

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

**Environmental Assessment
DOI-BLM-UT-G021-2012-0048-EA**

August, 2012

**November 2012 Price Field Office
Oil and Gas Lease Sale**

Location: Price Field Office
Carbon County, Utah

Applicant/Address: U.S. Department of the Interior
Bureau of Land Management
Utah State Office
440 West 200 South, Suite 500
Salt Lake City, Utah 84145-0155

Utah State Office
440 West 200 South, Suite 500
Salt Lake City, Utah 84145-0155
Office (801) 539-4080
Fax (801) 539-4237



1 PURPOSE & NEED

1.1 Introduction

The Bureau of Land Management (BLM), Price Field Office (PFO) has prepared this environmental assessment (EA) to disclose and analyze the environmental consequences of the sale of 9 parcels, approximately 9,122 acres, during the November 2012 competitive oil and gas lease sale and subsequent lease issuance to successful bidders. The EA is an 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). 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. A Decision Record (DR), including 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 PFO Record of Decision and Approved Resource Management Plan (ROD/RMP).

1.2 Background

Nominations to lease for oil and gas development for the lands encompassed by 9 parcels (See Appendix A, November 2012 Preliminary Oil and Gas Lease Sale List; Appendix B, Map 1) were received by the BLM. The surface and mineral rights for all proposed parcels (Appendix B, Map 1) are managed and administered by the BLM PFO.

If a parcel is not taken by competitive bidding, it may be leased by non-competitive sale for the two years following the auction date. A lease may be held for ten years (43 CFR 3120.2-1), after which the lease would expire unless oil or gas is produced in paying quantities. A producing lease would be held indefinitely by paying production of oil or gas. These lands would be offered subject to applicable laws and standard lease terms. Standard lease terms provide for reasonable measures to minimize adverse impacts to specific resource values, land uses, or users (Standard Lease Terms are contained in Form 3100-11, Offer to Lease and Lease for Oil and Gas, U.S. Department of the Interior, BLM, June 1988 or later edition). 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. 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. In addition, lease operations would be subject to stipulations for surface disturbing activities prescribed in PFO ROD/RMP. Lease parcels UT1112-016, UT1112-019 and UT1112-020 fall within an area analyzed in the West Tavaputs Plateau Natural Gas Full Field Development Plan EIS (WTP EIS). The Record of Decision (ROD) for the WTP EIS was signed on July 2010. The WTP EIS included a comprehensive

environmental analysis of the direct, indirect, and cumulative impacts of construction, drilling, and completion, and production activities proposed by Bill Barrett Corporation and other oil and gas operators. The WTP EIS analyzed the drilling of up to 807 oil and gas wells from up to 538 well pads on leased and unleased lands within a 137,930 acre project area approximately 30 miles east-northeast of Price, Utah. While the WTP EIS provides analysis of development on unleased lands within the project area, the ROD for the EIS did not include a decision to lease any specific parcel within the WTP project area. The WTP ROD approved a more contracted plan of development of 626 wells from approximately 120 well pads on leased federal lands over a 4 to 7 year period. Portions of this EA are tiered to the WTP EIS and relevant material from the EIS has been incorporated by reference.

1.3 Purpose and Need of the Proposed Action

The purpose of the proposed action is to provide parcels for inclusion in a competitive oil and gas lease sale to be held by the Utah BLM State Office in November 2012. 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. Adequate provisions will be included with the leases to protect public health and safety and assure full compliance with the objectives of NEPA and other federal environmental laws and regulations. Continued leasing is necessary to maintain options for production of oil and gas as companies seek new areas for production, or attempt to locate and develop previously unidentified, inaccessible, or uneconomical reserves.

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, and there has been steady interest in oil and gas exploration in the PFO area. 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.

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.

1.4 Conformance with BLM Land Use Plan

Within the PFO ROD/RMP (as maintained), Appendices R-3 (Stipulations for Surface Disturbing Activities), R-5 (Best Management Practices for Raptors and their Associated Habitats), and R-14 (Fluid Mineral Development Best Management Typical Practices) contain pertinent stipulations, lease notices and committed measures.

The proposed action is in conformance with the applicable Land Use Plan (LUP) because it is specifically provided for in the following decisions:

MLE-5 (page 125 PFO ROD/RMP)

The BLM has identified LUP leasing allocations for all lands within the Price Field Office. In addition, the Proposed RMP describes specific lease stipulations (Appendix R-3) that apply to a variety of different resources including raptors, greater sage grouse, and big game habitat, as well as program-related Best Management Practices (Appendix R-14) that may be applied on a case-by-case basis, site-specific basis to prevent, minimize, or mitigate resource impacts (Map R-8).

MLE-6 (page 125 PFO ROD/RMP)

Review all lease parcels prior to lease sale. If the Price Field Office determines that new resource data information or circumstances relevant to the decision is available at the time of the lease review that warrants changing a leasing allocation or specific lease stipulation, the Price Field Office will make appropriate changes through the plan maintenance or amendment process. The Price Field Office may also apply appropriate conditions of approval at the permitting stage to ensure conformance with the LUP and all applicable law, regulation, and policies. (Department of the Interior, 2008).

MLE-9 (page 126 PFO ROD/RMP)

Oil and gas leasing management will be conducted as shown on Map R-25.

- Areas open to leasing subject to the standard terms and conditions of the lease form (1,161,000 acres)
- Areas open to leasing subject to moderate constraints (timing limitations; CSU, and lease notices) (467,000 acres)
- Areas open to leasing subject to major constraints (NSO) (282,000 acres)
- Areas unavailable to leasing (569,000 acres)

The combination of all restrictions on oil and gas development is shown on Map R-26.

The proposed action is also consistent with PFO ROD/RMP decisions and objectives as they relate to the management of the following resources (including but not limited to): air quality, BLM natural areas, cultural resources, recreation, riparian, soils, water, vegetation, fish and wildlife, and Areas of Critical Environmental Concern (ACEC).

1.5 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
- 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

- Migratory Bird Treaty Act (1918)
- 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)
- Mineral Leasing Act (1920), as amended and supplemented and associated regulations found at 43 CFR 3100
- Utah Standards and Guidelines for Rangeland Health (1997)
- BLM Utah Riparian Management Policy (2005)
- BLM Manual 6840 - Special Status Species Management
- 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)
- Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement (U.S. Department of Interior, Bureau of Land Management, June 2007)
- Price Field Office Record of Decision and Approved Resource Management Plan (2008)
- Price Field Office Final Environmental Impact Statement and Final Resource Management Plan (2008)
- West Tavaputs Plateau Natural Gas Full Field Development Plan Environmental Impact Statement and Record of Decision (2010)
- State Protocol Agreement Between the Utah State Director of the Bureau of Land Management and the Utah State Historic Preservation Officer Regarding the Manner in which the Bureau of Land Management Will Meet its Responsibilities Under the National Historic Preservation Act and the National Programmatic Agreement Among the BLM, the Advisory Council on Historic Preservation and the National Conference of State Historic Preservation Officers (2001)
- MOU Among the USDA, USDI and EPA Regarding Air Quality Analysis and Mitigation for Federal Oil and Gas Decisions Through the NEPA Process (2011)
- Determining Conformity of Federal Actions to State or Federal Implementation Plans (40 CFR Part 93 Subpart E)
- Land Management Plan for Gordon Creek Wildlife Management Area
- Programmatic Agreement (Attachment 4 – WTP EIS ROD)
- Greater Sage-Grouse Interim Management Policies and Procedures (WO IM 2012-043)

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 PFO. 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.

1.6 Identification of Issues

The proposed action was reviewed by an Interdisciplinary Parcel Review (IDPR) team composed of resource specialists from the PFO. This team identified resources in the parcel areas which

might be affected and considered potential impacts using current office records, geographic information system (GIS) data, and site visits. The results of the IDPR team review, including a list of all resources/issues that are analyzed in detail within this EA are contained in the Interdisciplinary Team Checklist, which is included as Appendix C.

Letters were sent to the private landowners on March 28, 2012 to solicit their comments and concerns about the pending lease sale.

On March 16, 2012, notice of the lease sale, parcel locations and an invitation to attend the site visit was provided to the National Park Service, the United States Fish and Wildlife Service and the State of Utah's Public Land Policy Coordination Office and the State Institutional Trust Land Administration Office. The IDPR team conducted site visits to parcels UT1112-008, UT1112-009, UT1112-010, UT1112-011, UT1112-013, and UT1112-014 on April 17, 2012 and to parcels UT1112-016, UT1112-019, and UT1112-020 on April 18, 2012 to validate existing data and gather new information in order to make an informed leasing recommendation. The Utah Division of Wildlife Resources participated in all parcel visits. None of the other outside agencies contacted the PFO expressing interest in attending the site visit.

The deadline for the public to nominate areas or otherwise submit expressions of interest (EOI) was January 4, 2012. As per WO IM 2010-117 (Leasing Reform), public notification was initiated by entering the project information on the Environmental Notification Bulletin Board (ENBB)¹, a BLM environmental information internet site on June 22, 2012.. Additional information for the public is maintained on the Utah BLM Oil and Gas Leasing Webpage.² Additional information on public participation is available in Section 5.3.

1.7 Summary

This chapter presented the purpose and need of the proposed project, as well as the relevant issues, i.e., those elements of the human environment that could be affected by the implementation of the proposed project. In order to meet the purpose and need of the proposed project the BLM has considered the proposed action and the no action alternatives. These alternatives are presented in Chapter 2. The potential environmental impacts or consequences resulting from the implementation of each alternative considered in detail are analyzed in Chapter 4 for each of the identified issues.

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

² Accessed online at: http://www.blm.gov/ut/st/en/prog/energy/oil_and_gas/oil_and_gas_lease.html

2 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 because the issues identified during scoping did not indicate a need for additional alternatives or protective measures 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

Nine nominated parcels, approximately 9,122 acres, within the jurisdiction of the PFO have been proposed for sale in the November 2012 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 Price Field Office Approved Resource Management Plan and Record of Decision (PFO ROD/RMP), 2008. Legal descriptions of each nominated parcel can be found in Appendix A, and maps of the nominated parcels can be found in Appendix B, Map 1.

Parcels UT1112-016, UT1112-019, and UT1112-020 fall within the area recently analyzed in the WTP EIS. These parcels may be subject to the provisions set forth in the WTP ROD including those in the WTP ROD Appendix 2 (Conditions of Approval and Stipulations), approved July 30, 2010. Those provisions include but are not limited to protection of cultural resources as outlined in the WTP Programmatic Agreement, wildlife mitigation, as outline in the WTP wildlife mitigation plan, and water quality monitoring, as outlined in the Water Quality Monitoring Plan.

Parcels 016, 019 and 020, overlap with the Nine Mile Canyon ACEC (Appendix B, Map 2). The portions of these parcels that are located within the ACEC are subject to the No Surface Occupancy (NSO) stipulation with no exceptions, waivers or modifications as determined in the Price ROD/RMP (Appendix 3). Portions of parcels 019 and 020 overlap with ridge tops mapped as occupied sage grouse habitat, however these areas are also subject to the NSO stipulation because they fall within the Nine Mile Canyon ACEC boundary. Therefore, leasing parcels 019 and 020 subject to the NSO stipulation would be in line with the direction given in WO IM 2012-043 (Greater Sage-Grouse Interim Management Policies and Procedures).

Parts of the southern boundary of parcel 011 overlaps with approximately 10 acres mapped as occupied sage grouse habitat. With the understanding that habitat mapping is done at a gross scale and the amount of overlapping area being so small, habitat suitability was considered during the on-the-ground site visit for parcel 011 conducted on April 17, 2012. Observations noted that the 10 acre area is within old growth pinion-juniper stands, is directly adjacent to prominent cliff faces, and lacks the typical vegetation and terrain conditions desired by sage grouse. Therefore, it was determined through on-the-ground verification and in coordination with UDWR that leasing parcel 011 would be in line with the direction given in WO IM 2012-043 (Greater Sage-Grouse Interim Management Policies and Procedures).

2.3 Alternative B – No Action

The No Action alternative would not offer any of the nominated parcels for sale.

2.4 Alternatives Considered but Not Carried Forward

Leasing All Parcels Alternative

A total of eleven parcels were nominated for sale in the PFO. An alternative was considered that included leasing all eleven parcels. However, lease parcels UT1112-006, UT1112-007 and a large portion of parcel UT1112-010 are within the Gordon Creek Wildlife Management Area. The PFO ROD/RMP decision WL-6, p.82, states that the closure of the Gordon Creek Wildlife Management Area to leasing (including oil and gas) will continue.

Coal conflicts also occur within parcel 007. Therefore, parcels 006, 007 and approximately half of parcel 010 (western portion) will not be considered for leasing.

3 AFFECTED ENVIRONMENT

3.1 Introduction

This chapter presents the potentially affected existing environment (i.e., the physical, biological, social, and economic values and resources) of the impact area as identified in the Interdisciplinary Team Checklist found in Appendix C and presented in Chapter 1 of this assessment. This chapter provides the baseline for comparison of impacts/consequences described in Chapter 4. Only those aspects of the affected environment that are potentially impacted (PI) in the Interdisciplinary Team Checklist are described in detail.

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

3.2 General Setting

The nominated parcels are located in Carbon and Emery County, Utah. Appendix A contains legal descriptions of the nominated parcels. Appendix B, Map 1 shows the locations of the nominated parcels. The project area is situated in the Colorado Plateau physiographic province.

The nominated parcels are located in the central and northern regions of the PFO area which is made up of the Book Cliffs and Roan Plateau section of the Colorado Plateau. This area constitutes the southern extension of the Uinta Basin where Upper Cretaceous and Lower Tertiary rocks rise upward from the north along the dip slopes of the basin to reach elevations of 8,000 to 10,000 feet. On their south end, these rocks are abruptly truncated in great erosional cliffs that descend to elevations around 5,000 feet in the Mancos Lowlands. The Book Cliffs are formed by Upper Cretaceous sandstones and shaly siltstones of the Mesaverde Group, including the Blackhawk Formation, Castlegate Sandstone, and the Price River Formation. To the northeast of the Book Cliffs, the Roan Cliffs are formed by the reddish-brown mudstone and sandstone beds of the Colton Formation (Paleocene-Eocene). Further to the northeast in Carbon County are other erosional rises, including the West Tavaputs Plateau and the Bad Land Cliffs that expose the Eocene Green River Formation.

The lower elevations receive less than 10 inches of precipitation annually. Higher elevations of the PFO receive more than 14 inches of precipitation annually. Snow amounts also are low east of the Wasatch Mountains. Average maximum temperatures in the area range from 97°F in July to 33°F in January. Average minimum temperatures range from 7°F in January to 58°F in July (BLM 1997, BLM 1999b).

3.3 Resource Issues Brought Forward for Analysis

The affected environment of the proposed action and no action alternatives was considered and analyzed by an interdisciplinary team as documented in the Interdisciplinary Team Checklist, Appendix C. The checklist indicates which resources of concern are either not present in the project area or would not be impacted to a degree that requires detailed analysis. Resources which could be impacted to a level requiring further analysis are described in this Chapter and impacts to these resources are analyzed in Chapter 4.

3.3.1 Air Quality

The Project Area is located in the Uinta Basin, a semiarid, mid-continental climate regime typified by dry, windy conditions and limited precipitation. The Uinta Basin is subject to abundant sunshine and rapid nighttime cooling. Wide seasonal temperature variations typical of a mid-continental climate regime are also common. Existing point and area sources of air pollution within the Uinta Basin include the following:

- Exhaust emissions (primarily CO, NO_x, PM_{2.5}, and HAPs) from existing natural gas fired compressor engines used in transportation of natural gas in pipelines;
- Natural gas dehydrator still-vent emissions of CO, NO_x, PM_{2.5}, and HAPs;
- Gasoline and diesel-fueled vehicle tailpipe emissions of VOCs, NO_x, CO, SO₂, PM₁₀, and PM_{2.5};
- Oxides of sulfur (SO_x), NO_x, and fugitive dust emissions from coal-fired power plants and coal mining and processing;
- Fugitive dust (in the form of PM₁₀ and PM_{2.5}) from vehicle traffic on unpaved roads, wind erosion in areas of soil disturbance, and road sanding during winter months; and
- Long-range transport of pollutants from distant sources.

The Uinta Basin is designated as attainment or unclassified under the Clean Air Act, meaning that the concentration of criteria pollutants in the ambient air is less than the National Ambient Air Quality Standards (NAAQS), or adequate air monitoring is not available to make an attainment determination. NAAQS are standards that have been set for the purpose of protecting human health and welfare with an adequate margin of safety. Pollutants for which standards have been set include sulfur dioxide (SO₂), nitrogen dioxide (NO₂), and carbon monoxide (CO), and particulate matter less than 10 microns in diameter (PM₁₀) or 2.5 microns in diameter (PM_{2.5}). Airborne particulate matter (PM) consists of tiny coarse-mode (PM₁₀) or fine-mode (PM_{2.5}) particles or aerosols combined with dust, dirt, smoke, and liquid droplets. PM_{2.5} is derived primarily from the incomplete combustion of fuel sources and secondarily formed aerosols, whereas PM₁₀ is primarily from crushing, grinding, or abrasion of surfaces.

NAAQS have also been set for ground-level ozone (O₃), which is a secondary pollutant that is formed by a chemical reaction between NO_x and VOCs in the presence of heat and sunlight. Precursor sources of ozone include motor vehicle exhaust and industrial emissions, gasoline vapors, some tree species emissions, wood burning, and chemical solvents. Sunlight and hot weather cause ground-level ozone to form. As a result, it is generally known as a summertime air pollutant. Ozone is a regional air quality issue because, along with its precursors, it transports hundreds of miles from its origins. Maximum ozone levels may occur at locations many miles downwind from the sources.

The Utah Division of Air Quality (UDAQ) estimates background air quality as guidance for regulatory modeling of permitted sources to insure NAAQS compliance. These background values are used in dispersion models which need a background value to add to a proposed point sources emissions so that an evaluation can be made on whether the source will meet NAAQS. These background estimates are based on monitored values when possible, and on default factors when monitoring data does not exist. UDAQ does not estimate ozone and PM_{2.5} background values, as the models used to determine impacts from these pollutants estimate background as part of the overall modeling calculations. **Table 2** lists the latest regulatory background values from UDAQ for the Uinta Basin.

Table 2. Ambient Criteria Pollutant Concentrations in the Uinta Basin

Pollutant	Averaging Period(s)	Uinta Basin Background Concentration ($\mu\text{g}/\text{m}^3$)	NAAQS ($\mu\text{g}/\text{m}^3$)
SO ₂	Annual	5	80
	24-hour	10	365
	3-hour	20	1,300
NO ₂	Annual	17	100
PM ₁₀	24-hour	28	150
CO	8-hour	1,111	10,000
CO	1-hour	1,111	40,000

Active ozone monitoring in the Uinta Basin began in the summer of 2009. Both of these monitoring sites have recorded numerous exceedences of the 8 hour ozone standard during the winter months (January through March). While the monitors are not currently being operated to CFR standards, and as such are not considered adequate data to make a NAAQS determination, the data is considered viable and representative of the area. Apparently, high concentrations of ozone are being formed under a “cold pool” process whereby stagnate air conditions with very low mixing heights form under clear skies with snow-covered ground and abundant sunlight that, combined with area precursor emissions (NO_x and VOCs), create intense episodes of ozone. Based on the monitoring to date, these episodes occur only during the winter months (January through March). This phenomenon has also been observed in similar types of locations in Wyoming and has contributed to a proposed nonattainment designation for Sublette County. The National Park Service also operates an ozone monitor in Dinosaur National Monument during the summer months. No exceedences of the current ozone NAAQS have been recorded at this site.

Winter ozone formation is a newly recognized issue, and the methods of analyzing and managing this problem are still in development. Existing photochemical models are currently unable to replicate winter ozone formation satisfactorily, in part due to the very low mixing heights associated with the unique meteorology of these ambient conditions. Based on the emission inventories developed for Uintah County, the most likely dominant source of ozone precursors in the Uinta Basin are oil and gas operations in the vicinity of the monitors. The monitors are located in remote areas where impacts from other human activities are unlikely to be significantly contributing to this ozone formation. While ozone precursors can be transported large distances, the meteorological conditions under which this cold pool ozone formation is occurring tends to preclude any significant transport. At the current time ozone exceedences in this area seem to be confined to the winter months during periods of intense surface inversions and low mixing heights. Significant work still remains to be done to definitively identify the sources of ozone precursors contributing to the observed ozone concentrations. In particular, speciation of gaseous air samples collected during periods of high ozone is needed to determine which VOCs are present and what their likely sources are.

The complete EPA Ouray and Redwash monitoring data can be found at:
<http://www.epa.gov/airexplorer/index.htm>

The complete NPS Dinosaur National Monument monitoring data can be found at:
<http://www.nature.nps.gov/air/Monitoring/MonHist/index.cfm>

The UDAQ conducted limited monitoring PM_{2.5} in Vernal, Utah that started in December 2006. During the 2006-2007 winter season, PM_{2.5} levels were measured at the Vernal monitoring station higher than the PM_{2.5} health standard that became effective in December 2006. The PM_{2.5} levels recorded in Vernal were similar to other areas in northern Utah that experience wintertime inversions. The sources of elevated PM_{2.5} concentrations during winter inversions in Vernal, Utah haven't been identified as of yet. The most likely causes of elevated PM_{2.5} at the Vernal monitoring station are probably those common to other areas of the western US (combustion and dust) plus nitrates and organics from oil and gas activities in the Basin. PM_{2.5} monitoring that has been conducted in the vicinity of oil and gas operations in the Uinta Basin have not recorded any exceedences of either the 24 hour or annual NAAQS. Monitoring for PM_{2.5} is currently ongoing in the Uinta Basin.

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.

Air quality meets the NAAQS (State Department of Environmental Quality and the Division of Air Quality Standards (Utah Division of Air Quality 2011 Annual Report).³ An "unclassified" designation indicates that sufficient air monitoring is not available to make a determination as to attainment status. For regulatory purposes an unclassified county is considered the same as attainment. The UDAQ 2011 annual report includes a 2008 emissions inventory (EI) by county (Table 3).

Table 3: Emissions Inventory (2008) (Measured in Tons per Year (TPY)).

Pollutant	Carbon	Emery
PM ₁₀	1930.90	4361.77
PM _{2.5}	460.00	1136.44
SO _x	5671.81	9484.08
NO _x	5733.24	32326.93
VOC	17006.40	32545.00
CO	11811.31	16613.08

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

This EA addresses mobile off road engine exhaust emissions from drilling activities, venting and flaring emissions from completion and testing activities, emissions from ongoing production activities, and fugitive dust emissions, specifically emissions of total particulate matter of less than 10 micrometers (PM₁₀), from heavy construction operations. PM₁₀ emissions are

³ Accessed online on 6/5/12 from <http://www.airquality.utah.gov/Public-Interest/annual-report/pdf/2011%20Annual%20Report.pdf>

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 PM₁₀. PM_{2.5} is converted from PM₁₀ 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.

Greenhouse gases keep the planet's surface warmer than it otherwise would be. But, as the concentrations of these gases continue to increase in the atmosphere, the Earth's temperature is climbing above past levels. According to NOAA and NASA data, the Earth's average surface temperature has increased by about 1.2 to 1.4° F in the last 100 years. The eight warmest years on record (since 1850) have all occurred since 1998, with the warmest year being 1998. However, according to the British Meteorological Office's Hadley Centre (BMO 2009), the United Kingdom's foremost climate change research centre, the mean global temperature has been relatively constant for the past nine years after the warming trend from 1950 through 2000. So while most scientists believe that Earth will continue to warm in the future, this warming has not occurred for the past ten years. Therefore, quantified or globally accepted predictions on the ultimate outcome of global warming are still unknown. The warmest year on record was 1998, a year associated with the most intense El Niño global phenomena ever experienced. Most of the warming from 1950 through 2000 is speculated to be the result of human activities. Other aspects of the climate, such as rainfall patterns, snow and ice cover, and sea level, are also changing.

