

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

**Environmental Assessment
for the November 2011 Oil and Gas Lease Sale**

Grand Junction Field Office
2815 H Road
Grand Junction, Colorado 81506

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TABLE OF CONTENTS

CHAPTER 1 - INTRODUCTION.....	1
1.1 IDENTIFYING INFORMATION.....	1
1.2 PROJECT LOCATION AND LEGAL DESCRIPTION.....	2
Map 1 – all nominated parcels in the Grand Junction Field Office.....	3
1.3 PURPOSE AND NEED.....	4
1.4 PLAN CONFORMANCE REVIEW.....	4
1.5 PUBLIC PARTICIPATION.....	5
1.6 DECISION TO BE MADE.....	6
CHAPTER 2 - PROPOSED ACTION AND ALTERNATIVES.....	7
2.1 INTRODUCTION.....	7
2.2 ALTERNATIVES ANALYZED IN DETAIL.....	7
2.2.1 Proposed Action.....	7
Map 2 – Parcels proposed for lease in the November 2011 lease sale.....	8
2.2.2 No Action Alternative.....	8
2.3 ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL.....	9
CHAPTER 3 - AFFECTED ENVIRONMENT AND EFFECTS.....	10
3.1 INTRODUCTION.....	10
3.2 PHYSICAL RESOURCES.....	11
3.2.1 Air Quality and Climate.....	11
3.2.2 Fluid Mineral Resources.....	16
3.2.3 Soils (includes a finding on Standard 1).....	16
3.2.4 Water (surface and groundwater, floodplains) (includes a finding on Standard 5).....	20
3.3 BIOLOGICAL RESOURCES.....	26
3.3.1 Invasive, Non-native Species.....	26
3.3.2 Threatened, Endangered and Sensitive Species (includes a finding on Standard 4).....	27
3.3.3 Vegetation (grasslands, forest management) (includes a finding on Standard 3).....	32
3.3.4 Wetlands & Riparian Zones (includes a finding on Standard 2).....	33
3.3.5 Wildlife (includes fish, aquatic and terrestrial) (includes a finding on Standard 3).....	35
3.3.6 Migratory Birds.....	38
3.4 HERITAGE RESOURCES AND HUMAN ENVIRONMENT.....	40
3.4.1 Cultural Resources.....	40
3.4.2 Paleontological Resources.....	41
3.4.3 Tribal and Native American Religious Concerns.....	43
3.4.4 Visual Resources.....	43
3.4.5 Social and Economic.....	44
3.4.6 Environmental Justice.....	45
3.4.7 Transportation/Access.....	45
3.4.8 Wastes, Hazardous or Solid.....	46
3.5 LAND RESOURCES.....	46
3.5.1 Recreation.....	46
3.5.2 Range Management.....	47
3.5.3 Land Tenure, Rights of Way and other Uses.....	47
CHAPTER 4 - CONSULTATION AND COORDINATION.....	48
4.1 LIST OF PREPARERS AND PARTICIPANTS.....	48

4.2 TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED..... 49
CHAPTER 5 - REFERENCES..... 51
FINDING OF NO SIGNIFICANT IMPACT i
DECISION RECORD..... iv
Attachment A - Pre-EA Parcels Proposed for Lease vi
Attachment B - Parcels Recommended for Deferral from Leasing..... xix
Attachment C - Parcels Available for Lease with Applied Stipulations..... xxvi
Attachment D - Exhibits Description..... xxviii
Attachment E - Public Comment Review xxxix

CHAPTER 1 - INTRODUCTION

1.1 IDENTIFYING INFORMATION

BACKGROUND: It is the policy of the Bureau of Land Management (BLM) as derived from various laws, including the Mineral Leasing Act of 1920 and the Federal Land Policy and Management Act of 1976, to make mineral resources available for disposal and to encourage development of mineral resources to meet national, regional, and local needs.

The BLM's Colorado State Office conducts quarterly competitive lease sales to sell available oil and gas lease parcels. A Notice of Competitive Lease Sale, which lists lease parcels to be offered at the auction, is published by the Colorado State Office at least 45 days before the auction is held. Lease stipulations applicable to each parcel are specified in the Sale Notice. The decision as to which public lands and minerals are open for leasing and what leasing stipulations may be necessary, based on information available at the time, is made during the land use planning process. Constraints on leasing and any future development of split estate parcels are determined by the BLM in consultation with the appropriate surface management agency or the private surface owner.

In the process of preparing a lease sale the Colorado State Office sends a draft parcel list to each field office where the parcels are located. Field Office staff then review the legal descriptions of the parcels to determine if they are in areas open to leasing; if appropriate stipulations have been included; if new information has become available which might change any analysis conducted during the planning process; if appropriate consultations have been conducted, and if there are special resource conditions of which potential bidders should be made aware. Once the draft parcel review is completed and returned to the State Office, a list of available lease parcels and stipulations is made available to the public through a Notice of Competitive Lease Sale (NCLS). Lease sale notices are posted on the Colorado BLM website at:

http://www.blm.gov/nm/st/en/prog/energy/oil_and_gas/lease_sale_notices.html.

On rare occasions, additional information obtained after the publication of the NCLS may result in withdrawal of certain parcels prior to the day of the lease sale.

The inclusion of a parcel listed in the lease sale notice may be protested. A protest must be received at the BLM's Colorado State Office no later than close of business on the 30th calendar day after the posting of the notice of the lease sale. Nominated parcels that receive no bids during the November lease sale become available for noncompetitive sale beginning the day after the lease sale. Parcels offered noncompetitively remain available on a first-come, first-served basis for a two-year period beginning the day after the sale.

Twenty-five parcels comprising 14,207.8 acres within the Grand Junction Field Office (GJFO) were nominated for the November lease sale (see Attachment A for complete legal descriptions). This figure is comprised of 9,762.9 acres of federal land and 4,445 acres of split-estate land. The legal descriptions of the nominated parcels and proposed leasing stipulations are in Attachment A.

Colorado Bureau of Land Management (BLM) Instruction Memorandum No. CO-2010-027 provided guidance and direction for implementing Washington Office (WO) IM 2010-117, Oil

and Gas Leasing Reform-Land Use Planning and Parcel Review, and WO IM 2010-118, Energy Policy Act Section 390 Categorical Exclusion (CX) Policy Revision. That IM requires the field office to complete an environmental assessment and provide a 30 day public review and comment period for lease sales. It also provides guidance for parcel review, timeframes, leasing recommendations and attachments to be included with the Environmental Assessment (EA) as well as guidance for use of Master Leasing Plans. This EA has been prepared in accordance with IM CO-2010-027 by the BLM GJFO to analyze leasing of 25 parcels nominated.

PROJECT NAME: November 2011 Oil and Gas Lease Sale

PLANNING UNIT: Grand Junction Field Office

1.2 PROJECT LOCATION AND LEGAL DESCRIPTION

LEGAL DESCRIPTION:

Please see Attachments A, B, and C and Map 1 Below.

1.3 PURPOSE AND NEED

The purpose of offering parcels for competitive oil and gas leasing is to allow private individuals or companies to explore and develop oil and gas resources for sale on public markets. The sale of oil and gas leases is needed to meet the “present and future [energy] needs of the American people” 43 U.S.C. § 1702 (c). Production of oil and gas resources on public lands contributes to decreasing the dependence of the United States on foreign energy sources, which is a BLM policy that complies with the Mining and Minerals Policy Act of 1970. Continued leasing is necessary to maintain options for production as oil and gas companies seek new areas for production or attempt to develop previously inaccessible or uneconomical reserves.

1.4 PLAN CONFORMANCE REVIEW

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

Name of Plan: GRAND JUNCTION Resource Management Plan

Date Approved: JANUARY, 1987

The Grand Junction RMP of 1987 identified areas open for oil and gas leasing, and specified stipulations that would apply to leases (pages 2-7 through 2-10 and Table 6). The proposed lease sales are within the areas identified as open to leasing. Based on the RMP, specific stipulations are attached to each lease parcel.

In January 1997, the Colorado State Office of the BLM approved the Standards for Public Land Health and amended all RMPs in the State. Standards describe the conditions needed to sustain public land health and apply to all uses of public lands.

Standard 1: Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes.

Standard 2: Riparian systems associated with both running and standing water function properly and have the ability to recover from major disturbance such as fire, severe grazing, or 100-year floods.

Standard 3: Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat’s potential.

Standard 4: Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities.

Standard 5: The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado.

Because standards exist for each of these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in Chapter 3 of this document.

1.5 PUBLIC PARTICIPATION

1.5.1 Scoping: NEPA regulations (40 CFR §1500-1508) require that the BLM use a scoping process to identify potential significant issues in preparation for impact analysis. The principal goals of scoping are to allow public participation to identify issues, concerns, and potential impacts that require detailed analysis. Initial scoping took place by posting the project summary on the NEPA register on the Grand Junction Field Office NEPA website. No comments were received as a result of this scoping.

1.5.2 Agencies/Organizations Consulted: Prior to the development of the EA, notification letters were sent to the Colorado Division of Wildlife (CDOW), Native American Tribes, and right of way holders.

CDOW was notified of the nominated parcels and the upcoming lease sale in a letter from the BLM state office on Monday April 18, 2011. Michael Warren of CDOW submitted comments to the field office by email on April 20, 2011 and May 10, 2011. Through discussion with Mr. Warren and their submission of comments, the CDOW and BLM concluded that the stipulations included would be sufficient to protect big game while in their winter range.

The Ute Water Conservancy District was notified of the nominated parcels and the upcoming lease sale on April 4, 2011 because they hold rights of way in the area. They responded in a letter with concerns about leasing of parcel 6067 because it is adjacent to their drinking water reservoirs. The Proposed Action would defer leasing of this parcel, therefore this comment is not further addressed in the EA.

Mesa County Board of Commissioners was notified of the nominated parcels and the upcoming lease sale on January 20, 2011 because they hold rights of way in the area. They did not respond immediately but did provide comments during the public comment period.

Native American Tribes did not submit comments.

BLM also coordinated with US Fish and Wildlife Service regarding impacts to listed species on May 23, 2011. It was agreed that the parcels proposed for leasing are outside the range of any listed species.

1.5.3 Public Comment Period:

The preliminary draft of this EA was posted to our website and announced by press release for a 30 day comment period starting June 6, 2011. Letters were also mailed to affected private land surface owners whose land overlies federal minerals proposed for leasing.

The BLM received three comment letters as a result of this comment period; one letter from environmental organizations, one letter from Mesa County, and one letter from a private individual. These letters provided the BLM information on the concerns of the public and local government. No significant issues requiring further analysis or alternative development in the EA were identified in the review of the comments. However, several minor clarifications, corrections, and additions were made to the final EA in order to more clearly disclose the impacts of the proposed action with regard to the concerns raised in the letters. The review of these comments is included as Attachment E.

1.6 DECISION TO BE MADE

The BLM Grand Junction Field Office (GJFO) will decide which parcels to offer for sale in the November 2011 competitive lease sale based on the analysis contained in this EA. The BLM may choose to: a) offer all of the nominated parcels for sale, b) offer a subset of the parcels for sale, or c) not sell any parcels at this time. The finding associated with this EA may not constitute the final approval for the proposed action. The final decision on which parcels will be sold will be made by the State Director.

CHAPTER 2 - PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

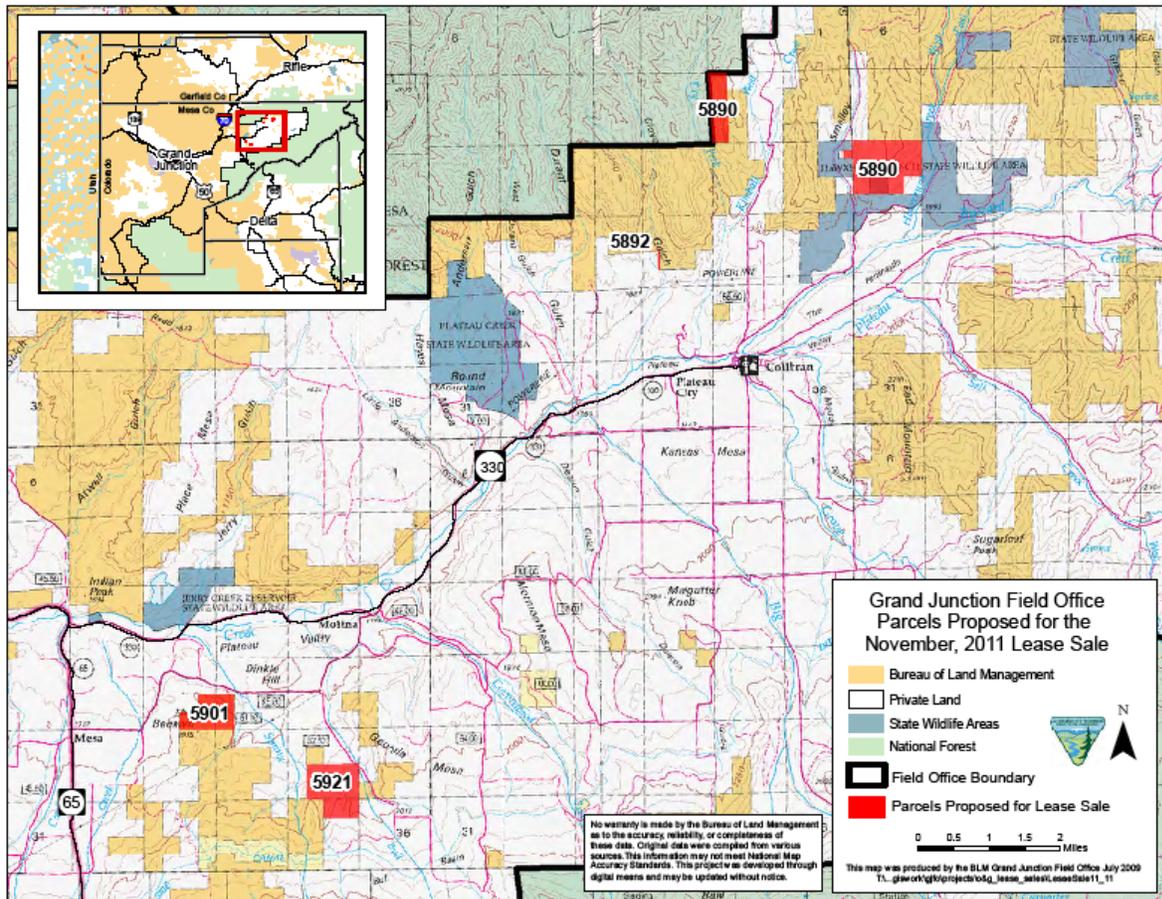
The purpose of this chapter is to provide information on the Proposed Action and Alternatives. Alternatives considered but not analyzed in detail are also discussed.

2.2 ALTERNATIVES ANALYZED IN DETAIL

2.2.1 Proposed Action

The Grand Junction Field Office proposes to offer for sale four parcels (5890, 5892, 5901, 5921) comprising approximately 1136.86 acres in the November 2011 Colorado Competitive Oil and Gas Lease Sale (see Attachment A for complete legal descriptions). This figure is comprised of 365.52 acres of federal land and 770.34 acres of split-estate land. These parcels would be offered at public auction. Following the auction, any unsold parcels could be sold non-competitively. Each lease would be issued subject to stipulations identified in the 1987 Grand Junction Resource Management Plan (ROD/RMP). These stipulations are specified in the attached parcel listing (Attachment E). Additional site specific analyses would take place upon submission of individual Applications for Permits to Drill (APD).

Map 2 – Parcels proposed for lease in the November 2011 lease sale



2.2.2 No Action Alternative

The BLM NEPA Handbook (H-1790-1) states that for EAs on externally initiated proposed actions, the No Action Alternative generally means that the proposed action would not take place. In the case of a lease sale, this would mean that an expression of interest to lease (parcel nomination) would be denied or rejected.

The No Action Alternative would withdraw the lease parcels from the November 2011 lease sale. The parcels would remain available for inclusion in future lease sales. Surface management would remain the same and ongoing oil and gas development would continue on surrounding private, State, and Federal leases.

No mitigation measures would be required as no new oil and gas development would occur on the unleased lands. No rental or royalty payments would be made to the Federal government. It is not expected that demand would decrease. It is likely that continuing demand would be addressed through production elsewhere.

It is an assumption that the No Action Alternative (no lease option) may result in a slight reduction in domestic production of oil and gas. This would likely result in reduced Federal and State royalty income. Oil and gas consumption is driven by a variety of complex interacting factors including energy costs, energy efficiency, availability of other energy sources, economics, demographics, and weather or climate. If the BLM were to forego its leasing decisions and potential development of those minerals, the assumption is that the public's demand for the resource would not be expected to change. Instead, the resource foregone would be replaced by other sources that may include a combination of imports, fuel switching, alternative fuels, and other domestic production.

2.3 ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL

Originally, 25 parcels (5888, 5889, 5890, 5891, 5892, 5893, 5894, 5899, 5900, 5901, 5902, 5905, 5906, 5909, 5912, 5913, 5914, 5915, 5921, 5968, 5969, 6067, 6068, 6070, 6071) comprising 14,207.8 acres within the GJFO (see map 1) were nominated for the November lease sale (see Attachment A for complete legal descriptions). This figure is comprised of 9722.86 acres of federal land and 4444.98 acres of split-estate land. Parcels 5888, 5889, 5891, 5893, 5894, 5899, 5900, 5902, 5905, 5906, 5909, 5912, 5913, 5914, 5915, 5968, 5969, 6067, 6068, 6070, and 6071 all fall within the Shale Ridges and Canyons Master Leasing Plan Recommendation; one of several areas recommended by environmental groups for preparation of a Master Leasing Plan. These recommendations were made to promote proactive approaches to manage energy development in an area that supports other federal and local priorities, such as Greater Sage Grouse (an ESA candidate species), White-Tailed Prairie Dog, the federally threatened Colorado Hookless Cactus, and multiple Citizen Wilderness Proposal areas. BLM Colorado has committed to addressing the resource concerns raised in these MLP recommendations in the ongoing Resource Management Plan (RMP) revisions going on throughout the state. The RMP analysis will include analyzing whether a master leasing plan is appropriate for these areas.

