah Division of Wildlife Resources
USFWS	United States Fish & Wildlife Service
USC	United States Code
USO	Utah State Office
WO	Washington Office

6.3 List of Appendices

A. Oil and Gas Lease Sale List with Stipulations and Lease Notices
B. Parcel Maps
C. Interdisciplinary Team Checklist
D. Deferred Parcel List
E. Comment Response

APPENDIX A OIL AND GAS LEASE SALE 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.

UT0513 - 002
T. 18 S., R. 2 E., Salt Lake
Sec. 28: W2NW;
Sec. 29: All;
Sec. 30: E2E2;
Sec. 31: Lots 3-9, 13, 14, 16-23.
1,426.48 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-121: NSO – Riparian and Wetland Areas
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0513 - 003
T. 13 S., R. 3 E., Salt Lake
Sec. 7: SWNE, SENW, SESE;
Sec. 8: SWSW;
Sec. 17: E2, E2NW, SWNW, N2SW;
Sec. 18: Lots 1-4, NE, E2NW, NESW, N2SE;
Sec. 19: Lot 4, NWNE, S2NE, SENW, NESW, N2SE;
Sec. 20: W2NE, SENW, E2SW, SE.
1,880.56 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-121: NSO – Riparian and Wetland Areas
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0513 - 004
T. 13 S., R. 3 E., Salt Lake
Sec. 12: Lot 3;
Sec. 13: NWNE;
Sec. 14: SWNW, N2SW, SWSW;
Sec. 15: SENE, NESE;
Sec. 21: W2, SE;
Sec. 22: SW;
Sec. 23: NWNW;
Sec. 27: NWSE.
1,047.25 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0513 - 005
T. 13 S., R. 3 E., Salt Lake
Sec. 28: N2, SW, W2SE;
Sec. 29: All;
Sec. 30: NE, N2SE;
Sec. 31: E2SE;
Sec. 33: All;
Sec. 34: E2E2, W2SW;
Sec. 35: W2W2.
2,560.00 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-121: NSO – Riparian and Wetland Areas
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0513 - 006
T. 14 S., R. 3 E., Salt Lake
Sec. 1: W2SW;
Sec. 11: E2, N2NW, SENW, SW;
Sec. 12: W2NW, SW, N2SE, SESE;
Sec. 13: N2N2, SENE, SE;
Sec. 14: N2NE, SENE, N2SE.
1,560.00 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0513 - 007
T. 14 S., R. 3 E., Salt Lake
Sec. 3: All;
Sec. 4: All;
Sec. 5: Lots 1-4, S2NE, SENW, NESE.
1,676.09 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0513 - 008
T. 14 S., R. 3 E., Salt Lake
Sec. 9: N2, SESW, SE;
Sec. 10: W2, SE, N2NE, SWNE;
Sec. 15: W2, W2E2, NENE, SESE.
1,680.00 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU– Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0513 - 009
T. 14 S., R. 3 E., Salt Lake
Sec. 14: SWSW;
Sec. 22: N2N2, SWNE, SENW, E2SW, SWSW, SE;
Sec. 23: W2NE, SENE, NW, NWSW, S2SW;
Sec. 26: N2NW, SENW;
Sec. 27: NE, N2NW, E2SW, SWSW, W2SE, SESE;
Sec. 34: SENE, NENW, S2SW.
1,720.00 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0513 - 010
T. 15 S., R. 3 E., Salt Lake
Sec. 3: Lots 1-4, SWNE, SENW.
240.19 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0513 - 011
T. 13 S., R. 4 E., Salt Lake
Sec. 3: SESE;
Sec. 5: NESW;
Sec. 6: NESE;
Sec. 7: Lots 2, 3, SWNE, E2NW;
Sec. 15: NWNE.
427.20 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0513 - 012
T. 14 S., R. 4 E., Salt Lake
Sec. 7: Lot 3, SWNE;
Sec. 18: Lot 2, S2SE;
Sec. 19: N2NE, NENW.
322.49 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

ACQUIRED LANDS

UT0513 - 014
50% U.S. Interest
T. 13 S., R. 4 E., Salt Lake
Sec. 26: W2SW, SESW.
120.00 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species

UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

LEASE STIPULATIONS SUMMARY

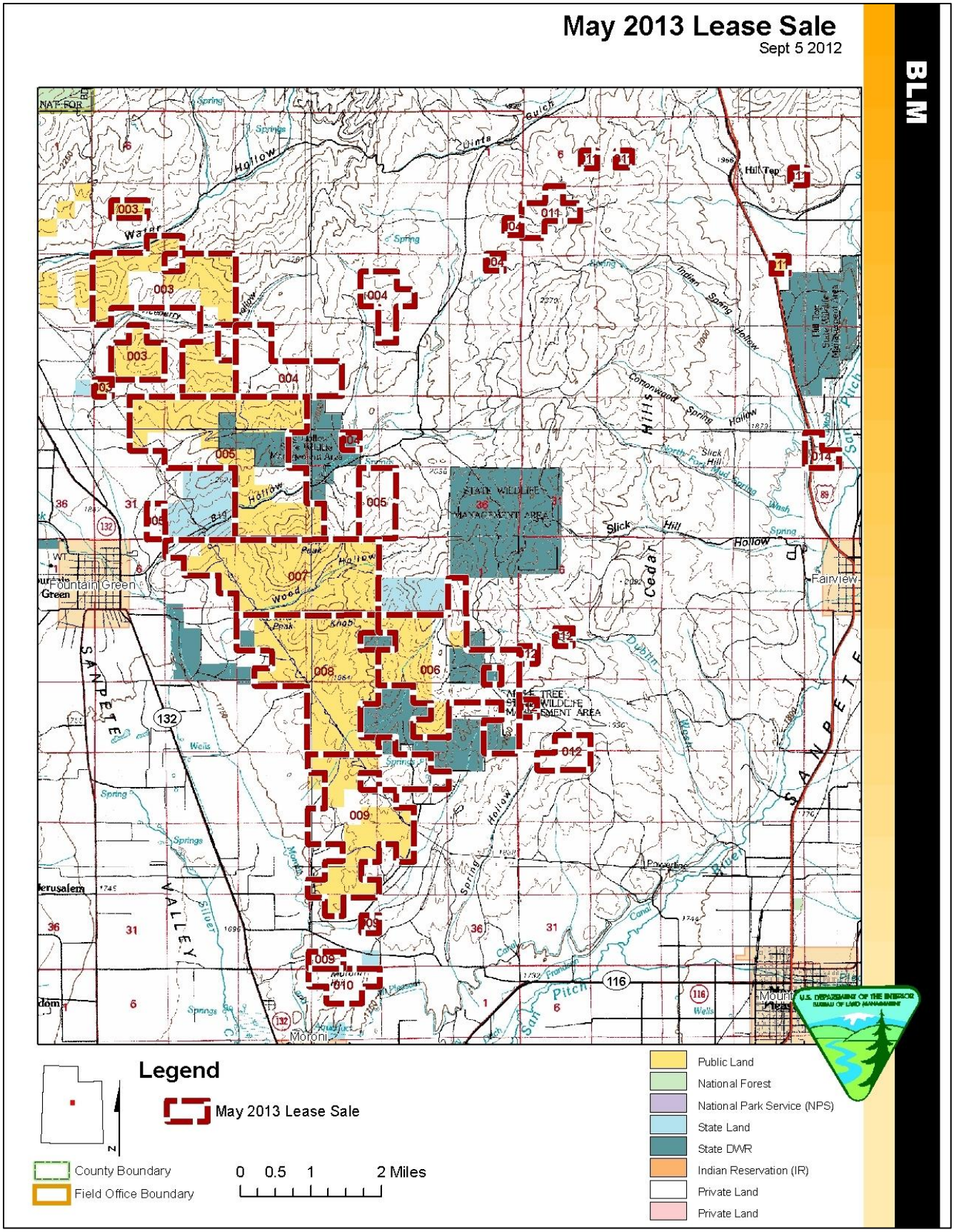
UT-S-01	**AIR QUALITY** All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower shall not emit more than 2 grams of NO_x per horsepower-hour. **Exception:** This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower. **Modification**: None **Waiver**: None **AND** 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_x per horsepower-hour. **Exception**: None **Modification**: None **Waiver**: None
UT-S-102	**CONTROLLED SURFACE USE – FRAGILE SOILS/SLOPES 30 PERCENT OR GREATER** No surface disturbing proposed projects involving construction on slopes greater than 30 percent. If the action cannot be avoided, rerouted, or relocated than a proposed project will include an erosion control strategy, reclamation and a site plan with a detailed survey and design completed by a certified engineer. This proposed project must be approved by the BLM prior to construction and maintenance. **Exception:** None **Modification:** None **Waiver**: None
UT-S-121	**NO SURFACE OCCUPANCY – RIPARIAN AND WETLAND AREAS** No surface disturbance and/or occupancy within buffer zones around natural springs. Base the size of the buffer on hydrological, riparian, and other factors necessary to protect the water quality of the springs. If these factors cannot be determined, maintain a 330-foot buffer zone from outer edge. **Exception:** Consider exceptions if it can be shown that (1) there are no practical alternatives to the disturbance, (2) all long-term impacts can be fully mitigated, and (3) the activity will benefit and enhance the riparian area. Consider compensatory mitigation where surface disturbance cannot be avoided within riparian wetland habitats on a site-specific basis. **Modification:** None **Waiver:** None
UT-S-233	**TIMING LIMITATION - CRUCIAL MULE DEER AND ELK WINTER HABITAT** No surface disturbing activities within crucial mule deer and elk habitats from **December 15 through April 15** to protect winter habitats. **Exception:** 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 that demonstrates that impacts from the proposed action can be adequately mitigated or it is determined the habitat is not being used during the winter period for any given year. **Modification:** The authorized officer may modify the boundaries of the stipulation area if (1) a portion of the area is not being used as crucial winter range by deer/elk, (2) habitat outside of stipulation boundaries is being used as crucial winter range and needs to be protected, or (3) the migration patterns have changed causing a difference in the season of use. **Waiver:** A waiver 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.