3.3.2 Hydrologic Conditions

The lease areas have a varied landscape described as extreme slopes over 50% to flat large park, with many of the upper slopes being high soil production due to the character of the parent material. With vegetation that exists in the form of various shrubs and other leafy plants, this is a high soil production area. During spring and storm runoff with overland flow, this soil is washed down annually to build up the park. Surface runoff transporting the soil particles creates rills that carry the soil off the slopes to the lower, flatter areas. Grasses at the toe and throughout the flatter park areas slow the surface flow, and soil particles drop out in gradients sorting the soil to finer texture as the distance increases from the slopes. The finer textured particles tend to be stickier when moist, resisting the erosive effects of the slower moving runoff from snow melt and storm events. This effect causes the rills to end, spreading out, thus depositing the load it carries at the lower toe. This is one mechanism that creates the park areas. There are some live ephemeral flows in small headwater streams crossing these parks and springs scattered throughout. The result of the environs is a high sediment load being carried by surface water in the form of clays, silts, and fine sands. Furthermore, additional fines such as small silt and clays are being transported by lateral movement of fast, shallow groundwater flows through the soil column.

Rills and gullies are common due in part to the effects of the above discussion. The desert environment typically transports storm and seasonal runoff through rills and gullies because there is little vegetation to retard overland flows, effecting infiltration, and soils tend to be less developed or mature.

A detailed description of soil and water conditions is included in Sections 3.4 and 3.5 of the WTP EIS.

3.3.3 Threatened, Endangered or Candidate Plant Species

There are no known populations of federally listed or candidate plants within the proposed parcels. However, there is potential habitat for *Pediocactus despainii* and *Sclerocactus wrightiae* within parcel 009. The San Rafael cactus (*Pediocactus despainii*) is federally listed as endangered. San Rafael cacti occur primarily on BLM administered lands managed by the Price Field Office. However, no critical habitat is designated for this species. It is a small sub-globose cactus. The species is usually solitary stemmed, 3.8-6.0 cm tall and 3.0 to 9.5 cm in diameter. Habitat descriptions for this cactus vary. Typically the San Rafael cacti grows in fine textured, mildly alkaline soils rich in calcium derived from limestone substrates of the Carmel Formation and the Sinbad member of the Moenkopi formation and on shale barrens of the Brushy Basin member of the Morrison, Carmel and Dakota geologic formation. The vegetation community is characterized by open woodlands of scattered Utah juniper and piñon pine with an understory of shrubs and grasses.

Much of the year cacti shrink underground or back to ground surface, defending themselves against an annual cycle of extreme heat, drought and cold. Resurfacing in the spring appears to be dependent on winter and spring moisture. Flowering occurs from March to May with fruiting from May to June. Reproduction, seedling ecology and the overall effects of natural factors, such as disease, parasitism, grazing by native species, natural erosion and potential of vegetative competition on the viability of the species is still largely unknown.

Wright's fishhook cactus (*Sclerocactus wrightiae*) is federally listed as endangered. Populations of Wright fishhook cactus occur primarily on lands managed by the BLM out of the Price and Richfield Field Offices and by the National Park Service at Capitol Reef National Park. However, no critical habitat has been designated for the species. Wright fishhook cactus typically grows as a single plant with a branched taproot. The stems are 1 to 8 cm long and 4 to 8 cm in diameter. Flowering occurs from early April through May and fruits are set in June. The stamens have magenta filaments with anthers that are yellow. The Wright fishhook cactus is found on semi-barren sites in salt desert shrub, piñon/juniper woodlands, mixed grassland, and mixed desert shrub communities at elevations of 4200 and 7600 feet. The species occurs on a variety of geologic formations. However, it is most commonly found on the Curtis, Mancos Shale and Summerville Formations.

3.3.4 Threatened, Endangered, Candidate or Sensitive Animal Species

Under Section 7 of the Endangered Species Act (ESA), the BLM is required to consult with the USFWS on any proposed action which may affect federally listed threatened or endangered species or species proposed for listing. Section 7 consultation efforts [a Biological Assessment (BA) and subsequent Biological Opinion (BO)] covering a wide variety of actions, including oil and gas leasing, associated with the current BLM land use plans in Utah was completed October 2008 (BLM 2008c). The BO includes species-specific lease notices that were developed in the during the Section 7 process. Informal consultation is conducted before each lease sale to ensure the appropriate lease notices from the BO are attached to the lease parcels. When habitat is thought to be present, these lease notices are to be attached to oil and gas leases offered in Utah. Washington Office (WO) Instruction Memorandum (IM)-2002-174, directs that the BLM attach an Endangered Species Act stipulation to leases to protect threatened and endangered along with other special status species. According to this stipulation, the BLM will not approve any ground-disturbing activity until obligations under applicable requirements of the ESA have been fulfilled, including completion of any required procedure for formal or informal conference or consultation.

43 CFR 3162.1(a) provides the BLM with broad authority to ensure compliance of lessees with orders of the authorized officer issued for the protection of the environment. Conservation measures (lease notices and stipulations) as discussed above increase the likelihood that the BLM and by association, the lessee, will not have to complete formal Section 7 consultation at the project level; however it should be noted that BLM may be required to reinstate Section 7 consultation at the project-level, as necessary, to ensure proper management of listed species in the future. Site-specific effects cannot be analyzed until an exploration or development application is received, after leasing has occurred. Until there is a site-specific proposal, there is no action directly or indirectly causing modifications to the land, water, or air.

As previously mentioned, parcels UT1112-016, UT1112-019 and UT1112-020 are included within the WTP Project. The USFWS participated in development of the WTP EIS as a cooperating agency. In addition, formal Section 7 consultation was completed for the project. The USFWS's BO is included as Appendix 9 of the WTP ROD. All of the measures included in the USFWS BO were included in the WTP ROD as committed mitigation. As discussed in Chapter 2, measures included in the ROD may be applied to development on these leases.

A detailed description of all threatened, endangered, candidate or sensitive animal species that may be present on parcels UT1112-016, UT1112-019 and UT1112-020 is included in the WTP EIS (Section 3.10). A summary is included in the sections below.

Mexican Spotted Owl

The Mexican spotted owl was listed as a threatened species in 1993. Its known range in the PFO is in the West Tavaputs Plateau in central Utah. Although MSO have not been documented as occurring within the area of the proposed parcels, there is designated critical habitat close to the area. USFWS-designated critical habitat for the MSO occurs on the eastern portion of the Tavaputs Plateau, in the canyons near the Green River.

Mexican spotted owls primarily forage at night. Their diet consists of a variety of mammals, birds, reptiles, and insects, with mammals constituting the bulk of the diet throughout the owl's range. Steep slopes and canyons with rocky cliffs and trees characterize much of the owl's habitat in the PFO. Threats to Mexican spotted owls include habitat loss associated with human disturbance and fire.

Designated critical habitat was established for the Mexican spotted owl in 2001 and revised in 2004. For canyon habitats, the primary constituent elements include one or more of the following attributes: (1) cooler and often more humid conditions than the surrounding area; (2) clumps or stringers of trees and/or canyon walls containing crevices, ledges, or caves; (3) a high percentage of ground litter and woody debris; and (4) riparian or woody vegetation. The primary constituent elements related to forest structure include: (1) a range of tree species; (2) a shade canopy created by the tree branches, covering 40 percent or more of the ground; and (3) large, dead trees with a trunk diameter of at least 12 inches. The PFO contains 160,400 acres of designated critical habitat for the Mexican spotted owl on BLM-managed land.

Numerous MSO surveys have been completed, in the general area, according to USFWS survey guidelines. MSO surveys were first completed in Dry Canyon in 2001 by EIS Consultants, Inc (EIS Consultants). No MSO were seen or heard during these inventories. Cottonwood, Harmon, Jack, and Nine Mile Canyons, as well as Prickly Pear Creek were surveyed for MSO in 2003. No MSOs were identified or heard during these surveys. Surveys completed in 2004 documented a

potential sighting (i.e., an unconfirmed auditory response from an MSO) of a single MSO in the Lower Jack Canyon near the Green River. In 2006, EIS Consultants completed MSO surveys in Dry, Jack, Nine Mile, and Prickly Pear Canyons. No MSO were seen or heard during these surveys. Recently, EIS Consultants completed MSO surveys in Cottonwood, Dry, Harmon, Nine Mile, Prickly Pear Canyons, as well as in the Peter's Point area during the 2007 breeding and nesting season. No MSO were seen or heard during these surveys.

Greater Sage-Grouse

Greater sage-grouse are now a candidate species, which was not the case when the PFO RMP was completed. Greater sage-grouse populations are documented in both Carbon and Emery counties (NatureServe 2005). The greater sage-grouse is an herbivore and insectivore and is associated with both tall and short sagebrush types. Greater sage-grouse inhabit sagebrush plains, foothills, and mountain valleys at elevations from 4,000 to more than 9,000 feet and are highly dependent on sagebrush for food and cover (USFWS 2005). Sagebrush, an understory of grasses and forbs, and associated wet meadow areas are essential for optimum habitat. Greater sage-grouse exist on State, private, and BLM lands in the Emma Park, Whitmore Park, and West Tavaputs areas. Greater sage-grouse are not hunted in the PFO.

Greater sage-grouse use the same breeding ground or "leks" for several consecutive breeding seasons; there are approximately 50 acres of crucial value known leks on BLM-managed land in the PFO. Greater sage-grouse crucial value nesting/brood rearing (13,300 acres), high-value winter habitat (42,200 acres), and high-value yearlong habitat (37,200 acres) are also located on BLM-managed land in the PFO. In addition to these areas, a large percentage of greater sage-grouse winter within the Emma Park area, but the wintering sites in these areas are highly variable annually and are therefore not mapped.

Greater sage-grouse habitat has decreased from historic levels as a result of pinyon-juniper woodland invasion into the sagebrush steppe, sagebrush die-off on 15,380 acres in the PFO, and resource development. Threats to greater sage-grouse include habitat loss due to agricultural expansion, human development, and livestock grazing (UDWR 2003).

The USFWS began a formal status review after receiving three petitions to list the greater sage-grouse range-wide as endangered or threatened (USFWS 2005). On March 23, 2010, the USFWS placed in the federal register a 12-month finding on a petition to list the greater sage-grouse as threatened or endangered under the Endangered Species Act of 1973, as amended. The USFWS found that listing the greater sage-grouse (rangewide) is warranted, but precluded by higher priority listing actions. The warranted, but precluded makes the greater sage-grouse a candidate species. The BLM is not required to initiate Section 7 consultation on candidate species.

3.3.4 Non WSA Lands with Wilderness Characteristics

Non-WSA lands with wilderness characteristics are defined as areas having at least 5,000 acres or areas less than 5,000 acres that are contiguous to WSAs or other administratively endorsed for wilderness management lands or, in accordance with the Wilderness' Act's language, areas "of sufficient size as to make practicable its preservation and use in an unimpaired condition". Non-WSA lands with wilderness characteristics are lands that are in a natural or undisturbed condition, providing outstanding opportunities for solitude or primitive forms of recreation.

The PFO BLM, determined in the 1999 Utah Wilderness Inventory that approximately 483,900 acres outside of existing WSAs had wilderness characteristics. Many of these areas are adjacent

to or contiguous to Wilderness Study Areas (WSAs). Areas with wilderness characteristics involved by this lease sale include the Price River unit. The Price River unit is large in size covering approximately 90,000 acres with wilderness characteristics. It extends from the mounds area on the north to the Cedar Mountain country on the south, with the Price River crossing through the northern half of the area and the Humbug country covering the southern half of the unit. During the PFO land use planning process, the Price River Unit (Appendix B, Map 3) non-WSA lands with wilderness characteristics was considered and thoroughly analyzed for the protection, preservation, and maintenance of those wilderness characteristics as well as for the impacts that could occur if other resource developments and uses were allowed. The Price ROD/RMP October 2008, determined that the Price River unit non-WSA lands with wilderness characteristics would not be managed for those characteristics based upon the analysis in the Price Proposed Plan/Final EIS (2008), which the Price River unit as being located in an oil and gas development area with a moderate to high potential for future development (BLM, 2008b).

4 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 and occur later or farther away from the resource but are still reasonably foreseeable. 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. For each alternative, the environmental effects are analyzed for the resource topics that were carried forward for analysis in Chapter 3.

4.2 General Analysis Assumptions and Guidelines

Leasing is an administrative action that affects economic conditions but does not directly cause environmental consequences. However, leasing is considered to be an irrevocable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a No Surface Occupancy (NSO) stipulation. Potential oil and gas exploration and production activities, committed to in a lease sale, could impact 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. In order to provide a basis for analysis, the Reasonably Foreseeable Development (RFD) scenario is applied to each of the alternatives analyzed in detail. The RFD scenario is a long term projection of oil and gas exploration, development, production, and reclamation activity in a defined area for a specified period of time and serves as an analytical baseline for identifying and quantifying direct, indirect, and cumulative effects of oil and gas activity, under standard lease terms and conditions, on all potentially productive areas open to oil and gas leasing, and forms the foundation for the analysis of the effects of oil and gas management decisions.

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. 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 draft parcel list to the appropriate District Office where the parcels are located. District and field office staff then review and verify that the parcels are in areas open to leasing; that any new information that has become available, or any circumstances that have changed, are assessed to determine what level of analysis is required; that appropriate stipulations and notices can be included; that appropriate consultations have been 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 district or field office to meet the requirements of WO IM 2010-117. The EA results in a list of available lease parcels and stipulations or notices as part of the analysis. The EA and unsigned FONSI/FONNSI (Finding of No New Significant Impact) are then made available to the public for a 30-day public comment period on the BLM web page and ENBB. After analyzing and incorporating all comments received during the public comment period, changes to the document and/or lease list parcels are made as necessary. The EA and unsigned FONSI/FONNSI are posted again when the Notice of Competitive Lease Sale (NCLS), a list of available lease parcels and stipulations is issued. The NCLS initiates the protest period (30 days) on the parcel list. 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.

It is unknown when, where, or if future well sites or roads might be proposed on any leased parcel. Although no site-specific activities are specified, analysis of projected surface disturbance impacts, should a lease be developed, was estimated based on the RFD in the PFO Record of Decision and Approved Resource Management Plan and its associated Final Environmental Impact Statement. This EA would be 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. If leases are offered, purchased, and issued, typical subsequent developments may include the construction of drill pads, access roads, and other ancillary facilities. Detailed site-specific analysis of individual wells, roads, and facilities would occur when a lease holder submits an APD. 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, Best Management Practices (BMPs) and required consultation through the APD process.

Standard lease terms provide for reasonable measures to minimize adverse impacts to specific resource values, land uses, or users (Standard Lease Terms are contained in Form 3100-11, Offer to Lease and Lease for Oil and Gas, U.S. Department of the Interior, BLM, June 1988 or later edition). Although once the lease has been issued, subject to lease stipulations 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, 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 (CWA), Clean Air Act (CAA), Endangered Species Act (ESA), National Historic Preservation Act (NHPA), and FLPMA, which are applicable to all actions on federal lands even though they may not be reflected in the oil and gas stipulations in the RMP(s) and would be applied to all potential leases regardless of their category. Also included in all leases are the two mandatory stipulations for the statutory protection of cultural resources (WO IM-2005-03, Cultural Resources and Tribal Consultation for Fluid Minerals Leasing) and threatened, endangered and special status species (WO IM-2002-174, Endangered Species Act Section 7 Consultation). BLM would also encourage industry to consider participating in EPA's Natural Gas STAR program under all alternatives. The

program is a flexible, voluntary partnership between EPA and the oil and natural gas industry wherein EPA works with companies that produce, process, transmit and distribute natural gas to identify and promote the implementation of cost-effective technologies and practices to reduce emissions of methane, a greenhouse gas.

For purposes of the effects analysis, the RFD and the primary construction, operations, and abandonment elements described below would be similar for the Proposed Action and No Action alternatives.

4.2.1 Reasonably Foreseeable Development

As described above, the RFD scenario serves as an analytical baseline for identifying and quantifying direct, indirect, and cumulative effects of oil and gas activity and forms the foundation for the analysis of the effects of oil and gas management decisions in planning and environmental documents. The PFO Proposed Resource Management Plan and Final Environmental Impact Statement (RMP EIS) Appendix M describes in detail fluid mineral RFD scenarios for PFO area. In those analyses it was estimated based on the occurrence potential and past exploration and development activities that the BLM believes that future exploration and development are most likely to occur on the Wasatch (Emery/Book Cliffs CBNG Plays) which primarily run along highways 6 and 10; and the Tavaputs Plateau in the far northeast area of the field office.

The PFO Proposed RMP/Final EIS Appendix M states that the initial surface disturbance impacts from oil and gas activity for the Proposed RMP are 15,210 acres over 20 years. The long-term surface disturbance impacts from oil and gas activity for the Proposed RMP are 5,620 acres over 20 years. Impacts from past and present activity are estimated at 3,200 acres (after reclamation), and when added to projected future activity, the estimate is about 18,500 acres in total disturbance. Future initial impacts will be reduced from 7.9 to 2.8 acres per well pad through reclamation, resulting in a net total disturbance of approximately 8,800 acres. Application of BMPs and revised mitigation resulting from improved technologies and adaptive management processes are expected to further reduce impacts in the future.

The WTP EIS and ROD that was signed July, 2010 included a comprehensive environmental analysis of the direct, indirect, and cumulative impacts of construction, drilling, completion, and production activities. The WTP EIS analyzed the drilling of up to 807 oil and gas wells from up to 538 well pads within a 137,930 acre project area. The ROD approved drilling of 626 wells from approximately 120 well pads on leased federal lands over a 4 to 7 year period. Anticipated short-term surface disturbance associated with the project is approximately 1,603 acres (includes Federal, State, and private lands). Lease sale parcels UT1112-016, UT1112-019 and UT1112-020 are within the area analyzed in the WTP EIS. The development occurring on the WTP is directly adjacent to and within the immediate vicinity of these parcels. It is reasonably foreseeable that similar proposals and mineral development may occur on these parcels.

For analysis purposes, this EA assumes that one well and associated facilities could be developed on each lease for the parcels outside of the WTP project area. Parcels within the WTP project area contain a different development assumption as defined in the WTP EIS, which analyzed development on leased and unleased lands.

4.2.2 Well Pad and Road Construction

Equipment for well pad construction would consist of dozers, scrapers, and graders. Topsoil from each well pad would be stripped to depth and stockpiled for future reclamation. The topsoil would be seeded with native species of plants and left in place for the life of the well, then used during the final reclamation process. Disturbance for each well pad would be estimated at an area of approximately 175 feet by 250 feet (one acre), including topsoil piles. For this analysis, it was assumed that disturbance for well pads could be as high as six acres per well to account for any access roads and well pad construction. Disturbed land would be seeded with a mixture 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. Construction of new roads or upgrades to existing roads would require a 30-foot wide right of way (ROW) 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 similar to development in other areas (five acres of disturbance).

All operations would be conducted following the “Gold Book” Surface Operating Standards for Oil and Gas Exploration and Development (BLM 2002b). 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.

Proper planning and consultation, along with the proactive incorporation of these BMPs into the APD Surface Use Plan of Operations (SUPO) by the operator, will typically result in a more efficient APD and environmental review process, increased operating efficiency, reduced long-term operating costs, reduced final reclamation needs, and less impact to the environment.

4.2.3 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 surface discharge pits or underground injection. Handling of produced water is addressed in Onshore Oil and Gas Order No. 7, which prescribes measures required for the protection of surface and ground water sources.

4.2.4 Plugging and Abandonment

If the wells do not produce economic quantities of oil or gas, the well would be plugged and abandoned. The wells would be plugged and abandoned following specifications from a BLM Petroleum Engineer, which would include requiring cement plugs at strategic positions in the well bores. 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, the fluid would be pumped from the pit and disposed of in accordance with applicable regulations. The well pad

would be recontoured, and topsoil would be replaced, scarified, and seeded within 180 days of the plugging the well. All reclamation efforts would be coordinated closely with the project lead in the PFO. Reclamation would meet the objectives described in the Green River District Reclamation Guidelines (IM UTG000-2011-003).

4.3 Direct and Indirect Impacts

4.3.1 Alternative A – Proposed Action

This section analyzes the impacts of the proposed action to those potentially impacting resources described in the affected environment Chapter 3, above.

4.3.1.1 Air Quality

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

The Proposed Action 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 Uinta Basin is considered to be in attainment of the NAAQS. The Proposed Action would result in different emission sources associated with two project phases: well development and well production. Annual estimated emissions from the Proposed Action are summarized in **Table 3**.

Well development includes emissions from earth-moving equipment, vehicle traffic, drilling, and completion activities. NO_x, SO₂, 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 SO₂. 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, VOC, and HAP emissions would result from the long-term operation of condensate storage tank vents, and well pad separators. Additionally, road dust (PM₁₀ and PM_{2.5}) would be produced by vehicles servicing the wells.

Table 3. Proposed Action Annual Emissions (tons/year)⁴

Pollutant	Development	Production	Total
NO _x	14.2	2.2	16.4
CO	3.2	3.2	6.4
VOC	2.5	6.5	9.0
SO ₂	0.9	0	0.9
PM ₁₀	0.7	0.03	0.73
PM _{2.5}	0.3	0.01	0.31
Benzene	0.03	0.13	0.16
Toluene	0.02	0.09	0.11
Ethylbenzene	0.02	0.22	0.24
Xylene	0	0.07	0.07
n-Hexane	0.05	0.08	0.13
Formaldehyde	0	0	0

Emissions of NO_x and VOC, ozone precursors, are 16.4 tons/yr for NO_x, and 9.0 tons/year of VOC (**Table 3**). Project emissions of ozone precursors would be dispersed and/ or diluted to the extent where any local ozone impacts from the Proposed Action would be indistinguishable from background 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.

Emissions Inventory Parcels Within the WTP Project Area:

Air quality was analyzed for the parcels within the WTP EIS and all information can be found within the Air Quality Technical Report (Appendix J), as such BLM is tiering to this EIS. This Report includes a near field dispersion model and meteorology, exposure thresholds, sub grid impacts and air pollutant results, including an emissions discussion. This air quality analysis remains valid because the RFD has not changed and remains current.

These parcels occur within the Unita Basin where an additional air analysis was completed for the Greater Natural Buttes EIS that also addressed regional settings, standards, emissions data (including production and operation values), modeling procedures, assessment/reporting of impacts, and greenhouse gas emissions. BLM is incorporating by reference the relevant portions of this EIS, as supplement.

⁴ Emissions include 1 producing well and associated operations traffic during the year in which the project is developed.

Emissions Inventory for Parcels Outside of WTP Project Area:

Due to the very small level of anticipated development (1 well per year), an emission inventory (EI) has not been conducted for the parcels that occur outside of the WTP project area. A typical oil and gas well EI is estimated for the purpose of this analysis and is based on the following analysis assumptions:

- Each oil and gas well would cause 6 acres of surface disturbance. This acreage is divided into 5 acres for road and pipeline construction and 1 acre for well pad construction.
- Construction activity for each well is assumed to be 10 days. It is further assumed that, based on the acreage disturbed, 4.5 days would be spent in well pad construction and 5.5 days would be spent in road and pipeline construction.
- Control efficiency of 25% for dust suppression would be achieved as a result of compliance with Utah Air Quality regulation R307-205.
- Post construction particulate matter (dust) emissions are likely to occur on a short term basis due to loss of vegetation within the construction and staging areas. Assuming appropriate interim reclamation, these emissions are likely to be minimal to negligible and will not be considered in this EA.
- Drilling operations would require 14 days.
- Completions and testing operations would require 3 days.
- Off road mobile exhaust emissions from heavy equipment during construction activities and on road mobile emissions will not be considered as they are dispersed, sporadic, temporary, and not likely to cause or contribute to exceedence of the National Ambient Air Quality Standards.
- The estimated EI for the typical well includes particulate matter of less than 10 micrometers in diameter (PM₁₀), nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC). Emissions of sulfur dioxide (SO₂) and lead (Pb) from oil and gas development activities are insignificant and are not included.

Lease stipulation UT-S-01 Air Quality, which regulates the amounts of NO_x emission per horsepower hour based on internal combustion engine size, would be attached to all parcels.