In order to offer nominated parcels for sale in the November lease sale, GJFO must complete this leasing EA by July 22, 2011. According to state office direction, those parcels within MLP areas could be leased prior to the MLP analysis in the RMP revision, however first, we must conduct public site visits to the nominated parcels in order to resolve resource concerns. We will be unable to conduct these site visits in time to include these parcels in this EA for the November Lease Sale, so we find that leasing parcels within the MLP recommendation area at this time is outside the scope of this EA. Therefore we will not analyze the alternative to lease parcels 5888, 5889, 5891, 5893, 5894, 5899, 5900, 5902, 5905, 5906, 5909, 5912, 5913, 5914, 5915, 5968, 5969, 6067, 6068, 6070, and 6071 in detail at this time. This alternative will likely be analyzed in a future leasing EA when site visits have taken place.

CHAPTER 3 - AFFECTED ENVIRONMENT AND EFFECTS

3.1 INTRODUCTION

This section provides a description of the human and natural environmental resources that could be affected by the Proposed Action and presents comparative analyses of the direct, indirect and cumulative effects on the affected environment stemming from the implementation of the actions under the Proposed Action and other alternatives analyzed.

This EA draws upon information compiled in the Grand Junction Resource Area RMP (BLM 1987) and the Grand Resource Area RMP (BLM 1985).

3.1.1 Elements Not Affected

The following elements, identified as not being present or not affected will not be brought forward for additional analysis:

Farmlands, Prime and Unique – There are no identified Prime or Unique Farmlands in the affected area

Special Designations – there are no Special Designations in the affected area

Wilderness, Wild and Scenic Rivers – There are no designated wilderness areas or wild and scenic rivers, wilderness study areas, or lands with wilderness characteristics in the area affected by the alternatives analyzed in detail

Wild Horses– there are no herd management areas in the area affected by the alternatives analyzed in detail

3.1.2 Past, Present, Reasonably Foreseeable Actions

NEPA requires federal agencies to consider the cumulative effects of proposals under their review. Cumulative effects are defined in the Council on Environmental Quality (CEQ) regulations 40 CFR §1508.7 as “...the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency...or person undertakes such other actions.” The CEQ states that the “cumulative effects analyses should be conducted on the scale of human communities, landscapes, watersheds, or airsheds” using the concept of “project impact zone” or more simply put, the area that might be affected by the proposed action. The area that may be affected by this project includes the Plateau Valley watershed. To assess past, present and reasonably foreseeable actions that may occur within the affected area a review of GJFO NEPA log and our field office GIS data was completed. The following list includes all past, present and reasonably foreseeable actions known to the BLM that may occur within the affected area:

Oil and gas development – much of the Plateau Valley is currently leased for oil and gas development, and considerable drilling and related road and pipeline construction has occurred on public and private lands. Past, present and reasonably foreseeable development would require continued pipeline and road construction as well as the use of existing or new water disposal facilities.

Other past or existing actions near the project area that have an influence on the landscape are water diversion and irrigation, reservoir construction, wildfire, recreation, hunting, livestock grazing, residential development, highway construction, noxious weed infestations, gravel mining and utility lines.

All of these actions have occurred in the past, and are expected to continue to occur into the future.

This list of past, present and reasonably foreseeable actions was considered when analyzing cumulative effects in sections 3.2, 3.3, 3.4, and 3.5 below.

3.2 PHYSICAL RESOURCES

3.2.1 Air Quality and Climate

Since the Grand Junction Field Office ROD/RMP was signed in 1987, new information about GHGs and their effects on national and global climate conditions has emerged. On-going scientific research has identified the potential impacts of greenhouse gas (GHG) emissions such as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), water vapor; and several trace gases on global climate. Through complex interactions on a global scale, GHG emissions cause a net warming effect of the atmosphere, primarily by decreasing the amount of heat energy radiated by the earth back into space. Although GHG levels have varied for millennia (along with corresponding variations in climatic conditions), industrialization and burning of fossil carbon resources have caused GHG concentrations to increase measurably and may contribute to overall climatic changes.

This EA incorporates an analysis of the contributions of the proposed action to GHG emissions and a general discussion of potential impacts to climate. Air quality and climate are the components of air resources, which include applications, activities, and management of the air resource. Therefore, the BLM must consider and analyze the potential effects of BLM and BLM-authorized activities on air resources as part of the planning and decision making process.

Air Quality

The U.S. Environmental Protection Agency (EPA) established national air quality standards (NAAQS) for criteria pollutants. Criteria pollutants include carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM₁₀ and PM_{2.5}), sulfur dioxide (SO₂), and lead (Pb). Air pollutant concentrations greater than the NAAQS represent a risk to human health. The

EPA has delegated regulation of air quality to the State of Colorado where air quality is administered by the Colorado Department of Public Health and Environment (CDPHE). Colorado Ambient Air Quality Standards (CAAQS) and NAAQS identify maximum limits for concentrations of criteria air pollutants at all locations to which the public has access. The CAAQS and NAAQS are legally enforceable standards. Concentrations above the CAAQS and NAAQS represent a risk to human health that, by law, require public safeguards be implemented. State standards must be at least as protective of human health as Federal standards, and may be more restrictive than Federal standards, as allowed by the Clean Air Act.

Visibility can be expressed in terms of deciviews (dv), a measure for describing perceived changes in visibility. One dv is defined as a change in visibility that is just perceptible to an average person which is approximately a 10 percent change in light extinction. To estimate potential visibility impairment, monitored aerosol concentrations are used to reconstruct visibility conditions for each day monitored. These daily values are then ranked from clearest to haziest and divided into three categories to indicate the mean visibility for all days (average), the 20 percent of days with the clearest visibility (20 percent clearest), and the 20 percent of days with the worst visibility (20 percent haziest). Visibility can also be defined by standard visual range (SVR), measured in miles, and is the farthest distance at which an observer can see a black object viewed against the sky above the horizon; the larger the SVR, the cleaner the air. Since 1980 the Interagency Monitoring of Protected Visual Environments (IMPROVE) network has measured visibility in national parks and wilderness areas. These are managed as high visual quality Class I and II areas by the Federal visual resource management (VRM) program. There are IMPROVE stations in Colorado, including two located within the Mount Zirkel and Flat Tops National Wilderness areas and one in the White River National Forest at Aspen Mountain Ski Resort.

Atmospheric Deposition

Atmospheric deposition refers to processes in which air pollutants are removed from the atmosphere and deposited into terrestrial and aquatic ecosystems. Air pollutants can be deposited by either wet (precipitation via rain or snow) or dry (gravitational) settling of particles and adherence of gaseous pollutants to soil, water, and vegetation. Much of the concern about deposition is due to secondary formation of acids and other compounds from emitted nitrogen and sulfur species such as nitrogen oxides (NO_x) and sulfur dioxide (SO₂), which may contribute to acidification of lakes, streams, and soils and affect other ecosystem characteristics, including nutrient cycling and biological diversity.

Substances deposited include:

- Acids, such as sulfuric (H₂SO₄) and nitric (HNO₃), sometimes referred to as acid rain
- Air toxics, such as pesticides, herbicides, and volatile organic compounds (VOCs)
- Heavy metals, such as mercury
- Nutrients, such as nitrates (NO₃-) and ammonium (NH₄+

The accurate measurement of atmospheric deposition is complicated by contributions to deposition by several components: rain, snow, cloud water, particle settling, and gaseous pollutants. Deposition varies with precipitation and other meteorological variables (e.g.,

temperature, humidity, winds, atmospheric stability, etc.), which in turn, vary with elevation and time.

In the Rocky Mountain Region, BLM uses level of concern (LOC) considered to be unlikely to harm terrestrial or aquatic ecosystems for total nitrogen deposition of 3.0 kilograms per hectare per year or less. For total sulfur deposition, the LOC is 5.0 kilograms per hectare per year.

Affected Environment: The proposed lease parcels are located in rural northwest Colorado in the Colorado River Basin, more than thirty miles from designated air quality management areas (including PSD Class I or non-attainment areas). Such designated areas may require special consideration from the air quality regulatory agencies of CDPHE and EPA. Industrial facilities in the Colorado River Basin include coal mines, natural gas processing plants, and power plants. Due to these industrial uses, increased local population, and oil and gas development, emissions of air pollutants in the Colorado River Basin (primarily due to engine exhaust and dust from roads and exposed areas) are likely to increase into the future. Despite increases in emissions, overall air quality conditions in the Colorado River Basin are likely to continue to be good due to effective emission controls and strong atmospheric dispersion conditions.

The cities of Grand Junction, Steamboat Springs, Rifle, and Parachute all host air quality monitoring stations. Available monitoring data at these stations indicate that the ambient concentrations of criteria pollutants are less (better) than the applicable air quality standards (NAAQS and CAAQS). However it should be noted, there is not continuous monitoring of all criteria pollutants at any of the stations. Also, differences in the atmospheric conditions, proximity to emissions, and climate at any of these monitoring sites may not represent specific conditions at individual parcel locations.

The Colorado River Basin has been classified as either attainment or unclassified for all air pollutants (NAAQS and CAAQS standards), and most of the area has been designated as Clean Air Act Prevention of Significant Deterioration (PSD) Class II. There are two Class I areas in proximity of the Field Office boundary, including both the Maroon Bells-Snowmass, and Raggeds Wilderness Areas. Because the historic air quality in the Colorado River Basin has been good, small changes in air quality may have noticeable localized effects, especially on visibility.

Environmental Consequences of the No Action Alternative: There would be no impacts to air quality from the No Action Alternative.

Environmental Consequences of the Proposed Action: The decision to sell the leases would not result in any direct criteria pollutants, hazardous pollutants, and greenhouse gas emissions. However, the future development of these leases will emit these pollutants. The assessment of GHG emissions and climate change are in a formative phase. While it is not possible to accurately quantify potential GHG emissions in the affected areas as a result of making the proposed tracts available for leasing, some general assumptions however can be made (e.g., the selling the proposed tracts may contribute to drilling new wells). Subsequent

development of any leases sold would contribute an incremental increase in overall hydrocarbon emissions, including GHGs.

While the act of leasing the parcels would produce no significant air quality impacts, potential future development of the lease could lead to surface disturbance from the construction of well pads, access roads, pipelines, and power lines, as well as associated air pollutant emissions from vehicle use, windblown dust, and engine exhausts. Since it is unknown if the parcels would be developed, or the extent of the development, it is not possible to reasonably quantify potential air quality impacts through dispersion modeling at this time. At the APD stage additional air analysis will be completed to evaluate the site specific issues of development proposed in the APD. The site-specific proposal will identify reasonably foreseeable activities, equipment, and locations. All proposed activities including, but not limited to, exploratory drilling activities would be subject to applicable local, State, and Federal air quality laws and regulations. Before the leases can be developed or explored, the impacts from the proposed actions will be evaluated as required by Council on Environmental Quality (CEQ) regulations.

Lease development at the APD stage may result in emissions of particulate matter, mainly dust, becoming airborne when drill rigs and other vehicles travel on existing dirt roads to drilling locations. Air quality would also be affected by engine exhaust emissions.

Wells may be drilled during exploration. If the area is for natural gas development, gas may be flared and/or vented to evaluate the characteristics and potential of the resource available. The development stage is likely to include the installation of pipelines for transportation of raw product, as well as possible new gas processing facilities. During this period volatile organic compounds (VOCs) would be released from the reserve pit, water disposal facilities, and/or tanks and during completion activities.

Soil disturbance resulting from construction of pads and roads, pipeline construction, and drilling is expected to cause increases in fugitive dust and inhalable particulate matter (specifically PM₁₀ and PM_{2.5}) in the project area and immediate vicinity. In addition, increases in the following criteria pollutants: carbon monoxide, ozone (a secondary pollutant, formed photochemically by combining VOC and NO_x emissions), nitrogen dioxide, and sulfur dioxide would also occur due to combustion of fossil fuels during exploration and development activities. Non-criteria pollutants such as carbon dioxide, methane and nitrous oxide (GHGs), air toxics (e.g., benzene), total suspended particulates (TSP), increased impacts to visibility, and atmospheric deposition may also increase as a result of exploration and development (no national ambient air quality standards have been set for non-criteria pollutants). Additional low, short-term impacts to air quality may occur due to venting of gas from the wells during exploration. Even with these increased pollutants, development of only the offered lease parcels is unlikely to result in an exceedance of NAAQ and CAAQ standards, and is likely to comply with applicable PSD increments and other significant impact thresholds. As described above, exploration and development would release VOCs from pits and tanks and from venting and flaring. Engines used for drilling, transportation, gas processing, compressing gas for pipelines, and other uses would contribute to associated air pollutant emissions.

EPA Region 8 has reported that “In the coming decades, scientists project that climate change will lead to significant changes in the Mountain West and Great Plains” including several specific impacts. The BLM will continue to evaluate the impacts of oil and gas exploration and development in terms on the global climate, and apply appropriate management techniques and BMPs to address changing conditions. Research has identified the general potential impacts of anthropogenic greenhouse gas emissions and their effects on global climatic conditions. These anthropogenic GHGs include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and several trace gases which differentially absorb and emit thermal radiation in the atmosphere and therefore may contribute to climate change. However, current research on climate change impacts is an emerging and rapidly evolving area of science, and given the lack of adequate analysis methods, it is not possible to identify reasonably foreseeable local, regional, or global climate change impacts based on assumed potential GHG emissions. Changes in global temperatures and climate vary significantly with time, and are subject to a wide range of driving factors and complex interrelationships, the level of GHG emissions can generally be quantified and compared to overall estimates to provide some measures of the level and significance of any potential impacts.

Oil and or gas may be developed and produced as part of the proposed lease sale and subsequently utilized to produce energy. The potential GHG impacts associated with the development of the oil and gas resources would be addressed in a subsequent environmental analysis.

Substantial air pollutant (including GHG) emission generating activities cannot occur without further BLM analysis and approval. Based on proposals for exploration and development operations, approval of these activities would be made subject to conditions of approval addressing air pollutant emissions as appropriate.

Cumulative Effects: This lease sale, when combined with the past, present and reasonably foreseeable actions (including increased traffic and the need for water disposal facilities) will elevate *potential* for the deterioration of air quality in the Plateau Valley. Increased development of fluid minerals will result in a cumulative increase in surface and subsurface disturbances as well as increase emissions during drilling and completion activities. The type of impacts will be the same as described under environmental impacts associated with the proposed action. However, the severity of the impacts will be elevated with increased development in the watershed.

Mitigation: No additional mitigation measures beyond those required by applicable local, State and Federal air quality laws and regulations would be required for leasing. However, additional requirements could be imposed based on site-specific proposals during later approval of exploration and development activities.

3.2.2 Fluid Mineral Resources

Affected Environment: All of the parcels are located in the Piceance Basin in an area identified as having moderate to high potential for oil and gas development. Surficial geology of the parcels ranges from the Quaternary deposits to the Wasatch Formation. Site specific geologic formations would be analyzed during the APD NEPA process. All sale parcels or portions of the sale parcels have been previously leased for federal oil and gas minerals.

Environmental Consequences of the No Action Alternative: Recoverable natural gas and oil resources in the oil and gas bearing formations would not be developed at this time.

Environmental Consequences of the Proposed Action: Sale of the parcels will allow development and recovery of oil and natural gas resources in the underlying oil and gas bearing formations. The GJFO ensures the APD submitted casing and cementing program is adequate to protect all of the resources, minerals, and fresh water zones, 43 CFR §3162.5-2(d).

Cumulative Effects: As of May 2011, approximately 693,000 acres of BLM-administered Federal oil and gas mineral estate within the GJFO is leased. Of this leased acreage approximately 15 percent is split estate. As of May 2011, there were 803 authorized oil and gas leases administered by BLM within the GJFO.

Since 1989 approximately 270 wells have been drilled in the GJFO. On average 14 wells have been drilled annually over the last 10 years.

3.2.3 Soils (includes a finding on Standard 1)

Affected Environment: The magnitude and location of direct and indirect effects on soil resources cannot be predicted until site-specific proposals are made for exploration and development. Soil classifications for the proposed lease parcels are shown in Table 3.

Table 3: Soil Classifications for Lease Areas

Soil Classification	Acres	Affected Lease Parcel(s)
Badlands	1.5	5892
Biedsaw-Sunup gravelly loams, 10-40% slopes	2.5	5892
Borollic Calciorthids, 25-50% slopes	14	5890
Clapper very stony loam, 25-65% slopes	5	5890
Goma Coldy loam, 5-15% slopes, very gravelly	67	5921
Hesperus-Pagota complex, 3-12% slope	76	5921
Rock outcrop-Torrirrhents complex 15-90% slopes	258	5890
Torrirrhents, cool-rock outcrop complex, 35-90% slop	368	5890, 5921, 5892
Wrayha-veatch-Rabbitex complex, 12-45% slopes	307	5901, 5921

Environmental Consequences of the No Action Alternative: There would be no impacts to the soils from the No Action Alternative.

Finding on Standard 1 (Upland Soils) for No Action: A formal land health assessment was conducted by BLM in 2010 and soils within identified lease parcels were meeting land health standard 1. The No-leasing alternative would not alter this finding.

Environmental Consequences of the Proposed Action: The proposed action allows the subsequent exploration and development of the lease. Exploration and development includes activities which would physically disturb soils (e.g., building well pads, access roads, installation of pipelines, etc.). The size of well pads will depend on the number of wells and the type of drilling that is being done. Access roads, pipelines and other infrastructure would be developed during both exploration and development activities.