LEASE NOTICES SUMMARY

UT-LN-40	**GOLDEN EAGLE HABITAT** The lessee/operator is given notice that lands in this lease have been identified as containing Golden Eagle Habitat. Modifications to the Surface Use Plan of Operations may be required in order to protect the Golden Eagle 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.
UT-LN-45	**MIGRATORY BIRD** 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.
UT-LN-49	**UTAH SENSITIVE SPECIES** 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 activities in accordance with Section 6 of the lease terms, Endangered Species Act, Migratory Bird Treaty Act and 43 CFR 3101.1-2.
UT-LN-52	**NOXIOUS WEEDS** The lessee/operator is given notice that lands in this lease have been identified as containing or are near areas containing noxious weeds. Best management practices to prevent or control noxious weeds may be required for operations on the lease.
UT-LN-91	**WATER AND WATERSHED PROTECTION** The lessee/operator is given notice that this lease may need modifications to the Surface Use Plan of Operations in order to prevent water pollution and protect municipal and non-municipal watershed areas. No surface use or otherwise disruptive activity allowed within 500 feet of a supply well in order to prevent water quality degradation in accordance with section 6 of the lease terms and 43CFR3101.1-2.
UT-LN-99	**REGIONAL OZONE FORMATION CONTROLS** 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 for any development projects: • Tier II or better drilling rig engines • Stationary internal combustion engine standard of 2g NOx/bhp-hr for engines <300HP and 1g NOx/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

UT-LN-102	**AIR QUALITY ANALYSIS** The lessee/operator is given notice that prior to project-specific approval, additional air quality analyses may be required to comply with the National Environmental Policy Act, Federal Land Policy Management Act, and/or other applicable laws and regulations. Analyses may include dispersion modeling for deposition and visibility impacts analysis, control equipment determinations, and/or emission inventory development. These analyses may result in the imposition of additional project-specific air quality control measures.

APPENDIX B PARCEL MAPS


May 2013 Lease Sale
Sept 5 2012
BLM
Legend
May 2013 Lease Sale
County Boundary
Field Office Boundary
0 0.5 1 2 Miles
Public Land
National Forest
National Park Service (NPS)
State Land
State DWR
Indian Reservation (IR)
Private Land
Private Land
Fountain Green
Moroni
Fairview
Mount Pleasant
Jerusalem
SANPETE VALLEY
Cedar Hills
Hill Top
Slick Hill
Powerline
Wells
Spring
Springs
Hollow
Wash
Canal
Pitch
Silver
Wood
Peak
Knob
Big
Water
Dinta
Gulch
Indian
Cottonwood
North Fork
Mud
Dugway
Moroni
Aqueduct
Pleasant
Frontier
STATE WILDLIFE MANAGEMENT AREA
MAPLE TREE STATE WILDLIFE MANAGEMENT AREA
132
116
89
003
004
005
006
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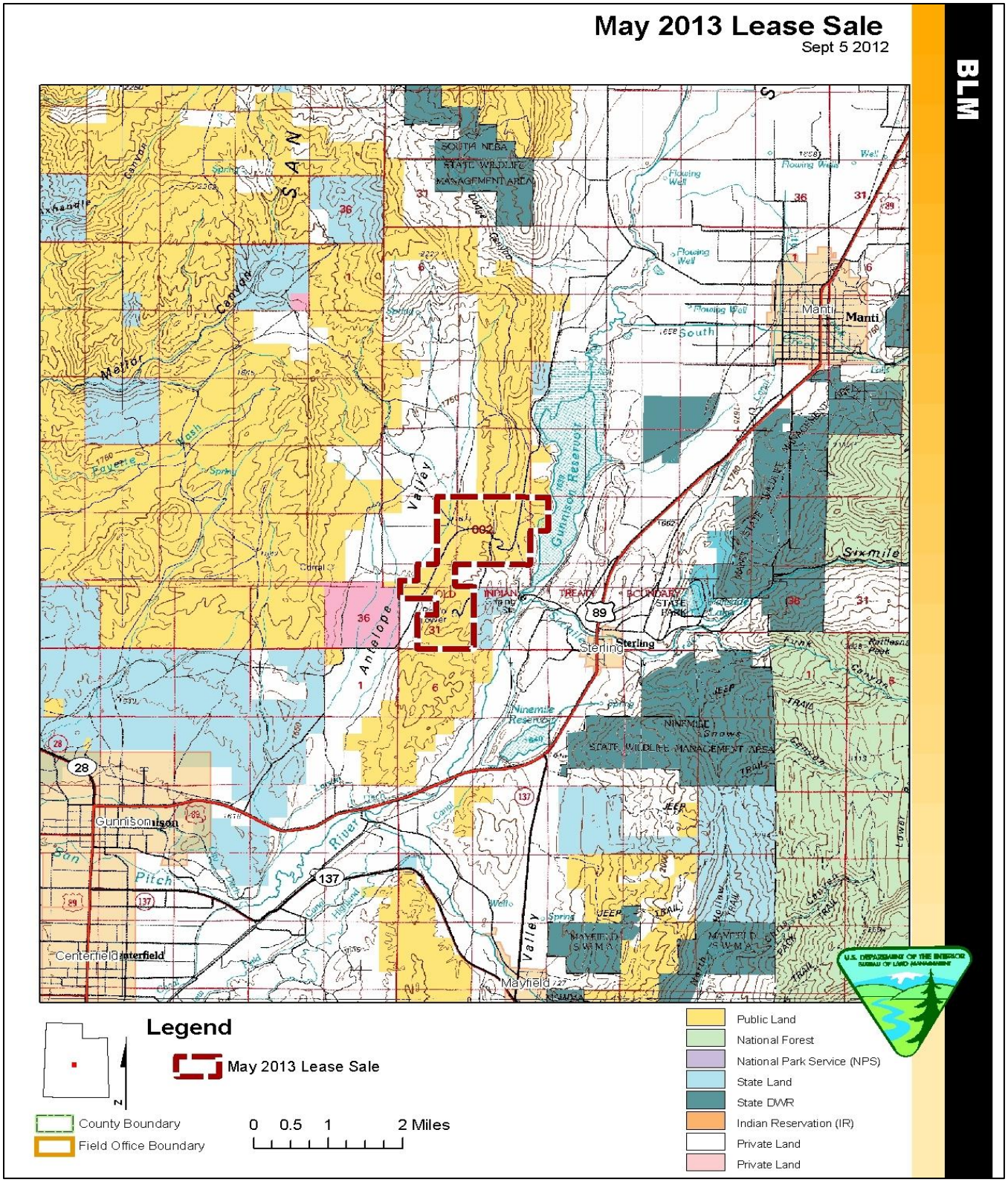
008
009
010
011
012
014