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

Additional air impact mitigation strategies have recently been developed in the Uinta Basin. The BLM in coordination with the EPA and the UDAQ, among others, developed the following air quality mitigation measures. Integration of and adherence to these measures may help minimize adverse local or regional air quality impacts from activities carried out during oil and gas development (including but not limited to construction, drilling, and production). As per the WTP ROD and the GNB DEIS, as supplemented, the following avoidance and minimization measures should be considered in the Plan of Development (UT-LN-96):

- Electric compression, where feasible.

- Emission controls having a control efficiency of 95 percent on existing condensate tanks with a potential to emit of greater 20 tpy, and on new condensate tanks with a potential to emit of 5 tpy VOCs.
- Green completions for all well completion activities.
- Tier II drill rig engines by 2012, with phase-in of Tier IV engines or equivalent emission reduction technology as soon as possible thereafter, but no later than 2018
- Lean burn natural gas-fired stationary compressor engines or equipment with equivalent emission rates.
- Catalyst on all natural gas-fired compressor engines to reduce the emissions of CO and VOCs.
- Dry seals on new centrifugal compressors.
- An annual inspection and maintenance program to reduce VOC emissions, including:
 - Performing inspections of thief hatch seals and Enardo pressure relief valves to ensure proper operations.
 - Reviewing gathering system pressures to evaluate any areas where gathering pressure may be reduced, resulting in lower flash losses from the condensate storage tanks.
 - Vent emissions from stock tanks and natural gas TEG dehydrators would be controlled by routing the emissions to a flare or similar control device which would reduce emissions by 95% or greater.
 - Low bleed pneumatics would be installed on separator dump valves and other controllers. The use of low bleed pneumatics would result in a lower emission of VOCs.
 - During completion, flaring would be limited as much as possible. Production equipment and gathering lines would be installed as soon as possible.
 - Well site telemetry would be utilized as feasible for production operations.
- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 grams of NO_x 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 NO_x per horsepower-hour.

Additional site-specific measures may also be employed to avoid or minimize effects to local or regional air quality. These additional measures would be developed and implemented in coordination with the EPA, the UDAQ, and other agencies with expertise or jurisdiction as appropriate (UT-LN-97).

Application of these lease notices to each of parcels on federal surface would be adequate for the leasing stage to disclose potential future restrictions and to facilitate the reduction of potential impacts upon receipt of a site specific APD.

4.3.1.2 Hydrologic Conditions

Drill pads would have the potential to interrupt surface flow patterns which could create new channeling of surface runoff from storms and spring snow melt. Flow patterns moving onto the pads and around them would have reduced vegetation to slow flows and filter sediments. Berm

placement around the well pads and proper placement of the drill pads would mitigate these impacts.

There is a potential for impacts to groundwater levels, but casing as a standard practice through the groundwater zones would reduce impacts to negligible.

The installation of new access roads would interrupt surface runoff and create paths for concentrated surface flow. Flow patterns could be interrupted, causing the flows to create new paths, and thus creating rills and gullies. Roadways would create concentrated flow for runoff water from storms and spring snow melt. Strict compliance to BLM manual 9113 would reduce this impact to acceptable levels.

Short term impacts to hydrologic conditions would be increased sediment loading and associated dissolved solids in the streams as non-point source pollution. This would reduce to normal levels for the area over the long term provided mitigation measures listed above are complied with.

4.3.1.3 Threatened, Endangered or Candidate Plant Species

Surface disturbance associated with drill pads, roads and other associated activities could impact habitat.

The issuance of leases would not directly impact threatened endangered, candidate or sensitive plant species on the nominated parcels. However, as the BLM generally cannot deny all surface use of a lease unless the lease is issued as a No Surface Occupancy stipulation, the issuance of leases does convey an expectation that drilling and development would occur. Chapter 3 identifies species that could be impacted through future actions on leased parcels. Indirect impacts to these resources could result from future lease actions, such as exploration or operational activities.

Application of the appropriate species-specific lease notices and T&E-05, 15, 17 (Listed Plant Species) to each of the identified parcels on federal surface would be adequate for the leasing stage to disclose potential restrictions against future authorizations. The mandatory ESA stipulation attached to each parcel (listed above) would also protect special status plant species. Impacts to the identified species and their respective habitats resulting from future authorizations connected to the proposed leases cannot be analyzed until an exploration or development application is received, individual species surveys are completed, and necessary avoidance and mitigation incorporated into the plan of development or applied to the application as a condition of approval.

4.3.1.4 Threatened, Endangered, Candidate or Sensitive Animal Species

The issuance of leases would not directly impact threatened, endangered, or candidate animal species on the nominated parcels. However, the issuance of leases does convey an expectation that drilling and development could occur. Impacts to these resources could result from future lease actions, such as exploration or operational activities. Application of the appropriate species-specific lease notices would be adequate for the leasing stage to disclose potential restrictions against future authorizations. Appropriate lease stipulations and notices have been included within the Proposed Action to protect habitat values. Project-specific impacts relating to future authorizations cannot be analyzed until an exploration or development application is received.

Each lease would be issued with the mandatory WO IM-2002-174 endangered species act stipulation, which would be enforced through any future authorization to conduct exploration or operational activities under the lease. Potential impacts relating to future authorizations would be mitigated through avoidance whenever possible. To assure appropriate consideration of future effects from the lease sale, the BLM would add the following lease stipulation to all parcels offered for lease.

The lease area may now or hereafter contain plants, animals or their habitats determined to be threatened, endangered, or other special status species. BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM-approved activity that would contribute to a need to list such species or their habitat. BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. BLM will not approve any ground-disturbing activity until it completes its obligations under applicable requirements of the Endangered Species Act as amended, 16 U.S.C. 1531 et seq. including completion of any required procedure for conference or consultation.

For parcels UT1112-016, UT1112-019 and UT1112-020 the cumulative impacts to threatened, endangered, candidate, and sensitive animal species were fully analyzed within Section 4.10 of the WTP EIS. A summary of the impacts is included in the sections below.

Mexican Spotted Owl

Implementation of the Proposed Action could affect Mexican spotted owls (MSO) that potentially nest or hunt within the area due to a loss of foraging habitat, potential displacement from nesting and hunting areas, and potential exposure to hazardous substances associated with produced water. Construction of well pads, roads, pipelines and other facilities as well as increased human activity could result in a loss of foraging habitat including USFWS-designated critical habitat for MSO.

Field surveys for MSO would be conducted according to USFWS protocol in all potential MSO habitats. No surface disturbance would be permitted within known populations or designated critical habitat of Mexican spotted owl, without consultation or conference between the BLM and USFWS. These actions could increase costs to the operator and potentially require relocating access roads, drill pads, pipelines, and other ancillary facilities. For larger areas of special status species habitat, directional drilling would potentially be required to extract the resources, which could increase operator costs.

The Proposed Action could result in a short-term loss of potential foraging habitat for the MSO, depending upon locations of facilities, which are unknown at the present time. Because it is not known if one habitat cover type is more beneficial than another in regards to MSO prey species, all habitat loss under the Proposed Action could be considered a potential loss of MSO foraging habitat; however, habitat losses within USFWS-designated critical habitat would be considered to be most important. A decrease in prey base habitats and consequently, prey availability could result in increased energy expenditure and time spent away from nest sites.

Greater Sage Grouse

In this part of Utah, especially in the WTP, the Greater sage-grouse move lower in elevation as the snow levels deepen during the winter. However at all times, sagebrush leaves are the only food eaten during the winter. Sagebrush stands, without any trees close by, are the wintering areas for sage grouse. The WTP area includes extensive stands of Pinyon-Juniper with an occasional sagebrush park. Within the parcels nominated for leasing, sage brush flats on top of Flat Iron Mesa within portions of parcels UT1112-019 and UT1112-020 have the highest potential to be utilized by sage grouse as wintering habitat. The top of Flat Iron Mesa that falls within parcels UT1112-019 and UT1112-020 is currently mapped as occupied habitat for sage grouse. However, all portions of occupied habitat within these parcels also falls within the Nine Mile Canyon ACEC and is therefore regulated with a No Surface Occupancy (NSO) stipulation. Because the NSO stipulation is applied to these parcels no surface disturbance that would degrade areas mapped as occupied habitat within the parcels would occur.

A 10 acre area of mapped occupied sage grouse habitat overlaps with the southern boundary of parcel 011. With the understanding that habitat mapping is done at a gross scale and the amount of overlapping area being so small, habitat suitability on this 10 acre area was considered during the on-the-ground site visit for parcel 011. Observations at that time noted that the 10 acre area is within old growth pinion-juniper stands, is directly adjacent to prominent cliff faces, and lacks the typical vegetative species and terrain conditions desired by sage grouse. There are no known sage grouse using habitat near the 10 acre overlap area within parcel 011 or in any mapped habitat within the adjacent vicinity of parcel 011. Through consultation and coordination with UDWR, it is believed that this 10 acre area is outside of the suitable occupied habitat based on the field visit observations made on April 17, 2012. Construction of oil and gas facilities, including the roads to provide access to the facilities, has the greatest impact on sage grouse if they are located in natural sagebrush parks. The impacts are relative to the amount of sagebrush that is present in the immediate area. The more sagebrush available that can be used as wintering habitat means less impact if sagebrush is removed by roads or facilities. While, like in the WTP, little sagebrush areas mean big impacts if any sagebrush is removed or if there are disturbances right next to the sagebrush areas during the winter.

During the leasing stage, facilities and road locations are not known. When an APD is submitted, then the exact locations are known. There could be a range of impacts varying from none to extensive, based upon the time of construction and the location of the facilities and road. The immediate impacts and the long-term effects can be reduced by locating the proposed project features away from important sage grouse areas and avoiding times when the sage grouse are present.

Parcels UT1112-016, UT1112-019 and UT1112-020 are located in the WTP and are close to an existing natural gas field. Effects on sage grouse were a concern in the WTP EIS ROD. In the final WTP it was decided that fewer wells would be drilled in greater sage-grouse winter range in order to reduce the overall development footprint, and the companies developing the area would invest in mitigation to enhance the existing winter range habitat and to close or reroute existing roads that bisected sage-grouse winter range. The BLM has identified mitigation measures, which will allow the agency to grant a waiver or exception to seasonal timing limitations in the WTP Project Area on a project-by-project basis as specific applications for development on the affected lease, are submitted except in areas that the Utah Division of Wildlife Resources and the BLM have identified as the core sage-grouse winter-use areas.

For the core winter use areas, the WTP EIS includes these measures for Greater Sage-Grouse;

- Disturbance will be minimized in and around core winter use areas through strategic planning for optimal realignment of existing roads and placement of new roads, well pads and other infrastructure, thereby reducing habitat fragmentation.
- No surface disturbance will be authorized in core winter use areas (during any time of the year) until the operator submits a site-specific plan of development for proposed roads, wells, pipelines, and/or other project features that will be constructed within those areas.
- No winter development (i.e., construction, drilling, or completion activities) will be allowed in core winter use areas in the Peters Point area (*Sagebrush Flat and surrounding area*) between December 1 - March 14.

Included in the special protection measures for wildlife, is a requirement that BBC and other operators must realign existing roads within core sage-grouse winter habitat, thereby reducing fragmentation. Evidence suggests that habitat fragmentation and destruction across much of the species' range has contributed to population declines over the past century. If current trends persist, many local populations may disappear in the next several decades, with the remaining fragmented population vulnerable to extinction. Sagebrush is essential for sage grouse habitat, however not all sagebrush areas are equal habitat for grouse. The USFWS recommend that a healthy understory containing grasses and forbs is needed to conserve large intact expanses of habitat.

The BLM would attach the greater sage-grouse winter range timing limitation stipulation (UT-S-212), that would close areas with sage grouse winter habitat from December 1 to March 14 of each year to protect wintering sage grouse and the habitat within parcels UT1112-019 and UT1112-020.

4.3.1.5 Non WSA Lands with Wilderness Characteristics

Potential impacts of leasing and future development activities on parcel UT1112-013 would result in direct and indirect impacts to the wilderness characteristics including: loss of size, loss of naturalness, loss of outstanding opportunities for solitude, and loss of outstanding opportunities for primitive and unconfined recreation.

Approximately 138 acres of parcel UT1112-013 overlaps the 90,000 acre Price River wilderness characteristics unit. Where development would occur within parcel is currently unknown; also whether development would be proposed within the area of the parcel overlapping the Price River wilderness character unit is currently unknown. If development of fluid mineral resources were proposed it is considerable that at a minimum approximately six acres would be disturbed within the parcel as the result of the placement of a single well pad and access road. Regardless of the number of wells that may be established on the parcel, it is expected that the wilderness characteristic of naturalness will be directly lost at the pad and along the access road. Acreage within the unit that is not directly affected by drilling activity and road construction will retain its natural character. This is because topography and vegetative screening can disrupt the visual and auditory impacts from drilling activity. Other indirect impacts to the wilderness characteristic of outstanding opportunity for solitude will occur within the immediate vicinity of the drilling activity (visual and auditory impacts) and would extend for a short distance beyond the areas of direct disturbance. However outstanding opportunities for solitude and primitive recreation do not have to be present upon every acre of potential wilderness character lands.

4.3.2 Alternative B – No Action

This alternative (not to offer any of the nominated parcels for sale) would not meet the need for the proposed action. The sale of oil and gas leases is needed to meet the growing energy needs of the United States. Furthermore, it is a stated goal of the PFO ROD/RMP to provide opportunities for mineral exploration and development under the mining and mineral leasing laws subject to legal requirements to protect other resource values. The PFO ROD/RMP categorizes the areas incorporated by the nominated parcels as open to leasing with the application of standard leasing stipulations and notices.

4.3.2.1 Air Quality and Green House Gas Emissions

The No Action alternative would not result in potential impacts because the parcels would not be leased or developed.

4.3.2.2 Hydrologic Conditions

The No Action alternative would prevent future potential impacts relating to lease operations. Although drilling and production activities on federal land surfaces are restricted to leased parcels, oil and gas exploration may also be authorized on non-leased public lands, on a case-by-case basis, pursuant to 43 CFR 3150.0-1. Accordingly, this alternative would not prevent direct, indirect or cumulative environmental impacts relating to oil and gas exploration activities through denial of the proposed action. Additionally, this alternative would not prevent indirect impacts relating to rights of way authorizations to support oil and gas operations on adjacent leased parcels.

4.3.2.3 Threatened, Endangered or Candidate Plant Species

The No Action alternative would prevent future potential impacts relating to lease operations. Although drilling and production activities on federal land surfaces are restricted to leased parcels, oil and gas exploration may also be authorized on unleased public lands, on a case-by-case basis, pursuant to 43 CFR 3150.0-1. Accordingly, this alternative would not prevent direct, indirect or cumulative environmental impacts relating to oil and gas exploration activities through denial of the proposed action. Additionally, this alternative would not prevent indirect impacts relating to rights of way authorizations to support oil and gas operations on adjacent leased parcels.

4.3.2.4 Threatened, Endangered, Candidate or Sensitive Animal Species

The No Action alternative would prevent future potential impacts relating to lease operations. Although drilling and production activities on federal land surfaces are restricted to leased parcels, oil and gas exploration may also be authorized on unleased public lands, on a case-by-case basis, pursuant to 43 CFR 3150.0-1. Accordingly, this alternative would not prevent direct, indirect or cumulative environmental impacts relating to oil and gas exploration activities through denial of the proposed action. Additionally, this alternative would not prevent indirect impacts relating to rights of way authorizations to support oil and gas operations on adjacent leased parcels.

4.3.2.5 Non WSA Lands with Wilderness Characteristics

The No Action Alternative would prevent future potential impacts relating to lease operations within the Non-WSA lands with wilderness characteristics. Impacts to Non-WSA lands with wilderness characteristics would continue at present levels from existing oil and gas development.

4.3.3 Cumulative Impacts Analysis

4.3.3.1 Air Quality and Green House Gas Emissions

The Cumulative Impact Analysis Area (CIAA) for air quality is the Uinta Basin. Cumulative air quality impacts are defined as the combination of emissions resulting from the Proposed Action, existing nearby permitted sources, and Reasonably Foreseeable Development (RFD) within the region. Cumulative impacts are incorporated by reference to the Uinta Basin Air Quality Study (UBAQS), the Greater Natural Buttes air quality study, and the Gasco air quality study. The increase in emissions associated with the Proposed Action would be localized, in some cases temporary (well development phase), and on a much smaller scale in comparison with regional emissions. For regional ozone issues, when the emissions inventory for the Proposed Action is compared to the regional emission inventory compiled during the WRAP Phase III study for the Uinta Basin, 2006 Baseline Emissions, (WRAP, 2009), it can be seen from **Table 4** that the VOC and NO_x emissions from the Proposed Action comprise a small percentage of the WRAP baseline emissions.

Table 4. Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison

Emission	Proposed ^a Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory ^b (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NO _x	16.4	16,547	0.099
VOC	9.0	127,495	0.007

^a see Table 4-2

^b http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html Uintah Basin Data

The WRAP Phase III baseline inventory for the Uinta Basin for VOC emissions in 2006 was 71,546 tons/yr. For 2012, the NO_x and VOC emissions are projected at 16,547 and 127,495 ton/yr, respectively. Potential VOC emissions from the Proposed Action represent 0.007% of the total 2012 VOC estimated emissions for the region, and potential NO_x emissions from the Proposed Action represent 0.099% of the total 2012 VOC estimated emissions for the region.

Based on the magnitude of the projected increase in VOC emissions for the Uinta Basin from 2006 to 2012, and the inconsequential contribution that would be emitted from the Proposed Action, an accurate analysis of potential ozone impacts from the Proposed Action is not feasible. Any cumulative ozone impacts from the Proposed Action would be indistinguishable from, and dwarfed by, the margin of uncertainty associated with the regional cumulative VOC and NO_x emission inventory. Thus the potential cumulative ozone impact from the Proposed Action cannot be modeled with any accuracy due to the level of the emissions from the Proposed Action, the size of the project, and the lack of model sensitivity. When compared to regional emissions inventories, the amounts of ozone precursors emitted from the Proposed Action are not

expected to have a measurable contribution or effect on regional ozone formation. The No Action alternative would not result in an accumulation of impacts.

The assessment of GHG emissions and climate change is still in its earliest stages of formulation. At present, under current scientific data and models, it is not technically feasible to know with any certainty the net impacts to climate due to global emissions, let alone regional or local emissions. The inconsistency in results of scientific models used to predict climate change at the global scale, combined with the lack of scientific models designed to predict climate change on regional or local levels, prohibits the ability to quantify potential future impacts of decisions made at the local level, particularly for small scale projects such as the Proposed Action. However, drilling and development activities from the Proposed Action are anticipated to release a negligible amount of emissions, including GHGs, into the local airshed. The No Action alternative would not result in an accumulation of impacts.

4.3.3.2 Hydrologic Conditions

The associated surface disturbance should oil and gas development occur on the proposed leases would have the potential to interrupt surface flow patterns which could create new channeling of surface runoff from storms and spring snow melt. Should facilities be development close to or crossing waterways on the proposed parcels, the likelihood of project impacts would increase. These impacts could include increased sedimentation; increased salt loading; contamination by petroleum products, chemicals, or produced waters; and flow alterations. Impacts to hydrologic conditions could increase sediment loading and associated dissolved solids into streams. Impacts can be reduced or avoided through proper project design, construction, maintenance activities, and implementation of best management practices.

Specific locations, development techniques, and mitigation procedures are not included in the proposed action; therefore, specific descriptions of potential effects are unattainable at this time. Authorization of proposed projects would require full compliance with BLM directives and stipulations that relate to hydrologic conditions.

For those within WTP the cumulative impact to soils and water was analyzed in Section 5.4 and 5.5 and is hereby incorporated within this document.

4.3.3.3 Threatened, Endangered or Candidate Plant Species

The CIA for Threatened, Endangered or Candidate Plant Species includes the PFO planning area. However, as suitable and occupied habitats have not been completely mapped and population estimates are largely unknown, accurate disturbance estimates for the CIA cannot be precisely quantified.

Cumulative impacts to Threatened, Endangered or Candidate Plant Species is directly associated with their ongoing habitat losses, sensitivity to disturbance, and declining population numbers, these species would be more sensitive than other, more common species to impacts related to development within the CIA. Past, present, and reasonably foreseeable surface-disturbing land uses have reduced, and will likely continue to reduce, the quality and quantity of suitable and occupied habitats in the CIA for Threatened, Endangered or Candidate Plant Species.

Based on direct and indirect cumulative impacts, ongoing and future oil and gas development and other land uses such as OHV travel, forage utilization by livestock and wildlife, and noxious weed encroachment and management in the CIA could cumulatively and incrementally reduce and fragment habitats for Threatened, Endangered or Candidate Plant Species.

4.3.3.4 Threatened, Endangered, Candidate or Sensitive Animal Species

The CIA for Threatened, Endangered, Proposed or Candidate Animal Species will be the Price Planning Area. Cumulative impacts are incorporated by reference to 4.7.3 in the Price RMP. Cumulative impacts include reduction in AUMs for wildlife and loss of wildlife and fisheries habitat, habitat fragmentation, and disruption or alteration of seasonal migration routes. The past, present, and foreseeable future actions with the potential to contribute to surface disturbance include development of new and existing mineral rights or realty actions (for example, pipeline or road rights of way) or the continuation of agricultural activities. The proposed action would contribute to these cumulative impacts by making nine parcels available for lease sale and oil and gas development; with the potential for future surface disturbance should the leases be developed. It is assumed that the proposed action would add one well pad with road and pipeline on each lease for those not within WTP. For those within WTP the cumulative impact to Threatened, Endangered, Candidate, BLM Sensitive and Otherwise Special Status Animal Species was analyzed in Section 5.10.1 of the WTP EIS and is hereby incorporated within this document. The No Action alternative would not contribute any cumulative impacts.

Mexican Spotted Owl

The development of minerals and associated infrastructure could cause slight to substantial changes to important habitat components and population function. Individually, authorized wells would probably not affect overall species populations or threaten their existence; however, population function may decline over time and could become substantial as development increases. Disturbance to habitats could displace MSO, and possible long-term habitat deterioration could eliminate potential habitat that might otherwise foster expansion from current territories.

Potential displacement of nesting and hunting MSOs could occur as a result of increased noise levels (e.g., increased volumes and changes in ambient noise levels from construction, drilling, and production equipment, changes in ambient tones or tonal noises, and repetitive low frequency noise emanating from production equipment such as compressor stations) and artificial lighting associated with project-related activities such as drilling and use of temporary working housing. Displacement from preferred nesting and hunting areas could force MSOs to travel further distances and thereby expend additional energy, causing greater physical stress. Displacement could also cause MSOs to move into less suitable habitats with greater predation or higher inter- and intra-specific competition for resources, even hiking through canyons could lead to declines in important activities such as prey delivery for nesting MSOs. Construction, drilling, and completion activities, and compressor stations and engines would increase noise levels and artificial lighting within the area, which could further limit use of potential nesting and hunting habitats.

Greater Sage-Grouse

The cumulative impact analysis area of sage-grouse includes all habitat within the PFO. Impacts to sage-grouse would primarily occur from lands and mineral actions within the PFO including oil and gas development and associated infrastructure, which could cause slight to substantial changes to important habitat components and population function.

Potential displacement of brooding and nesting sage-grouse could occur as a result of increased noise levels (e.g., increased volumes and changes in ambient noise levels from construction,

drilling, and production equipment, changes in ambient tones or tonal noises, and repetitive low frequency noise emanating from production equipment such as compressor stations) and artificial lighting associated with project-related activities such as drilling and use of temporary working housing. Displacement from preferred brooding and nesting areas could force sage grouse to travel further distances and thereby expend additional energy, which would cause greater physical stress. Displacement could also cause sage-grouse to move into less suitable habitats with greater predation or higher inter- and intra-specific competition for resources. The presence of surface facilities could also increase predation from perching raptors.