Direct impacts resulting from the construction of well pads, access roads, pipelines and reserve pits would include removal of vegetation, exposure of the soil, mixing of horizons, compaction, loss of topsoil productivity, susceptibility to wind and water erosion, and possible contamination of soils with petroleum constituents. These impacts would likely result in increased indirect impacts such as runoff, erosion, and off-site sedimentation. This increased surface run-off could be expected in areas downstream of surface disturbance and could cause increased sheet, rill, and gully erosion in some areas.

Decreased soil productivity as a result of the loss of topsoil has the potential to hinder revegetation efforts and leave soils further exposed to erosion. Grading, trenching, and backfilling activities may cause mixing of the soil horizons which could diminish soil fertility and reduce the potential for successful revegetation. Segregation and reapplication of surface soils would result in the mixing of shallow soil horizons, resulting in a blending of soil characteristics and types. This blending would modify physical characteristics of the soils, including structure, texture, and rock content, which could lead to reduced permeability and increased runoff from these areas.

The erosion potential for the soil types likely to be disturbed ranges from slight to very high. Impacts are directly related to the erosion potential of soils and the steepness of the slopes in the proposed lease areas

Contamination of surface and subsurface soils can occur from leaks or spills of oil, produced water, and condensate liquids from wellheads, produced water sumps, and condensate storage tanks. Leaks or spills of drilling and hydraulic fracturing chemicals, fuels, and lubricants could also result in soil contamination. Such leaks or spills could compromise the productivity of the affected soils. Of these materials, leaks or spills of condensate would have the greatest potential environmental impact. Depending on the size and type of spill, the impact to soils would primarily consist of the loss of soil productivity. Typically, contaminated soils would be removed and disposed of in a permitted facility or would be bioremediated in place using

techniques such as excavating and mulching to increase biotic activities that would break down petrochemicals into inert and/or common organic compounds.

The Grand Junction ROD/RMP has lease stipulations for the protection of soils occurring on slopes 40% or greater and soils with landslide potential (NSO-1). These lease stipulations were reviewed and applied based on data from the USDA Soil Surveys for Mesa County.

Based on 10 meter DEM data, many of the proposed lease parcels have areas with slopes that are greater than 40 percent. These soils are unstable and unusable from the standpoint of building roads, infrastructure, and drill pad locations and construction in these areas could increase the risk of landslides and accelerate erosion rates. Landslides are the rapid downhill movement of a mass of soil and loose rock, generally when wet and saturated. The 1987 Grand Junction Field Office ROD/RMP applies an NSO in areas that are considered unstable and subject to slumping and mass movement. Approximately 40 acres within lease parcel 5921 is identified as having slump/landslide potential. Short sections of roads and linear features such as pipelines could still be constructed in areas depending on construction techniques and will be allowed based on a site specific analysis.

Construction and use of roads, structures, and drill pad locations in areas with slopes that are greater than 40 percent would likely destabilize soils, would result in severe cut and fill slopes, and would be extremely difficult to reclaim. These direct impacts would result in increased potential to make these areas unstable and subject to slumping and mass movement even after reclamation. Lease parcel 5890 has 233 acres of steep slopes, parcel 5921 had 73 acres of steep slopes, parcel 5901 has 15 acres of steep slopes, and parcel 5892 has no mapped steep slopes. Applying an NSO-1 in these areas would still leave these areas available for development by locating infrastructure on suitable slopes and utilizing directional drilling practices. Therefore this NSO application is unlikely to impede the development of the mineral resources, but will protect areas that have higher erosive potential.

Finding on Standard 1 (Upland Soils) for Proposed Action: A formal land health assessment was conducted by BLM in 2010 and soils within identified lease parcels were meeting land health standard 1. Leasing these parcels would not alter this finding. However, development of these lease parcels would increase surface disturbance, elevating potential for deterioration of soil and vegetative health. Standard 1 would continue to be met until further assessed.

Cumulative Effects: This lease sale, when combined with the past, present and reasonably foreseeable actions will elevate *potential* for the deterioration of soil health. Increased development of fluid minerals will result in a cumulative increase in surface disturbances as well as increase potential for leaks or spills during drilling and completion activities. The type of impacts will be the same as described under environmental impacts associated with the proposed action. However, the severity of the impacts will be elevated with increased development in the watershed.

Mitigation: For the purpose of protecting areas from slumping and mass movement of soils or landslides, GJFO-NSO-01 lease stipulation should be applied on all appropriate locations within lease areas. For the purpose of minimizing erosion and sediment transport from slopes equal to or greater than 40 percent, GJFO-NSO-03 lease stipulation should be applied on all appropriate locations within the lease areas. Specific locations having slopes steeper than 40 percent would be identified during site specific proposals for exploration and development.

- When saturated soil conditions exist on or along the right-of-way, construction shall be halted until soil material dries out sufficiently for construction to proceed without undue damage and erosion to the right-of way.
- The grant holder shall provide satisfactory reclamation of all sites disturbed by their activity. This may include installation of additional erosion control devices and seeding at the discretion of the BLM Authorized Officer.
- Topsoil shall be conserved during excavation and reused as cover on disturbed areas to facilitate re-growth of vegetation. Topsoil shall only be used for reclamation and shall not be used to bed or pad the pipe during backfilling.
- To control erosion and sediment transport, roads shall be crowned or sloped, ditched, surfaced, drained with culverts and/or water dips, and constructed to BLM Gold Book standards. Culvert outlets shall incorporate controls such as rip-rap, sediment catchments, and anchored straw bales, to slow water velocity and prevent erosion and soil transport. Initial gravel application shall be a minimum of four inches.
- The operator shall provide timely year-round road maintenance and cleanup on roads. A regular schedule for maintenance shall include, but not be limited to, crown or slope reconstruction, blading, ditch, culvert and catchment cleaning, road surface replacement, and dust abatement. When rutting within the traveled way becomes greater than three inches, blading, and/or gravelling shall be conducted as approved by the BLM Authorized Officer.
- Top soil segregation will not occur when soils are saturated or frozen unless special authorization is granted by the BLM Authorized Officer.
- A Winter Construction 1 Plan will be submitted and approved by the BLM Authorized Officer before a Notice to Proceed will be authorized for construction activities in frozen soils.
- All erosion and sediment control practices and measures shall be constructed, applied, and maintained in accordance with the approved erosion and sediment control plan.
- Topsoil stripping shall be confined to the immediate construction areas. A 4 to 6-inch stripping depth is common, but depth may vary depending on the particular soil. All perimeter dikes, basins, and other sediment controls shall be in place prior to stripping.

- After the areas to be topsoiled have been brought to grade, and immediately prior to spreading the topsoil, the subgrade shall be loosened by disking or scarifying to a depth of at least two inches (or as site specific analysis determines 1 appropriate for soil type) to ensure bonding with subsoil.
- Topsoil shall not be placed while in a frozen or muddy condition, when the subgrade is excessively wet, or in a condition that may otherwise be detrimental to proper grading or proposed sodding or seeding.

3.2.4 Water (surface and groundwater, floodplains) (includes a finding on Standard 5)

Affected Environment: Surface Water: Lease parcels 5901 and 5921 are located within water quality control stream segment 15 of the Lower Colorado River Basin. Stream segment 15 of the Lower Colorado River Basin is defined as the “Mainstem of Plateau Creek including all tributaries and wetlands, from its source to the HWY 330 bridge in Collbran. Kimball Creek, Grove Creek, Big Creek, Cottonwood Creek, Bull Creek, Spring Creek, Coon Creek, and Mesa Creek, including all wetlands and tributaries, from their sources to their confluences with Plateau Creek. Lease parcels 5901 and 5921 are within the Spring Creek and Bull Creek watersheds. Both Spring Creek and Bull Creek are perennial tributaries to Plateau Creek. Plateau Creek is a perennial tributary to the Colorado River near Cameo, Colorado.

Lease parcels 5890 and 5892 are located within water quality control stream segment 16 of the Lower Colorado River Basin. Through the CDPHE-Water Quality Control Division (WQCD) bi-annual review of the Status of Water Quality in Colorado - 2010, stream segment 15 was split to facilitate the adoption of appropriate temperature standards creating stream segment 16 (CDPHE, Regulation No. 37). Stream segment 16 is defined as “Plateau Creek including all tributaries and wetlands, from the HYW 300 bridge in Collbran, to the confluence with the Colorado River, excluding specific listings in segment 15” (CDPHE-WQCC. 2010a). Lease parcel 5890 is within the Dry Creek, Kimball Creek, Smalley Gulch, and Hawxhurst Creek watersheds. Lease parcel 5892 is within the Clover Gulch watershed. Clover Gulch is an ephemeral tributary to Plateau Creek. Dry Creek is an ephemeral tributary to Kimball Creek which is a perennial tributary to Plateau Creek. Smalley Gulch is an ephemeral tributary to Buzzard Creek which is a perennial tributary to Plateau Creek. Hawxhurst Creek is a perennial tributary to Buzzard Creek. Plateau Creek is a perennial tributary to the Colorado River near Cameo, Colorado. Table 1 identifies stream classifications and water quality standards for segments 15 and 16.

Table 1 identifies stream classifications and water quality standards for Lower Colorado River Basin stream segments 15 and 16 as outlined in CDPHE, Regulation No. 37.

Stream Segment	Classification s	Numeric Standards					
		Physical and Biological	Inorganic (mg/l)		Metals (ug/l)		
COLCLC15	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) oC D.O.=6.0 mg/l D.O.(sp)= 7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH3(ac/ch)=T VS Cl2(ac)=0.019 Cl2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO2=0.05 NO3=10 Cl=250 SO4=WS	As(ac)=340 As(ch)=0.02(Tre c) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Tre c) CrVI(ac/ch)=TV S Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Tre c) Pb(ac/ch)=TVS Mn(ch)=WS(dis) Mn(ac/ch)=TVS Hg(ch)=0.01(tot)	Ni(ac/ch)=TV S Se(ac/ch)=TV S Ag(ac)=TVS Ag(ch)=TVS(t r) Zn(ac)=TVS Zn(ch)=TVS(s c)
COLCLC16	Aq Life Cold 1 Recreation E Water Supply Agriculture	T = TVS (CS-II)°C D.O. = 6.0 mg/l D.O. (sp) = 7.0 mg/l pH = 6.5-9.0 E. Coli = 126/100ml	NH3(ac/ch)=TV S Cl2(ac)=0.019 Cl2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO2=0.05 NO3=10 Cl=250 SO4=WS	As (ac)=340, As(ch)=0.02 (Trec) Cd(ac/cj)=TVS CrIII(ac)=50(Tre c) CRVI(ac/ch)=TV S CU(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Tre c) Pb(ac.ch)=TVS Mn(ch)=WS(dis) Mn(ac/ch)=TVS Hg(ch)=0.01(tot)	Ni(ac.ch)=TV S Se(ac/ch)=TV S Ag(ac/ch)=TV S Zn(ac/ch)=TV S

CDPHE–WQCC. 2010a

The CDPHE —Integrated Water Quality Monitoring and Assessment Report-2010 update to the 2008 305(b) Report (CDPHE-WQCC. 2010c) was reviewed to determine the current status of assessment and determination of water quality within the proposed project area. The Colorado Integrated Reporting Category (IR) value assigned to the assessment units in the —Status of Water Quality in Colorado – 2010 document was IR=2. Stream segment 15 is described as fully supporting agriculture, water supply, and primary contact recreation. Insufficient information was available to adequately assess aquatic life cold 1 as potential water quality impairments from selenium and iron (unknown sources) were identified. Stream segment 16 is described as fully supporting agriculture, aquatic life cold 1, water supply, and primary contact recreation. In Colorado, the majority of the assessed surface water bodies fall into IR Categories 1, 2, and 3. Category 1 indicates waters attaining water quality standards. Colorado has elected to place segments where not all uses have been assessed in IR Category 2. In some cases, a complete assessment of all uses cannot be completed do to the lack of data, but the data that is available indicates that at least some of the uses that were assessed are fully supporting. IR Category 3 indicates that insufficient data is available to determine whether or not the classified uses are being attained. Category 4 indicates waters which are not supporting a standard for 1 or more classified uses, but a TMDL is not needed. IR Category 5 indicates that available data and/or information indicate that at least one classified use is not being supported or is threatened, and a TMDL is needed. Segments must be placed in Category 5 when, based on existing and readily available data and/or information, technology-based effluent limitations required by the Clean Water Act (CWA), more stringent effluent limitations, and other pollution control requirements are not sufficient to implement an applicable water quality standard and a TMDL is needed. This category constitutes the Section 303(d) list of waters impaired by a pollutant (CDPHE-WQCC. 20010c).

The 2010 CDPHE-WQCC Regulation No. 93 Section 303d List of Impaired Waters and Monitoring and Evaluation List, was reviewed to determine if Lower Colorado River stream segments 15 and 16 were listed. Stream segment 15 is identified on the Monitoring and Evaluation List for potential selenium and iron impairments. Stream segment 16 was not identified on the 303(d) or Monitoring and Evaluation list (CDPHE-WQCC. 2010b).

Groundwater: The proposed action is situated within Piceance Structural Basin located in western Colorado. The Piceance Basin is an elongated structural depression trending northwest - southeast. The basin is more than 100 miles long and has an average width of over 60 miles, encompassing an area of approximately 7,110 square miles. The Piceance structural basin encompasses varying portions of Moffat, Rio Blanco, Garfield, Mesa, Pitkin, Delta, Gunnison, and Montrose counties (Topper et. al. 2003).

Being part of the Colorado Plateau physiographic province, the Piceance Basin is characterized by a series of high plateaus and deep valleys. Down-cutting of the Colorado River has divided the Piceance Basin into a northern and southern province. The proposed action is located in the southern province. The southern province is marked by two significant erosional remnants, Grand Mesa and Battlement Mesa (Topper et. al. 2003). The principal bedrock aquifers south of the Colorado River; the upper Tertiary-age aquifers have largely been eroded off, exposing a thick basal confining unit of the lower Green River and Wasatch Formations. As such, most water supply wells in the southern portion of the Piceance Basin are completed in the alluvial aquifers associated with the Colorado and Gunnison River tributaries (Topper et. al. 2003). Within the Plateau Valley, the dominant source of ground water is located within shallow to deep alluvial and glacial till deposits. These alluvial and glacial till aquifers are primarily recharged by high elevation snowmelt/precipitation and contribute to base flows in perennial streams and springs in the Plateau Valley.

Water Rights:

Numerous water rights and permitted groundwater wells exist within the Plateau Valley. Use types for these sources include: municipal, domestic, household use only, irrigation, stock, other, and commercial. Lease segments 5901, and 5921 are situated within the Mesa/Powderhorn Source Water Protection Area (as defined by BLM in the ongoing GJFO RMP revision). The eastern portion of lease parcel 5890 is situated within the Colbran source water protection area (as defined by BLM in the ongoing GJDO RMP revision). It is important to note that these source water boundaries were developed using information from the local water conservancy district, State of Colorado, GIS coverage of water well distribution in the Plateau Valley, 1:250k geologic mapping, and basic principals in groundwater hydrology. Watershed boundaries were developed to protect private water outtakes as well as municipal sources. BLM Colorado has committed to addressing environmental concerns associated with fluid mineral development in source water protection areas in the GJFO Resource Management Plan revision. This analysis will include analyzing whether or not leasing in source water protection areas is appropriate. As part of this plan, BLM is analyzing one or more alternatives that would not allow additional fluid mineral leasing in municipal watersheds or source water protection areas. It is important to note

that development of fluid minerals (private and federal minerals) in the Plateau Valley has been heavy in the past. Development of valid existing federal leases as well as non-federal minerals will continue to be developed in the future regardless of BLM's decision on future leasing in these areas.

Surface geology in parcels 5890 and 5892 is dominantly Tertiary aged Wasatch and Ohio Creek Formation. The Wasatch Formation is comprised of interbedded shale and lenticular sandstone. The Wasatch formation is generally thought of as a confining unit however, field observation of sandstone intervals reveal these deposits can produce limited quantities of water. Quaternary aged eolian, gravels and alluvial deposits are located downgradient of these lease parcels and are in part, recharged by precipitation and snowmelt runoff originating at higher elevations.

Surface geology in parcels 5901 and 5921 is dominantly Quaternary glacial drift, landslides and colluvial deposits. Modern alluvium and terrace gravels also make up a small portion of these lease parcels. Permeable glacial and alluvial deposits make up the most substantial water bearing units in the Plateau Valley. A query of the CDSS well database and the 1:250k surface geology mapping within the Mesa/Powderhorn and Collbran Source-water Protection Areas was done to identify the primary water bearing units within each of the source water protection areas. From this query it was determined that 415 of the 556 completed wells within the Mesa/Powderhorn Source-water Protection Area were constructed in Quaternary deposits (glacial tills, alluvium, colluvium, eolian, terrace gravels, landslides, and colluvial deposits). Of these 415 constructed wells, 249 were reported to have domestic uses, 124 were reported to have household only uses, and 6 were reported as having municipal uses. The query identified 27 of the 110 wells within the Collbran Source-water Protection Area to be within Quaternary deposits. Of these 27 constructed wells, 14 were reported to have domestic uses while 11 were reported to have household only uses. No municipal wells were identified within the Collbran Source-water protection Area. Three constructed wells are located on parcel 5921. All wells are identified as having domestic uses and depths range from 45-105 feet below ground surface. No water wells were identified on any of the other proposed lease tracts. However, many wells are situated downgradient from the proposed lease tracts. Well depths range from less than 10 feet (outtakes near perennial surface water) to 765 feet below ground surface.

A Review of the GJFO springs database indicated no springs or seeps within any of the identified lease parcels.

The Colorado Division of Water Resources (DWR) has jurisdiction over the production of groundwater that is put to beneficial use. However, groundwater produced from conventional oil and gas wells (and CBM wells) within the basin typically is of poor water quality and defined as oil field waste. Fresh water utilized for drilling and dust suppression would be acquired from private sources with valid existing rights.

Environmental Consequences of the No Action Alternative: No impacts identified.