May 2013 Lease Sale
Sept 5 2012
BLM
Manti
Sterling
Gunnison
Centerfield
Mayfield
Gunnison Reservoir
Ninemile Reservoir
Sixmile
Antelope
Valley
Pitch
Sun
River
Legend
May 2013 Lease Sale
County Boundary
Field Office Boundary
0 0.5 1 2 Miles
Public Land
National Forest
National Park Service (NPS)
State Land
State DWR
Indian Reservation (IR)
Private Land
Private Land

APPENDIX C INTERDISCIPLINARY TEAM CHECKLIST

INTERDISCIPLINARY TEAM CHECKLIST

Project Title: May 2013 Oil and Gas Lease Sale
NEPA Log Number: DOI-BLM-UT-C020-2012-0035-EA
File/Serial Number: Not Applicable
Project Leader: Stan Andersen

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.

Determi-nation	Resource	Rationale for Determination	Signature	Date
RESOURCES AND ISSUES CONSIDERED (Includes Supplemental Authorities Appendix 1 H-1790-1)				
PI	Air Quality	Sanpete County is in attainment of the National Ambient Air Quality Standards (NAAQS) for all pollutants. Currently air quality in the area of the proposed leasing meets State Department of Environmental Quality and the Division of Air Quality Standards. Leasing would have no impact on air quality. However, there is some expectation that exploration could occur. Any ground disturbing activity would have to first be authorized as a lease operation but only through additional NEPA analysis. 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. 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. Hazardous air pollutants (HAPs) are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental impacts. The EPA has classified 187 air pollutants as HAPs. Examples of listed HAPs associated with the oil and gas industry include formaldehyde, benzene, toluene, ethylbenzene, isomers of xylene (BTEX) compounds, and normal-hexane (n-hexane). There are no applicable Federal or State of Utah ambient air quality standards for assessing potential HAP impacts to human health. Application of stipulation UT-S-01 and lease notices UT-LN-99 and UT-LN-102 are warranted on all parcels.	Leonard Herr	10/23/2012
NP	Areas of Critical Environmental Concern	No ACECs are present.	Noelle Glines-Bovio	10/22/12
NP	BLM Natural Areas	None present.	Noelle Glines-Bovio	10/22/12
NP	Non-WSA Lands with Wilderness Characteristics	None of the lease parcels are located on lands determined to possess wilderness characteristics following a wilderness character review.	Noelle Glines-Bovio	10/22/12

Determi-nation	Resource	Rationale for Determination	Signature	Date
NI	Cultural Resources	As it authorizes no ground disturbance, the proposed lease sale would have no direct effect on cultural resources. A cultural resource records search was completed for lands involved with the subject lease sale parcels. The Class I survey 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. Known cultural resources are located in such a fashion (size, density and placement) that avoidance is feasible during exploration for oil and gas resources. The potential for locating additional cultural resources within the proposed lease parcels is low. A 100% pedestrian survey has not been completed within the APE; therefore, to assure appropriate consideration of future effects from the lease sale, the BLM would add the cultural resources protection stipulation as defined in WO IM 2005-003 to all parcels. If additional, site specific resource protection measures are needed to prevent unnecessary or undue degradation; these would be prepared at the APD stage. Parcel UT0513--002 has had cultural resource inventories done either within or near it. Within the last few years, seismic line cultural resource inventories have recorded only six archaeological sites within this parcel. Only two sites 42SP691 and 42SP723 are considered to be eligible to the National Register. If actual surface-disturbing activities result from the lease, site specific cultural resource inventories will be conducted and appropriate Section 106 consultation will be done. It is likely that wells could be located on any leased parcel without disturbing any archaeological or historic sites that may be present. In conclusion, the limited information that we currently have on Parcel 002 and the other parcels would support the location of wells there. Assuming that the scarcity of significant cultural remains on this parcel would allow for the placement of well pads without impacting archaeological sites, a Determination of No Historic Properties Affected can be made; any eligible sites present would be avoided by all project activities as defined by 36CFR800.4. SHPO concurred with this determination on October 25, 2012. 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	Craig Harmon	11/5/2012