4.3.3.5 Non WSA Lands with Wilderness Characteristics

Cumulative impacts to lands with wilderness characteristics were considered in detail within the PFO RMP/ROD. Cumulative impacts resulting from other past, present and reasonably foreseeable actions, including oil and gas development include loss of size, loss of naturalness, loss of outstanding opportunities for solitude, and loss of outstanding opportunities for primitive and unconfined recreation. During the PFO land use planning process, the Jack Canyon Unit and the Desolation Canyon Unit non-WSA lands were considered and thoroughly analyzed for the protection, preservation, and maintenance of those wilderness characteristics as well as for the impacts that could occur if other resource developments and uses were allowed. The Approved Resource Management Plan, October 2008, Record of Decision, determined that the non-WSA lands with wilderness characteristics would not be managed for those characteristics because those lands were found to have other important resource uses that would conflict with protection, preservation, or maintenance of the wilderness characteristics (BLM, 2008b). Jack Canyon and Desolation Canyon Units fall within that determination.

5 CONSULTATION AND COORDINATION

5.1 Introduction

The issue identification section of Chapter 1 identifies those issues analyzed in detail in Chapter 4. The Interdisciplinary Team Checklist provides the rationale for issues that were considered but not analyzed further. The issues were identified through the public and agency involvement process described in sections 5.2 and 5.3 below.

5.2 Persons, Groups, and Agencies Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
U.S. Fish & Wildlife Service	Information on Consultation, under Section 7 of the Endangered Species Act (16 USC 1531)	Coordination is ongoing.
Utah State Historic Preservation Office	Consultation for undertakings, as required by the National Historic Preservation Act (NHPA) (16 USC 470)	Coordination is ongoing.
Utah Division of Wildlife Resources	Coordination with UDWR as the agency with expertise on wildlife species.	Coordination is ongoing.
US Forest Service	Consult as USFS as a leasing program partner.	Coordination is ongoing.
School and Institutional Trust Lands Administration	Coordinated with as leasing program partner.	Coordination is ongoing.
Public Lands Policy Coordination Office	Coordinated with as leasing program partner.	Coordination is ongoing.
Paiute Tribe of Utah (PITU), Ute Indian Tribe, Hopi Tribe, Zuni Tribe, Navaho Nation, Ute Mountain Tribe, Southern Ute Tribe, Northwestern Band of Shoshone Nation, Shoshone-Bannock Tribes, and Eastern Shoshone Tribe	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	Consultation is ongoing.
Private Landowners	Coordination as outlined by WO IM 2010-117 and NEPA.	Letters sent to private surface estate owners on 3/28/12. Several contacted the USO expressing some concerns regarding the lease sale. Most were general inquiries into the sale process. Individuals were informed of the pending EA comment period and protest provisions of the NCLS.

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 issues related to a Proposed Action” (40 CFR 1501.7) several actions were taken to involve the public.

BLM utilized and coordinate 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.

During the public comment period, BLM received one letter from the Southern Utah Wilderness Alliance.

On June 22, 2012, the public was notified of the proposed action by posting on the Utah BLM Environmental Notification Bulletin Board. The process used to involve the public also included a 30-day public review and comment period for the EA and unsigned FONSI & FONNSI from 6/22/2012 to 7/23/2012. In addition to the ENBB, the EA and unsigned FONSI and unsigned FONNSI were posted on the BLM Utah’s Oil and Gas Lease Sale webpage.

The BLM also refers to the public involvement process utilized in developing the PFO ROD/RMP, the West Tavaputs Full Field Development ROD and the Greater Natural Buttes EIS, as supplemented.

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

5.3.1 Modifications Based on Public Comment and Internal Review

Based on public comments and an internal review, BLM has identified necessary corrections or clarifications to this EA. These modifications include:

1. Corrections to grammar, sentence structure, and formatting were made throughout the EA. In general, these changes were made without further clarification. Examples include: an addition of a Table of Contents, changes in font size, changes in verb tense and style or insertion of footnotes. An August 2012 date was inserted into the header of each page to distinguish prior versions of the EA.
2. Section 5.3 (Modifications) additional information was added to describe how BLM reviewed and addressed public comments.
3. Section 5.3.1 (Modifications Based on Public Comment and Internal Review) was added.
4. Section 5.3.2 (Response to Public Comment) information was added.
5. Appendix A (Parcel List) was edited by the following actions:

- UT1112-009: legal description for section 5 was edited. The private landowner could not be notified; therefore, that portion of this section was removed from consideration. The parcel acreage was adjusted accordingly.
 - UT1112-016: unit joinder stipulation UT-S-317 was added.
 - UT1112-016, 019 and 020: lease notice UT-LN-97 (West Tavaputs) was added.
 - All Parcels: lease notices UT-LN-96 (Air Quality), UT-LN-99 (Regional Ozone Formation Controls) and UT-LN-102 (Air Quality Analysis) were added.
6. Appendix C (Interdisciplinary Team Checklist) was modified to apply UT-LN-45 on all parcels (general wildlife). Under recreation, the checklist was modified to address the Nine Mile Canyon SRMA.

The NEPA coordinator and manager signed the checklist.

7. Appendix D (Comment Response Table) was inserted and includes a comment and response table.

5.3.2 Response to Public Comment

As stated in Section 5.3, BLM concluded a public comment period on the Unsigned FONSI and EA on July 23, 2012. BLM received comments from the Southern Utah Wilderness Alliance.

The comments are summarized in Appendix D and Section 5.3.1 Modifications Based on Public Comments and Internal Review lists the modifications that were made in the EA as a result of public comments. Specific comments and responses are detailed in Appendix D.

The BLM acknowledges the support and concerns expressed by the public regarding the leasing of oil and gas resources on the public lands within the field offices, including the subject lease parcels.

Information within the comment letter that is background or general in nature was reviewed; however, responses to or clarifications made to the EA from these items are not necessary. Likewise, expressions of position or opinion are acknowledged but do not cause a change in the analysis. As identified in the NEPA Handbook (H-1790-1, section 6.9.2.2 comment response), BLM looked for modifications to the alternatives and the analysis as well as factual corrections while reviewing public comment.

Challenges⁵ to BLM's 2008 Price Field Office Record of Decision and Resource Management Plan will not be considered. Likewise, specific responses to ongoing litigation will not be made.

⁵ The Price RMP and associated EISs provide the basis for land use allocations including oil and gas leasing decisions. Challenges to the planning process, including the RMP and associated EISs, will not be considered as part of oil and gas leasing decisions. The public was afforded opportunities to protest the Proposed RMP and Final EIS documents. Protests were resolved by the BLM Director in 2008. Copies of the Director's Protest Resolution Reports are available on-line at (scroll down to Utah): http://www.blm.gov/wo/st/en/prog/planning/protest_resolution/protestreports.html. Subsequent to protest resolution, the Record of Decision and Approved RMP was signed by the Assistant Secretary for Lands and

5.4 List of Preparers

Name	Office	Title	Responsible for the Following Section(s) of this Document
Kyle Beagley/Don Stephens	PFO	NRS	Project Lead
Stephanie Howard/Leonard Herr	VFO/USO	Air Quality Specialist	Air Quality
Cameron Cox	VFO	Archeologist	Cultural Resources
Jeffrey Brower	PFO	Hydrologist	Hydrologic Conditions; Wetland/Riparian Zones
Dana Truman	PFO	Range Specialist	Threatened, Endangered or Candidate Plant Species
Darren Williams	VFO	Wildlife Biologist	Fish and Wildlife Excluding USFWS Listed Species and BLM Sensitive Species, e.g. Migratory Birds; BLM Sensitive Species; ESA Candidate Animal Species

Minerals, Department of the Interior, which constituted the final decision for the Department of the Interior, and ended all administrative courses of action on those planning processes.

6 REFERENCES, ACRONYMS AND APPENDICES

6.1 References Cited

Bureau of Land Management (BLM), 1997. Final Environmental Impact Statement and Record of Decision, Price Coalbed Methane Project. May 1997.

Bureau of Land Management (BLM). 1999b. Final Environmental Impact Statement and Record of Decision, Ferron Natural Gas Development Project Carbon and Emery County, Utah. July 1999.

Bureau of Land Management (BLM). 2008. West Tavaputs Plateau Natural Gas Full Field Development Plan Draft Environmental Impact Statement. Price Field Office. February 2008.

BLM, 2008b. Price Field Office Record of Decision and Approved Resource Management Plan. October 2008

BLM. 2008c. Price Field Office Record of Decision and Approved Resource Management Plan. Biological Opinion – USFWS October 27, 2008.

IM UTG000-2011-003 Green River District Reclamation Guidelines, March 2011.

NatureServe. 2005. NatureServe Explorer: An online encyclopedia of life [web application]. Version 4.6. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. Accessed (August 2005–May 2006).

Programmatic Agreement Between The U.S.D.I. Bureau Of Land Management, Utah, The Utah State Historic Preservation Officer, The Advisory Council On Historic Preservation, The State Of Utah School And Institutional Trust Lands Administration, Carbon And Duchesne Counties, And Bill Barrett Corporation Regarding The West Tavaputs Plateau Natural Gas Full Field Development Plan In Carbon And Duchesne Counties, Utah.2010

U.S. Fish and Wildlife Service (USFWS). 2005. “Status Review Completed: Greater Sage-Grouse Not Warranted for Listing as Endangered or Threatened.” News Release. January 7, 2005.

WO IM 2010-117 Oil and Gas Leasing Reform – Land Use Planning and Lease Parcel Reviews, May 2010.

WO IM 2012-043 Greater Sage-Grouse Interim Management Policies and Procedures, December 2011.

6.2 List of Acronyms

APD	Application for Permit to Drill
ACEC	Area of Critical Environmental Concern
BLM	Bureau of Land Management
BMP	Best Management Practices
CBNG	Coalbed Natural Gas
CFR	Code of Federal Regulations
CIAA	Cumulative Impact Analysis Area
CSU	Conditional Surface Use
DR	Decision Record
EA	Environmental Assessment
EIS	Environmental Impact Statement
ENBB	Environmental Notification Bulletin Board
EOI	Expression of Interest
ESA	Endangered Species Act
FLPMA	Federal Land Policy and Management Act of 1976
FONSI	Finding of No Significant Impact
GIS	Geographic Information System
IDPR	Interdisciplinary Parcel Review
IM	Instruction Memorandum
LUP	Land Use Plan
NAGPRA	Native American Graves Protection and Repatriation Act
NCLS	Notice of Competitive Lease Sale
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPS	National Park Service
NSO	No Surface Occupancy
PFO RMP	Price Field Office Resource Management Plan
PLPCO	Public Land Policy Coordination Office
RMP	ROD Resource Management Plan Record of Decision
RMP	Resource Management Plan
RFD	Reasonably Foreseeable Development
ROD	Record of Decision
SHPO	State Historic Preservation Office
SITLA	School and Institutional Trust Lands Administration
UDWR	Utah Division of Wildlife Resources
USDI	United States Department of the Interior
USO	Utah State Office
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
WO	Washington Office
WSA	Wilderness Study Area
WTP EIS	West Tavaputs Plateau Natural Gas Full Field Development Plan Environmental Impact Statement
WTP EIS ROD	West Tavaputs Plateau Natural Gas Full Field Development Plan Environmental Impact Statement Record of Decision

6.3 Appendices

- A. Preliminary Oil and Gas Lease Sale List with Stipulations and Lease Notices
- B. Maps
- C. Interdisciplinary Team Checklist
- D. Comment Response Table

APPENDIX A
PRELIMINARY OIL AND GAS LEASE SALE LIST
WITH STIPULATIONS AND LEASE NOTICES

**PRELIMINARY OIL AND GAS LEASE SALE LIST
WITH STIPULATIONS AND LEASE NOTICES**

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.

UT1112 - 008

T. 15 S., R. 8 E., Salt Lake

Sec. 21: N2.

320.00 Acres

Carbon County, Utah

Price Field Office

STIPULATIONS

- UT-S-01: Air Quality
- UT-S-97: NSO – Fragile Soils/Slopes for Slopes Greater Than 40%
- UT-S-101: CSU – Fragile Soils/Slopes 20-40 Percent
- UT-S-126: NSO – Natural Springs
- UT-S-127: NSO – Intermittent and Perennial Streams
- UT-S-169: CSU – Cultural Resource Inventories
- UT-S-232: TL – Mule Deer and Elk Crucial Winter Range
- UT-S-305: CSU – Noxious Weed

NOTICES

- UT-LN-49: Utah Sensitive Species (Ferruginous hawk)
- UT-LN-45: Migratory Bird
- UT-LN-99: Regional Ozone Formation Controls
- UT-LN-102: Air Quality Analysis

UT1112 - 009

T. 20 S., R. 8 E., Salt Lake

Sec. 3: Lots 3-4, S2;

Sec. 4: Lots 1-4, SWNE, S2NW, N2SW, W2SE, SESE;

Sec. 5: Lots 1, S2NE, SE;

Sec. 8: N2NE.

1,241.88 Acres

Emery County, Utah

Price Field Office

STIPULATIONS

- UT-S-01: Air Quality
- UT-S-97: NSO – Fragile Soils/Slopes for Slopes Greater Than 40%
- UT-S-101: CSU – Fragile Soils/Slopes 20-40 Percent
- UT-S-126: NSO – Natural Springs
- UT-S-127: NSO – Intermittent and Perennial Streams
- UT-S-169: CSU – Cultural Resource Inventories
- UT-S-177: CSU – Fossil Resources
- UT-S-305: CSU – Noxious Weed

NOTICES

- T&E-05: Listed Plant Species
- T&E-15: Wright Fishhook Cactus (*Sclerocactus wrightiae*)
- T&E-17: San Rafael Cactus (*Pediocactus despainii*)
- UT-LN-45: Migratory Bird
- UT-LN-49: Utah Sensitive Species (White-Tailed Prairie Dogs, Bats, Bluehead Suckers, Burrowing Owls, and Yellow-Billed Cuckoos)
- UT-LN-99: Regional Ozone Formation Controls
- UT-LN-102: Air Quality Analysis

UT1112 - 010

T. 13 S., R. 9 E., Salt Lake

Sec. 20: All;

640.00 Acres
Carbon County, Utah
Price Field Office

STIPULATIONS

- UT-S-01: Air Quality
- UT-S-97: NSO – Fragile Soils/Slopes for Slopes Greater Than 40%
- UT-S-101: CSU – Fragile Soils/Slopes 20-40 Percent
- UT-S-126: NSO – Natural Springs
- UT-S-127: NSO – Intermittent and Perennial Streams
- UT-S-156: TL – High Country Watershed Areas
- UT-S-169: CSU – Cultural Resource Inventories
- UT-S-232: TL – Mule Deer and Elk Crucial Winter Range
- UT-S-260: TL – Raptor Habitat
- UT-S-305: CSU – Noxious Weed

NOTICES

- UT-LN-45: Migratory Bird
- UT-LN-99: Regional Ozone Formation Controls
- UT-LN-102: Air Quality Analysis

UT1112 - 011

T. 13 S., R. 9 E., Salt Lake

- Sec. 21: N2, N2SW, SESW, SE;
- Sec. 22: S2N2, S2, Excluding O&G Lease U79642 (8.4 ac.);
- Sec. 23: S2NW, W2SW, Excluding O&G Lease U79642 (7.2 ac.);
- Sec. 27: W2NE, NW, Excluding O&G Lease U79159 (25.72 ac.);
- Sec. 28: N2, N2SW.

1,838.68 Acres
Carbon County, Utah
Price Field Office

STIPULATIONS

- UT-S-01: Air Quality
- UT-S-97: NSO – Fragile Soils/Slopes for Slopes Greater Than 40%
- UT-S-101: CSU – Fragile Soils/Slopes 20-40 Percent

UT-S-126: NSO – Natural Springs
UT-S-127: NSO – Intermittent and Perennial Streams
UT-S-156: TL – High Country Watershed Areas
UT-S-169: CSU – Cultural Resource Inventories
UT-S-212: TL – Greater Sage Grouse Winter Habitat
UT-S-232: TL – Mule Deer and Elk Crucial Winter Range
UT-S-260: TL – Raptor Habitat
UT-S-305: CSU – Noxious Weed

NOTICES

T&E-06: Mexican Spotted Owl
UT-LN-45: Migratory Bird
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT1112 - 013

T. 16 S., R. 11 E., Salt Lake

Sec. 10: SESE;
Sec. 11: NE, SENW, S2;
Sec. 14: NE, E2NW, NESW, N2SE, SESE;
Sec. 15: NE, NWNW, S2NW, N2SW, NWSE.

1,360.00 Acres

Emery County, Utah

Price Field Office

STIPULATIONS

UT-S-01: Air Quality
UT-S-97: NSO – Fragile Soils/Slopes for Slopes Greater Than 40%
UT-S-101: CSU – Fragile Soils/Slopes 20-40 Percent
UT-S-126: NSO – Natural Springs
UT-S-127: NSO – Intermittent and Perennial Streams
UT-S-169: CSU – Cultural Resource Inventories
UT-S-177: CSU – Fossil Resources
UT-S-305: CSU – - Noxious Weed

NOTICES

UT-LN-17: Pronghorn Fawning Habitat
UT-LN-45: Migratory Bird
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT1112 - 014

T. 15 S., R. 12 E., Salt Lake

Railroad Right-of-Way SL031859 in Secs. 15 and 22.

* Can only be leased under the Right-of-Way Leasing Act of 1930

56.00 Acres

Carbon County, Utah

Price Field Office

STIPULATIONS

UT-S-01: Air Quality
UT-S-97: NSO – Fragile Soils/Slopes for Slopes Greater Than 40%

UT-S-101: CSU – Fragile Soils/Slopes 20-40 Percent
UT-S-126: NSO – Natural Springs
UT-S-127: NSO – Intermittent and Perennial Streams
UT-S-169: CSU – Cultural Resource Inventories
UT-S-305: CSU – Noxious Weed

NOTICES

UT-LN-17: Pronghorn Fawning Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species (Ferruginous Hawk)
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT1112 - 016

T. 12 S., R. 15 E., Salt Lake

Sec. 10: NE;

Sec. 14: NW;

Sec. 15: NE.

480.00 Acres

Carbon County, Utah

Price Field Office

STIPULATIONS

- UT-S-01: Air Quality
- UT-S-97: NSO – Fragile Soils/Slopes for Slopes Greater Than 40%
- UT-S-101: CSU – Fragile Soils/Slopes 20-40 Percent
- UT-S-126: NSO – Natural Springs
- UT-S-127: NSO – Intermittent and Perennial Streams
- UT-S-156: TL – High Country Watershed Areas
- UT-S-169: CSU – Cultural Resource Inventories
- UT-S-177: CSU – Fossil Resources
- UT-S-232: TL – Mule Deer and Elk Crucial Winter Range
- UT-S-260: TL – Raptor Habitat
- UT-S-305: CSU – Noxious Weed
- UT-S-317: Unit Joinder (Prickly Pear Unit)
- UT-S-319: NSO – Cultural ACEC

NOTICES

- T&E-06: Mexican Spotted Owl
- UT-LN-45: Migratory Bird
- UT-LN-49: Utah Sensitive Species (White-Tailed Prairie Dogs, Bats, Bluehead Suckers, Burrowing Owls, and Yellow-Billed Cuckoos)
- UT-LN-97: West Tavaputs
- UT-LN-99: Regional Ozone Formation Controls
- UT-LN-102: Air Quality Analysis

UT1112 - 019

T. 12 S., R. 16 E., Salt Lake

Sec. 17: All;

Sec. 18: All.

1,275.20 Acres

Carbon County, Utah

Price Field Office

STIPULATIONS

- UT-S-01: Air Quality
- UT-S-97: NSO – Fragile Soils/Slopes for Slopes Greater Than 40%
- UT-S-101: CSU – Fragile Soils/Slopes 20-40 Percent
- UT-S-126: NSO – Natural Springs
- UT-S-127: NSO – Intermittent and Perennial Streams
- UT-S-156: TL – High Country Watershed Areas
- UT-S-169: CSU – Cultural Resource Inventories
- UT-S-177: CSU – Fossil Resources

UT-S-212: TL – Greater Sage Grouse Winter Habitat
UT-S-260: TL – Raptor Habitat
UT-S-305: CSU – Noxious Weed
UT-S-319: NSO – Cultural ACEC

NOTICES

T&E-06: Mexican Spotted Owl
UT-LN-45: Migratory Bird
UT-LN-97: West Tavaputs
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT1112 - 020

T. 12 S., R. 16 E., Salt Lake

Sec. 19: Lots 1-4, NE, E2NW, NESW;
Sec. 20: NE, N2NW, N2SE;
Sec. 21: W2E2, NW, N2SW, SESW;
Sec. 28: W2NE, E2NW, N2SW, SWSW, W2NWSE;
Sec. 29: S2SE.

1,575.52 Acres
Carbon County, Utah
Price Field Office

STIPULATIONS

UT-S-01: Air Quality
UT-S-97: NSO – Fragile Soils/Slopes for Slopes Greater Than 40%
UT-S-101: CSU – Fragile Soils/Slopes 20-40 Percent
UT-S-126: NSO – Natural Springs
UT-S-127: NSO – Intermittent and Perennial Streams
UT-S-156: TL – High Country Watershed Areas
UT-S-169: CSU – Cultural Resource Inventories
UT-S-177: CSU – Fossil Resources
UT-S-212: TL – Greater Sage Grouse Winter Habitat
UT-S-260: TL – Raptor Habitat
UT-S-305: CSU – Noxious Weed
UT-S-319: NSO – Cultural ACEC

NOTICES

T&E-06: Mexican Spotted Owl
UT-LN-45: Migratory Bird
UT-LN-97: West Tavaputs
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

LEASE STIPULATIONS SUMMARY

UT-S-01	<p style="text-align: center;">AIR QUALITY</p> <p>All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 grams of NOx per horsepower-hour.</p> <p>Exception: This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.</p> <p>Modification: None</p> <p>Waiver: None</p> <p>AND</p> <p>All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gram of NOx per horsepower-hour.</p> <p>Exception: None</p> <p>Modification: None</p> <p>Waiver: None</p>
UT-S-97	<p style="text-align: center;">NO SURFACE OCCUPANCY – FRAGILE SOILS/SLOPES GREATER THAN 40 PERCENT</p> <p>NSO on slopes greater than 40 percent.</p> <p>Exception: If after an environment analysis the authorized officer determines that it would cause undue or unnecessary degradation to pursue other placement alternatives, surface occupancy in the area may be authorized. In addition, a plan from the operator and BLM’s approval of the plan would be required before construction and maintenance could begin. The plan would have to include:</p> <ul style="list-style-type: none"> • An erosion control strategy • GIS modeling • Proper survey and design by a certified engineer. <p>Modification: None</p> <p>Waiver: None</p>
UT-S-101	<p style="text-align: center;">CONTROLLED SURFACE USE – FRAGILE SOILS/SLOPES 20-40 PERCENT</p> <p>In surface disturbing proposals regarding construction on slopes of 20 percent to 40 percent, include an approved erosion control strategy and topsoil segregation/restoration plan. Such construction must be properly surveyed and designed by a certified engineer and approved by the BLM prior to project implementation, construction, or maintenance.</p> <p>Exception: If after an environment analysis the authorized officer determines that it would cause undue or unnecessary degradation to pursue other placement alternatives, surface occupancy in the area may be authorized. In addition, a plan from the operator and BLM’s approval of the plan would be required before construction and maintenance could begin. The plan must include:</p> <ul style="list-style-type: none"> • An erosion control strategy • GIS modeling • Proper survey and design by a certified engineer. <p>Modification: Modifications also may be granted if a more detailed analysis is conducted and shows that impacts can be mitigated, e.g., Order I soil survey conducted by a qualified soil scientist, finds that surface disturbance activities could occur on slopes between 20 and 40 percent while adequately protecting areas from accelerated erosion.</p> <p>Waiver: None</p>
UT-S-126	<p style="text-align: center;">NO SURFACE OCCUPANCY – NATURAL SPRINGS</p> <p>No surface disturbance or occupancy will be maintained around natural springs to protect the water quality of the spring. The distance would be based on geophysical, riparian, and other factors necessary to protect the water quality of the springs. If these factors cannot be determined, a 660-foot buffer zone would be maintained.</p> <p>Exception: An exception could be authorized if (a) there are no practical alternatives, (b) impacts could be fully mitigated, or (c) the action is designed to enhance the riparian resources.</p>