Finding on Standard 5 (water quality) for No Action: Stream segments 15 and 16 of the Lower Colorado River Basin currently meet water quality standards. Implementation of the no action alternative would not create potential to alter this finding.

Environmental Consequences of the Proposed Action: The lease sale would lease parcels with lease stipulations to protect resources. Lease stipulations 6 and 7 in the 1987 GJFO RMP/ROD identify measures protective of water resources. Lease stipulations 1 and 3 are protective of lands with 40 percent slope or greater, unstable and slumping soils. Collectively, lease stipulations 1, 3, 6, and 7 will help protect areas from excessive erosion that could impact surface water quality.

Surface Water: Clearing, grading, and soil stockpiling activities associated with exploration and development actions would alter overland flow and natural groundwater recharge patterns. Potential impacts include surface soil compaction caused by construction equipment and vehicles, which would likely reduce the soil's ability to absorb water, increasing the volume and rate of surface runoff. New oil and gas roads and pads could intersect shallow groundwater along cut slopes and alter channel and floodplain characteristics at drainage crossings. The combination of increased surface runoff, decreased infiltration, and changes in drainage features would likely result in increased peak flows and an increase in the frequency and extent of flooding for downstream streams in proportion to the amount of area in a watershed that is impacted by oil and gas development activity.

The success or failure of BMPs designed to manage stormwater and reduce erosion during construction and operation of oil and gas facilities will determine much of the impact with regard to surface waters. Runoff associated with storm events would likely increase sediment/salt loads in surface waters down gradient of the disturbed areas. Sediment may be deposited and stored in minor drainages where it would be readily moved downstream during heavy convection storms. Some sediment from future development activity may eventually be carried into perennial tributaries to Plateau Creek and eventually the Colorado River where water quality classifications would limit the amount of sediment and salts that could be present and meet standards. The distance to impacted surface waters would have an attenuating effect on the amount of sediment contributed by lease exploration and development activities. Surface erosion would be greatest during construction and would be controlled using BMPs for storm water.

The magnitude of the impacts to surface water resources from future development activities depends on the proximity of disturbances to drainage channels, slope aspect and gradient, degree and area of soil disturbance, soil character, duration of construction activities, and the timely implementation and success/failure of mitigation measures. Natural factors which attenuate the transport of sediment into creeks include water available for overland flow; the texture of the eroded material; the amount and kind of ground cover; the slope shape, gradient, and length; and surface roughness. Impacts would likely be greatest shortly after the start of construction activities and would likely decrease in time due to stabilization, reclamation, and revegetation efforts.

Groundwater: Impacts to groundwater resources could occur due to failure of well integrity, surface spills, or the loss of drilling, completion, and hydraulic fracturing fluids into groundwater. Chemical additives used in completion activities would be introduced into the producing formations. Loss of drilling fluids may occur at any time in the drilling process due to changes in porosity or other properties of the rock being drilled through. When this occurs, drilling fluids may be introduced into groundwater. Site specific conditions and drilling practices determine the probability of this occurrence and determine the groundwater resources that could be impacted. In addition to changing the producing formations' physical properties by increasing the flow of water, gas, and/or oil around the well bore, hydraulic fracturing can also introduce chemical additives into the producing formations. Types of chemical additives used in drilling activities may include acids, hydrocarbons, thickening agents, lubricants, and other additives that are operator and location specific. These additives are not always used in these drilling activities and some are likely to be benign such as bentonite clay and sand. Concentrations of these additives also vary considerably and are not always known since different mixtures can be used for different purposes in the same oil and gas development and even in the same well bore.

If contamination of aquifers from oil and gas development occurs, changes in groundwater quality could impact downstream users diverting water from groundwater sources (e.g. domestic wells, springs, and surface water diversions). All of the identified parcels have the potential to impact groundwater resources in and/or adjacent to proposed lease areas which includes domestic wells, springs, and surface water resources in the Plateau Valley. More specifically, proposed lease parcel 5921 contains 3 constructed wells identified for domestic uses. The depth of these wells ranges from 45 feet to 105 feet below ground surface and are completed in Quaternary deposits. Water quality degradation resulting from spills or leaks of chemicals associated with well completion and/or drilling operations would likely be evident first in these domestic sources give the proximity to fluid mineral development. Other diversion points (wells) located downgradient of developed parcels are likely to experience water quality degradation in the event of upstream spills, leaks, etc...over time. However, the severity of water quality impacts at downstream locations would be subject to the type and volume of contaminant introduced. The timing of these impacts would vary based in aquifer properties.

Fluid minerals in the Plateau Valley have been highly developed on both private and public lands and contamination of groundwater resources associated with this past/current development has not yet been documented. Known water bearing zones in the project area are protected by drilling requirements, regulations, and industry practice. With proper drilling and completion practices, potential contamination of groundwater resources is minimized.

Finding on Standard 5 (water quality) for Proposed Action: Stream segments 15 and 16 of the Lower Colorado River Basin currently meet water quality standards. Leasing of the proposed parcels is not anticipated to alter the current finding.

Cumulative Effects: This lease sale, when combined with the past, present and reasonably foreseeable actions will elevate *potential* for the deterioration of surface and groundwater quality in the Plateau Valley. Increased development of fluid minerals will result in a cumulative

increase in surface and subsurface disturbances as well as increase potential for leaks or spills during drilling and completion activities. The type of impacts will be the same as described under environmental impacts associated with the proposed action. However, the severity of the impacts will be elevated with increased development in the watershed.

Mitigation - The following are common measures required at the APD stage:

- See Soils mitigation.
- Oil and gas drilling operations within municipal watersheds and/or source water protection areas will utilize methods and materials that will prevent degradation of the underlying groundwater. This may include practices such as surface casing through potential fresh water zones, green completions, green frac fluids, and pitless drilling - closed loop drilling.
- Within portions of municipal watersheds available for fluid minerals development, the operator will develop and implement a watershed protection plan. This plan will include characterization and monitoring of hydrologic/hydrogeologic conditions such as but not limited to: water quality, water quantity, groundwater flow patterns, connectivity between geologic formations, and communication between surface and groundwater. The operator will collaborate with all watershed stakeholders in development and implementation of the watershed protection plan.
- Protection of drinking water supply sources within surface water supply areas (leased or made available for leasing) will (at minimum) concur with Colorado Oil and Gas Conservation Commission rule 317B and subsequent updates.
- Collbran has town ordinance pursuant to C.R.S 31-15-707(1)(b) for the purpose of maintaining and protecting the Town's waterworks from injury and to protect the water from pollution in lands and territory occupied by such waterworks and over the streams or sources, including groundwater, from which the water is taken for five (5) miles above the point from which it is taken. The Town will require the lessee to obtain a watershed protection permit prior to development.
- Additional site-specific mitigation measures will be implemented at the APD stage based on the submitted Surface Use and Drilling Plans.

3.3 BIOLOGICAL RESOURCES

3.3.1 Invasive, Non-native Species

Affected Environment: Invasive species and noxious weeds occur within the affected area. Downy brome (cheatgrass) and other annual weeds are common along roadsides and on other disturbed areas. Houndstongue, Canada thistle, Scotch thistle, musk thistle, and hoary cress are

also known to occur in these areas. Other species of noxious weeds can be introduced by vehicle traffic, livestock, and wildlife and can be readily spread into newly disturbed areas. The BLM, USFS, Mesa County, and oil and gas companies collaborate in their efforts to find the best integrated approaches to manage weeds through the *Oil and Gas Weed Management Plan for Oil and Gas Operators*, which has been in place since 2007.

Environmental Consequences of the No Action Alternative: There would be no impacts from the No Action Alternative.

Environmental Consequences of the Proposed Action: If drilling were to occur on these parcels, subsequent activities would create an environment for and provide a mode of transport for invasive species and other noxious weeds to become established. Construction equipment and any other vehicles or equipment brought onto the site can introduce weed species. Wind, water, recreation vehicles, livestock and wildlife would also assist with the distribution of weed seed into the newly disturbed areas. The annual invasive weed species (downy brome and other annual weeds) that occur on adjacent rangelands would occupy the disturbed areas; the bare soils and the lack of competition from a perennial plant community would allow these weed species to grow unchecked and can affect the establishment of seeded plant species. Establishment of perennial grasses and other seeded plants as part of interim reclamation is expected to reduce the presence of invasive annual weeds within two or three years. The perennial and biennial noxious weeds in the area are less frequently established on the uplands but some potential exists for their establishment in draws and swales or areas that would collect additional water. The largest concern in the project area would be for these species to become established and not be detected, providing seed which can move onto adjacent rangelands. At the APD stage, the operator would be required to adhere to the *Oil and Gas Weed Management Plan* and continue weed management actions throughout the life of the project.

Cumulative Effects: This lease sale, when combined with the past, present and reasonably foreseeable actions will potentially add new sites requiring on-going weed management. Additional roads, pads, and pipelines will add to the areas requiring regular maintenance unless abandonment and final reclamation efforts exceed development.

3.3.2 Threatened, Endangered and Sensitive Species (includes a finding on Standard 4)

Affected Environment: The only listed species that has potential to be directly influenced by development of the proposed leases is the Canada Lynx. Parcels 5892 and the western portion of 5890 are within the battlement Lynx analysis unit. Parcel 5901 and 5921 are within the Mesa lakes Lynx Analysis Unit. Of these parcels one hundred and ten acres of the 5890 parcel were mapped as habitat for Lynx in mapping exercises conducted with the USFS, BLM, and USFWS in 2003. Since 2003, habitat mapping has revealed that most of this area is pinyon juniper woodland and does not meet habitat requirements for the lynx. In addition CDOW telemetry data from Lynx shows the Lynx do not use this area (Shenk, 2005). In 2010 the USFS in coordination with the BLM and USFWS re-mapped lynx habitat and the area within parcel 5890 is no longer mapped as lynx habitat nor does it fall within a Lynx analysis unit, the closest

currently mapped lynx habitat is approximately 3 miles northeast of parcel 5890 (USFS, 2010). The parcels occur within the Colorado River Basin and development on these parcels is expected to result in water depletions to the Colorado River Basin which will indirectly affect the critical habitat of the Boneytail Chub, Humpack Chub, Colorado Pikeminnow and Razorback Sucker.

Proposed lease parcel (5901) has a high probability of containing the BLM sensitive DeBeque milkvetch. Biological surveys completed in 2010 recorded a large population of the milkvetch immediately south of the proposed lease parcel. While it is unknown if lease parcel 5921 contains DeBeque milkvetch, the parcel does contain suitable habitat for the species. The remaining two proposed lease parcels (5892, 5890) are not known to contain occupied or potential habitat for any Special Status plant Species. A number of BLM sensitive animal species are known to inhabit or may be indirectly influenced from development of the proposed lease parcels, including the northern goshawk, Colorado River cutthroat trout, flannelmouth sucker, roundtail chub, and bluehead sucker. The lease parcels are located within mapped historic habitat for the Gunnison and Greater Sage grouse but do not currently contain the species nor are these areas mapped as potential habitat.

Parcel 5921 contains a portion of Bull creek which contains Colorado River Cutthroat trout, and the two 5890 parcels are adjacent to the West Fork of Kimball Creek and Hawxhurst creek respectively, both of which contain Colorado River Cutthroat trout. All of the four parcels drain into Plateau Creek which contains roundtail chub, bluehead sucker and flannelmouth sucker. With the exception of the 5921 parcel the lease parcel acreage is located in upland communities and the likelihood of development directly influencing downstream aquatic habitats is considered low. Parcel 5921 contains 140meters of Bull creek on the northeast corner of the parcel.

The GJFO has one recent record of a Goshawk nest adjacent to but not within parcel 5921. Based on BLM's experience, goshawks nest at low densities in the field office in mature pinyon-juniper woodlands above 6,500 ft and Douglas-fir stands. Parcels 5901, 5921, and 5890 contain potential habitat nesting habitat for the species.

Curent Status of Standard 4 (T&ES): Standard 4 of the BLM Standards for Public Land Health require the BLM to manage threatened and endangered species and their habitat by sustaining healthy, native plant and animal communities. Public land health standards were evaluated in this area in 2010. All BLM lands within the proposed lease parcels were meeting Standard 4, with the exception of the parcel 5921, which contains very little public land. Private land is typically not included in the land health assessment.

Environmental Consequences, No Action Alternative: There would be no impacts to special status species or their habitat from the No Action Alternative.

Finding on Standard 4 (T&ES) for No Action: The No Action Alternative would not change current land health ratings for the proposed lease parcels, as the parcels would not be leased, and ground disturbance associated with energy development would not occur.

Environmental Consequences, Proposed Action:

Bonytail, Humpback Chub, Razorback sucker, and Colorado Pikeminnow: Cumulative water depletions from the Colorado River Basin are considered likely to jeopardize the continued existence of the Colorado pikeminnow, humpback chub, bonytail, and razorback sucker and result in the destruction or adverse modification of their critical habitat. In 2008, BLM prepared a Programmatic Biological Assessment (PBA) that addressed water depleting activities associated with BLM's fluid minerals program in the Colorado River Basin in Colorado, including water used for well drilling, hydrostatic testing of pipelines, and dust abatement on roads. In response, the U.S. Fish and Wildlife Service (FWS) prepared a Programmatic Biological Opinion (PBO) that addressed water depletions associated with fluid minerals development on BLM lands. The PBO included reasonable and prudent alternatives which allowed BLM to authorize oil and gas wells that result in water depletion while avoiding the likelihood of jeopardy to the endangered fishes and avoiding destruction or adverse modification of their critical habitat. The reasonable and prudent alternative authorized BLM to solicit a one-time contribution to the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (Recovery Program) in an amount based on the average annual acre-feet depleted by fluid minerals activities on BLM lands. This contribution was ultimately provided to the Recovery Program through an oil and natural gas development trade association. Development associated with this lease sale would be covered by this agreement and water-use values associated with this project would be entered into the GJFO fluid minerals water depletion log that is submitted to the Colorado State Office at the end of each Fiscal Year.

Implementation of State and federally-imposed design measures to control erosion and spills would limit the risk of contaminants migrating off-site and degrading water quality in the Colorado River.

Canada Lynx: While several of these parcels are within Lynx Analysis units, habitat on these parcels is marginal and according to more recent analysis does not meet habitat requirements for the species. Therefore leasing of these parcels will have no effect on Lynx or their habitat.

Greater and Gunnison sage-grouse: The proposed lease parcels are within the historic range of Gunnison and Greater sage-grouse. However the historic distribution was coarsely mapped (at a scale of 1:2,000,000) and site specific analysis reveals that the areas to be leased are not within an area that historically supported sage brush. The proposed lease parcels are dominated by pinion juniper woodlands and are therefore not likely to support sage grouse or sagebrush habitats and are not mapped as potential habitat for either species. The Sunnyside area, northwest of parcel 5892 contains wintering habitat for sage grouse, however none of the parcels included in the proposed action contain sage grouse habitat. Therefore impacts to the Greater and Gunnison Sage grouse are not expected.

Northern goshawk: There are no known goshawk nests within the proposed lease parcels, although potential exists for some of these parcels to contain nests. Raptor nest surveys are required prior to project implementation in those areas potentially influenced by proposed

development activities. Information on functional nest sites found in the course of surveys are used as the basis for developing siting alternatives or applying timing limitations that reduce the risk of nest activity disruptions that could result in reproductive failure or compromising the long-term utility of nest habitat. All parcels in the proposed action provide for special status species, allowing for the application of raptor timing limitations as needed to protect nesting activities, therefore it is expected any direct impacts to nesting birds could be mitigated at the time of development .

BLM sensitive fish (including Colorado River Cutthroat): Of the BLM sensitive fish, Colorado River Cutthroat are known to occur in Bull Creek which crosses parcel 5921. These leases would be issued under current RMP guidance, which allows the BLM to move oil and gas facilities by up to 200 meters. Possible changes in the ongoing RMP revision, and draft state wide oil and gas stipulations could require greater avoidance of riparian systems and add timing limitations to avoid impacts during spawning, however these parcels would remain subject to only the protections under the current RMP. Because this parcel contains a small portion of Bull creek impacts to Colorado River Cutthroat trout as a result of leasing are expected to be minimal. All BLM sensitive fish are likely to be subject to depletion-related effects, to which the development of proposed lease parcels would incrementally contribute.

DeBeque milkvetch: Absent specific location information for this species in proposed lease parcels 5901 and 5921, BLM will require biological surveys to be completed prior to well pad location approval. Current RMP guidance stipulates avoidance of BLM Sensitive plant Species, with no recommended buffers. Possible changes in the ongoing RMP revision, and draft state wide oil and gas stipulations could require avoidance of the species by set buffer distances to ensure avoidance and to minimize disturbance of pollinator species, and dust impacts, however these parcels would remain subject to only the protections under the current RMP. While the DeBeque milkvetch would be protected under the existing stipulations, protections are anticipated to be greater in the future under the guidance of the revised RMP, and the state wide oil and gas stipulations. These additional protections would not be applied to these leases. In addition to the aforementioned threats, impacts associated with the oil and gas development may include crushing of individual plants, habitat fragmentation, and weed introduction. Additional analysis and project level planning will take place prior to development. As a result of surveys prior to development, BLM routinely requires operators to avoid or minimize effects to sensitive species through COAs. These measures are expected to be sufficient to render the effects to DeBeque milk vetch insignificant.

Finding on Standard 4 (T&ES) for Proposed Action: The proposed action is expected to have no effect on the areas ability to meet standard 4 for threatened, endangered and sensitive species.

Cumulative Effects: Development of one or more of these lease parcels would contribute to activity simultaneous with and in addition to ongoing natural gas and mineral development and recreation use in the GJFO. Initial disturbance to TES species (e.g., construction, drilling, and completion activities), as conditioned by timing limitations, CSU and COAs would be relatively localized and temporary. After these initial activities have subsided, human activity

and effects of habitat fragmentation would continue throughout the production phase and persist for the life of well or field. The consequences of these influences on TES species would vary according to species-specific response through time as modified by habituation or circumstance, such as the use of access restrictions or BMPs that reduce the frequency and duration of well visitation. Development would result in further unavoidable modifications and reductions in, particularly, pinyon-juniper woodland communities. Roads and working surfaces of pads represent incremental accumulation of acreage removed from habitat base for the life of the well or field.