Determi-nation	Resource	Rationale for Determination	Signature	Date
		the continuing cultural identity of the community.		
NI	Environmental Justice	As defined in EO 12898, minority, low income populations and disadvantaged groups may be present within the counties involved in this lease sale. However, all citizens can file an expression of interest or participate in the bidding process (43 CFR §3120.3-2). The stipulations and notices applied to the subject parcels do not place an undue burden on these groups. Leasing would not adversely or disproportionately affect minority, low income or disadvantaged groups.	Stan Andersen	9/10/2012
NP	Farmlands (Prime or Unique)	None of the parcels identified are classified as prime or unique farmlands according to the Soil Survey of the Sanpete Valley Area, Utah.	Brant Hallows	10/4/12
NI	Fish and Wildlife	Detailed information on the inclusion of the appropriate lease notices and stipulations are contained in the RMP. A particular species habitat and corresponding criteria were identified 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 LUP and provided needed protections through stipulations or notices. Crucial deer and/or elk winter/spring range occurs on all twelve parcels. The application of stipulation UT-S-233 is warranted on all parcels.	Larry Greenwood	9-7-12
NI	Floodplains	Floodplains, as defined by EO 11988, FEMA, HUD, Corps of Engineers and the RMP, are or are not present. The lease sale and application of stipulations/notices would not affect a county's ability to obtain and/or maintain Federal flood insurance. Through design features, BLM would avoid occupancy and modification of floodplain development. The hazard degree is low. Impacts to floodplains are not expected to reach a level that would require adding a lease notice to any of the parcels. Refer also to the riparian and wetland areas discussion. Also, the proposed action will not increase the risk of flooding or damage to human life and property and it will not be contrary to Executive Order 11988 – Floodplain Management.	Brant Hallows	10/1/12
NI	Fuels/Fire Management	The proposed action would have no impact on Fuels/Fire Management. The implementation of appropriate reclamation standards at the APD stage would prevent an increase of hazardous fuels.	Bob Bate	10/16/12
NI	Geology / Mineral Resources/Energy Production	The RMP/FEIS adequately addresses the impacts of oil and gas and stipulations for leasing and drilling/production operations in those specific sections on minerals and energy Chapters 3 and 4 and Appendices' 11 and 12 of the RMP/FEIS. Exploration/Production of Oil and Gas would have a positive impact under these criteria and be consistent with goals and policy of the RMP/FEIS. The FEIS adequately addresses the impacts of oil and gas leasing. While conflicts could arise between oil and gas operations and other mineral operations, these could generally be mitigated under the regulations 3101.1-2, where proposed oil and gas operations may be moved up to 200 meters or delayed by 60 days and also under the standard lease terms (Sec. 6) where siting and design of facilities may be	John Reay	9/10/12

Determi-nation	Resource	Rationale for Determination	Signature	Date
		modified to protect other resources. Leasing and exploration would have minimal impact on mineral or energy management.		
NI	Invasive Species/Noxious Weeds (EO 13112)	Noxious/invasive weed species may be present on the subject parcels. The BLM coordinates with County and local governments to conduct an active program for control of invasive species. The lessee/operator is given notice that lands in this lease have been identified as containing or are near areas containing noxious weeds. Standard operating procedures such as washing of vehicles and annual monitoring and spraying along with site specific mitigation applied as conditions of approval (COA) at the APD stage should be sufficient to prevent the spread or introduction of Invasive, Non-native species. All disturbed areas and piles of top soil should be reseeded with weed free seed the first fall after the disturbance is made to provide competition against weeds. Other constraints, including the use of certified weed free seed and vehicle/equipment wash stations, would be applied as necessary at the APD stage as documented in filing plans and conditions of approval. Control measures would be implemented during any ground disturbing activity. Treatment will occur as part of regular operations, BMPs, SOPs and site specific mitigation applied at the APD stage as COAs. Negligible impacts would be expected as a result of leasing and exploration. All disturbed areas and piles of top soil should be reseeded with weed free seed the first fall after the disturbance is made to provide competition against weeds. Application of UT-LN-52 is warranted on all parcels.	Burke Williams	9-13-12
NI	Lands/Access	As described, the proposed action would not substantially affect access to public land on a permanent basis. No roads providing access to public land would be closed for an extended period of time. The proposal would be subject to valid prior existing rights including county-maintained roads (See BLM internal/public Master Title Plat web site as there are various rights-of-way in the area). Any operations would be coordinated with right-of-way (ROW) holders and adjacent non-federal landowners. Off-lease ancillary facilities that cross public land, if any, may require a separate authorization (Generally Access Roads and utility ROW). It is anticipated that existing ROWs in proposed operation areas would not be affected because site specific mitigation applied at the APD stage, including the ability to move operations up to 200 meters, would ensure that existing ROWs would be avoided, restored, or replaced if damaged. Potential issues include but are not limited to surface disturbance within and outside described project areas and removal of any generated trash/debris from public land and discarded at an authorized facility. R&PP leases, cemeteries, landfills, municipalities, airports, and Federal facilities are not present.	Michael B. Utley	9/25/2012
NI	Livestock Grazing/Range	Lease of the parcels will not impact livestock grazing within the identified grazing allotments. However, there is an inherent expectation that there may be oil or gas activities on each leased parcel. Any activity that involves surface disturbance or direct resource impacts would have to be authorized as a lease operation through future NEPA	Burke Williams	9-13-12