	<p>Modification: None Waiver: None</p>
<p>UT-S-127</p>	<p style="text-align: center;">NO SURFACE OCCUPANCY – INTERMITTENT AND PERENNIAL STREAMS</p> <p>No new surface disturbance (excluding fence lines) will be allowed in areas within the 100-year floodplain or 100 meters (330 feet) on either side from the centerline, whichever is greater, along all perennial and intermittent streams, streams with perennial reaches, and riparian areas.</p> <p>Exception: The authorized officer could authorize an exception if it could be shown that the project as mitigated eliminated the need for the restriction.</p> <p>An exception could be authorized if (a) there are no practical alternatives, (b) impacts could be fully mitigated, or (c) the action is designed to enhance the riparian resources.</p> <p>Modification: None Waiver: None</p>
<p>UT-S-156</p>	<p style="text-align: center;">TIMING LIMITATION – HIGH-COUNTRY WATERSHED AREAS</p> <p>High-country watershed areas (above 7,000 feet) will be closed seasonally from December 1 to April 15.</p> <p>Exception: Upon review and monitoring, the authorized officer may grant exceptions because of climatic conditions if activities would not cause undue damage to soils or roads.</p> <p>Modification: Season may be adjusted depending on climatic and vegetation conditions.</p> <p>Waiver: Activities may be allowed as long as all surface disturbing activities are conducted before seasonal closure.</p>
<p>UT-S-169</p>	<p style="text-align: center;">CONTROLLED SURFACE USE – CULTURAL RESOURCE INVENTORIES</p> <p>Cultural resources inventories (including point, area, and linear features) will be required for all federal undertakings that could affect cultural resources or historic properties in areas of both direct and indirect impacts.</p> <p>Waiver of Inventory:</p> <p>Although complete Class III inventories will be performed for most land use actions, an authorized officer could waive inventory for any part of an Area of Potential Effect when one or more of the following conditions exist:</p> <ul style="list-style-type: none"> • Previous natural ground disturbance has modified the surface so extensively that the likelihood of finding cultural properties is negligible. (Note: This is not the same as being able to document that any existing sites may have been affected by surface disturbance; ground disturbance must have been so extensive as to reasonably preclude the location of any such sites.) • Human activity within the last 50 years has created a new land surface to such an extent as to eradicate locatable traces of cultural properties. • Existing Class II or equivalent inventory data are sufficient to indicate that the specific environmental situation did not support human occupation or use to a degree that would make further inventory information useful or meaningful. • Previous inventories must have been conducted according to current professionally acceptable standards. • Records are available and accurate and document the location, methods, and results of the inventory. • Class II “equivalent inventory data” includes an adequate amount of acreage distributed across the same specific environmental situation that is located within the study area. • Inventory at the Class III level has previously been performed, and records documenting the location, methods, and results of the inventory are available. Such inventories must have been conducted according to current professionally acceptable standards. • Natural environmental characteristics (such as recent landslides or rock falls) are unfavorable to the presence of cultural properties. • The nature of the proposed action is such that no impact can be expected on significant cultural resources. • Conditions exist that could endanger the health or safety of personnel, such as the presence

	of hazardous materials, explosive ordnance, or unstable structures.
UT-S-177	<p style="text-align: center;">CONTROLLED SURFACE USE – FOSSIL RESOURCES</p> <p>A BLM permitted paleontologist will be required to be onsite during surface disturbance in any Potential Fossil Yield Classification (PFYC) 4 or 5 areas.</p> <p>Exceptions: None Modification: None Waiver: None</p>
UT-S-212	<p style="text-align: center;">TIMING LIMITATION – GREATER SAGE GROUSE WINTER HABITAT</p> <p>No surface disturbing or otherwise disruptive activities within Greater sage-grouse winter habitat areas seasonally from December 1 to March 14.</p> <p>Exception: Upon review and monitoring, the Authorized Officer may grant exceptions because of climatic and/or habitat conditions if certain criteria are met and if activities would not cause undue stress to wintering greater sage-grouse.</p> <p>Modification: Season may be adjusted depending on climatic and habitat conditions.</p> <p>Waiver: This stipulation may be waived if, in cooperation with the State wildlife agency, it is determined that the site has been permanently abandoned or unoccupied for a minimum of 5 years.</p>
UT-S-232	<p style="text-align: center;">TIMING LIMITATION – MULE DEER AND ELK CRUCIAL WINTER RANGE</p> <p>No surface disturbing or otherwise disruptive activities within mule deer and elk crucial winter range from December 1 to April 15.</p> <p>Exception: Upon review and monitoring, the authorized officer may grant exceptions because of climatic and/or range conditions if certain criteria are met and if activities would not cause undue stress to deer and/or elk populations or habitats.</p> <p>Modification: Season may be adjusted depending on climatic and range conditions.</p> <p>Waiver: A waiver may be granted if the winter range habitat is unsuitable for or unoccupied during winter months by deer/elk and there is no reasonable likelihood of future winter range use.</p>
UT-S-260	<p style="text-align: center;">TIMING LIMITATION – RAPTOR HABITAT</p> <p>Raptor nesting complexes and known raptor nest sites will be closed seasonally from February 1 to July 15 within ½ mile of occupied nests.</p> <p>Exception: The authorized officer may grant an exception if the raptor nest in question is deemed to be inactive by May 31 and if the proposed activity would not result in a permanent structure or facility that would cause the subject nest to become unsuitable for nesting in future years.</p> <p>Modification: Season may be adjusted depending on climatic and range conditions. Distance may be adjusted if natural features provide adequate visual screening.</p> <p>Waiver: This stipulation may be waived if, in cooperation with the UDWR, it is determined that the site has been permanently abandoned or unoccupied for a minimum of 3 years.</p>

UT-S-305	<p style="text-align: center;">CONTROLLED SURFACE USE – NOXIOUS WEED</p> <p>Continue implementation of noxious weed and invasive species control actions in accordance with national guidance and local weed management plans, in cooperation with State, federal, affected counties, adjoining private land owners, and other partners or interests directly affected. Implement Standard Operating Procedures and Mitigation Measures for herbicide use as well as prevention measures for noxious and invasive plants identified in the Record of Decision Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States PEIS and associated documents.</p> <p>Exception: None Modification: None Waiver: None</p>
UT-S-317	<p style="text-align: center;">UNIT JOINDER</p> <p>The successful bidder will be required to join the _____ Unit Agreement or show reason why a joiner should not be required.</p>
UT-S-319	<p style="text-align: center;">NO SURFACE OCCUPANCY – CULTURAL ACEC</p> <p>NSO for cultural values within areas of critical environmental concern (ACEC) to retain the cultural character and context of the area.</p> <p>Exception: The AO may grant an oil and gas exception if it is determined that no other economical and technical feasible access is available to reach and drain the fluid mineral resources of the area. A block cultural survey must be completed and a treatment plan developed and submitted to BLM and the State Historic Preservation Office (SHPO) for their approval. The plan must contain measures to mitigate surface disturbance and reduce visual intrusion.</p> <p>Modification: None Waiver: None</p>

LEASE NOTICES SUMMARY

UT-LN-17	<p style="text-align: center;">PRONGHORN FAWNING HABITAT</p> <p>The lessee/operator is given notice that lands in this lease have been identified as containing antelope fawning habitat. Exploration, drilling and other development activities would be restricted from May 15 through June 15 to protect antelope fawning. This notice may be waived, accepted, or modified by the authorized officer if either the resource values change or the lessee/operator demonstrates that adverse impacts can be mitigated.</p>
UT-LN-45	<p style="text-align: center;">MIGRATORY BIRD</p> <p>The lessee/operator is given notice that surveys for nesting migratory birds may be required during migratory bird breeding season whenever surface disturbances and/or occupancy is proposed in association with fluid mineral exploration and development within priority habitats. Surveys should focus on identified priority bird species in Utah. Field surveys will be conducted as determined by the authorized officer of the Bureau of Land Management. Based on the result of the field survey, the authorized officer will determine appropriate buffers and TLs. This notice may be waived, excepted, or modified by the authorized officer if either the resource values change or the lessee/operator demonstrates that adverse impacts can be mitigated.</p>
UT-LN-49	<p style="text-align: center;">UTAH SENSITIVE SPECIES</p> <p>The lessee/operator is given notice that no surface use or otherwise disruptive activity would be allowed that would result in direct disturbance to populations or individual special status plant and animal species, including those listed on the BLM sensitive species list and the Utah sensitive species list. The lessee/operator is also given notice that lands in this parcel have been identified as containing potential habitat for species on the Utah Sensitive Species List. Modifications to the Surface Use Plan of Operations may be required in order to protect these resources from surface disturbing activities in accordance with Section 6 of the lease terms, Endangered Species Act, Migratory Bird Treaty Act and 43 CFR 3101.1-2.</p>

<p>UT-LN-96</p>	<p style="text-align: center;">AIR QUALITY</p> <p>The lessee is given notice that the Bureau of Land Management (BLM) in coordination with the U.S. Environmental Protection Agency and the Utah Department of Air Quality, among others, have developed the following air quality mitigation measures that may be applied to any development proposed on this lease. Integration of and adherence to these measures may help minimize adverse local or regional air quality impacts from oil and gas development (including but not limited to construction, drilling, and production).</p> <ul style="list-style-type: none"> • Electric compression, where feasible. • Emission controls having a control efficiency of 95 percent on existing condensate tanks with a potential to emit of greater 20 tpy, and on new condensate tanks with a potential to emit of 5 tpy VOCs. • Green completions for all well completion activities. • Tier II drill rig engines by 2012, with phase-in of Tier IV engines or equivalent emission reduction technology as soon as possible thereafter, but no later than 2018 • Lean burn natural gas-fired stationary compressor engines or equipment with equivalent emission rates. • Catalyst on all natural gas-fired compressor engines to reduce the emissions of CO and VOCs. • Dry seals on new centrifugal compressors. • An annual inspection and maintenance program to reduce VOC emissions, including: <ul style="list-style-type: none"> • Performing inspections of thief hatch seals and Enardo pressure relief valves to ensure proper operations. • Reviewing gathering system pressures to evaluate any areas where gathering pressure may be reduced, resulting in lower flash losses from the condensate storage tanks. • Vent emissions from stock tanks and natural gas TEG dehydrators would be controlled by routing the emissions to a flare or similar control device which would reduce emissions by 95% or greater. • Low bleed pneumatics would be installed on separator dump valves and other controllers. The use of low bleed pneumatics would result in a lower emission of VOCs. • During completion, flaring would be limited as much as possible. Production equipment and gathering lines would be installed as soon as possible. • Well site telemetry would be utilized as feasible for production operations. • 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. <p>Additional site-specific measures may also be employed to avoid or minimize effects to local or regional air quality. These additional measures will be developed and implemented in coordination with the U.S. Environmental Protection Agency, the Utah Department of Air Quality, and other agencies with expertise or jurisdiction as appropriate.</p>
<p>UT-LN-97</p>	<p style="text-align: center;">WEST TAVAPUTS</p> <p>The lessee is given notice that the parcel falls within the area recently analyzed West Tavaputs Plateau Natural Gas Full-Field Development Environmental Impact Statement (WTP EIS). The Record of Decision (ROD) for the WTP EIS was signed in July, 2010 and includes provisions regarding development activities within the WTP EIS study area. Those provisions include but are not limited to, protection of cultural resources, as outlined in the WTP Programmatic Agreement; wildlife mitigation, as outline in the WTP wildlife mitigation plan; water quality monitoring, as outlined in the Water Quality Monitoring Plan; and air quality measures, which would minimize air quality impacts. Additional provisions can be found in Attachment 2 of the WTP EIS ROD.</p>

<p>UT-LN-99</p>	<p style="text-align: center;">REGIONAL OZONE FORMATION CONTROLS</p> <p>To mitigate any potential impact oil and gas development emissions may have on regional ozone formation, the following Best Management Practices (BMPs) would be required for any development projects:</p> <ul style="list-style-type: none"> • 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
<p>UT-LN-102</p>	<p style="text-align: center;">AIR QUALITY ANALYSIS</p> <p>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.</p>

<p>T&E-05</p>	<p style="text-align: center;">LISTED PLANT SPECIES</p> <p>The Lessee/Operator is given notice that the lands in this parcel contain suitable habitat for federally listed plant species under the Endangered Species Act. The following avoidance and minimization measures have been developed to facilitate review and analysis of any submitted permits under the authority of this lease.</p> <p>Site inventories: Must be conducted to determine habitat suitability, Are required in known or potential habitat for all areas proposed for surface disturbance prior to initiation of project activities, at a time when the plant can be detected, and during appropriate flowering periods, Documentation should include, but not be limited to individual plant locations and suitable habitat distributions, and All surveys must be conducted by qualified individuals. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated. Project activities must be designed to avoid direct disturbance to populations and to individual plants: Designs will avoid concentrating water flows or sediments into plant occupied habitat. Construction will occur down slope of plants and populations where feasible; if well pads and roads must be sited upslope, buffers of 100 feet minimum between surface disturbances and plants and populations will be incorporated. Where populations occur within 200 ft. of well pads, establish a buffer or fence the individuals or groups of individuals during and post-construction. Areas for avoidance will be visually identifiable in the field, e.g., flagging, temporary fencing, rebar, etc. For surface pipelines, use a 10 foot buffer from any plant locations: If on a slope, use stabilizing construction techniques to ensure the pipelines don't move towards the population. For riparian/wetland-associated species, e.g. Ute ladies-tresses, avoid loss or disturbance of riparian habitats: Ensure that water extraction or disposal practices do not result in change of hydrologic regime. Limit disturbances to and within suitable habitat by staying on designated routes. Limit new access routes created by the project. Place signing to limit ATV travel in sensitive areas. Implement dust abatement practices near occupied plant habitat. All disturbed areas will be re-vegetated with native species comprised of species indigenous to the area. Post construction monitoring for invasive species will be required. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in plant habitat. Ensure that such directional drilling does not intercept or degrade alluvial aquifers. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated. Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the U.S. Fish and Wildlife Service between the lease sale stage and lease development stage to ensure continued compliance with the ESA.</p>
<p>T&E-06</p>	<p style="text-align: center;">MEXICAN SPOTTED OWL</p> <p>The Lessee/Operator is given notice that the lands in this lease contain suitable habitat for Mexican spotted owl, a federally listed species. The Lessee/Operator is given notice that the lands in this lease contain Designated Critical Habitat for the Mexican spotted owl, a federally listed species. Critical</p>

	<p>habitat was designated for the Mexican spotted owl on August 31, 2004 (69 FR 53181-53298). Avoidance or use restrictions may be placed on portions of the lease. Application of appropriate measures will depend whether the action is temporary or permanent, and whether it occurs within or outside the owl nesting season. A temporary action is completed prior to the following breeding season leaving no permanent structures and resulting in no permanent habitat loss. A permanent action continues for more than one breeding season and/or causes a loss of owl habitat or displaces owls through disturbances, i.e. creation of a permanent structure. The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the Endangered Species Act. Integration of, and adherence to these measures, will facilitate review and analysis of any submitted permits under the authority of this lease. Following these measures could reduce the scope of Endangered Species Act, Section 7 consultation at the permit stage.</p> <p>Current avoidance and minimization measures include the following:</p> <p>Surveys will be required prior to operations unless species occupancy and distribution information is complete and available. All Surveys must be conducted by qualified individual(s).</p> <p>Assess habitat suitability for both nesting and foraging using accepted habitat models in conjunction with field reviews. Apply the conservation measures below if project activities occur within 0.5 mile of suitable owl habitat. Determine potential effects of actions to owls and their habitat.</p> <ul style="list-style-type: none"> a) Document type of activity, acreage and location of direct habitat impacts, type and extent of indirect impacts relative to location of suitable owl habitat. b) Document if action is temporary or permanent. <p>Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated.</p> <p>Water production will be managed to ensure maintenance or enhancement of riparian habitat. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in canyon habitat suitable for Mexican spotted owl nesting.</p> <p>For all temporary actions that may impact owls or suitable habitat:</p> <ul style="list-style-type: none"> a) If the action occurs entirely outside of the owl breeding season (March 1 – August 31), and leaves no permanent structure or permanent habitat disturbance, action can proceed without an occupancy survey. b) If action will occur during a breeding season, survey for owls prior to commencing activity. If owls are found, activity must be delayed until outside of the breeding season. c) Rehabilitate access routes created by the project through such means as raking out scars, re-vegetation, gating access points, etc. <p>For all permanent actions that may impact owls or suitable habitat:</p> <p>Survey two consecutive years for owls according to accepted protocol prior to commencing activities. If owls are found, no actions will occur within 0.5 mile of identified nest site. If nest site is unknown, no activity will occur within the designated Protected Activity Center (PAC).</p> <p>Avoid drilling and permanent structures within 0.5 mi of suitable habitat unless surveyed and not occupied.</p> <p>Reduce noise emissions (e.g., use hospital-grade mufflers) to 45 dBA at 0.5 mile from suitable habitat, including canyon rims. Placement of permanent noise-generating facilities should be determined by a noise analysis to ensure noise does not encroach upon a 0.5 mile buffer for suitable habitat, including canyon rims.</p> <p>Limit disturbances to and within suitable habitat by staying on approved routes.</p> <p>Limit new access routes created by the project.</p> <p>Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the U.S. Fish and Wildlife Service between the lease sale stage and lease development stage to ensure continued compliance with the ESA.</p>
T&E-15	Wright Fishhook Cactus (<i>Sclerocactus wrightiae</i>)

In order to minimize effects to the federally threatened Wright Fishhook Cactus, the Bureau of Land Management (BLM), in coordination with the U.S. Fish and Wildlife Service (Service), has developed the following avoidance and minimization measures. Implementation of these measures will help ensure the activities carried out during oil and gas development (including but not limited to drilling, production, and maintenance operations) are in compliance with the endangered Species Act (ESA). For the purposes of this document, the following terms are so defined:

- *Potential habitat* is defined as areas which satisfy the broad criteria of the species habitat description; usually determined by preliminary, in-house assessment.
- *Suitable habitat* is defined as areas which contain or exhibit the specific components or constituents necessary for plant persistence; determined by field inspection and/or surveys; may or may not contain Wright Fishhook Cactus; habitat descriptions can be found in Federal Register Notice and species recovery plan links at <http://www.fws.gov/endangered/wildlife.html>.
- *Occupied habitat* is defined as areas currently or historically known to support Wright Fishhook Cactus; synonymous with “known habitat.”

The following avoidance and minimization measures should be included in the Plan of Development:

1. Pre-project habitat assessments will be completed across 100% of the project disturbance area within potential habitat¹ prior to any ground disturbing activities (including ATV use) to determine if suitable Wright Fishhook Cactus habitat is present.
2. Site inventories will be conducted within suitable habitat to determine occupancy. Where standard surveys are technically infeasible and otherwise hazardous due to topography, slope, etc.. suitable habitat will be assessed and mapped for avoidance (hereafter, “avoidance areas”); in such cases, in general, 300’ buffers will be maintained between surface disturbance and avoidance areas. However, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat. Where conditions allow, inventories:
 - a. Must be conducted by qualified individuals(s) and according to BLM and Service accept survey protocols,
 - b. Will be conducted in suitable and occupied habitat for all areas proposed for surface disturbance prior to initiation of project activities and within the same growing season, at a time when the plant can be detected (usually April 15th to June 5th, however, surveyors should verify that the plant is flowering by contacting a BLM or FWS botanist or demonstrating that the nearest known population is in flower),
 - c. Will occur within 300’ from the centerline of the proposed right-of-way for surface pipelines or roads; and within 300’ from the perimeter of disturbance for the proposed well pad including the well pad,
 - d. Will include, but not be limited to, plant species lists and habitat characteristics, and
 - e. Will be valid until April 15th the following year.
3. Design project infrastructure to minimize impacts within suitable habitat:
 - a. Where standard surveys are technically infeasible, infrastructure and activities will avoid all suitable habitat (voidance areas) and incorporate 300’ buffers, in general; however, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat,
 - b. Reduce well pad size to the minimum needed, without compromising safety,
 - c. Where technically and economically feasible, use directional drilling or multiple wells from the same pad,
 - d. Limit new access routes created by the project,

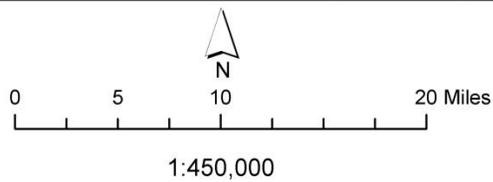
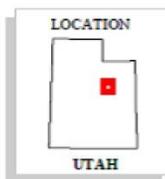
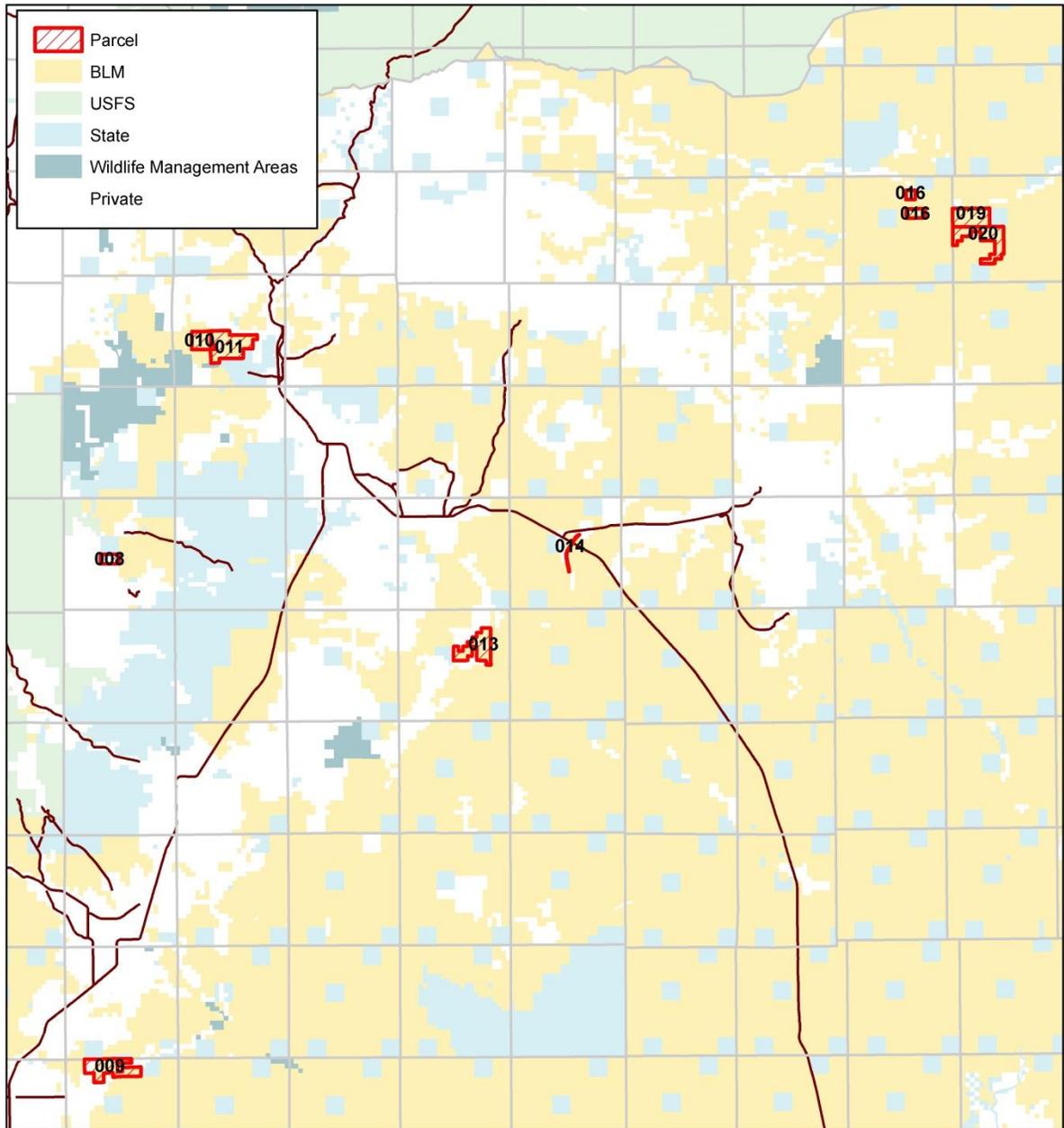
	<ul style="list-style-type: none"> e. Roads and utilities should share common right-of-ways where possible, f. Reduce the width of right-of-ways and minimize the depth of excavation needed for the road bed; where feasible, use the natural ground surface for the road within habitat, g. Place signing to limit off-road travel in sensitive areas, and h. Stay on designated routes and other cleared/approved areas, i. All disturbed areas will be revegetated with native species comprised of species indigenous to the area and non-native species that are not likely to invade other areas. <p>4. Within occupied habitat, project infrastructure will be designed to avoid direct disturbance and minimize indirect impacts to populations and to individual plants:</p> <ul style="list-style-type: none"> a. Follow the above recommendations (#3) for project design within suitable habitats, b. To avoid water flow and/or sedimentation into occupied habitat and avoidance areas, silt fences, hay bales, and similar structures or practices will be incorporated into the project design; appropriate placement of fill is encouraged, c. Construction of roads will occur such that the edge of the right of way is at least 300' from any plant and 300' from avoidance areas, d. Roads will be graveled with occupied habitat; the operator is encouraged to apply water for dust abatement to such areas from April 15th to June 5th (flowering period); dust abatement applications will be comprised of water only, e. The edge of the well pad should be located at least 300' away from plants and avoidance areas, in general; however, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat, f. Surface pipelines will be laid such that a 300' buffer exists between the edge of the right of way and plants and 300' between the edge of right of way and avoidance areas; use stabilizing and anchoring techniques when the pipeline crossed suitable habitat to ensure pipelines don't move towards the population; site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat, g. Construction activities will not occur from April 15th through June 5th within occupied habitat, h. Before and during construction, areas for avoidance should be visually identifiable in the field, e.g., flagging temporary fencing, rebar, etc., i. Place produced oil, water, or condensate tanks in centralized locations, away from occupied habitat, and j. Minimize the disturbed area of producing well locations through interim and final reclamation. Reclaim well pads following drilling to the smallest area possible. <p>5. Occupied Wright Fishhook Cactus habitats within 300' of the edge of the surface pipelines' right-of-ways, 300' of the edge of the roads' right-of-ways, and 300' from the edge of the well pad shall be monitored for a period of three years after ground disturbing activities. Monitoring will include annual plant surveys to determine plant and habitat impacts relative to project facilities. Annual reports shall be provided to the BLM and the Service. To ensure desired results are being achieved, minimization measures will be evaluated and may be changed after a thorough review of the monitoring results and annual reports during annual meetings between the BLM and the Service.</p> <p>6. Reinitiation of section 7 consultation with the Service will be sought immediately if any loss of plants or occupied habitat for the Wright Fishhook Cactus is anticipated as a result of project activities. Additional site-specific measures may also be employed to avoid or minimize effects to the species, These additional measures will be developed and implemented in consultation with the U.S. Fish and Wildlife Service to ensure continued compliance with the ESA.</p>
--	---