Leasing and subsequent development of one or more of these lease parcels in combination with the past, present, and reasonably foreseeable actions; is likely to contribute to a sustained reduction in the overall abundance of most affected species through direct and indirect impacts, but it would not be expected to elevate cumulative effects to levels that would compromise the viability of any wildlife population or the utility of broader landscapes as habitat. The size and distribution of habitat patches ultimately created through lease development (instigating species-area effects) or whether barriers persist long enough to manifest inbreeding depression (reduced fitness of individuals and isolated populations) is subject to much speculation, but considering only those parcels recommended for leasing (4 parcels out of 25 nominated), in combination with the past, present, and reasonably foreseeable actions; these principles of fragmentation are not known to be operating at a level that prompts imminent concern.

The combination of CSU and TL lease stipulations and complementing sighting criteria that attempts to minimize or avoid adverse modification of raptor nest habitat character have been effective in preventing reproductive failures and maintaining the integrity of the nest substrate or woodland stand for subsequent nest attempts. Raptor nest surveys are required prior to project implementation in those areas potentially influenced by proposed development activities. Information on functional nest sites found in the course of survey are used as the basis for developing siting alternatives or applying timing limitations that reduce the risk of nest activity disruptions that could result in reproductive failure or compromising the long-term utility of nest habitat.

Mitigation: Mitigation that is used to reduce the duration or severity of impacts to special status species is presented integral with the discussions above. Potential mitigation applied to subsequent lease development includes RMP-derived Controlled Surface Use (CSU), and Timing Limitation (TL) stipulations (see Attachment A). All parcels are also subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

3.3.3 Vegetation (grasslands, forest management) (includes a finding on Standard 3)

Affected Environment: The ecological sites and acres potentially affected by the lease sale are shown in Table 6. The exact impacts to vegetation cannot be determined until site specific proposals have been submitted to GJFO for analysis.

Table 6: Ecological Sites within the Proposed Lease Parcels

Ecological Site	Acres
Alkaline Slopes	604
Bad lands	215
Brushy Loam	707
Brushy Loam/ Unspecified	423
Deep Loam	68
Engelmann’s Spruce/Subalpine fir	500
Foothill Juniper	2434
Foothill Swale	111
Loamy Salt Desert	138
Mountain Loam/Loamy Slopes	929
Mountain Pinyon	327
Pinyon-Juniper /Unspecified	5546
Rocky Mtn. Douglas-fir Woodlands	244
Rolling Loam	566
Salt Desert Overflow/Salt Flats	78
Semi-Desert Clay	382

Note: Acreages in the above table do not sum exactly to the total acreage being proposed for leasing since the above acreage analysis was done in GIS and is not based on direct calculations from the legal descriptions.

In general desired plant communities are managed in an ecological status of high-seral or healthy mid-seral for all rangeland plant communities within the GJFO. In general most of the north west parcels near Douglass Pass and Brush Mountain are currently meeting land health standards and would be classified at mid to late-seral. There are a few parcels near the Town of DeBeque, CO that are not meeting or meeting with problems within the land health standard 3 (plant and animal communities) and may be classified as early seral. This is generally as a result of a lack of desirable vegetation, ground cover, and diversity. Cheatgrass (*Bromus tectorum*) along with other undesirable invasive annuals generally make up the majority of the ground cover and do

not have root structures capable of anchoring and protecting soils in the area. Vegetation conditions will be further evaluated during the onsite inspections for individual oil and gas activities as they are proposed.

Environmental Consequences of the No Action Alternative: There would be no impacts to vegetation under the No Action Alternative.

Environmental Consequences of the Proposed Action: Specific impacts associated with vegetation cannot be predicted at the leasing stage, however management direction in the Grand Junction ROD/RMP allows for the site-specific development of COAs at the APD stage, including facility relocations and providing for rapid stabilization and restoration. Generally oil and gas development involves complete removal of vegetation and at times re-contouring of the landscape to allow for resources to be retrieved. Vegetation is removed in an amount commensurate with the level of oil and gas development. Conditions of Approval, including reclamation/restoration procedures, are developed at the approval stage and are followed throughout the life of the development. These COAs generally include plans for interim reclamation, re-seeding, re-contouring, and soil stabilization on the site. With appropriate COAs all developed land ultimately will be reclaimed and restored, albeit in some instances up to 30 years after initial disturbance. The type of ground activity associated with oil and gas development does result in increased susceptibility to adverse impacts such as weed infestations and erosion (See Soils and Invasive, Non-Native Species sections).

Finding on Standard 3 (plant and animal communities) for Proposed Action:

Cumulative Effects: Cumulative impacts to the plant communities within the leases and adjacent areas include an incremental reduction of continuity in the plant communities in terms of acreages that remain undisturbed. Loss of continuity results in smaller and smaller areas of undisturbed native vegetation and the potential for loss of integrity within the larger plant community. The increased disturbance also makes native plant communities more susceptible to invasion by annual weeds as vectors for increasing weeds. Even with weed control measures applied, the potential for weeds to move further into undisturbed remnant areas increases as these remnants become smaller and more isolated from larger undisturbed areas.

Mitigation: Proposed mitigation measures, including reclamation practices, are developed upon environmental analysis of a site specific APD.

3.3.4 Wetlands & Riparian Zones (includes a finding on Standard 2)

Affected Environment: A few of the lease parcels encompass perennial or intermittent channel systems that support riparian communities (see Table 5).

Table 5: Parcels Supporting Riparian Communities

Parcel number	Approx. channel length involved (meters)	Channel Name
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5890	0	Hawxhurst Creek and West Fork of Kimball Creek
5892	0	Clover Gulch
5901	0	Spring Creek
5921	140	Bull Creek

Current Status of Standard 2 (riparian systems):

The only lease area that contains riparian areas is parcel number 5921, which contains a portion of Bull Creek that is approximately 200 meters. This portion of Bull Creek is located on private property and therefore the condition of the riparian community has not been assessed. The portion of Bull Creek that runs immediately adjacent to the lease parcel located on public land was assessed in 2005 and rated as Proper Functioning Condition (PFC). Management of the private land may vary from that on the public land and the rating may not be the same. The west edge of this parcel is located approximately 180 to 600 meters east of Spring Creek. The portion of Spring Creek located on public land was also rated as PFC in 2005.

Parcel number 5901 does not contain any riparian communities but is located in close proximity to Spring Creek. The northeast corner of this parcel is located approximately 50 meters away from Spring Creek. The Pioneer Extension Ditch extends off of Spring Creek and runs through the northeast corner of this parcel and may support riparian communities.

Three of the proposed parcels are located on split estate and Land Health Assessments have not been completed on these parcels. The Land Health assessment and riparian assessment completed on parcel number 5901 indicate that Standard 2 for Riparian Systems is being met. Assessments completed on public land adjacent to the other three parcels also indicate that standards are being met on public land.

Environmental Consequences of the No Action Alternative:

There would be no action authorized that would have potential to influence riparian zones and wetlands.

Finding on Standard 2 (riparian systems) for No Action:

Under the No Action Alternative Standard 2 for Riparian Systems would continue to be met on public land managed by the BLM. There would be no leasing of federal minerals or associated development associated with gas extraction at this time.

Environmental Consequences of the Proposed Action:

Although specific influences associated with lease development cannot be predicted at the leasing stage, management direction in the Grand Junction ROD/RMP requires that land use activity that maintain existing riparian acreage and diversity in plant height. BLM policy and current Grand Junction ROD/RMP decisions allow for the site-specific development of COAs at the APD stage that are effective in substantially reducing direct involvement and indirect influences on riparian vegetation and channel function, including facility relocations of up to 200

meters and providing for rapid stabilization and restoration in the event of unavoidable involvement (e.g., typically linear alignments).

Hawxhurst West Creek and Hawxhurst East Creek above parcel number 5890 are identified as wildlife management areas where the riparian community has special protection that prohibits surface disturbance. The portion of Spring Creek to the south of parcel 5921 was also identified as having a No Surface Disturbance restriction. Neither one of the leases is directly affected by the restrictions, but they could be indirectly affected during development of the leases. Surface disturbance associated with facilities that would directly affect either creek would not be allowed.

Special circumstances are associated with lease parcel 5921 as it encompasses Bull Creek which is a perennial stream. Lease stipulations were developed in the Grand Junction ROD/RMP to protect perennial streams and water quality. The Perennial Stream Water Quality Stipulation limits surface disturbance within 100 feet of streams to essential crossings of roads and utilities. Colorado BLM statewide Controlled Surface Use stipulations were developed to protect perennial streams and riparian vegetation (CO-28). Under CO-28 oil and gas exploration and development facilities can be moved beyond the riparian vegetation zone. Approximately 200 meters of Bull Creek crosses through parcel number 5921 and would be subject to this stipulation, which would help to protect the riparian community from future surface disturbing activities.

Finding on Standard 2 (riparian systems) for Proposed Action:

Under the proposed action the Finding for Standard 2 would continue to be met on Public land and in riparian areas adjacent to public land.

Cumulative Effects:

Leasing the four proposed parcels, in combination with the past, present and reasonably foreseeable actions would not have any cumulative effects on riparian zones. Effects on riparian zones should be limited due to existing lease stipulations and CSU restrictions that provide protection to these areas. Some impacts could occur if creek crossings cannot be avoided during oil and gas exploration and development activities. Due to the limited amount of riparian areas located in or adjacent to the proposed lease parcels direct impacts would be minimal.

Mitigation:

Where potential effects are identified, the preferred mitigation is to relocate the proposed well pad(s) or infrastructure to avoid riparian areas by more than 100 meters, or relocation such that the action has a minimal impact on riparian areas. If development in riparian areas cannot be avoided then design, construction, and reclamation activities should be professionally engineered. Site-specific mitigation is developed during the NEPA review of APDs.

3.3.5 Wildlife (includes fish, aquatic and terrestrial) (includes a finding on Standard 3)

Affected Environment:

Of the proposed lease parcels parcel 5921 includes a portion of Bull Creek which provides habitat for Colorado river cutthroat trout and rainbow trout. Effects to Bull creek are discussed under the TES section and would be similar for rainbow trout as Colorado river cutthroat trout.

All of the proposed lease parcels include some portion of big game (deer, elk, moose and rocky mountain bighorn sheep) ranges. Lease parcel 5890 includes moose overall range and rocky mountain bighorn sheep winter range. The rocky mountain bighorn sheep habitat in this parcel is not classified as critical or severe winter range for the species and the portions of the parcel that overlap mapped winter range are in densely wooded pinion and juniper habitat that is unlikely to significantly contribute to habitat for the species. Lease parcel 5890 also contains mule deer winter and summer range and elk winter range and portions of a winter concentration area for elk, as well as migration pattern areas for both these species. Lease parcel 5892 contains mule deer winter concentration area, and elk overall winter range. Lease parcel 5901 includes portions of a mule deer migration pattern area, overall winter range, winter concentration area and critical winter range. This lease also contains an elk migration pattern area and severe winter range. Lease parcel 5921 contains mule deer summer range, a mule deer resident population and concentration area. Parcel 5921 also includes portions of an elk winter concentration area.

Under possible changes in alternative management plans being considered for inclusion in the ongoing RMP revision, approximately 40 acres of parcel 5890 could have a No Surface Occupancy stipulation where the parcel overlaps the Hawxhurst Ranch State Wildlife Area. In addition parcel 5901 could have a CSU to avoid important wildlife area. All big game migration and movement corridors would have CSU's to avoid important areas for wildlife movement. However these protections would not be applied to these leases as they would only be subject to the current (1987) RMP stipulations.

Other terrestrial wildlife likely to occur on the parcels include Turkey, Black Bear, Mountain Lion and various small mammals, reptiles and resident birds that are likely to inhabit the lease parcels display broad ecological tolerance and are widely distributed throughout the region in suitable habitats. No narrowly-distributed or highly-specialized species or sub-specific populations are known to inhabit these parcels.

Curent Status of Standard 3: Standard 3 of the BLM Standards for Public Land Health require the BLM to manage for healthy, productive plant and animal communities of native and other desirable species and to ensure these species are maintained at viable population levels commensurate with the species and habitat's potential. Public land health standards were evaluated in this area in 2010. All BLM lands within the proposed lease parcels were meeting Standard 3, with the exception of the parcel 5921, which contains very little public land. Private land is typically not included in the land health assessment.

Environmental Consequences of the No Action Alternative: There would be no impacts to aquatic and terrestrial wildlife species or their habitat from the No Action Alternative.

Finding on Standard 3 (plant and animal communities) for No Action: The no action alternative would have no effect on the areas ability to meet standard 3 for plant and animal communities.

Environmental Consequences of the Proposed Action: Although specific influences associated with lease development cannot be predicted at the leasing stage, BLM policy and current Grand Junction ROD/RMP decisions allow for the site-specific development of COAs at the APD stage that are effective in substantially reducing direct and indirect effects on aquatic and terrestrial wildlife including facility relocations of up to 200 meters. Implementation of State and federally-imposed design measures to control erosion and spills also work to limit the risk of contaminants migrating off-site and degrading water quality in these systems. Also see discussions in the TES Animal and Riparian/Wetland sections.

Traditional timing limitations continue to be applied to these important summer and winter (i.e., severe winter and critical winter) ranges by the State and BLM, although these measures were not designed or intended to deal effectively with new drilling and completion technologies (e.g., deep directional, multi-well pads) and the disposal of large quantities of produced fluids. Sawyer (2006) demonstrated strong avoidance response of natural gas development activity in Wyoming deer and the pronounced influence of residual activity associated with maintenance/production phases and subsequent recreational use of well access roads. Later, Sawyer (2009) acknowledged that avoidance response in deer could be substantially reduced (40-60 percent) in these fields by employing technologies that reduce the truck transport of produced fluids (i.e., fluid transport via pipeline). These studies provide compelling evidence that behavioral impacts (habitat disuse from avoidance, elevated energetic demands) associated with human and vehicular activity attributable to oil and gas development are the primary impact imposed on big game and are, in these circumstances, more expansive and deleterious than direct habitat loss associated with longer term infrastructure occupation and shorter term vegetation modifications. Industry is actively planning or implementing fluids gathering systems that would drastically reduce the frequency of vehicle activity on affected big game ranges. Complementary actions that are being employed to further reduce direct or indirect impacts include pooled employee transport, on-site employee housing, adjusting lease requirements or offering year-round development incentives to promote clustered development, increasing the number of wells sequentially drilled at each location, and phased reclamation instituted soon after the pad is constructed. Site-specific conditions and opportunities are also reflected in COAs developed at the APD stage, including restricting public access on well access roads and pipeline rights-of-way and siting facilities and infrastructure in a manner that balances the interspersion of cover and forage compatible with the behavioral traits of deer and elk. Although all proposed lease parcels may not be developed in this manner, more advanced objectives and principles are likely to be universally promoted and applied where practical BLM believes serious impacts to big game abundance and distribution can be largely averted.

Lease development's influence on small mammal populations, at least in the short term, is likely primarily confined to on-site mortality and direct habitat loss attributable to facility occupation and vegetation clearing. These assumptions are tempered by the possibility that certain species

may rarely, if ever, cross barren roadbeds. The expanse of continuous habitat usually available on either side of a ridge (typical pattern of development) and its present ability to support robust populations of small mammals would likely mask declining population fitness for long periods of time.

Finding on Standard 3 (plant and animal communities) for Proposed Action: The proposed action of leasing these parcels is not expected to impact the areas ability to meet land health standard 3.

Cumulative Effects: Development of one or more of these lease parcels would contribute to activity simultaneous with and in addition to ongoing natural gas and mineral development and recreation use in the GJFO. Initial disturbance to wildlife (e.g., construction, drilling, and completion activities), as conditioned by timing limitations, would be relatively localized and temporary. After these initial activities have subsided, human activity and effects of habitat fragmentation would continue throughout the production phase and persist for the life of well or field. The consequences of these behavioral influences on wildlife would vary according to species-specific response through time as modified by habituation or circumstance, such as the use of access restrictions or BMPs that reduce the frequency and duration of well visitation.

Development would result in further unavoidable modifications and reductions in, particularly, pinyon-juniper woodland communities as wildlife forage and cover. Roads and working surfaces of pads represent incremental accumulation of acreage removed from cover and forage base for the life of the well or field.

Leasing and subsequent development of one or more of these lease parcels is likely to contribute to a sustained reduction in the overall abundance of most affected species through direct and indirect impacts, but it would not be expected to elevate cumulative effects to levels that would compromise the viability of any wildlife population or the utility of broader landscapes as habitat. The size and distribution of habitat patches ultimately created through lease development (instigating species-area effects) or whether barriers persist long enough to manifest inbreeding depression (reduced fitness of individuals and isolated populations) is subject to much speculation, but considering only those parcels recommended for leasing, these principles of fragmentation are not known to be operating at a level that prompts imminent concern.

Mitigation: Site specific COAs and BMPs will be applied as appropriate at the time of APD application.

3.3.6 Migratory Birds

Affected Environment: BLM Instruction Memorandum No. 2008-050 provides guidance towards meeting BLM's responsibilities under the Migratory Bird Treaty Act (MBTA) and Executive Order (EO) 13186. The guidance emphasizes management of habitat for species of conservation concern by avoiding or minimizing negative impacts and restoring and enhancing

habitat quality, and suggests use of a timing limitation to avoid the direct take of migratory bird nests.

The proposed lease parcels encompass a wide variety of habitats, but they are largely dominated by pinyon-juniper woodlands with lesser representation or scattered inclusions of shrublands. These habitats support a large array of migratory birds during the breeding season (generally May through July).