Determi-nation	Resource	Rationale for Determination	Signature	Date
		analysis, on a case-by-case basis. Impacts to livestock grazing may occur as a result of subsequent actions including exploration development, production, etc. Therefore, reclamation provisions/procedures including re-vegetation (utilizing appropriate seed mix based on the ecological site, elevation and topography) and road reclamation would be completed if a well were authorized. Range improvement project replacement/restoration (fences, cattle guards, etc.), noxious weed controls, would be identified in future NEPA/Decision documents on a case-by-case basis. In addition, if any range improvement projects could be impacted by wells or associated infrastructure, wells would be moved 200 meters to avoid these impacts 43 CFR 3101.1-2. The issues identified above would be addressed further on a project site specific level if an APD is filed.		
NI	Migratory Birds	Habitat for priority migratory birds occurs on all twelve parcels. The application of lease notice UT-LN-45 is warranted on all parcels. The following documents are incorporated: Utah Comprehensive Wildlife Conservation Strategy (CWCS), Utah Partners in Flight Avian Conservation Strategy Version 2.0. (2002), Birds of Conservation Concern (2002), 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 (4/2010), and Utah Supplemental Planning Guidance: Raptor Best Management Practices (BLM UTSO IM 2006-096)	Larry Greenwood	9-7-12
NI	Native American Religious Concerns	Letters containing notification of this lease sale and the results of our cultural resources records search were sent to the following Tribes on October 11, 2012: Paiute Indian Tribe of Utah, Ute Indian Tribe, Hopi Tribe, Navajo Nation, Utah Navajo Commission, Southern Ute Tribe, Ute Mountain Ute, White Mesa Ute, San Juan Southern Paiute, Kaibab Paiute Tribe, Moapa Band of Paiute Indians and the Northwest Band of Shoshone. Correspondence is summarized in the Chapter 5 consultation table. This correspondence is part of the record. Additional consultation would be initiated at the APD stage. The Hopi Tribe responded back to the Field Office with a letter (November 1, 2012) recommending that the BLM conduct additional surveys prior to leasing. Additional consultation will be conducted should site-specific use authorization requests be received. As the proposal becomes more site-specific, tribes will again be notified and given further opportunity for comment. Intensive cultural resource surveys would be completed prior to authorizing a well.	Craig Harmon	11/5/2012
NI	Paleontology	Portions of the proposed action will be conducted on BLM administered lands ranging from low to high paleontological resource potential. There are no known paleontological resources in this area. While drilling and other oil and gas exploration and recovery operations present the potential for damage of paleontological resources, existing laws, regulations and policies provide for mitigation of effects through avoidance or data recovery efforts. If vertebrate fossils or other fossils of scientific interest are encountered they would be protected under existing regulatory authority	John Reay	9/10/12

Determi-nation	Resource	Rationale for Determination	Signature	Date
		(43CFR 3101.1-2). If vertebrate or other fossil remains of potential scientific value are encountered, operations will be suspended and a BLM representative notified so that the find can be evaluated. Facility siting, design and operational timing may also be modified to protect paleontological and other resources under Standard Lease Terms (OFFER TO LEASE AND LEASE FOR OIL AND GAS, Form 3100-11).		
NI	Rangeland Health Standards & Guidelines	Leasing of these parcels would not impact Rangeland Health Standards. However, there is an inherent expectation that oil or gas activity could occur on any or all of the leased parcels. Any activity that involves surface disturbance or direct resource impacts would have to be authorized as a new project through future NEPA analysis, on a case-by-case basis. It would be expected that reclamation procedures would be required to ensure impacts to Rangeland Health Standards are minimized. The Gold Book standards also provide mechanisms to achieve Rangeland Health. These include weed control, siting considerations (e.g. well pad, contouring, road alignment), and re-vegetation. Design features necessary for the protection of water quality, soils, vegetation, threatened & endangered species habitat and other ecological features (rangeland health components) are incorporated. Refer also to the corresponding discussion in this checklist. Given the degree of anticipated exploration and application of SOPs, BMPs and design features applied at the APD stage as conditions of approval it is concluded that rangeland health standards would be met.	Burke Williams	9-13-12
NI	Recreation	Leasing fluid minerals in a dispersed recreational management area may have no impact to the recreational resources. Construction activities (traffic, noise, dust, visual impacts, etc.) within an area may displace some recreational activity for a short time. Once the construction of an area has decreased most recreationists would return to use the areas. SRMAs and developed recreation sites are not present. Stipulations/notices are not warranted.	Noelle Glines-Bovio	10/22/12
PI	Socio-Economics	Drilling an exploration well could impact the local social structure and economy. For the short-term, land surveyors, landsmen, construction crews, drilling crews, and logging crews would be involved during the drilling phase. Construction could take 10 to 20 days and drilling operations are expected to take about 60 to 90 days. This activity would lead to work crews lodging in local facilities with subsequent of expenditures in local markets. If the well is producible in paying quantities, the local social structure and economy could experience long-term impacts. These impacts could result in beneficial economic development, a need for additional infrastructure to provide goods and services to work forces, and possible changes to the economic and social base of the local community. Production could lead to additional exploration and development, increased oil and gas activities, additional employment, and royalties. Long term impacts could be in the range of 10-40 years.	Stan Andersen	9/10/2012
PI	Soils / Watersheds	SOPs, BMPs and site specific design features including reclamation would be applied at the APD stage as COAs. If development occurs the Proposed Action could result in	Brant Hallows	10/1/12