T&E-17	<p style="text-align: center;">San Rafael Cactus (<i>Pediocactus despainii</i>)</p> <p>In order to minimize effects to the federally threatened San Rafael Cactus, the Bureau of Land Management (BLM), in coordination with the U.S. Fish and Wildlife Service (Service), has developed the following avoidance and minimization measures. Implementation of these measures will help ensure the activities carried out during oil and gas development (including but not limited to drilling, production, and maintenance operations) are in compliance with the endangered Species Act (ESA). For the purposes of this document, the following terms are so defined:</p> <ul style="list-style-type: none"> • <i>Potential habitat</i> is defined as areas which satisfy the broad criteria of the species habitat description; usually determined by preliminary, in-house assessment. • <i>Suitable habitat</i> is defined as areas which contain or exhibit the specific components or constituents necessary for plant persistence; determined by field inspection and/or surveys; may or may not contain San Rafael Cactus; habitat descriptions can be found in Federal Register Notice and species recovery plan links at http://www.fws.gov/endangered/wildlife.html. • <i>Occupied habitat</i> is defined as areas currently or historically known to support San Rafael Cactus; synonymous with “known habitat.” <p>The following avoidance and minimization measures should be included in the Plan of Development:</p> <ol style="list-style-type: none"> 1. Pre-project habitat assessments will be completed across 100% of the project disturbance area within potential habitat¹ prior to any ground disturbing activities (including ATV use) to determine if suitable San Rafael Cactus habitat is present. 2. Site inventories will be conducted within suitable habitat to determine occupancy. Where standard surveys are technically infeasible and otherwise hazardous due to topography, slope, etc., suitable habitat will be assessed and mapped for avoidance (hereafter, “avoidance areas”); in such cases, in general, 300’ buffers will be maintained between surface disturbance and avoidance areas. However, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat. Where conditions allow, inventories: <ol style="list-style-type: none"> a. Must be conducted by qualified individuals(s) and according to BLM and Service accept survey protocols, b. Will be conducted in suitable and occupied habitat for all areas proposed for surface disturbance prior to initiation of project activities and within the same growing season, at a time when the plant can be detected (usually April 15th to June 5th, however, surveyors should verify that the plant is flowering by contacting a BLM or FWS botanist or demonstrating that the nearest known population is in flower), c. Will occur within 300’ from the centerline of the proposed right-of-way for surface pipelines or roads; and within 300’ from the perimeter of disturbance for the proposed well pad including the well pad, d. Will include, but not be limited to, plant species lists and habitat characteristics, and e. Will be valid until April 15th the following year. 3. Design project infrastructure to minimize impacts within suitable habitat: <ol style="list-style-type: none"> a. Where standard surveys are technically infeasible, infrastructure and activities will avoid all suitable habitat (avoidance areas) and incorporate 300’ buffers, in general; however, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat, b. Reduce well pad size to the minimum needed, without compromising safety, c. Where technically and economically feasible, use directional drilling or multiple wells from the same pad, d. Limit new access routes created by the project, e. Roads and utilities should share common right-of-ways where possible, f. Reduce the width of right-of-ways and minimize the depth of excavation needed for the
--------	--

	<p>road bed; where feasible, use the natural ground surface for the road within habitat,</p> <ul style="list-style-type: none"> g. Place signing to limit off-road travel in sensitive areas, and h. Stay on designated routes and other cleared/approved areas, i. All disturbed areas will be revegetated with native species comprised of species indigenous to the area and non-native species that are not likely to invade other areas. <p>4. Within occupied habitat, project infrastructure will be designed to avoid direct disturbance and minimize indirect impacts to populations and to individual plants:</p> <ul style="list-style-type: none"> a. Follow the above recommendations (#3) for project design within suitable habitats, b. To avoid water flow and/or sedimentation into occupied habitat and avoidance areas, silt fences, hay bales, and similar structures or practices will be incorporated into the project design; appropriate placement of fill is encouraged, c. Construction of roads will occur such that the edge of the right of way is at least 300' from any plant and 300' from avoidance areas, d. Roads will be graveled with occupied habitat; the operator is encouraged to apply water for dust abatement to such areas from April 15th to June 5th (flowering period); dust abatement applications will be comprised of water only, e. The edge of the well pad should be located at least 300' away from plants and avoidance areas, in general; however, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat, f. Surface pipelines will be laid such that a 300' buffer exists between the edge of the right of way and plants and 300' between the edge of right of way and avoidance areas; use stabilizing and anchoring techniques when the pipeline crossed suitable habitat to ensure pipelines don't move towards the population; site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat, g. Construction activities will not occur from April 15th through June 5th within occupied habitat, h. Before and during construction, areas for avoidance should be visually identifiable in the field, e.g., flagging temporary fencing, rebar, etc., i. Place produced oil, water, or condensate tanks in centralized locations, away from occupied habitat, and j. Minimize the disturbed area of producing well locations through interim and final reclamation. Reclaim well pads following drilling to the smallest area possible. <p>5. Occupied San Rafael Cactus habitats within 300' of the edge of the surface pipelines' right-of-ways, 300' of the edge of the roads' right-of-ways, and 300' from the edge of the well pad shall be monitored for a period of three years after ground disturbing activities. Monitoring will include annual plant surveys to determine plant and habitat impacts relative to project facilities. Annual reports shall be provided to the BLM and the Service. To ensure desired results are being achieved, minimization measures will be evaluated and may be changed after a thorough review of the monitoring results and annual reports during annual meetings between the BLM and the Service.</p> <p>6. Reinitiation of section 7 consultation with the Service will be sought immediately if any loss of plants or occupied habitat for the San Rafael Cactus is anticipated as a result of project activities. Additional site-specific measures may also be employed to avoid or minimize effects to the species, These additional measures will be developed and implemented in consultation with the U.S. Fish and Wildlife Service to ensure continued compliance with the ESA.</p>
--	--

APPENDIX B
MAPS

Map 1



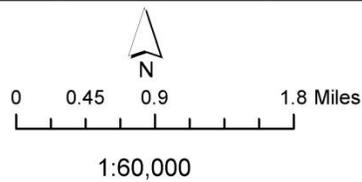
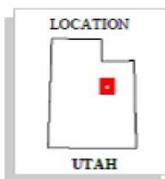
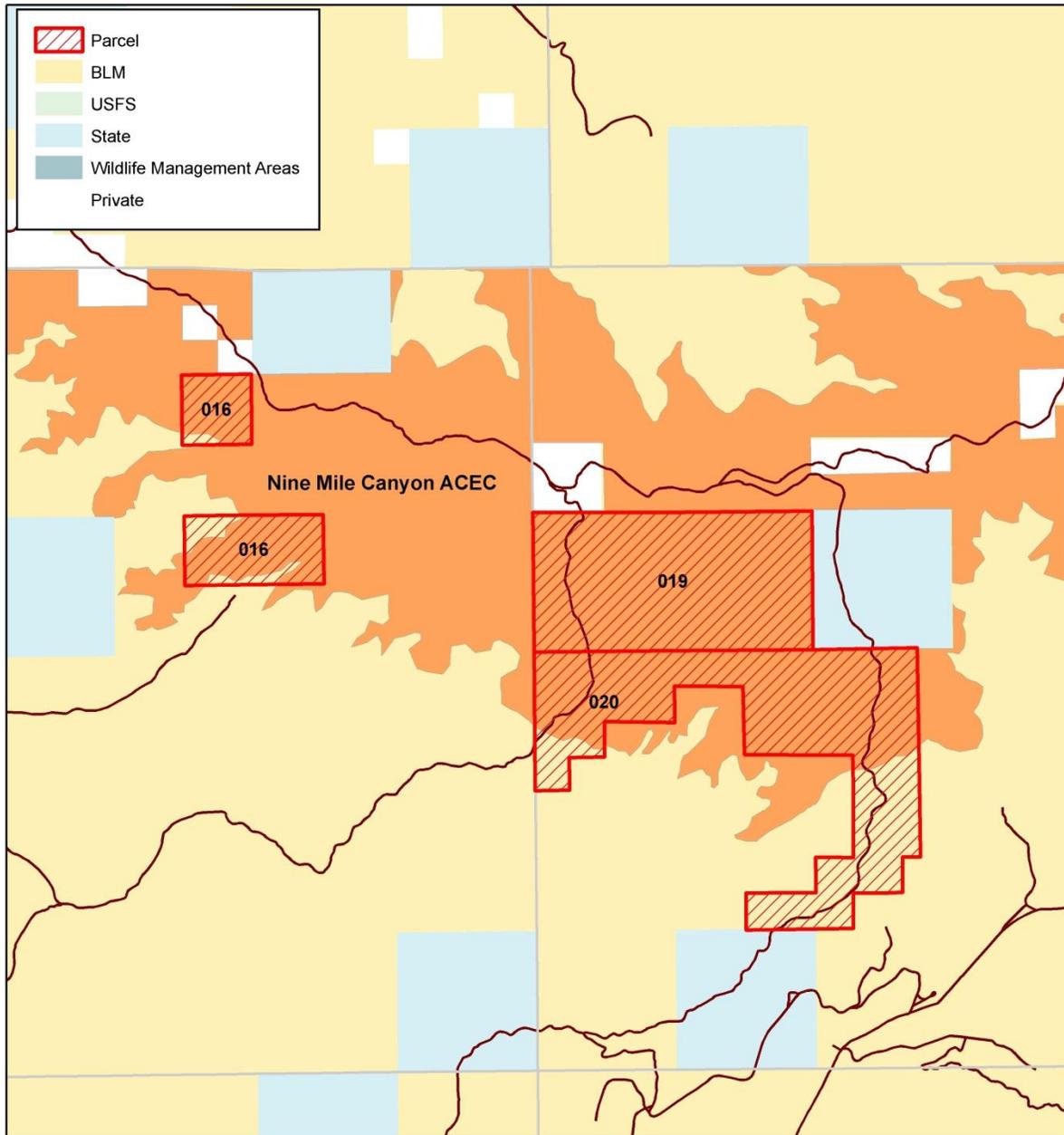
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE



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

Map 2

Nine Mile Canyon ACEC - NSO



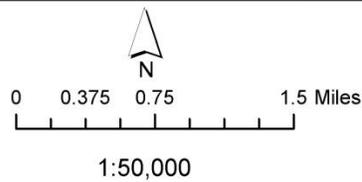
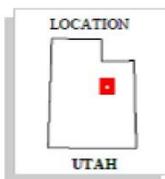
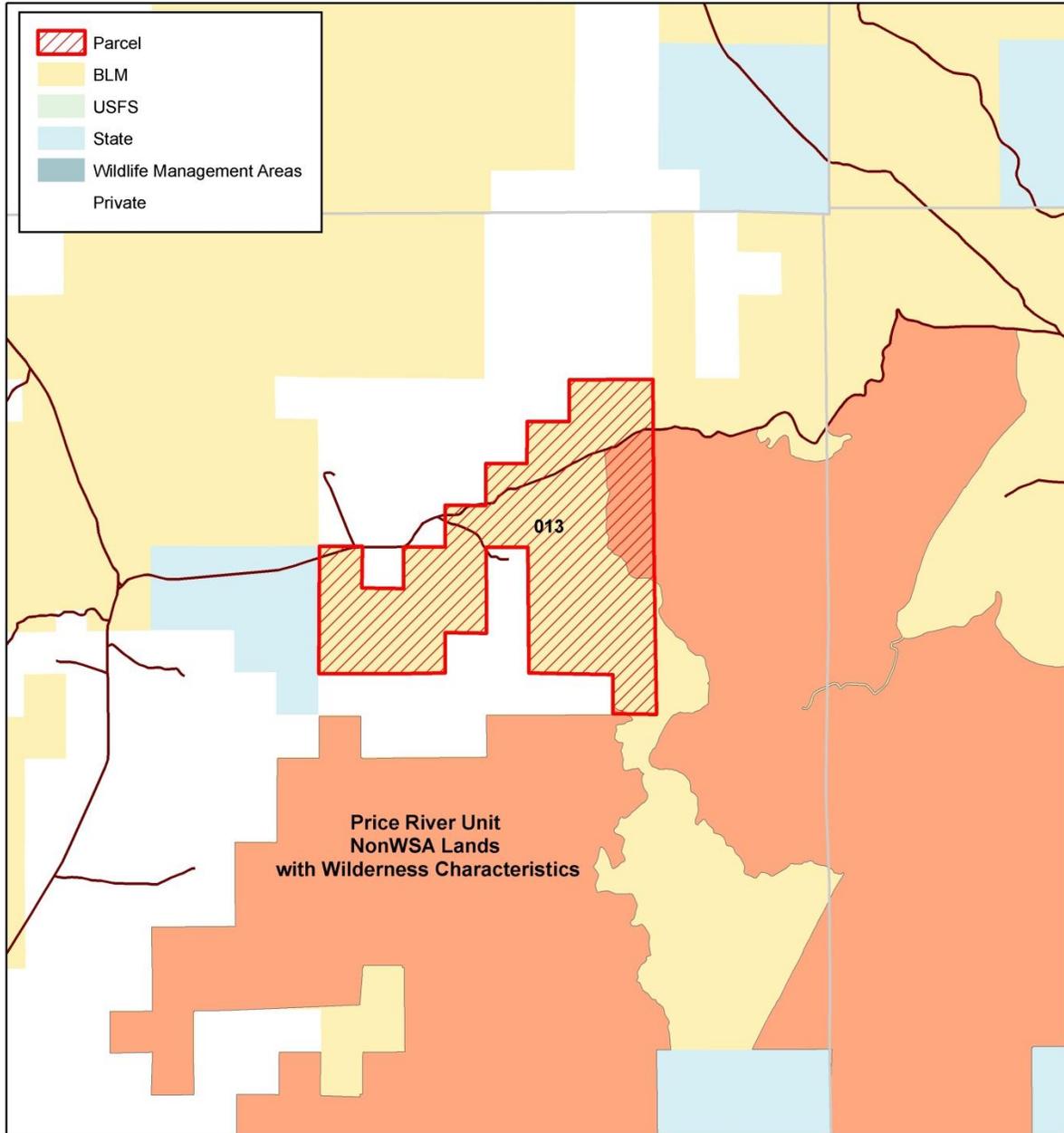
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE



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

Map 3

Price River
NonWSA Lands with Wilderness Characteristics



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



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

APPENDIX C
INTERDISCIPLINARY TEAM ANALYSIS RECORD CHECKLIST

INTERDISCIPLINARY TEAM ANALYSIS RECORD CHECKLIST

Project Title: November 2012 Competitive Oil and Gas Lease Sale
NEPA Log Number: DOI-BLM-UT-G021-2012-0034-EA
File/Serial Number: Not Applicable
Project Leader: Kyle Beagley

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 significant impact analyzed in detail in the EA; or identified in a DNA as requiring further analysis

NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form.

Determination	Resource	Rationale for Determination	Signature	Date
RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)				
PI	Air Quality	<p>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 adversely affect air quality. Application of UT-S-01, UT-LN-99, and UT-LN-102 is warranted for all parcels. Lease notice UT-LN-97 is applied to parcels 016, 019, and 020 that occur within the WTP project area.</p> <p>No standards have been set by EPA or other regulatory agencies for greenhouse gases. In addition, the assessment of greenhouse gas emissions and climate change is still in its earliest stages of formulation. Global scientific models are inconsistent, and regional or local scientific models are lacking so that it is not technically feasible to determine the net impacts to climate due to greenhouse gas emissions. It is anticipated that greenhouse gas emissions associated with this action and its alternative(s) would be negligible.</p>	Stephanie Howard/Leonard Herr	5/17/12
NI	Greenhouse Gas Emissions/Climate Change	<p>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.</p> <p>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</p>	Stephanie Howard/Leonard Herr	5/17/12

Determination	Resource	Rationale for Determination	Signature	Date
		<p>information on the impacts to climate change is known, such information would be incorporated into the BLM's planning and NEPA documents as appropriate.</p> <p>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 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.</p>		
NI	Areas of Critical Environmental Concern	<p>After review of the GIS/RMP data, it has been determined that lease parcels 016, 019 and 020 overlap with Nine Mile Canyon ACEC. Oil and gas will be open to leasing subject to major constraints, No Surface Occupancy (NSO). Oil and gas development in the Nine Mile Canyon ACEC will be permitted after compliance with the NHPA. Lease Notices and stipulations, namely UT-S-319 (NSO within the ACEC) have been attached to parcels that are in the Nine Mile ACEC, (lease parcels 016, 019 and 020).</p>	Josh Winkler	5/29/12
NI	BLM Sensitive Animal Species	<p>Ferruginous Hawks and bluehead suckers have been observed, and there is potential for sensitive bat species to be in the area. Lease stipulations and notices should be added to those parcels to reduce any future project's impacts. Site-specific effects cannot be analyzed until an exploration or development application is received, after leasing has occurred.</p> <p>UT-LN-49 is attached to parcels 008 and 014 (Ferruginous hawks) UT-LN-49 is attached to parcels 009 and 016 (white-tailed prairie dogs, bats, bluehead suckers, burrowing owls, and yellow-billed cuckoos)</p>	David L. Waller/ Darren Williams	2012-Mar-29
NI	Cultural Resources	<p>A complete inventory of the proposed lease parcels has not occurred; however cultural resource sites have been identified within the parcels.</p> <p>After consideration of cultural resource information and other general data including: the applicable Price Field Office Resource Management Plan (RMP) and associated Environmental Impact Statement (EIS); oil and gas activity NEPA documents; specific data relating to the individual proposed parcels such as topography and soils; as well as personal knowledge and experience of the lands at issue, it has been determined that reasonable development could occur without adverse impacts to cultural properties eligible to the NRHP.</p>	Cameron Cox	5/31/12

Determination	Resource	Rationale for Determination	Signature	Date
		<p>The potential for locating additional cultural resources within the proposed lease parcels low to moderate.</p> <p>The BLM will not approve any ground disturbing activities that may affect such properties or resources until it completes its obligations under applicable requirements of the NHPA and other authorities. The BLM may require modification to exploration or development proposals to protect properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized or mitigated.</p> <p>Application of UT-S-169 (cultural resources inventory) is warranted for all parcels.</p>		
NI	Environmental Justice	The ethnic composition and economic situation of residents of Carbon and Emery Counties indicate that no minority or low-income populations are experiencing disproportionately high or adverse effects from current management actions (RMP EIS). Leasing would not adversely or disproportionately affect minority, low income or disadvantaged groups.	Kyle Beagley	4/2/12
NP	Farmlands (Prime or Unique)	After review of NRCS Soil Survey of Carbon Area, Utah, it is determined that there is no Prime or Unique Farmlands within the project area.	Jeffrey Brower	04/03/12
NP	Floodplains	After review of USGS 7.5 min. maps of the project areas, no floodplain as defined by EO 11988, FEMA, or Corps of Engineers is found on or near the project area	Jeffrey Brower	04/03/12
NI	Invasive, Non-native Species (EO 13112)	<p>Surface disturbing activities could introduce or spread invasive/non-native species. Lessees would be required to control invasive/non-native species on roads, pads and ROWs. A PUP and PAR would be required before and after all chemical treatments. If treatment occurs as part of regular operations, BMPs, SOPs and site specific mitigation are applied at the APD stage as conditions of approval, negligible impacts would be expected.</p> <p>UT-S-305 is attached to all parcels (Noxious Weeds)</p>	Stephanie Bauer	5/31/12
NI	Native American Religious Concerns	<p>Consultation ongoing</p> <p>Letters containing notification of this lease sale, location maps and legal descriptions of the offered parcels were sent to the Tribes. The letters detailed the leasing proposal and requested comments and concerns.</p>	Julie Howard/Kyle Beagley	5/31/12
PI	Threatened, Endangered or Candidate Plant Species	There are no known populations of Federally listed or candidate plants within the proposed parcels. However, there is potential habitat for <i>Pediocactus despainii</i> and <i>Sclerocactus wrightiae</i> present. Lease Notices and stipulations have been attached to parcels that are known to contain threatened, endangered or candidate plant species or their habitat and site-specific surveys will determine whether T&E plant species are present. Federally listed species may be present within the lease parcels 009. Should T&E plant species be found, the surface use plan of operations may be amended to protect or avoid these	Dana Truman	4/20/2012

Determination	Resource	Rationale for Determination	Signature	Date
		species. T&E-05, T&E-15 and T&E-17 are applied to parcel 009.		
NI	Threatened, Endangered or Proposed Animal Species	There is modeled potential habitat for Mexican Spotted Owls on some of the parcels, based upon USFWS GIS models. No other listed or proposed species would be expected to be potentially on these sites. Lease stipulations and notices should be added to those parcels to reduce any future project's impacts. Site-specific effects cannot be analyzed until an exploration or development application is received, after leasing has occurred. Until there is a site-specific proposal, there is no action directly or indirectly causing modifications to the land, water, or air, therefore "no effect" on any listed animal species or designated critical habitat. T&E-06 is applied to parcels 011, 016, 019, and 020 (MSO).	David L. Waller/ Darren Williams	2012-Mar-29
PI	ESA Candidate Animal Species	Greater sage grouse could be present on the parcels. Lease stipulations should be added to those parcels to reduce any future project's impacts. Greater sage grouse are now a candidate species, which was not the case when the PFO ROD/RMP was completed. Further analysis in the EA is recommended to determine if additional stipulations are needed for access through sage grouse habitat. UT-S-212 is attached to parcels 011, 019, 020.	David L. Waller/ Darren Williams	2012-Mar-29
NI	Wastes (hazardous or solid)	No chemicals subject to reporting under SARA Title III will be used, produced, stored, transported, or disposed of annually in association with the project. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the project. Trash would be confined in a covered container and disposed of in an approved landfill. No burning of any waste will occur due to this project. Human waste will be disposed of in an appropriate manner in an approved sewage treatment center.	Jeffrey Brower	04/03/12
NI	Water Quality (drinking/ground)	The lease parcels do not occur within any Sole Source Aquifers or Drinking Water Source Protection Zones (DWSPZs). Compliance with IM UT 2010-055 would be completed prior to APD approval. Maintenance and refueling of equipment could impact water quality. However, standard protocols would minimize possibility of releases. Drill holes will be cased to an elevation below 5800 feet. No surface disturbance or occupancy would be maintained within 660 feet of any natural springs to protect the water quality of the spring. No new disturbance will 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. At the time of development, drilling operators will conform to the provisions of the operational regulations and Onshore Oil & Gas Order Number 2, which requires the protection and isolation of all	Jeffrey Brower	04/03/12