The BLM lends increased management attention to migratory birds listed by the FWS as Birds of Conservation Concern (BOCC). These are bird populations that monitoring suggests are undergoing range-wide declining trends and are considered at risk for becoming candidates for listing under the Endangered Species Act if not given due consideration in land use decisions. Those species associated with the Southern Rockies/Colorado Plateau region (FWS 2008a) and the proposed lease parcels are presented by habitat affiliation below.

Pinyon-juniper woodland associates within the GJFO include four species that are considered BOCC: Cassin's finch, pinyon jay, gray vireo, and juniper titmouse. The titmouse and finch occur widely in virtually all available woodlands, but occur at relatively low densities. Pinyon jays are loosely colonial nesters and are patchily distributed throughout the GJFO's woodlands in larger patches of Pinyon Juniper. Gray vireos are associated with juniper-dominated habitats below 6,000 ft. The current lease offerings are generally outside the normal distribution of this species.

BOCC associated with shrubland habitats is limited to the BLM-sensitive Brewer's sparrow, this species typically requires large contiguous patches of sagebrush which is not available in these lease parcels.

More generally, birds associated with these lease parcels are well distributed in extensive suitable habitats throughout the GJFO and northwest Colorado and habitat-specific bird assemblages appear to be composed and distributed appropriately to the normal range of habitat variability.

Environmental Consequences of the No Action Alternative: There would be no impacts to migratory bird species or their habitat from the No Action Alternative.

Environmental Consequences of the Proposed Action: The actual lease sale would not impact any migratory bird species or their habitat, however, potential future development of the proposed leased parcels would influence both localized populations and their associated habitats. The GJFO typically applies a 60 day COA to leases to avoid taking of individual nests of migratory birds, however the larger effects of habitat loss and habitat fragmentation are not addressed through this COA.

Cumulative Effects: Development of one or more of these lease parcels would contribute to activity simultaneous with and in addition to ongoing natural gas and mineral development

and recreation use in the GJFO. Initial disturbance to migratory birds (e.g., construction, drilling, and completion activities), as conditioned by COA's to avoid peak breeding season, would be relatively localized and temporary. After these initial activities have subsided, human activity and effects of habitat fragmentation would continue throughout the production phase and persist for the life of well or field. The consequences of these behavioral influences on migratory birds would vary according to species-specific response through time as modified by habituation or circumstance.

Leasing and subsequent development of one or more of these lease parcels is likely to contribute to a sustained reduction in the overall abundance of most affected species through direct and indirect impacts, but it would not be expected to elevate cumulative effects to levels that would compromise the viability of any migratory bird population or the utility of broader landscapes as habitat.

Mitigation: Upon APD application restrictions on vegetation disturbance during the peak breeding season will be applied to avoid impacts to individual nests.

3.4 HERITAGE RESOURCES AND HUMAN ENVIRONMENT

3.4.1 Cultural Resources

Affected Environment: All five parcels proposed for the Nov 2011 Oil and Gas Lease Sale, located in the Plateau Valley Unit of the GJFO analyzed by the Class I Overview for the GJFO (Conner et al 2011:9-54). The cultural history of the area is incorporated by this reference. Twenty-four percent of the Unit has had previous cultural surveys, most related to energy development. The parcels on the south side of the valley are in an area generally thought to have a moderate to high potential for cultural resources. One parcel, 5901, has had approximately twenty-five percent previous Class III inventory completed (CRIR 5498-01) with a finding of one prehistoric site, 5ME11451, that was determined through consultation with the State Historic Preservation Officer (SHPO) to be potential eligible for nomination to the National Register of Historic Places (NRHP). Based on previous inventory the estimated site density for parcels #5901 and #5921 is 1:35. Parcels on the north side of the valley are in a different depositional environment. One parcel, #5890, has 100% previous survey (CRIR 8391-02) with the recording of one prehistoric site, 5ME6815, conducted in 1991 for the Hawxhurst Land Exchange, when 1,090 acres of BLM land transferred out of federal ownership to the Hawxhurst Ranch. The site was determined not eligible for NRHP nomination. In subsequent projects in this area it has become apparent that surface manifestations of sites is not a good measure of site significance. Numerous sites were discovered during the construction monitoring of the Collbran Pipeline including three deeply buried open architectural (pithouse) sites (Conner et al 2011:9-61). From this new information, the original evaluation of 5ME6815 may have been inadequate.

Environmental Consequences of the No Action Alternative: There would be no impacts to cultural resources.

Environmental Consequences of the Proposed Action:

The GJFO requires a minimum 40-acre inventory block around proposed well locations to allow for the relocation of proposed well pads to avoid newly discovered sites potentially Eligible for NRHP listing. Surveys are also required for corridors of associated roads and pipelines and may require redesign to avoid cultural resources. Reevaluation of previously recorded sites will be required for final determinations of eligibility. Law and regulation require the BLM to ensure that Bureau-initiated or Bureau-authorized actions do not inadvertently harm or destroy cultural resource values. Coordination with private landowners will ensure consideration of the effect of future federal decisions on cultural resources. Because most cultural resources are unidentified, irreplaceable, and highly sensitive to ground disturbance, it is necessary that the resources are properly identified, evaluated, and reported prior to any future activity that may affect their integrity or condition. Before any APDs are approved for exploration or drilling, a Class III cultural resource survey would be undertaken to comply with Section 106 of the National Historic Preservation Act.

Cumulative Effects: This lease sale, when combined with the past, present and reasonably foreseeable actions has the potential to identify previously unrecorded cultural resources by increasing the acres of documented survey. It is anticipated that buried sites could be identified in units #5890 and #5892, so results from future construction monitoring may add to the understanding of archaeological site development and preservation. Sites that could not be avoided may require excavation, which would add to the regional information about prehistory. Construction and the infrastructure of the industry detract from the visual setting and can impair the integrity of criteria considered in the evaluation of NRHP eligibility.

Standard Stipulations / Mitigation:

Where potential effects are identified, the preferred mitigation is to relocate the proposed well pad(s) or infrastructure to avoid potentially Eligible sites by more than 100 meters, or relocation such that the undertaking's APE does not affect potentially Eligible sites or the Allocation to Use Categories. Site-specific mitigation is developed during the NEPA review of APDs.

All lands are subject to Exhibit CO-39 to protect cultural resources.

3.4.2 Paleontological Resources

Affected Environment: The project area contains portions of geological formations known to produce few to several scientifically valuable fossils, resulting in Potential Fossil Yield Classifications (PFYCs) between 2 and 5. The formations affected, their known fossil types, and their PFYC values are as follows (Tweto 1979, Armstrong and Wolny 1989, BLM Colorado State Office PFYC chart):

Mesaverde Group or Formation, Upper part—PFYC 3—dinosaurs, reptiles (turtles & crocodilians), mammals, fish, ichnological traces, snails, and plants.

Modern Alluvium—PFYC 2—Holocene animals, including Bison and horses.

Green River Formation, Lower part—PFYC 3—fish and ostracoda.

Green River Formation, Parachute Creek Member—PFYC 3—fossil reptiles (lizards, crocodilians, turtles), bats, insects (including eggs & larvae, scorpion ants, beetles, gnats, and mosquitoes), and plants (including algae reefs, ferns, horse-tails (*Equisteum*), seeds, flowers, fruit, oaks, maples, sassafras, figs, magnolias, etc.).

Wasatch Formation—PFYC 4-5—Paleocene and Eocene mammals (including perissodactyls, tapiroids, condylarths, primates, insectivores, marsupials, creodonts, carnivores, and multituberculates), reptiles (including crocodilians, turtles, and lizards), birds (including eggs), amphibians, fish, invertebrates (non-marine mollusks and ostracoda), and various floras.

Environmental Consequences of the No Action Alternative: There would be no impacts from the No Action Alternative.

Environmental Consequences of the Proposed Action: The August 2011 lease sale parcels contain areas mapped as PFYC 2 to PFYC 5 formations and have a moderate to likely potential to impact scientifically valuable fossil resources. Locations for proposed oil or gas well pads, pipelines, and associated infrastructure will be subject to further analysis for the protection of paleontological resources. Areas of new surface disturbance occurring on or adjacent to bedrock (native sedimentary stone) exposures within a PFYC 4-5 formation must be inventoried by a permitted paleontologist and approved by the appropriate GJFO specialist during each project's NEPA review. Surface disturbing activities in some areas will require monitoring by a permitted paleontologist.

Cumulative Effects: This lease sale, when combined with the past, present and reasonably foreseeable actions has the potential to identify previously unrecorded paleontological resources by increasing the surface and subsurface area documented by pre-construction paleontological surveys and construction monitoring. Sites that could not be avoided may require excavation and collection, which would add to existing regional paleontological knowledge.

Mitigation: Mitigation will be developed during the NEPA review of individual ground disturbing activities. Mitigation includes provisions for the monitoring of ground disturbance by a permitted paleontologist, if there are known paleontological sites nearby, or if the proposed surface disturbance will encounter bedrock within a PFYC 4-5 geologic unit. If a project would occur on a site with PFYC 4-5 formation bedrock exposures on the surface a pre-construction paleontological survey would be required. All projects would require the operator to inform all persons associated with the project of relevant Federal laws protecting fossil resources, and requirements regarding the disclosure of inadvertent fossil discoveries during construction or operation to the GJFO while operating on federally-managed surface. Other notification and reporting requirements may exist for split-estate parcels with privately-owned surface.

3.4.3 Tribal and Native American Religious Concerns

The BLM GJFO has consulted annually with the Southern Ute Tribe, the Ute Mountain Ute Tribe, and the Ute Tribe of the Uintah and Ouray Reservation specifically to GJFO Oil and Gas Lease Sales since 2004. No comments specific to lease sales were brought to our attention in consultation meetings. No Native American Religious Concerns or Traditional Cultural Properties (TCPs) are known in the area. Letters requesting consultation were mailed to the three Ute Tribes May 5, 2011. Through follow-up phone calls thirty days after receipt, GJFO personnel will discuss the proposed lease sale with the NAGPRA representatives of the Tribe. What we have learned through past consultation is that the Ute have a generalized concept of spiritual significance that is not easily transferred to Western models or definitions. As such the BLM recognizes that they have identified sites that are of concern because of their association with Ute occupation of the area as part of their traditional lands. These parcels are in an area used by the Ute into historical times. Tribal representatives have consulted with the BLM Field Office on previous projects in this general area and provided instructions for the protection of culturally sensitive sites, should any be discovered during inventory or proposed actions. In addition to the stipulations for the protection of Cultural Resources if new information is brought forward any site-specific Native American mitigation measures suggested during previous notification/ consultation would be considered during analysis of any future APDs. If new information is provided by Native Americans during the EA process, additional or edited terms and conditions for mitigation may have to be negotiated or enforced to protect resource values.

3.4.4 Visual Resources

Affected Environment: Visual resource management (VRM) requirements are applied to projects to mitigate impacts to landscape character, comprised of form, color, texture, and line. Visual resource management has four management classes. The parcels nominated for leasing are in areas that were not classified in the 1987 RMP, but are being managed as VRM Class III. In 2009 a Visual Resource Inventory (VRI) was completed of the lands within the GJFO in preparation for the RMP Revision. This inventory resulted in a VRI Class III, this information will be used in the identification of management classes in the RMP Revision. The VRM Class III objective is to partially retain existing landscape character. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate a casual observer's view. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Environmental Consequences of the No Action Alternative: There would be no impacts to visual resources from the No Action Alternative.

Environmental Consequences of the Proposed Action: The act of selling oil and gas leases does not create a visual impact. The subsequent development of a lease could affect landscape character. For example, temporary or permanent facilities that have height, such as produced water, condensate or oil storage tanks would provide a strong vertical and horizontal visual contrast in form and line to the characteristic landscape and vegetation, which may have flat, horizontal to slightly rolling form and line. Since oil and gas well locations cannot be accurately determined at the leasing stage, it is not possible to accurately predict the visual impacts. A single well pad screened by terrain

in an area absent of visual receptors may have low to negligible impacts in Class III areas. Development would also be expected to favorably blend with the form, line, color and texture of the existing landscape.

Cumulative Effects: This lease sale, when combined with the past, present and reasonably foreseeable actions Development intensity, terrain, and proximity to visual receptors (e.g., main travel corridors, towns, recreation facilities, etc.) will greatly influence visual impacts. It is possible that post-lease industrial development could result in portions of or all of a VRM area to be downgraded to a lower classification if post-lease development activities are poorly designed.

Mitigation: As part of reviewing and approving APDs, visual impacts would be mitigated by applying COAs, which could include using special paint colors, hiding facilities with vegetation, or redesigning or relocating facilities. Development would be expected to favorably blend with the form, line, color and texture of the existing landscape.

3.4.5 Social and Economic

Affected Environment: Parcels nominated for leasing are offered for sale during an oral auction. The minimum acceptable bid for a parcel is \$2.00 per acre. Because the sale is conducted as an auction, the minimum bid is often increased, sometimes substantially, until bidding ceases. The increased bid is called a bonus bid. The sum of the minimum bid and the bonus bid, if any, is collected the day of the sale. Additionally the first year's rental of \$1.50 an acre or fraction of an acre must be paid at the time of the sale. Annual rental is \$1.50 per acre or fraction of an acre for the first five years of the lease term, increasing to \$2.00 per acre or fraction of an acre for any subsequent year. Because parcels are auctioned, there can be no guarantee that each parcel will be sold, and an estimate cannot be made in advance of the sale of the revenue produced from selling the parcels.

Environmental Consequences of the No Action Alternative: In this alternative, all nominated leases would be removed from the November sale. Revenue at the time of the sale in the amount of approximately \$4,000 would be lost. Any future social or economic impacts from possible development, including benefits to oil and gas corporations and the public, would not be realized.

Environmental Consequences of the Proposed Action Alternative: The leasing process provides no direct socio-economic benefit or detriment, except for the collection of bids, bonus bids, and rentals. The minimum income if all recommended parcels are sold at the November sale would be approximately \$4,000. Income from the sale goes to the federal and Colorado treasuries. The federal and Colorado treasuries would receive revenue if leases unsold during the November sale are later purchased non-competitively. Economic and social impacts would result from development of leases, in the form of temporary or permanent employment, rental or purchase of equipment, and royalties paid to the federal and Colorado treasuries, and other expenditures related to development. At the leasing stage, an estimate of economic impacts is not possible. Similarly, it is not possible to predict social impacts because development is not assured.

Cumulative Effects: This lease sale, when combined with the past, present and reasonably foreseeable actions, contributes slightly to the state and federal treasuries, and could contribute to continuation of an industry that provides substantial income and jobs to the community.

3.4.6 Environmental Justice

Affected Environment: The requirements for environmental justice review were established by Executive Order 12898 (February 11, 1994). That order declared that each federal agency is to identify “disproportionately high and adverse human health or environment effects of its programs, policies, and activities on minority populations and low income populations.”

The 2010 census data has not been released yet. According to Census 2000, the only minority population of note in the impact area is the Hispanic community of Mesa County. Persons describing themselves as Hispanic or Latino represented 10.0 percent of the population, considerably less than the Colorado state figure for the same group (17.1 percent). Blacks, American Indians, Asians and Pacific Islanders each accounted for less than one percent of the population, below the comparable state figure in all cases. The census counted 7.0 percent of the Mesa County population as living in families with incomes below the poverty line, compared to 6.2 percent for the entire state.

Environmental Consequences of the No Action Alternative: There would be no impacts under the no action alternative.

Environmental Consequences of the Proposed Action: Both minority and low income populations are dispersed throughout the county. Therefore, no minority or low-income populations would suffer disproportionately high and adverse effects as a result of any of the alternatives.

Cumulative Effects: Both minority and low income populations are dispersed throughout the county. Therefore, no minority or low-income populations would suffer disproportionately high and adverse effects as a result of any of the alternatives, even when combined with the past, present, and reasonably foreseeable actions.

3.4.7 Transportation/Access

Affected Environment:

The current travel designations for the nominated lease parcels 5892 and 5901 are designated “limited to existing” routes. Proposed lease parcels 5890 and 5921 do not occur on BLM-administered surface lands and there are no travel restrictions. BLM-administered lands adjacent to the nominated lease parcels are designated as “limited to existing”. Under the proposed and no action alternatives there are no impacts to transportation and access to BLM lands that can be identified until site specific analysis for development is proposed.

According to Mesa County, the county roads accessing parcels 5890 and 5921 would be impacted by expected oil and gas exploration and production traffic. At the APD stage, further analysis will be conducted, including analysis of transportation/access. At that time it is likely that our analysis will lead us to encourage the lessee to coordinate necessary road maintenance or potential agreed upon improvements with Mesa County to address this issue.

3.4.8 Wastes, Hazardous or Solid

Affected Environment: There are no known hazardous or other solid wastes on the proposed lease sale parcels.

Environmental Consequences of the No Action Alternative: There would be no impacts from the No Action Alternative, as there would be no action authorizing the generation, use, or storage of hazardous materials.

Environmental Consequences of the Proposed Action: A determination will be made as to whether solid or hazardous wastes have been previously used, stored, or disposed of at proposed oil and gas construction sites at the time individual APDs are submitted. Substances emitted during and used in the exploration, development, and production of oil and gas reserves may pose a risk of harm to human health and the environment. Potential impacts will be analyzed in subsequent environmental analysis.

Cumulative Effects: This lease sale, when combined with the past, present and reasonably foreseeable actions could add hazardous wastes to the environment, however conditions of approval at the development phase are expected to minimize these impacts.

Mitigation: Oil and gas operations will, at a minimum, comply with the Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development “The Gold Book” (BLM 2007). In addition, management of waste in oil and gas operations will be managed in accordance with all Federal, State, and local regulations. At the time of APD approval, Conditions of Approval (COAs) will be attached to ensure compliance with environmental obligations, 43 CFR §3162.5.