Determi-nation	Resource	Rationale for Determination	Signature	Date
		direct impacts to soils including loss of topsoil and its productivity, soil compaction and sedimentation into the watershed. These impacts are discussed further in Chapter 4.0 of the EA. The application of stipulation UT-S-102 is warranted on all parcels, and UT-LN-91 should be applied to parcel UT0513-010.		
NI	Utah Sensitive Plant and Animal Species other than FWS candidate or listed species	Habitat for the sensitive Ferruginous Hawk is found within all twelve parcels. Application of lease notice UT-LN-49 is warranted on all parcels. Golden Eagle habitat occurs on all twelve parcels and lease notice UT-LN-40 is warranted on all parcels. Washington Office BLM lease stipulation as directed by WO IM No. 2002-174 would apply to all parcels. The Utah BLM State Office has determined that Section 7 consultation with the U.S. Fish and Wildlife Service (FWS), has been completed for all lease sales as follows: In October, 2008, a Biological opinion from the FWS was a portion of the approved RMP. BLM and FWS personnel completed work on set of lease notices for listed species that are to be attached to oil and gas leases offered in the State. The notices contain current avoidance and minimization measures that if followed could reduce the scope of Section 7 consultation at the permit stage. FWS responded with a memorandum which basically stated the following: "We concur that the sale of oil and gas lease parcels, with the species-specific lease notices, results in a "not likely to adversely affect" determination." The State Office will send the findings of this report to the Utah Ecological Services Field Office in Salt Lake City reporting any threatened and endangered species found on the parcels and all applicable lease notices in order to complete informal consultation for this lease sale.	Larry Greenwood	9-7-12
NP	Threatened, Endangered or Candidate Plant Species	No Threatened, Endangered, or Candidate Plant Species are found within the proposed lease parcels.	Larry Greenwood	9-7-12
NP	Threatened, Endangered or Candidate Animal Species	There are no Threatened or Endangered Animal Species found within the proposed lease parcels. It is important to note that the UDWR Greater Sage Grouse Habitat Map shows that some of the parcels are within sage grouse habitat. However, after consultaion with UDWR biologists for the area, the UDWR recognizes no current sage grouse or habitat values in the area of concern. This was verified on the parcel site visits, it is also concluded by the BLM that sage grouse have not utilized this area and BLM does not consider the area to be habitat. 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.	Larry Greenwood	9-7-12
NI	Vegetation	Relict plant communities do not occur within the subject parcels. SOPs, BMPs and site specific design features applied at the APD stage including reclamation, as COA would address soil resource issues not already analyzed in the FEIS/PRMP. Leasing fluid minerals would have little or no impact on the vegetative resource of these parcels. The impact would happen if and when actual drilling etc. occurs on the parcel. If drilling is proposed, then the appropriate NEPA and its associated checklist will address impacts. If an Application to Drill Permit (APD) is received Best	Larry Greenwood	9-7-12

Determi-nation	Resource	Rationale for Determination	Signature	Date
		Management Practices (BMPs) and site specific design features to minimize disturbance to vegetation would be applied as Conditions of Approval.		
NI	Visual Resources	Inventory classes are informational in nature and provide the basis for considering visual values impacts. They do not establish management direction. As per the RMP, these parcels occur within VRM Class III and IV areas. Leasing fluid minerals in a VRM classes III and IV management areas will have minimal impact. Visual impacts are normally evaluated on a case by case basis at the APD level. The construction phase may impact the local communities of Manti and Fountain Green slightly with higher levels of dust and lights from drilling equipment through nighttime hours. The rest of the leasing area is topographically screened from the surrounding communities. If placed correctly during the APD process oil and gas facilities would be difficult for the public to notice. All leasing activities would meet VRM Classes III and IV objectives because VRM IV which allows for moderate or major modifications of the existing landscape characteristics. Reclamation of any drilling activities would be designed to restore the characteristic line and color elements present in the area.	Noelle Glines-Bovio	10/12/12
NI	Wastes (hazardous or solid)	There are currently no known waste issues associated with the proposed lease areas. If development of roads or well pads occur, potential release from equipment could be possible. State and Federal regulations would govern the use, storage and disposal of any products that could potentially impact persons or environment. Reporting and mitigation efforts would be required should such an event occur.	Randy Peterson	9/7/12
NI	Water Resources/Quality (drinking/surface/ground)	The lease parcels do not occur within any Sole Source Aquifers or Drinking Water Source Protection Zones (DWSPZs). Although parcel 010 is outside of protection zones; it is in proximity to 2 water supply wells. Modifications to a surface use plan of operations may be required at the APD stage in order to prevent water quality degradation. Lease notice UT-LN-91 (water and watershed protection) is applied to parcel 010. SOPs required by regulation and design features contained in an approved APD would be sufficient to isolate and protect all usable ground or surface water sources. 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. Potential impacts would be addressed and a design feature would be included utilizing IM No. UT 2010-055 prior to APD approval. Standard protocols would minimize possibility of releases (cased drill holes, no surface disturbance or occupancy would be maintained within 330 feet of any natural springs, new disturbance will be not be allowed in areas equal to the 100-year floodplain or 100 meters on either side of the center line of any stream, stream reach, or riparian area).	Phil Zieg	9/20/12