Determination	Resource	Rationale for Determination	Signature	Date
		useable quality waters. High-country watershed areas would be closed seasonally from December 1 to April 15 to surface disturbing activity at elevations above 7,000 feet. UT-S-126 and UT-S-127 are attached to all parcels (Natural Springs, and Floodplains, Riparian Areas, Springs and Public Water Resources). UT-S-156 is applied to parcels 010, 011, 016, 019, & 020 (High Country Watershed).		
PI	Hydrologic Conditions	The associated surface disturbance from oil and gas development on the proposed leases would have the potential to interrupt surface flow patterns which could create new channeling of surface runoff from storms and spring snow melt. The construction of well pads, roads and pipelines could interrupt surface runoff and create paths for concentrated surface flow. Impacts to hydrologic conditions could increase sediment loading and associated dissolved solids into streams. As described in water quality above, application of UT-S-126, UT-S-127, and UT-S-156 is warranted.	Jeffrey Brower	04/03/12
NI	Wetlands/Riparian Zones	Wetlands/riparian zones are located on parcels 009, 010, 011, 013, 016, 019, & 020. These wetlands and riparian zones include Ferron Creek (parcel 009), Wildcat Canyon (parcel 010), Spring Canyon (parcel 011), Nine Mile Creek (parcel 016), Dry Canyon (parcel 019 and parcel 020) and Cottonwood Canyon (parcel 020). UT-S-127 is applied to the listed parcels.	Karl Ivory	04/9/2012
NP	Wild and Scenic Rivers	There are no Wild and Scenic Rivers within this project area as per RMP/GIS review	Matt Blocker	5/3/2012
NP	Wilderness and Wilderness Study Areas	There are no Wilderness/WSAs within this project area as per RMP/GIS review	Matt Blocker	5/3/2012
NI	Rangeland Health Standards and Guidelines	Water quality, soils, vegetation, Threatened & Endangered Species habitat and other components of ecological conditions that are considered in Rangeland Health Standards and Guides have been analyzed in the Price RMP. Given the degree of anticipated exploration and development and application of standard operating procedures, best management practices and mitigation applied at the APD stage as conditions of approval it is concluded that Rangeland Health Standards would be met.	Dana Truman	4/9/2012
NI	Livestock Grazing	Standard operating procedures, best management practices and site specific mitigation applied at the APD stage as conditions of approval will address livestock grazing resource issues not already analyzed in the Price RMP. Any range improvements such as fences and cattle-guards that would be affected would be replaced or repaired by the applicant. The applicant would replace any barriers to livestock that are removed through field development.	Dana Truman	4/20/2012
NI	Woodland / Forestry	Standard operating procedures, best management practices and site specific mitigation applied at the APD stage as conditions of approval will address woodland and forest resources issues not already analyzed in the PFO Proposed	Stephanie Bauer	

Determination	Resource	Rationale for Determination	Signature	Date
		RMP/Final EIS.		
NI	Vegetation including Special Status Plant Species other than FWS candidate or listed species	Standard operating procedures, best management practices and site specific mitigation applied at the APD stage as conditions of approval will address vegetation. There are no known populations of or habitat for sensitive species present in the proposed parcels. Should any special status plant species be found, the surface use plan of operations may be amended to protect or avoid these species. As such there will likely be no adverse impacts to special status plant species.	Dana Truman	4/20/2012
NI	Fish and Wildlife, excluding USFWS Listed Species and BLM Sensitive Species, e.g. Migratory birds	The lease parcels contain cottonwoods and sagebrush, which are important habitats for mule deer, elk, raptors, and migratory birds. The area is mostly used as wintering habitat, according to the maps prepared by UDWR. Lease stipulations and notices should be added to those parcels to reduce any future project's impacts. Site-specific effects cannot be analyzed until an exploration or development application is received, after leasing has occurred. Some of the parcels have known raptor nests. UT-S-232 is attached to parcels 008, 010, 011, and 016 (Deer and Elk Crucial Winter). UT-LN-17 is attached to parcels 013 and 014 (Pronghorn Fawning). UT-LN-45 is attached to parcels 008, 009, 014, 016, 019, and 020 (Migratory Bird). UT-S-260 is attached to parcels 010, 011, 016, 019, and 020 (Raptor Nesting)	David L. Waller/ Darren Williams	2012-Mar-29
NI	Soils	NSO is applied on slopes greater than 40%. In surface disturbing proposals regarding construction on slopes of 20 percent to 40 percent, proponent would include an approved erosion control strategy and topsoil segregation/restoration plan. Such construction must be properly surveyed and designed by a certified engineer and approved by the BLM prior to project implementation, construction, or maintenance. Other standard operating procedures, best management practices and site specific mitigation applied at the APD stage including reclamation, as conditions of approval will address soil resource issues not already analyzed in the PFO Proposed RMP/Final EIS. UT-S-97 and UT-S-101 are applied to all parcels (NSO for slopes greater than 40%, and CSU on slopes 20 – 40%).	Jeffrey Brower	04/03/12
NI	Recreation	The proposed action is in an area (Extensive Recreation Management Area) where recreation opportunities and problems are limited and explicit recreation management is not required. Minimal management actions related to the BLM's stewardship responsibilities are adequate in these areas. Implementation of the project would have minimal impact on dispersed recreation in the ERMA. As per the PFO ROD/RMP, recreation decision (REC-60), oil and gas will be open to leasing subject to minor constraints (timing limitations, controlled surface use, lease notices), except where the Nine Mile Canyon ACEC overlaps the SRMA.	Josh Winkler	5/23/12

Determination	Resource	Rationale for Determination	Signature	Date
		Where this overlap exists in the SRMA, the area will be open to leasing with major constraints (NSO). Outside of the SRMA, BLM finds the associated dispersed recreation opportunity to adequately incorporate public demands.		
NI	Visual Resources	The Visual Resource Management Class within the proposed action is a III and IV, which allows for the level of change to the characteristic of the landscape to be moderate to high. The objectives are to provide for management activities which require moderate to major modification of the existing character of the landscape. Implementation of the proposed project will have an impact to the landscape but will not exceed the Visual Resource Management Class III or IV objectives.	Don Stephens	5/31/12
NI	Geology / Mineral Resources/Energy Production	The FEIS and WTP FEIS adequately address the impacts of oil and gas leasing. Oil and gas exploration could lead to an increased understanding of the geologic setting, as subsurface data obtained through lease operations may become public record. This information promotes an understanding of mineral resources as well as geologic interpretation. 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 modified to protect other resources. Mineral claims have been checked (5/23/11) and none were observed; however if claims are present or staked prior to drilling activities, the proposed actions can accommodate any claims.	Don Stephens/ Chris Conrad	4/6/2012
NI	Paleontology	Parcels 009, 013, 016, 019, and 020 are located where the surface is outcrop of the Green River Fm, a Potential Fossil Yield Classification System class 5. This means it is likely that a BLM-permitted paleontologist will need to be on site during any surface disturbing activities. This includes roads, pads, pump stations, pipelines, etc. A pre-work survey by a paleontologist will not be necessary since the fossil type is such that it won't be visible on the surface. UT-S-177 is attached to parcels 009, 013, 016, 019 and 020.	Michael Leschin	5/30/12
NI	Lands / Access	As described, the proposed action would not affect access to public land. Off-lease ancillary facilities that cross public land, if any, may require separate authorizations. Subsequent projects should coordinate with existing ROW holders and apply operating procedures and site specific mitigation at the APD stage that would ensure protection of existing rights.	Connie Leschin	04/09/12
NI	Fuels / Fire Management	There are no past or proposed fuels treatments in the project area. The implementation of appropriate reclamation standards at the time of site specific proposals will prevent an increase of hazardous fuels.	Kevin Cahill	04/03/12

Determination	Resource	Rationale for Determination	Signature	Date
NI	Socio-economics	The nominated parcels are located in rural areas with no commercial and residential development. No impacts to socio-economics are expected to occur as a result of the proposed action.	Kyle Beagley	4/2/12
NI	Wild Horses and Burros	As per review of GIS and RMP maps, parcels 019, 020 lie within the Range Creek Wild Horse Herd Management Area Boundary. However they are not within a currently occupied use area.	Mike Tweddell	05/30/12
NP	BLM Natural Areas	There are no BLM Natural Areas within this project area as per RMP/GIS review.	Matt Blocker	5/29/12
NI	Coal	There are no apparent conflicts with either existing coal leases/operations or potential coal developments. Parcel 008 (Sec. 21 north of Hiawatha) is just south of old abandoned mine workings of the Starpoint Mines, but the parcel is just beyond the coal outcrop and should not have any coal lands or mine workings on the parcel.	Stephen Falk	5/30/12
PI	Non WSA Lands with Wilderness Characteristics	Approximately 138 acres of parcel 013 is located within Non WSA Lands with Wilderness Characteristics, Price River unit as per RMP/GIS review. It is anticipated that there will be both direct and indirect impacts to the wilderness characteristics such as, loss of naturalness, and loss of opportunities for solitude and primitive and unconfined recreation. However, the Approved Resource Management Plan, October 2008, Record of Decision, determined that the Non WSA lands with wilderness characteristics would not be managed for those characteristics because those lands were found to have other important resource uses that would conflict with protection, preservation, or maintenance of the wilderness characteristics.	Matt Blocker	5/29/12

FINAL REVIEW:

Reviewer Title	Signature	Date	Comments
Environmental Coordinator	<i>Unsigned</i>	--	--
Authorized Officer	<i>Unsigned</i>	--	--

**Appendix D
Comment Response Table**

Reserved

Number	Comment	Response
SUWA		
1	<p>BLM must conduct environmental analysis at the leasing stage while it still retains full discretion regarding its management decisions. In the case of air quality impacts and impacts to other resources, the BLM appears to be pushing that analysis off to some other day. This is prohibited by the NEPA.</p> <p>At the leasing stage, BLM makes an “irrevocable commitment” to allow construction of roads, well pads, and pipelines. Once the lease is issued, BLM no longer has the authority to prevent some level of development. Because the issuance of the proposed November 2012 leases is the point of commitment, BLM must fully consider the environmental impacts of the leases, including air pollution, before issuing them.</p>	<p>As described by the WO⁶, management of onshore federal oil and natural gas resources occurs in five distinct phases. Nothing changes on the ground as a result of a lease being issued. Likewise, no surface disturbance may begin on a lease without associated permits including the APD. BLM cannot approve an APD until the requirements of certain laws and regulations have been met, including CAA, NEPA, NHPA and ESA.</p> <p>BLM notes that this November 2012 lease sale EA complies with the level of NEPA analysis outlined in WO IM-2010-117 and is consistent with the National MOU for air quality. When and if an APD is submitted, BLM will also initiate NEPA that will invite additional public participation and consultation with agencies with expertise and jurisdiction by law. Based on that analysis, additional constraints may be imposed at the APD stage.</p> <p>The BLM’s analysis of potential air quality impacts and its related values are provided throughout the EAs (Vernal at sections 3.3.1, 4.2.1, 4.2.2, 4.3.1 and appendices A & C and Price at sections 3.3.1, 4.3.1.1, 4.3.2.1, 4.3.3.1 and appendices A & C). Controls for the management of air quality are established in EAs and are based on the avoidance and minimization measures that should be considered in a future plan of development.</p> <p>Given the projected level of emissions and air quality analysis in the WTP EIS and GNG EIS (as supplemented) BLM has</p>

⁶ Accessed online at: http://www.blm.gov/wo/st/en/prog/energy/oil_and_gas/leasing_of_onshore.html. The phases include planning, nomination/sales, permitting/development, operations/production and plugging/reclamation.

Number	Comment	Response
		determined that this level of NEPA analysis is appropriate.
2	<p>Particulate matter and ozone pollution are serious problems in the Uinta Basin. Monitors in the Uinta Basin reveal that ozone and fine particulate pollution concentrations have now reached levels in excess of federal air quality standards, something that neither the Vernal nor Price resource management plans (RMPs) ever considered and something that the Vernal EA and Price EA only acknowledge in passing.</p> <p>Ozone and PM_{2.5} values in the Uinta Basin, the area of these six contested leases, have recently been recorded well in excess of federal air quality standards.</p>	<p>Within the EAs (section 3.3.1 of both EAs) and in other documents and correspondence between/among EPA, BLM acknowledges pollution levels that have exceeded NAAQS within the Uinta Basin and the corresponding data sets obtained from the EPA and UDAQ which document those exceedences.</p> <p>Ozone concentrations during winter inversion events are currently the only air quality issue of note in the Uinta Basin (SUWA’s allegations notwithstanding), and BLM describes the current state of knowledge related to this phenomenon in Section 3.3.1 of the draft EAs. This description is not acknowledging the ozone issue “in passing”, but is an accurate and complete description of the winter ozone problem as understood today. Contrary to commentor’s allegation, particulate matter is currently not an issue in the areas covered by this leasing action. Particulate concentrations have been measured above the current NAAQS in the town of Vernal, which the EA also notes, but has not been linked to oil and gas development in the Uinta Basin. While it is possible that oil and gas development may be contributing to this, no evidence exists to document this and commentor is engaging in pure speculation to try to link these readings to oil and gas operations. This is also explained in the EA.</p>
3	<p>The Vernal EA and Price EA acknowledge that oil and gas development has likely caused exceedances of federal air quality standards for ozone and PM_{2.5} in the Uinta Basin. Two of the biggest air quality problems associated with oil and gas development are ground level ozone and PM_{2.5}.</p> <p>The pollution emissions of oil and gas projects are measurable; this evidence repudiates the Vernal and Price EAs’ unsubstantiated claims to the contrary that quantitative analysis or additional analysis of these contributions would not be helpful at this point.</p> <p>Not only are oil and gas development and production emissions measurable and quantifiable, they are, at the very least, sufficient</p>	<p>BLM states that oil and gas development has likely contributed to exceedences of the ozone standard. BLM notes that there is little evidence to suggest this development activity is contributing substantially to any PM_{2.5} issues in the Uinta Basin.</p> <p>BLM is not stating that the emissions from oil and gas activities are not measureable but that the amount, location, and duration of future oil and gas operations cannot be known at the leasing stage (verses that of the project stage, as stated by the commentor) with enough certainty to conduct quantitative modeling that will produce results that could reasonably be used in decision making.</p> <p>Modeling is only an accurate and useful analytical tool for NEPA if specific source and operations data is available. In the case of</p>

Number	Comment	Response
	<p>to exacerbate poor air quality in the Uinta Basin. BLM’s claims to the contrary in the Vernal EA and Price EA lack evidence or support and are contradicted by analyses the BLM itself has done on other occasions, as well as the Price and Vernal EAs themselves. BLM must support its claims with adequate evidence in these EAs.</p> <p>The EPA has notified BLM of its concerns that elevated ozone levels in the Vernal Field Office are likely to increase due to current oil and gas development. Modeling and analysis conducted by the BLM confirms this. The Vernal EA and Price EA acknowledge that oil and gas development is responsible for the elevated levels of ozone in the Uinta Basin. A recent environmental analysis released by the BLM also acknowledged that oil and gas development was likely responsible for elevated ozone levels in the Uinta Basin.</p> <p>According to the EPA, this increase is “considered a significant project-specific contribution given the recent ozone monitored exceedances in the Uinta Basin.” The EPA also notified the BLM that this project had the “potential to contribute to significant impacts to PM_{2.5}.” The BLM routinely prepares PM_{2.5} analyses for oil and gas development in the Vernal Field Office; these analyses consistently show measurable, impactful increases in this pollutant. Thus, proposed development on existing leases in the Uinta Basin is already likely to continue and to further exacerbate poor air quality. Oil and gas development in the Uinta Basin contributes measurable, impactful levels of ozone and PM_{2.5} pollution. In light of the poor air quality in the Uinta Basin as a result of these two pollutants, those contributions are particularly damaging. These contributions have not been fully acknowledged and analyzed by the BLM in the Vernal and Price EAs.</p>	<p>leasing decisions this data is not available, and modeling would be at best speculative and certainly not reflective of actual impacts associated with these actions. A recent IBLA decision upholds this reasoning (IBLA 2011.133), and BLM reiterates that modeling at the leasing stage is neither warranted nor useful. Once specific projects are proposed resulting from a lease sale BLM can and does undertake appropriate analysis before approving these projects. This is a routine and effective function of BLM, and there are many examples of this analysis taking place. To suggest that simply because BLM approves a lease sale that development will occur without proper air quality analysis and controls is to ignore the actual practice that takes place when develop occurs on these lands.</p> <p>BLM is not claiming that emissions from oil and gas development could not or would not exacerbate existing air quality problems. BLM believes oil and gas development is contributing to existing ozone exceedance issues. BLM anticipates activities from this lease sale could contribute a minor amount to future exceedances. Based on the RFD for this lease sale and the controls identified in the EAs, BLM believes it is unlikely that emissions from this level of actively would majorly impact or exacerbate existing or potential future ambient ozone concentrations that haven’t already been analyzed in the WTP or GNB EISs.</p> <p>BLM does not “routinely” conduct PM_{2.5} analyses, nor has the analyses that have been done to date show measurable impactful increases in this pollutant.</p>
4	<p>BLM has not taken a hard look at the adverse effects of oil and gas development on air quality and it cannot approve development that will exceed federal air quality standards. Parcels 15, 16, 19, 20, 25 and 42 are located within the Uinta Basin airshed.</p>	<p>The BLM disagrees that the Vernal and Price November 2012 lease sale EAs contradict each other or within the individual EAs themselves and the commentor does not provide BLM with the specific locations of the implied contradictions. BLM cannot</p>

Number	Comment	Response
	<p>BLM recognizes ozone and PM2.5 pollution yet the EAs state that contributions would be negligible and that they are not likely to contribute to any violations of standards or at the very least will only contribute a small amount to future exceedences of air quality standards. BLM appears to commit to prepare dispersion modeling at the site-specific proposal stage before development will take place.</p> <p>The Vernal and Price EAs are contradictory in their air quality analysis and as a result, have not taken a hard look at the impacts of these potential leasing decisions on air quality. The internal inconsistency in the Vernal EA and Price EA must be eliminated and the BLM must perform this modeling analysis now, before it has issued these leases before it has committed to development. Considering the poor air quality of the region, it is not clear that any development can take place without further exacerbating already poor air quality levels.</p> <p>BLM’s Vernal and Price EAs claim that modeling at the prelease stage is not an accurate way to identify possible impacts. This explanation, however, conflicts with prior declarations by the BLM, with BLM’s practice, with reasonably foreseeable development scenarios the agencies has constructed, and with guidance from the EPA.</p> <p>The BLM’s repeated use of dispersion modeling on various projects demonstrates that the agency does find it useful for estimating impacts and quantifying them. It also shows that such models may be prepared well before leasing.</p> <p>In addition, the EPA, the agency charged with protecting the nation’s air quality and the technical expert in this realm, has continually indicated to BLM that modeling is useful and worthwhile.</p> <p>The BLM has already developed reasonably foreseeable development scenarios for how development might take place on leased parcels. These scenarios, which are used to project potential impacts to other resources, can easily be applied to air</p>	<p>logically follow the commentor’s points.</p> <p>BLM acknowledges that oil and gas development contributes to elevated levels of ozone pollution; however, this is not the case with particulate matter (PM_{2.5}). Particulate matter contributions have not been proven in this case.</p> <p>Within the comments, errors are not identified with respect to the application of the air quality stipulation (UT-S-01) or with lease notices UT-LN-97 (West Tavaputs), UT-LN-99 (Regional Ozone Formation Controls) and UT-LN-102 (Air Quality Analysis) for all applicable best management practices that would apply at the development stage for the subject parcels. Air quality is also affected by how well soil resources are managed. As such, concerns were not identified with BLM’s application of the stipulations for steep slopes, springs, streams, high country watersheds or noxious weed control.</p> <p>Informative and accurate modeling cannot occur before development proposals including locations, equipment, and development levels are known. The only reasonable foreseeable development on these parcels is exploratory at this stage. At the projected RFDs, development impacts would indeed be “negligible” and “only contribute a small amount” or have been analyzed in previous documents. It is critical to note that BLM acknowledges that even at the minor level of development forecast by the RFDs, BLM is acknowledging that emission will contribute, albeit to a minor level, to existing air quality issues. It is not until larger development is proposed that potential impacts and appropriate mitigation can be conclusively defined through more extensive analysis, including photochemical modeling where appropriate. Appropriate air quality controls are attached as stipulations or lease notices including those defined in the WTP and GNB EIS for the parcels located within the WTP project area. BLM notes that an important distinction is made here. The BLM thanks the commentor for acknowledging our efforts at project modeling and that it is done when modeling is appropriate.</p>

Number	Comment	Response
	<p>quality impacts analysis. BLM has not explained why such projections could not be applied to air quality development.</p> <p>The Vernal RMP did not analyze the potential contributions to ozone pollution from oil and gas development. The Price RMP did not prepare any quantitative modeling.</p> <p>To comply with NEPA’s “hard look” requirement, BLM must explain how its actions will or will not comply with environmental laws and policies, such as NAAQS. In fact, the Federal Land Policy and Management Act requires BLM to ensure that its approval of oil and gas development complies with all applicable air quality standards. BLM must analyze air emissions associated with oil and gas development, and determine whether those emissions will result in violations of federal air quality standards.</p> <p>In analyzing the air quality impacts of its actions under NEPA, BLM must pay special attention to the degree to which the proposed action affects public health or safety. BLM’s failure to analyze ozone pollution and the potential contributions from development of these six leases to those pollution levels are fatal and do not satisfy the agency’s NEPA hard look requirement. The agency has neglected its duty to inform the public of whether it will comply with air quality standards and to discuss the potential public health impacts for a pollutant – ozone – that can lead to adverse health effects in humans such as decreased lung function and possible cardiovascular-related mortality and respiratory morbidity. Also, because the BLM’s analysis here does not include information on elevated levels of PM_{2.5} that have recently been recorded in the Uinta Basin, it has not satisfied its hard look obligations for discussing how impacts will not comply with federal air quality standards as well as public health effects.</p> <p>The Vernal and Price EAs acknowledge that air pollution levels will continue to exceed federal air quality standards and that this development will add to that pollution, even if such contributions are minor. The BLM may not permit this and therefore may not</p>	<p>Modeling at the <u>project</u> stage has been and will continue to be used to estimate air pollution impacts from BLM authorized activities. BLM does not know, at the present time, what projects may or may not occur on these parcels beyond the RFDs identified in the EAs. It is possible that further development may be proposed resulting from the exploratory development reflected by the RFDs, and if and when that occurs, BLM will incorporate that site specific information needed to conduct modeling.</p> <p>Modeling was conducted for the WTP and GNB EIS in which BLM tiers to or incorporates by reference in this EA for the parcels located within the WTP project area.</p> <p>The commentor maintains that the BLM’s repeated use of dispersion modeling on various projects demonstrates that the agency does find it useful for estimating impacts and quantifying them and that it also shows that such models may be prepared well before leasing. The BLM maintains that the use of modeling at the project stage in no way says anything about the feasibility of doing modeling “well before leasing.” If anything, it repudiates that notion.</p>