3.5 LAND RESOURCES

3.5.1 Recreation

The nominated lease parcels 5892 and 5901 are within an area that is sparsely populated but utilized by wildlife and dispersed recreational opportunities. Proposed lease parcels 5890 and 5921 do not occur on BLM-administered surface lands. Under the proposed and no action alternatives there are no impacts that can be identified until site-specific analysis for proposed development is conducted.

3.5.2 Range Management

Affected Environment: The proposed lease sales are located on allotments permitted for livestock use. Any future developments would be analyzed on a case-by-case basis to avoid or mitigate any issues that could develop.

Environmental Consequences of the No Action Alternative: There would be no impacts from the No Action Alternative.

Environmental Consequences of the Proposed Action: The lease sale would not initially impact livestock grazing, however when a site-specific Annual Development Plan (ADP) is submitted, impacts to livestock grazing would need to be analyzed through an EA.

Cumulative Effects: Cumulative impacts to the livestock grazing operations in the area may be increased through the development of the proposed leases. If development occurs, the growth in wells, roads, and human activity has the potential to reduce the availability of forage in this area. The potential impact to grazing activities permitted in the GJFO would be a loss of available AUMs (i.e., a loss of the amount of livestock that allotments can reasonably support).

Mitigation: None.

3.5.3 Land Tenure, Rights of Way and other Uses

Affected Environment: The proposed lease sale parcels are located in areas with limited existing right-of-way development consisting of an above ground power line and access roads. All future projects, whether related to these lease sales or unassociated projects, would be analyzed on a case-by-case basis to avoid impacts to the existing infrastructure or to environmental resources.

Environmental Consequences of the No Action Alternative: There would be no impacts from the No Action Alternative.

Environmental Consequences of the Proposed Action: The lease sale would not impact any existing ROWs. When a site-specific APD is submitted, potential impacts will be analyzed in a subsequent EA.

Cumulative Effects: This lease sale, when combined with the past, present and reasonably foreseeable actions could lead to conflicts with other permitted uses, however these impacts are expected to be minimized through site specific conditions of approval at the permitting stage.

Mitigation: None

CHAPTER 4 - CONSULTATION AND COORDINATION**4.1 LIST OF PREPARERS AND PARTICIPANTS**

INTERDISCIPLINARY REVIEW

NAME	TITLE	AREA OF RESPONSIBILITY
Christina Stark	Natural Resource Specialist	Riparian, Floodplains
Julia Christiansen	Natural Resource Specialist	Oil and Gas
Aline LaForge	Archaeologist	Cultural Resources, Native American Religious Concerns
Michelle Bailey	Outdoor Recreation Supervisor	Access, Transportation, Recreation, VRM
Chris Pipkin	Outdoor Recreation Planner	Wilderness, ACECs, Wild and Scenic Rivers
Matt McGrath	Interpretive Specialist	Wild & Scenic Rivers, NCA
Scott Clarke	Range Management Specialist	Range, Wild Horse & Burro Act
Scott Gerwe	Geologist	Geology, Paleontology
Alan Kraus	Hazard Materials Specialist	Hazardous Materials
Robin Lacy	Realty Specialist	Land Status/Reality Authorizations
Heidi Plank	Wildlife Biologist	Migratory Bird Treaty Act, T&E Species, Terrestrial & Aquatic Wildlife
Anna Lincoln	Ecologist	Range, Land Health Assessment, T&E Plant Species
Bob Fowler	Range Management Specialist	Vegetation, Range, Riparian, Floodplains
Collin Ewing	Environmental Coordinator	Environmental Justice, Prime & Unique Farmlands, Environmental Coordinator
Nate Dieterich	Hydrologist	Air Quality Water Quality, Hydrology, Water Rights, soils
Jacob Martin	Range Management Specialist	Range, Forestry
Mark Taber	Range Management Specialist	Invasive, Non-Native Species (Weeds)
Lathan Johnson	Fire Ecologist Natural Resource Specialist	Fire Ecology, Fuels Management

Table 1– Potentially Impacted Resources (double click on boxes to check)

Resources	Not Present On Location	No Impact	Potentially Impacted	Mitigation necessary	Comments included in EA text	BLM Evaluator Initial & Date
PHYSICAL RESOURCES						
Air and Climate	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND 5/11/11
Geological	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SG 5/4/11
Mineral Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	RH
Soils	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ND 5/11/11
Water (surface & subsurface, floodplains)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ND 5/11/11
BIOLOGICAL RESOURCES						
Invasive, Non-native Species	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MT 5/3/11
Sensitive Species	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	HLP 5/13/11
Threatened or Endangered Species	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	HLP 5/13/11
Vegetation, Forestry	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	JAM 5/13
Wetlands/Riparian Zones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	CARS 5/11/11
Wildlife	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	HLP 5/13/11
HERITAGE RESOURCES AND HUMAN ENV.						
Cultural or Historical	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	AIL 5/5/11
Paleontological	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SG 5/4/11
Tribal & American Indian Religious Concerns	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	AIL 5/5/11
Visual Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	MLB 5/13/11
Social	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CE 5/3/11
Economic	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CE 5/3/11
Environmental Justice	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CE 5/3/11
Transportation and Access	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MLB 5/13/11
Wastes, Hazardous or Solid	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AK 4/28/11
LAND RESOURCES						
Prime or Unique Farmlands	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CE 5/3/11
Recreation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MLB 5/13/11
Special Designations (ACEC, SMAs etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MLB 5/16/11
Wild and Scenic Rivers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CPP 4/28/11
Wilderness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CPP 4/28/11
Range Management	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SC 5/13/11
Wild Horse and Burros	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CE 5/16/2011
Land Tenure, ROW, Other Uses	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RBL 5/11/11

4.2 TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED

Consultation letters sent to:

Ute Indian Tribe (Uintah and Ouray Reservations) Fort Duchesne, UT

Southern Ute Indian Tribe, Ignacio, CO

Ute Mountain Ute Tribe, Towaoc, CO

Prior to the development of the EA, notification letters were sent to the Colorado Division of Wildlife (CDOW), Native American Tribes, and right of way holders. CDOW was notified of the nominated parcels and the upcoming lease sale in a letter from the BLM state office on Monday April 18, 2011. Michael Warren of CDOW submitted comments to the field office by email on April 20, 2011 and May 10, 2011. Through discussion with Mr. Warren and their submission of comments, the CDOW and BLM concluded that the stipulations included would be sufficient to protect big game while in their winter range.

The Ute Water Conservancy District was notified of the nominated parcels and the upcoming lease sale on April 4, 2011 because they hold rights of way in the area. They responded in a letter with concerns about leasing of parcel 6067 because it is adjacent to their drinking water reservoirs. The Proposed Action would defer leasing of this parcel, therefore this comment is not further addressed in the EA.

Mesa County Board of Commissioners was notified of the nominated parcels and the upcoming lease sale on January 20, 2011 because they hold rights of way in the area. They did not respond immediately but did provide comments during the public comment period.

Native American Tribes did not submit comments.

BLM also coordinated with US Fish and Wildlife Service regarding impacts to listed species on May 23, 2011. It was agreed that the parcels proposed for leasing are outside the range of any listed species.

CHAPTER 5 - REFERENCES

- Bureau of Land Management (BLM). 1985. Draft Resource Management Plan and Environmental Impact Statement. Grand Junction Field Office. Grand Junction, Colorado.
- Bureau of Land Management. 1987. Grand Junction Resource Area Resource Management Plan and Record of Decision. Grand Junction District. Grand Junction, Colorado.
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- Conner, E. Carl, Nicole Darnell, Brian O'Neil, Richard Ott, Curtis Martin, Dakota Kramer, James C. Miller, and Barbara Davenport. 2011. Class I Cultural Resource Overview for the Grand Junction Field Office of the Bureau of Land Management. Edited by Michael S. Berry. Submitted to the BLM, Grand Junction Field Office.
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- Shenk, Tanya. 2005. Lynx (*Lynx canadensis*) Reintroduced to Southwestern Colorado from February 4, 1999 through February 1, 2005. Report for the Colorado Division of Wildlife, Fort Collins, CO 13pp.
- United States Forest Service. 2010. Region 2 Lynx Habitat, Lynx Analysis Unit. Denver, CO.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
GRAND JUNCTION FIELD OFFICE

FINDING OF NO SIGNIFICANT IMPACT

**November 2011 Oil and Gas Lease Sale
DOI-BLM-CO-130-2011-0043-EA**

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

BACKGROUND

It is the policy of the Bureau of Land Management (BLM) as derived from various laws, including the Mineral Leasing Act of 1920 and the Federal Land Policy and Management Act of 1976, to make mineral resources available for disposal and to encourage development of mineral resources to meet national, regional, and local needs.

The BLM's Colorado State Office conducts quarterly competitive lease sales to sell available oil and gas lease parcels. This EA was prepared to analyze the impacts of leasing parcels nominated with the Grand Junction Field Office in the November, 2011 lease sale.

The EA considered a range of alternatives from leasing all nominated parcels to leasing no parcels. The leasing of all nominated parcels was not analyzed in detail so that further planning and public site visits can be conducted. The proposed action was to lease four parcels in the Plateau Valley area. The EA was made available for a 30-day public review on June 6, 2011. Three comment letters were received. No significant issues were identified as a result of these comments.

Intensity

I have considered the potential intensity/severity of the impacts anticipated from the November Lease sale relative to each of the ten areas suggested for consideration by the CEQ. With regard to each:

1. Impacts that may be both beneficial and adverse. This project may have minor short term impacts to soils, vegetation, and wildlife; however these impacts are not expected to be significant and will be further analyzed in site specific NEPA documents at the development stage.

2. *The degree to which the proposed action affects public health and safety.* The proposed action is not expected to significantly impact public health and safety. Oil and gas development is a common practice in the area and no significant impacts to health and safety are known.

3. *Unique characteristics of the geographic area such as proximity of historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.*

There are no prime farmlands, wild and scenic rivers, or ecologically critical areas within the affected area. No significant impacts to riparian vegetation, parklands, wetlands, or municipal water supplies are expected and will be further analyzed and minimized in site specific NEPA documents at the development stage.

4. *The degree to which the effects on the quality of the human environment are likely to be highly controversial.*

Oil and gas development is a common practice in the area and the effects are generally well understood. NEPA documents at the development stage will incorporate all new information to analyze impacts.

5. *The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.*

Oil and gas development is a common practice in the area and the effects are generally well understood. NEPA documents at the development stage will incorporate all new information to analyze impacts.

6. *The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.*

This decision is like one of many that have previously been made and will continue to be made by BLM responsible officials regarding leasing on public lands. The decision is within the scope of the Resource Management Plan and is not expected to establish a precedent for future actions. It will allow for site specific development on the leases however that development will be analyzed in future NEPA documents and is not expected to have significant impacts.

7. *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.*

There are no significant cumulative effects on the environment, either when combined with the effects created by past and concurrent projects, or when combined with the effects from natural changes taking place in the environment or from reasonably foreseeable future projects. Additional analysis will take place at the development stage to ensure cumulative impacts are disclosed.

8. *The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources.* There would be no adverse impacts to the above resources from leasing. Site specific surveys and consultation with SHPO will take place at the development stage and we expect to minimize impacts to these resources through that process.

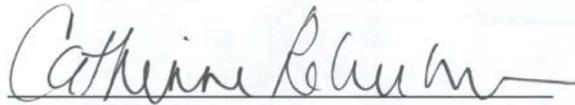
9. *The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.* No impacts are expected to endangered or threatened species or their designated critical habitats. Portions of parcels were formerly mapped as lynx habitat but were never designated as critical habitat. More up to date mapping efforts have revealed that there is no lynx habitat within the parcels.

10. *Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.* This decision complies with other Federal, State, or local laws and requirements imposed for the protection of the environment.

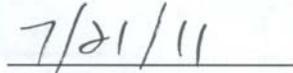
FINDING OF NO SIGNIFICANT IMPACT

On the basis of the information contained in the EA, and all other information available to me, it is my determination that: 1) the implementation of the Proposed Action or alternatives will not have significant environmental impacts beyond those already addressed in the "Record of Decision and Resource Management Plan," (January 1987) (2) the Proposed Action is in conformance with the Resource Management Plan; and (3) the Proposed Action does not constitute a major federal action having a significant effect on the human environment. Therefore, an environmental impact statement or a supplement to the existing environmental impact statement is not necessary and will not be prepared.

This finding is based on my consideration of the Council on Environmental Quality's (CEQ) criteria for significance (40 CFR '1508.27), both with regard to the context and to the intensity of the impacts described in the EA.



Field Manager
Grand Junction Field Office



Date

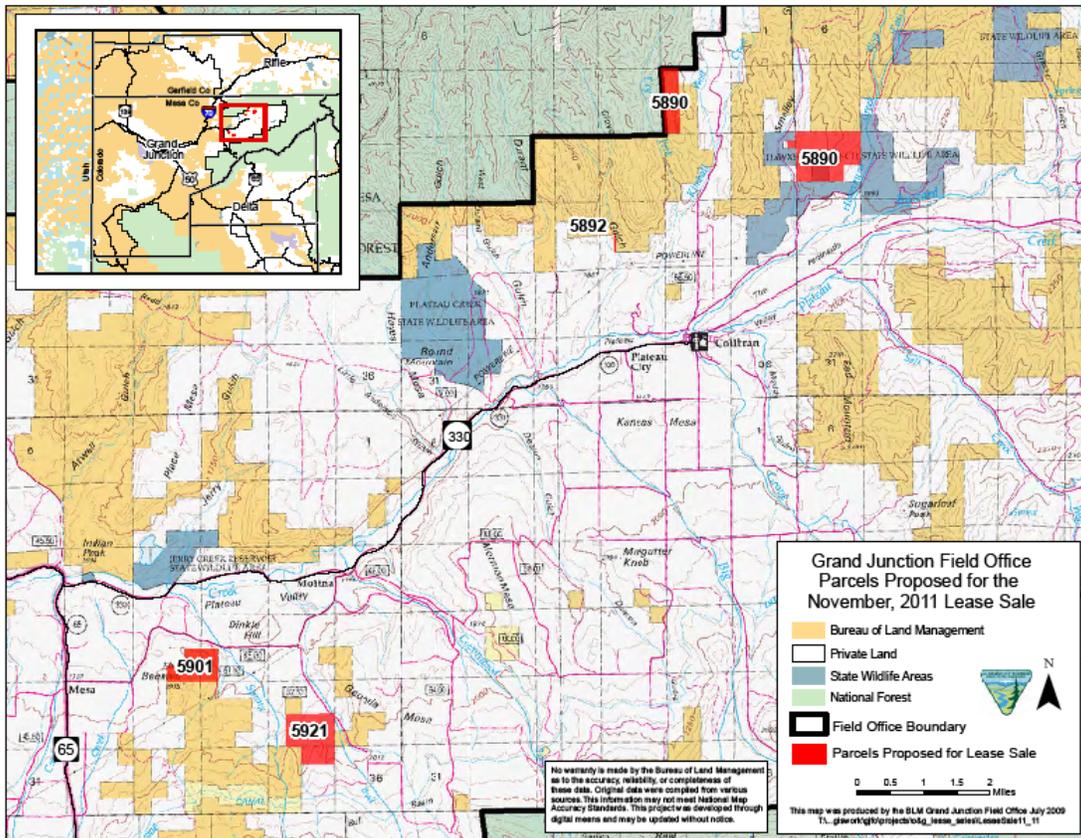
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
GRAND JUNCTION FIELD OFFICE

DECISION RECORD

November 2011 Oil and Gas Lease Sale
DOI-BLM-CO-130-2011-0043-EA

DECISION AND RATIONALE: I have determined that approving the lease sale of a portion of the nominated oil and gas parcels is in conformance with the approved Grand Junction Record of Decision and Approved Resource Management Plan (1987 Grand Junction ROD/RMP). to offer for sale four parcels (5890, 5892, 5901, 5921) comprising approximately 1136.86 acres in the November 2011 Colorado Competitive Oil and Gas Lease Sale (see Attachment A for complete legal descriptions). This figure is comprised of 365.52 acres of federal land and 770.34 acres of split-estate land. These parcels will be offered at public auction. Following the auction, any unsold parcels could be sold non-competitively. Each lease will be issued subject to stipulations identified in the 1987 Grand Junction Resource Management Plan (ROD/RMP). These stipulations are specified in the attached parcel listing (Attachment E). Additional site specific analyses will take place upon submission of individual Applications for Permits to Drill (APD).

Parcels approved for lease sale



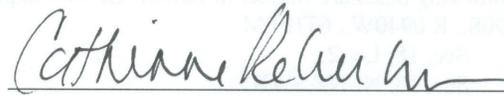
Originally, 25 parcels were nominated for the November lease sale (see Attachment A for complete legal descriptions). This figure is comprised of 9722.86 acres of federal land and 4444.98 acres of split-estate land. Parcels 21 parcels fall within the Shale Ridges and Canyons Master Leasing Plan Recommendation; one of several areas recommended by environmental groups for preparation of a Master Leasing Plan. I have chosen not to lease these 21 parcels at this time so that further analysis and site visits can take place to resolve resource concerns.

MITIGATION MEASURES: See Attachment C for the stipulations on the nominated parcels. Additional mitigation will be developed at the APD stage.

COMPLIANCE/MONITORING: Should the parcels be developed, monitoring may be required and would be addressed and analyzed under future NEPA documentation.

PUBLIC COMMENTS: On June 6, 2011, this EA was made available for a 30-day public comment period. Three letters were received. Attachment E contains BLM's response to their comments.