Determi-nation	Resource	Rationale for Determination	Signature	Date
NI	Wetlands/Riparian Zones	Parcels UT0513-002, UT0513-003 and UT0513-005 have riparian zones within them. These parcels should have the Lease Stipulation UT-S-121. No surface disturbance and/or occupancy within buffer zones around natural springs. Base the size of the buffer on hydrological, riparian, and other factors necessary to protect the water quality of the springs. If these factors cannot be determined, maintain a 330-foot buffer zone from outer edge.	Larry Greenwood	9-7-12
NP	Wild and Scenic Rivers	None are present.	Noelle Glines-Bovio	10/22/12
NP	Wilderness/WSA	None are present.	Noelle Glines-Bovio	10/22/12
NP	Wild Horses and Burros	No wild horses or burros are present, area not included within any Herd Unit.	Chris Colton	10-1-12
NI	Woodland / Forestry	Woodland production or restriction zones are or are not present. Leasing fluid minerals would have little or no impact on the Woodland/Forestry products. The impact would happen if and when actual drilling etc. occurs on the parcel. If drilling is proposed, then the appropriate NEPA and its associated checklist will address impacts. If an Application to Drill Permit (APD) is received Best Management Practices (BMPs) and site specific design features to minimize disturbance to vegetation would be applied as Conditions of Approval.	Bob Bate	10/16/12
NI	Greenhouse Gas Emissions / Climate Change	In addition to the air quality information contained within the governing LUP, new information about greenhouse gases (GHGs) and their effects on national and global climate conditions has emerged since LUP was prepared. Without additional meteorological monitoring and modeling systems, it is difficult to determine the spatial and temporal variability and change of climatic conditions; what is known is that increasing concentrations of GHGs are likely to accelerate the rate of climate change. Determining GHG emissions, their relationship to global climatic patterns, and the resulting impacts is an ongoing scientific process. The BLM does not have the ability to associate a BLM action's contribution to climate change with impacts in any particular area. The technology to be able to do so is not yet available. The inconsistency in results of scientific models used to predict climate change at the global scale coupled with the lack of scientific models designed to predict climate change on regional or local scales, limits the ability to quantify potential future impacts of decisions made at this level and determining the significance of any discrete amount of GHG emissions is beyond the limits of existing science. When further information on the impacts to climate change is known, such information would be incorporated into the BLM's planning and NEPA documents as appropriate. It is currently not feasible to know with certainty the net impacts from leasing and any potential exploration on climate. While BLM actions may contribute to the climate change phenomenon, the specific effects of those actions on global climate are speculative given the current state of the science. Leasing the subject parcels would have no direct impacts on climate as a result of GHG emissions. There is	Leonard Herr	10/23/2012

Determi-nation	Resource	Rationale for Determination	Signature	Date
		an assumption; however that leasing the parcels would lead to some type of exploration that would have indirect effects on global climate through GHG emissions. However, those effects on global climate change cannot be determined. It is unknown whether the petroleum resources specific to these parcels are gas or oil or a combination thereof. Since these types of data as well as other data are unavailable at this time, it is also unreasonable to quantify GHG emission levels.		

FINAL REVIEW:

Reviewer Title	Signature	Date	Comments
Environmental Coordinator	Unsigned	NA	NA
Authorized Officer	Unsigned.	NA	NA

APPENDIX D DEFFERRED PARCEL LIST

DEFFERRED PARCEL LIST

Date Nominated	Parcel Number	Legal Description	Acres	Reason Tract Postponed	Land Use Plan
July 1, 2012	UT0513-6352-013 Garfield County, Utah Kanab Field Office	T. 35 S., R. 2 W., Salt Lake Sec. 4: SW; Sec. 5: Lots 1, 2, S2NE, S2; Sec. 7: E2; Sec. 8: E2, SW, Excluding ROW (73.83 ac).	1,366.17	Parcel contains priority habitat for greater sage-grouse (WO IM 2012-043).	Kanab RMP

APPENDIX E COMMENT RESPONSE

Reserved.