Number	Comment	Response
	<p>offer these seven leases.</p> <p>BLM’s proposed air quality pollution mitigation measures in the Vernal and Price EAs will not eliminate emissions. Since air quality of the Unita Basin is already exceeding federal air quality standards, new sources of pollution will only further exacerbate that problem.</p> <p>BLM attempts to rely on air quality analysis performed in various outside documents to consider air quality impacts here. However, this reliance is misplaced and does not satisfy BLM’s NEPA or FLPMA obligations.</p> <p>BLM cannot now rely on the air quality studies presented in the West Tavaputs EIS, the Uinta Basin Air Quality Study, Greater Natural Buttes or Gasco.</p>	
5	<p>The BLM did not consider the effects of its decision to issue these seven leases on climate change or how climate change will impact the resources related to the development of these seven leases.</p> <p>The EPA has pointed out the inadequacies of BLM’s analysis and the BLM itself has now begun preparing some climate change analysis in other documents, demonstrating that this may be done. Unfortunately, the BLM’s protest decision merely attempts to explain its refusal to conduct this analysis at the lease sale stage, the point of an irreversible and irretrievable commitment of resources.</p> <p>In Secretarial Order 3289, Secretary Salazar stated that BLM “must consider and analyze potential climate change impacts when undertaking long-range planning exercises” and also made clear that the requirements in Secretarial Order No. 3226 remain in effect. Order 3226, issued by then-Interior Secretary Bruce Babbitt, requires BLM to “consider and analyze potential climate change impacts” when undertaking long-range planning exercises, including specifically “management plans and activities developed for public lands.” These Orders are enforceable and demand BLM’s compliance. The issuance of these six leases and the potential oil and gas development that would ensue constitute</p>	<p>BLM has not made a decision as to whether these parcels will be leased and continues with the NEPA process. Numerous statements are made about a “decision” and “protest decision” within this comment. Where this occurs the BLM believes these are remnants of other correspondence with the BLM and that it would not apply to this situation.</p> <p>Greenhouse gases and climate change were discussed at EAs. Climate change is acknowledged in both field office Proposed RMP/Final EIS. BLM incorporates the corresponding information and analysis. In addition, BLM also incorporates the analysis completed for the West Tavaputs Plateau and Greater Natural Buttes EISs. As the tools for predicting climate change improve and policy for determining effects of climate change is solidified, BLM remains committed to adjust management accordingly at that time. BLM follows current guidance from both the national office of BLM and from CEQ in deciding the appropriate level of analysis. Both EAs followed those guidelines, and is sufficient for purposes of these documents.</p> <p>BLM reviewed the information provided regarding disturbed desert dust and impacts to snowpacks and believes that that attempting to complete such analyses at the leasing stage would</p>

Number	Comment	Response
	<p>the sort of activity on public lands where BLM must consider climate change. Whether this analysis should have taken place at the resource planning stage or the lease issuance stage, BLM’s actions here appear more reflective of an attempt to avoid this analysis by pushing it off to some other phase (which phase never comes).</p> <p>Under NEPA, BLM must adequately and accurately describe the environment that will be affected by the proposed action. This includes the affected environment as modified by climate change. BLM did not adequately conduct any analysis of the effects of climate change in the Vernal RMP nor did the agency consider the greenhouse gas contributions of reasonably foreseeable oil and gas development originating in these six lease parcels. In the Vernal RMP, BLM claimed that it could not analyze the impacts of climate change due to lack of tools for quantification, including a lack of guidance from EPA. The same goes for the Price RMP. However, EPA rejected that precise argument in its comments on the Vernal RMP, stating that “NEPA requires federal agencies to take a hard look at potential environmental impacts associated with their proposed actions” and the “[l]ack of regulatory protocol or emission standards for greenhouse gases does not preclude BLM from fulfilling this responsibility.”</p> <p>The BLM attempts to waive away these issues by asserting that it is too soon to address issue of climate change. However, such an argument ignores the fact that this analysis must take place at the point of irreversible and irretrievable commitment. These six oil and gas leases do not prohibit all surface use and therefore constitute an “irreversible and irretrievable commitment of resources.” This argument also ignores the conclusion of the EPA that the Vernal and Price RMPs do not adequately analyze greenhouse gas emissions from oil and gas development and that an “[a]nalysis of greenhouse gas emissions will still be needed for future NEPA compliance regarding the approval of oil and gas operation in the Vernal planning area.” The same goes for the Price planning area.</p>	<p>not lead to accurate, useful results, would not be an appropriate use of the agency’s time and resources and would be pure conjecture that would not lead to an informed Bureau decision. Instead, BLM refers the public to the discussions associated with particulate matter in whole. Air quality mitigation and controls have been specifically prepared with the guidance and recommendations of the EPA.</p> <p>BLM notes another important distinction. Logic dictates that reasoned approach must be taken to estimate air pollution or perceived impacts to global climate change from BLM authorized activities. BLM must first adhere to the agreements made with the EPA by following procedures outlined in the Air Quality MOU and those of stemming from the WTP ROD.</p>

Number	Comment	Response
	<p>This oversight and obfuscation by BLM is significant. As the agency explains elsewhere, the Council on Environmental Quality released draft guidance for how NEPA analyses should consider and evaluate greenhouse gas emissions as well as climate change. “Specifically, where a proposed action is anticipated to cause direct, annual emissions of 25,000 metric tons or more of CO₂-equivalent greenhouse gas emissions, a quantitative and qualitative assessment is required together with the consideration of mitigation measures and reasonable alternatives to reduce greenhouse gas emissions.” Id. BLM has recently evaluated a one hundred-well-per-year development in the Vernal Field Office that would result in over 63,870 tons per year of carbon dioxide, a greenhouse gas.</p> <p>BLM has at its disposal guidance regarding climate change analysis and that guidance suggests that these six leases could facilitate development exceed a significant threshold. BLM’s lack of analysis constitutes a failure to take a hard look at the impacts of its decision on climate change.</p> <p>The Price and Vernal EAs also fail to consider the pressing issue of disturbed desert dust being deposited on nearby mountain snowpack, in turn leading to early snowmelt and increased regional temperatures, which is directly related to the larger phenomenon of climate change.</p> <p>The BLM should analyze the impacts of all the surface disturbing activities that would be permitted in the leasing of the parcels offered in the November 2012 lease sale along with the potential impacts of ongoing and reasonably-foreseeable activities in the Vernal and Price planning areas on the phenomenon of dust melting snow. In addition to qualitative analysis, the BLM can at least quantify total suspended particulates that are likely to be generated by wind erosion on the disturbed surfaces described above; this is something BLM already knows how to do and has employed in some projects.</p>	
6	Lease parcels 15, 16, 19 and 20 were previously offered by the	SUWA correctly notes that portions of the lands encompassed by

Number	Comment	Response
	<p>BLM in the December 2008 oil and gas lease sale. These parcels were deferred from that lease sale; however, a number of adjacent parcels were offered. These adjacent parcels were later withdrawn after a federal court issued a temporary restraining order and the Secretary of the Interior then determined that the parcels were being offered with inadequate, flawed analysis.</p> <p>Subsequently, the BLM sent a team of agency staff to investigate these parcels; this investigation was compiled into a report known as the “Stiles Report.”</p> <p>The Stiles Report specifically recommended that these adjacent lease parcels (which, for example were recently offered as UT1111-17, UT1111-18, UT1111-19, UT1111-20, and UT1111-22 (or their precursors)) be deferred from reoffering until a number of analyses could be conducted and conditions met. Although this report was directed at adjacent parcels, the analysis and critique applies equally well to these five parcels. The BLM has not met the conditions and the analyses have not been performed requested in the Stiles Report, therefore the BLM should remove these parcels from the November 2012 sale list.</p> <p>The Stiles Report indicated that the air quality analysis needed for the leasing of these parcels was lacking. As described above, the air quality analysis for these five parcels is still deficient and the BLM should not offer them for lease. See supra. Furthermore, the Stiles Report indicated that leasing of this area at this time was not needed to ensure the orderly development of minerals. Stiles Report at 9. It recommended that BLM wait until significant oil and gas development had commenced in the immediate area before it might be appropriate to lease these parcels. Id. The Price EA does not explain what development has taken place in the immediate vicinity of these five parcels that would now make leasing appropriate.</p>	<p>parcels UT1112-015, UT1112-016, UT1112-019 and UT1112-020 were previously under consideration in the December 2008 lease sale and that they were deferred.</p> <p>SUWA submitted similar comments on the November 2011 lease sale EAs. The subject parcels at that time were: UT1111-017, UT1111-018, UT1111-019, UT1111-020 and UT1111-022 (Stiles # 339, 340, 341, 342 and 345, respectively). The Stiles Report states the following: <i>The Team recommends deferral to reconsider the impacts on documented wilderness characteristics and to provide opportunity to consider the cumulative impacts of expanded leasing in the area near or accessed (in part) by Nine Mile Canyon. Further, leasing should be deferred until the completion of NHPA consultation relating to the use of, and development near, Nine Mile Canyon. The findings of the ongoing West Tavaputs field development Environmental Impact Statement should also inform future leasing decisions for this area, especially in the case of air quality. Leasing in this area would extend leases into the generally unleased portion of lower Nine Mile Canyon and the expansive canyon network breaking toward Desolation Canyon. Should significant oil or gas production begin on other lands in the immediate vicinity, it may be appropriate to go forward with leasing, but at the present time it does not appear that leasing of this area is needed to ensure the orderly development of minerals.</i></p> <p>The BLM has met the conditions, analysis and critique for addressing parcels UT1112-015, UT1112-016, UT1112-019 and UT1112-020. The West Tavaputs Full Field Development EIS has concluded with a Record of Decision⁷ signed on July 2, 2010. In addition, a programmatic agreement was signed by all parties on January 5, 2010, which also includes several concurring parties. The stipulations and notices as identified in this EA’s Appendix A remain consistent with those of the West Tavaputs ROD, including those for air quality, cultural resources and BLM natural</p>

⁷ Accessed online at: http://www.blm.gov/ut/st/en/fo/price/energy/Oil_Gas/record_of_decision.html.

Number	Comment	Response
		<p>areas, and it's associated programmatic agreement. Lease notices UT-LN-96 (Air Quality) and UT-LN-97 (West Tavaputs) were also included to notify a lease purchaser of requirements laid out in the West Tavaputs ROD.</p> <p>Specifically, the West Tavaputs ROD (pages 30 and 35) states that through development and implementation of the programmatic agreement, the Advisory Council on Historic Preservation and the Utah State Historic Preservation Officer have agreed that the BLM fulfilled its statutory obligations under Section 106 of the National Historic Preservation Act. Under the Agency Preferred Alternative, the BLM addressed how effective the stipulations would be within the project area (including the area of the subject leases) and described the residual effects including mitigation measures. The programmatic agreement was carried forward as a COA under the Selected Alternative. Lastly, the signing of this programmatic agreement and its implementation concluded the Section 106 process.</p> <p>Lease notices UT-LN-96 and UT-LN-97 were included to inform a potential purchaser that the subject parcel is within the WTP project area and that BMPs will be most likely required at the development stage.</p> <p>As part of the WO IM-2010-117 leasing process, the ID team conducted site visits to the parcels and did not find any changed circumstances.</p> <p>Appendix M of the PFO Proposed RMP/Final EIS (page M-4) documents that in addition to the increased drilling activity, there remains significant interest in leasing within this area as evidenced by the recent oil and gas lease sale results. It also concludes that that future exploration and development are most likely to occur on the Wasatch (Emery/Book Cliffs CBNG Plays) and Tavaputs Plateau (page M-6).</p> <p>The area contains several existing leases and a producing gas field; therefore BLM believes these parcels are a logical progression of development of oil and gas in the area.</p>

Number	Comment	Response
7	<p>Parcels 13, 15, 25, and 42 are all located inside of or partially overlap areas identified by the BLM as containing wilderness characteristics.</p> <p>Secretarial Order 3310 indicates that it is the policy of the Department of the Interior to avoid impairment of lands inventoried to have wilderness characteristics. Although Congress has indicated that funds are not available for implementing this order, the Order has not been revoked and the Interior Department's policy remains unchanged. See Department of Defense and Full-Year Continuing Appropriations Act 2011, Pub. L. No. 112- 010, § 1790 (stating that for the fiscal year ending September 30, 2011, none of the funds made available by this division or any other Act may be used to implement, administer, or enforce Secretarial Order No. 3310 issued by the Secretary of the Interior on December 22, 2010.) On June 1, the Secretary of the Interior responded to this legislation stating that "the BLM will not designate any lands as 'Wild Lands.'" Memo. from Ken Salazar, Sec'y of the Interior, to Bob Abbey, BLM (June, 1 2011). Thus the Secretary did not end Department's policy to avoid impairment of wilderness character lands. The BLM should not offer leases 13, 15, 25 or 42 because it would be contrary to the policy of Secretarial Order 3310. Following this policy would require no expenditure of money here and it would not entail the designation of Wild Lands, therefore it does not run afoul of the spending limitations or the Secretary's June 1 memo. This is entirely consistent with BLM's authority to manage and protect wilderness characteristics under FLPMA and BLM's Land Use Planning Handbook.</p> <p>Furthermore, the Secretary of the Interior's June 1, 2011, memorandum affirms BLM's obligation to inventory and consider wilderness characteristics when making project-level decisions. Here, BLM has already determined that these four parcels contain wilderness characteristics. Consequently, it must now fully consider those characteristics while planning for the November lease sale. The Vernal and price EAs do not fully consider these</p>	<p>The WO IM-2011-154, Requirement to Conduct and Maintain Inventory Information for Wilderness Characteristics and to Consider Lands with Wilderness Characteristics in Land Use Plans, dated July 25, 2011, directs offices to continue to conduct and maintain inventories regarding the presence or absence of wilderness characteristics, and to consider identified lands with wilderness characteristics in land use plans and when analyzing projects under the NEPA.</p> <p>BLM agrees that it is obligated to comply with FLPMA sections 201 and 202 and follow Departmental or Bureau policy.</p> <p>As stated, the BLM relied on wilderness characteristic inventories while preparing the 2008 RODs/RMPs. The methods utilized by the BLM at that time also remain consistent with requirements outlined in WO IM-2011-154.</p> <p>BLM describes the use of its 1999 lands with wilderness characteristics inventory. BLM fully considered and documented the extent to which the value and use of lands with wilderness characteristics would be foregone when it made its decision not to manage certain units as BLM natural areas in the RODs/RMPs. The impacts of this proposed action on non-WSA lands with wilderness characteristics are considered within the EAs.</p> <p>BLM Utah notes that in their Notice of Addendum No. 1, the Colorado State Office BLM did defer their subject parcels to allow time for further resource analysis. The unsigned FONSI states that all of parcel 6005 and portions of parcels 6003, 6004, 6006, and 6007 are deferred due to concerns regarding primitive recreation opportunities, not a lack of wilderness character inventory. Colorado BLM is currently in the planning process and has elected to defer leasing of their subject parcels while they compile and analyze level of inventory information that Utah BLM already has through the 2008 PFO Proposed RMP/Final EIS.</p> <p>The BLM has fully considered managing certain areas to protect, preserve, and maintain their wilderness characteristics. Price Field</p>

Number	Comment	Response
	<p>impacts.</p> <p>In order to fully consider wilderness characteristics in the context of this lease sale, the Secretary’s memorandum requires the BLM to develop and evaluate a leasing alternative that fully protects lands with wilderness characteristics, either through parcel deferrals or NSO stipulations. Such an alternative would comply with a key provision of IM 2010-117, which requires BLM to evaluate lease sale alternatives that address unresolved resource conflicts. In response to this requirement of the IM, BLM has consistently included alternatives in lease sale EAs that protect wilderness characteristics, even in lease sale EAs that postdate the congressional funding limitation on implementing the Wild Lands policy.</p>	<p>Office, for example analyzes WC within Alternative E, Proposed RMP/Final EIS. This information is summarized at page 14 of the PFO ROD/RMP. Specifically, BLM analyzed mineral leasing, including NSO, with the following categories (page 2-8, PFO Proposed RMP/FEIS):</p> <ul style="list-style-type: none"> • 0 acres open to oil and gas leasing subject to the standard terms and conditions of the lease form • 870,000 acres or 34 percent open to oil and gas leasing subject to minor constraints (timing limitations, CSU, lease notices) • 130,000 acres or 6 percent open to oil and gas leasing subject to major constraints (NSO) • 1,490,000 acres or 60 percent unavailable to leasing. <p>Under Section 201 and 201 of FLPMA, BLM is directed to conduct and maintain current inventories of public lands and the resources there-in; including wilderness characteristics. Data from these inventories are then used in resource analysis during land use plan revisions.</p> <p>Under this alternative, these acres were unavailable to mineral leasing and development, rights-of-way, woodcutting, and other surface disturbing activities. Management of non-WSA lands to preserve their wilderness characteristics precluded potentially beneficial actions such as fuels and vegetation treatments and other healthy lands initiatives, wildlife and range improvements, and the construction of recreation facilities. Many of the areas managed to protect wilderness characteristics in Alternative E had conflicts with high development potential areas for oil and gas. Some of this acreage was also currently leased for oil and gas and coal, thereby making it impractical to protect the wilderness characteristic values. BLM found that management of all the non-WSA lands with wilderness characteristics in Alternative E as overly restrictive on other resources and uses of the public lands and did not meet the intent of Energy Policy and Conservation Act (EPCA). The EPCA provides policy directing BLM to</p>

Number	Comment	Response
		<p>minimize impediments to oil and gas leasing and development, and this alternative does not meet that objective. Decisions were made off of those inventories. There has not been any change in circumstances to warrant the need to revisit those decisions made in the PFO ROD/RMP. Similar approaches are taken for the Vernal Field Office.</p>
8	<p>BLM must comply with the requirements of IM 2010-117. In addition to directing BLM to fully analyze an alternative that would protect wilderness characteristics, see supra, IM 2010-117 directs BLM to “take into account” several “other considerations” during its evaluation of lease sale parcels, including (1) whether non-mineral resource values outweigh mineral development values in “undeveloped areas;” and (2) whether leasing will cause “unacceptable impacts” on units of the National Park System. Because several of the sale parcels are located in “undeveloped areas” and/or are likely to have impacts on visibility in national parks, BLM must evaluate both of these considerations in the EA. In doing so, the BLM should follow the example of Wyoming’s High Desert District Office, which recently included a separate discussion for the IM’s “other considerations” in a lease sale EA. When evaluating lease parcels, BLM should determine whether “non-mineral resource values are greater than potential mineral development values” in “undeveloped areas.” The seven parcels, at issue here, are located in undeveloped areas. Because these areas also have considerable “non-mineral resource values,” such as inventoried wilderness characteristics, important recreation and scenic values, and cultural resource values, the BLM must evaluate and determine whether they are outweighed by potential mineral development values. The BLM has not performed this weighing. This determination is a policy decision that is not dependent upon the economic values that may be assigned to competing resources and not necessarily to the combination of uses that will give the greatest economic return.</p>	<p>Where BLM natural areas were not selected in the planning processes, BLM found that certain inventoried areas contained other important resources and uses that would conflict with protection, preservation or maintenance of wilderness characteristics. BLM fully considered their value in light of other resources and uses including the presence of existing leases that would preclude management for wilderness characteristics. Likewise, BLM addressed recreation demands by providing SRMAs. Therefore, BLM has complied with the spirit and intent of WO IM-2010-117.</p> <p>The Utah BLM coordinated with the NPS for the November 2012 lease sale including the parcels in question and the NPS did not provide any comments or have any concerns with the parcels being placed on the preliminary list. Also there are not any National Parks near any of the seven parcels of interest to the commentor.</p>
9	<p>The Vernal and Price field offices did not update their visual</p>	<p>BLM has reviewed the recent visual resource inventory reports</p>

Number	Comment	Response
	<p>resource inventory as part of the 2008 Vernal or Price RMPs. The BLM has been updating visual resource inventories for the field offices across the state, including the lands covered by these seven parcels. This updated information should be included in determining whether existing visual resource management classes are correct and oil and gas leasing stipulations are adequate to protect visual resources. In the face of this new information, BLM may be required to defer leasing until it prepares a new plan amendment to consider significant new information changing VRM categories.</p>	<p>prepared for the Vernal and Price field offices. The visual resource management categories remain as established in the 2008 RMPs.</p>
<p>10</p>	<p>Parcels 15, 16, 19, and 20 overlap with the Nine Mile Canyon ACEC. The BLM has not evaluated the potential impacts to this ACEC from development on these parcels. The Price EA incorrectly assumes that no surface occupancy (NSO) stipulations would prevent development on the portions of these parcels that overlap with the ACEC and suggests that these stipulations have no exceptions, waivers or modifications. However, that is not correct. As the Price EA itself later discloses, that NSO stipulation is subject to an exception. Price EA at App A. The Price EA must evaluate how potential development granted through this exception would impact the Nine Mile Canyon ACEC and its relevant and important values. Similarly, the Vernal EA erroneously assumes that impacts would be limited to a twenty acre portion of the parcel. Like the Price EA, the Vernal EA has not evaluated how these impacts might expand if the future operator were granted an exception and development took place on the lease outside the twenty acre area of impact. Leasing and development on these four parcels would not protect the relevant and important values of the Nine Mile Canyon ACEC and these parcels should therefore be deferred.</p> <p>Parcel 42 is located in the Red Creek Watershed ACEC. The Vernal EA makes clear that this parcel should not be leased. If leasing were to take place on this parcel it could possibly lead to some development and impacts on the parcel. Those impacts would lead to increased erosion and water contamination,</p>	<p>The Nine Mile Canyon ACEC intersects portions of parcels 15, 16, 19, and 20. The Proposed Plan/Final EIS addressed leasing activity within the Nine Mile Canyon ACEC. The commentor does not identify which R&I values have not been addressed or protected.</p> <p>BLM applies a NSO/CSU/TL stipulation (UT-S-23) in Vernal and a NSO stipulation (UT-S-319) in Price protecting the Nine Mile Canyon ACEC. As per the Price RMP Nine Mile Canyon ACEC Decision 10, oil and gas leasing is subject to major constraints (NSO). Exceptions to this stipulation can be applied but only through approval of the BLM and SHPO. There are no exceptions, waivers or modifications that could be applied to stipulations 23 or 24.</p> <p>As shown in appendix A in the Vernal EA, parcel 42 includes stipulation UT-S-24 (NSO/CSU/TL – Red Creek Watershed ACEC). Slopes and soils are managed by stipulations 96 and 100.</p>

Number	Comment	Response
	<p>according to the Vernal EA. The Red Creek Watershed ACEC was designated precisely to prevent this sort of activity, its relevant and important value being its watershed. New erosion from development on this parcel would adversely impact the watershed and should not be allowed. BLM must defer parcel 42 for this reason.</p>	
<p>11</p>	<p>BLM has completely failed to analyze the potential impact of leasing parcels 15, 16, and 19 on the Nine Mile Canyon SRMA. Oil and gas development on these parcels, which is possible due to the exception to the NSO stipulation for each parcel would be incompatible with recreation management here.</p>	<p>BLM has updated the Checklist. As per the PFO ROD/RMP, recreation decision (REC-60), oil and gas will be open to leasing subject to minor constraints (timing limitations, controlled surface use, lease notices), except where the Nine Mile Canyon ACEC overlaps the SRMA. Where this overlap exists in the SRMA, the area will be open to leasing with major constraints (NSO). Outside of the SRMA, BLM finds the associated dispersed recreation opportunity to adequately incorporate public demands.</p>
<p>12</p>	<p>BLM must evaluate the wilderness characteristics of the entirety of parcel 25. Portions of this parcel were determined by the BLM in the Vernal RMP not to contain wilderness characteristics. However, the BLM has recently issued a new wilderness character inventory manual (Manual 6310) which contains new guidance not considered by the Vernal Field Office. The BLM must defer parcel 25 until such time it is able to perform a wilderness character inventory for the entire parcel. SUWA will provide BLM with documentation of this area's wilderness character beyond the current boundaries with wilderness characteristics that the BLM has identified.</p>	<p>BLM has no new information or citizen-provided documentation at this time which would cause us to reconsider the decision in the Vernal RMP. If such documentation is submitted in the future, it will be considered in accordance with Manual 6310 and all other applicable guidance.</p>