SIGNATURE OF AUTHORIZED OFFICIAL:



Field Manager

DATE SIGNED:

7/21/11

Attachments:

- A - Pre-EA Parcels Proposed for Lease
- B - Parcels Recommended for Deferral from Leasing
- C - Parcels Available for Lease with Applied Stipulations
- D - Exhibits Description
- E - Public Comment Review

**Attachment A - Pre-EA Parcels Proposed for Lease
November 2011 - Colorado Competitive Oil & Gas Lease Sale**

PARCEL ID: 5890 SERIAL #:

T. 0090S., R 0940W., 6TH PM
 Sec. 18: Lot 1-3;
 Sec. 18: NE,E2NW,NESW,NWSE;
T. 0090S., R 0950W., 6TH PM
 Sec. 11: W2W2;
 Sec. 13: SENENE;

Mesa County
Colorado 610.340 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit GJ-3JA to protect steep slopes in excess of 40%:

T. 0090S., R 0940W., 6TH PM
 Sec. 18: Lot 2;
 Sec. 18: NENE,SWNE;

PVT/BLM;BLM; GJDO: GJRA

PARCEL ID: 5892 SERIAL #:

T. 0090S., R 0950W., 6TH PM
 Sec. 22: Lot 5;

Mesa County
Colorado 5.520 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

BLM; GJDO: GJRA

PARCEL ID: 5888 SERIAL #:

T. 0090S., R 0960W., 6TH PM
 Sec. 30: Lot 3,4,9,10,12;
 Sec. 31: Lot 3,4;

Mesa County
Colorado 174.370 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit GJ-12DA to protect deer and elk winter range:
T. 0090S., R 0960W., 6TH PM
Sec. 30: Lot 9,12;

The following lands are subject to Exhibit GJ-13EE to protect the Uinta Basin Hookless Cactus:
T. 0090S., R 0960W., 6TH PM
Sec. 30: Lot 3,4,9,10,12;
Sec. 31: Lot 3,4;

The following lands are subject to Exhibit GJ-3JA to protect steep slopes in excess of 40%:
T. 0090S., R 0960W., 6TH PM
Sec. 30: Lot 3,10;

BLM; GJDO: GJRA

PARCEL ID: 5891 SERIAL #:
T. 0090S., R 0960W., 6TH PM
Sec. 30: Lot 11;
Sec. 31: Lot 1,2,5,6,9-14;

Mesa County
Colorado 402.310 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit GJ-13EE to protect the Uinta Basin Hookless Cactus:
T. 0090S., R 0960W., 6TH PM
Sec. 30: Lot 11;
Sec. 31: Lot 1,2,5,6,9-14;

PVT/BLM; GJDO: GJRA

PARCEL ID: 5901 SERIAL #:
T. 0100S., R 0960W., 6TH PM
Sec. 21: NESE,S2SE;
Sec. 22: W2SW;

Mesa County
Colorado 200.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

All lands are subject to Exhibit GJ-12DA to protect deer and elk winter range.

The following lands are subject to Exhibit GJ-2GP to protect scenic and natural values in a highway corridor:

T. 0100S., R 0960W., 6TH PM
Sec. 21: S2SE;

BLM; GJDO: GJRA

PARCEL ID: 5921 SERIAL #:

T. 0100S., R 0960W., 6TH PM
Sec. 26: E2SW,SE;
Sec. 35: N2NE;

Mesa County
Colorado 320.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit GJ-12DA to protect deer and elk winter range:

T. 0100S., R 0960W., 6TH PM
Sec. 26: E2SW;

The following lands are subject to Exhibit GJ-12DB to protect deer and elk winter range:

T. 0100S., R 0960W., 6TH PM
Sec. 26: SE;
Sec. 35: N2NE;

The following lands are subject to Exhibit GJ-3JA to protect steep slopes in excess of 40%:

T. 0100S., R 0960W., 6TH PM
Sec. 35: NWNE;

All lands are subject to Exhibit CO-28 to protect perennial streams and riparian/wetland zones:

T. 0100 S., R. 0960 W., 6th PM
sec. 26: NESE;

The following lands are subject to Exhibit GJ-7BE to protect perennial streams and water quality:

T. 0100 S., R. 0960 W., 6th PM
sec. 26: NESE;

PVT/BLM; GJDO: GJRA

PARCEL ID: 5968 SERIAL #:

T. 0100S., R 0960W., 6TH PM
Sec. 7: SEE EXBT A M&B DESC;
Sec. 7: NENE WITHIN COC63679;

Mesa County
Colorado 0.129 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

BLM; GJDO: GJRA

PARCEL ID: 6067 SERIAL #:

T. 0100S., R 0960W., 6TH PM
Sec. 9: 26575 AND 0102696;
Sec. 9: RESVR ROW COC;
Sec. 10: RESVR ROW COC 26575;
Sec. 16: COC 0102696;
Sec. 16: RESVR ROW;

Mesa County
Colorado 258.300 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; GJDO: GJRA

PARCEL ID: 5909 SERIAL #:

T. 0070S., R 0970W., 6TH PM
Sec. 32: TR 58;
Sec. 33: TR 58;

Garfield County
Colorado 160.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

BLM; GJDO: GJRA

PARCEL ID: 5894 SERIAL #:

T. 0080S., R 0970W., 6TH PM
Sec. 10: W2NW;

Garfield County
Colorado 80.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; GJDO: GJRA

PARCEL ID: 5912 SERIAL #:

T. 0080S., R 0970W., 6TH PM
Sec. 21: NE,E2NW;
Sec. 22: N2,N2S2;

Mesa County
Colorado 720.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit GJ-12DA to protect deer and elk winter range:

T. 0080S., R 0970W., 6TH PM
Sec. 21: W2NE,E2NW;

The following lands are subject to Exhibit GJ-13EE to protect the Uinta Basin Hookless Cactus:

T. 0080S., R 0970W., 6TH PM
Sec. 21: NE,E2NW;
Sec. 22: NENE,S2N2,NWNW,N2S2;

The following lands are subject to Exhibit GJ-2GP to protect scenic and natural values in a scenic highway corridor:

T. 0080S., R 0970W., 6TH PM
Sec. 21: S2NE;
Sec. 22: NE,S2NW,N2S2;

BLM; GJDO: GJRA

PARCEL ID: 6068 SERIAL #:

T. 0080S., R 0970W., 6TH PM
Sec. 10: NE,E2NW,S2;
Sec. 14: W2SW,SESW;
Sec. 15: ALL;
Sec. 23: W2W2;

Mesa County
Garfield County
Colorado 1480.000 Acres

The following lands are subject to Exhibit CO-08 to protect special status plant species:

T. 0080S., R 0970W., 6TH PM
Sec. 14: S2SW;

The following lands are subject to Exhibit CO-15 to protect grouse winter habitat:

T. 0080S., R 0970W., 6TH PM
Sec. 14: NWSW,SESW;

The following lands are subject to Exhibit CO-26 to protect fragile soils:

T. 0080S., R 0970W., 6TH PM
Sec. 14: W2SW,SESW;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit GJ-13EE to protect the Uinta Basin Hookless Cactus:

T. 0080S., R 0970W., 6TH PM
Sec. 10: SWSW;
Sec. 14: S2SW;
Sec. 15: NWNW,SWSW;
Sec. 23: W2NW,NWSW;

The following lands are subject to Exhibit GJ-2GP to protect scenic and natural values in a scenic highway corridor:

T. 0080S., R 0970W., 6TH PM
Sec. 14: W2SW,SESW;
Sec. 15: E2SE;
Sec. 23: W2W2;

The following lands are subject to Exhibit GS-CSU-04 to protect erosive soils and slopes over 30%:

T. 0080S., R 0970W., 6TH PM
Sec. 10: E2,E2SW;
Sec. 14: W2SW,SESW;
Sec. 15: NE,NENW,N2SE,SESE;

The following lands are subject to Exhibit GS-CSU-05 to protect scenic values of Class II visual resource management areas:

T. 0080S., R 0970W., 6TH PM
Sec. 10: E2,E2SW;
Sec. 14: W2SW;
Sec. 15: NE,NENW,N2SE,SESE;

The following lands are subject to Exhibit GS-NSO-12 to protect Threatened and Endangered Species:

T. 0080S., R 0970W., 6TH PM
Sec. 14: W2SW,SESW;
Sec. 15: E2SE;

The following lands are subject to Exhibit GS-NSO-15 to maintain site stability and productivity of slopes greater than 50%:

T. 0080S., R 0970W., 6TH PM
Sec. 14: SESW;

The following lands are subject to Exhibit GS-TL-01 to protect big game winter habitat:

T. 0080S., R 0970W., 6TH PM
Sec. 10: E2,E2SW;
Sec. 14: W2SW,SESW;
Sec. 15: NE,NENW,N2SE,SESE;

BLM; GJDO: GJRA

PARCEL ID: 6070 SERIAL #:

T. 0080S., R 0970W., 6TH PM
Sec. 24: SENW,NESW;
Sec. 25: NENE,S2N2,NWNW;
Sec. 25: S2SW,E2SE;
Sec. 26: E2E2,SESW,SWSE;
Sec. 35: NE,NENW,S2NW;
Sec. 36: N2;

Mesa County
Colorado 1320.000 Acres

The following lands are subject to Exhibit CO-26 to protect fragile soils:

T. 0080S., R 0970W., 6TH PM

Sec. 24: SENW;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit GJ-12DA to protect deer and elk winter range:

T. 0080S., R 0970W., 6TH PM

Sec. 24: SENW,NESW;

Sec. 25: S2SW,E2SE;

Sec. 25: NENE,S2N2,NWNW;

Sec. 26: NESE,S2SE;

Sec. 35: N2NE;

Sec. 36: N2N2,NWNW;

The following lands are subject to Exhibit GJ-2GP to protect scenic and natural values in a scenic highway corridor:

T. 0080S., R 0970W., 6TH PM

Sec. 24: SENW,NESW;

Sec. 25: W2NW;

Sec. 26: E2E2,SESW,SWSE;

Sec. 35: NE,NENW,S2NW;

The following lands are subject to Exhibit GJ-3JA to protect steep slopes in excess of 40%:

T. 0080S., R 0970W., 6TH PM

Sec. 35: SENE;

Sec. 36: S2NW;

PVT/BLM;BLM; GJDO: GJRA

PARCEL ID: 6071 SERIAL #:

T. 0080S., R 0970W., 6TH PM

Sec. 24: NENW;

Mesa County

Colorado 40.000 Acres

All lands are subject to Exhibit CO-26 to protect fragile soils.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

All lands are subject to Exhibit GJ-2GP to protect scenic and natural values in a scenic highway corridor.

All lands are subject to Exhibit GS-01 to protect sensitive resource values in major river corridors.

PARCEL ID: 5889 SERIAL #:

T. 0090S., R 0970W., 6TH PM

Sec. 2: Lot 1-4;

Sec. 2: S2N2;
Sec. 3: Lot 1;
Sec. 3: SENE;
Sec. 11: S2NE,S2;
Sec. 12: S2N2,S2;

Mesa County
Colorado 1281.380 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit GJ-12DA to protect deer and elk winter range:

T. 0090S., R 0970W., 6TH PM
Sec. 2: S2NE,SENE;
Sec. 11: S2NE,E2SE;
Sec. 12: SWNW,SW;

The following lands are subject to Exhibit GJ-2GP to protect scenic and natural values in a scenic highway corridor:

T. 0090S., R 0970W., 6TH PM
Sec. 2: Lot 2-4;
Sec. 2: SWNE,S2NW;
Sec. 3: Lot 1;
Sec. 3: SENE;
Sec. 11: S2NE,S2;
Sec. 12: W2SW;

The following lands are subject to Exhibit GJ-3JA to protect steep slopes in excess of 40%:

T. 0090S., R 0970W., 6TH PM
Sec. 2: SWNE;
Sec. 11: SWNE,SWSE;

BLM; GJDO: GJRA

PARCEL ID: 5913 SERIAL #:

T. 0100S., R 0970W., 6TH PM
Sec. 12: NESW,N2SE;

Mesa County
Colorado 120.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit GJ-13EE to protect the Uinta Basin Hookless Cactus:

T. 0100S., R 0970W., 6TH PM
Sec. 12: NESW,N2SE;

BLM; GJDO: GJRA

PARCEL ID: 5914 SERIAL #:

T. 0080S., R 0980W., 6TH PM
Sec. 3: Lot 1-4;
Sec. 3: S2N2;

Garfield County
Colorado 319.840 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

All lands are subject to Exhibit GJ-12DA to protect deer and elk winter range.

BLM; GJDO: GJRA

PARCEL ID: 5915 SERIAL #:

T. 0090S., R 0980W., 6TH PM
Sec. 13: W2NW,NWSW;
Sec. 14: N2,N2S2;

Mesa County
Colorado 600.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit GJ-12DA to protect deer and elk winter range:

T. 0090S., R 0980W., 6TH PM
Sec. 13: W2NW,NWSW;

The following lands are subject to Exhibit GJ-13EE to protect the Uinta Basin Hookless Cactus:

T. 0090S., R 0980W., 6TH PM
Sec. 13: NWNW;
Sec. 14: N2NE,NENW;

BLM; GJDO: GJRA

PARCEL ID: 5899 SERIAL #:

T. 0050S., R 1000W., 6TH PM
Sec. 1: Lot 5-7;
Sec. 1: S2NE,S2;
Sec. 1: TR 37 LOT A,B;
Sec. 12: N2,N2S2;

Garfield County
Colorado 1133.900 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit GJ-3JA to protect steep slopes in excess of 40%:

T. 0050S., R 1000W., 6TH PM

Sec. 1: Lot 5-7;

Sec. 1: SENE;

The following lands are subject to Exhibit GJ-7BE to protect perennial streams with a 100 foot buffer zone:

T. 0050S., R 1000W., 6TH PM

Sec. 1: Lot 5-7;

PVT/BLM; GJDO: GJRA

PARCEL ID: 5902 SERIAL #:

T. 0060S., R 1010W., 6TH PM

Sec. 14: N2;

Garfield County

Colorado 320.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit GJ-3JA to protect steep slopes in excess of 40%:

T. 0060S., R 1010W., 6TH PM

Sec. 14: W2NW,SENW;

PVT/BLM; GJDO: GJRA

PARCEL ID: 5905 SERIAL #:

T. 0060S., R 1010W., 6TH PM

Sec. 13: ALL;

Sec. 14: S2;

Garfield County

Colorado 960.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit GJ-3JA to protect steep slopes in excess of 40%:

T. 0060S., R 1010W., 6TH PM

Sec. 13: N2,N2S2,SESE;

Sec. 14: SW,SWSE;

BLM; GJDO: GJRA

PARCEL ID: 5900 SERIAL #:

T. 0080S., R 1010W., 6TH PM

Sec. 2: Lot 5-16;

Sec. 2: S2;

Garfield County
Colorado 719.240 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit GJ-1GN to protect Hunter Garvey Cliffs for visual resource management:

T. 0080S., R 1010W., 6TH PM
Sec. 2: Lot 5-16;
Sec. 2: N2SW,E2SE;

The following lands are subject to Exhibit GJ-1IG to protect recreation resources in the Hunter/Garvey backcountry:

T. 0080S., R 1010W., 6TH PM
Sec. 2: Lot 5-16;
Sec. 2: N2SW,E2SE;

The following lands are subject to Exhibit GJ-2GN to protect scenic and natural values on the Hunter/Garvey Benches:

T. 0080S., R 1010W., 6TH PM
Sec. 2: Lot 13-16;
Sec. 2: S2;

The following lands are subject to Exhibit GJ-2IG to protect recreation resources on Hunter/Garvey Benches:

T. 0080S., R 1010W., 6TH PM
Sec. 2: Lot 13-16;
Sec. 2: S2;

The following lands are subject to Exhibit GJ-3JA to protect steep slopes in excess of 40%:

T. 0080S., R 1010W., 6TH PM
Sec. 2: Lot 5,7,8,12;

BLM; GJDO: GJRA

PARCEL ID: 5893 SERIAL #:

T. 0050S., R 1020W., 6TH PM
Sec. 25: SWNW,N2SW,SESW;
Sec. 36: Lot 1,2;
Sec. 36: NW,N2SW;

Garfield County
Colorado 480.540 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit GJ-1AA to protect soils in the Baxter/Douglas slump area:

T. 0050S., R 1020W., 6TH PM
Sec. 25: SWNW,N2SW,SESW;
Sec. 36: NWNW,SENW;

The following lands are subject to Exhibit GJ-2GP to protect scenic and natural values in a scenic highway corridor:

T. 0050S., R 1020W., 6TH PM
Sec. 25: SWNW,N2SW,SESW;
Sec. 36: Lot 1,2;
Sec. 36: NW,N2SW;

The following lands are subject to Exhibit GJ-3JA to protect steep slopes in excess of 40%:

T. 0050S., R 1020W., 6TH PM
Sec. 25: SWNW,E2SW;
Sec. 36: Lot 1,2;
Sec. 36: NW;

The following lands are subject to Exhibit GJ-7BE to protect perennial streams with a 100 foot buffer zone:

T. 0050S., R 1020W., 6TH PM
Sec. 25: NWSW;

The following lands are subject to Exhibit WR-TL-09 to protect deer and elk summer range:

T. 0050S., R 1020W., 6TH PM
Sec. 25: SWNW;

BLM; GJDO: GJRA

PARCEL ID: 5969 SERIAL #:

T. 0050S., R 1020W., 6TH PM
Sec. 25: W2SE;
Sec. 36: Lot 3;
Sec. 36: W2NE,NWSE;

Garfield County

Colorado 240.130 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit GJ-1AA to protect soils in the Baxter/Douglas slump area:

T. 0050S., R 1020W., 6TH PM
Sec. 25: W2SE;
Sec. 36: W2NE,NWSE;

The following lands are subject to Exhibit GJ-2GP to protect scenic and natural values in a scenic highway corridor:

T. 0050S., R 1020W., 6TH PM
Sec. 36: Lot 3;
Sec. 36: NWSE;

The following lands are subject to Exhibit GJ-3JA to protect steep slopes in excess of 40%:

T. 0050S., R 1020W., 6TH PM
Sec. 25: NWSE;
Sec. 36: Lot 3;
Sec. 36: SWNE,NWSE;

PVT/BLM; GJDO: GJRA

PARCEL ID: 5906 SERIAL #:

T. 0060S., R 1020W., 6TH PM

Sec. 6: Lot 16-23;

Sec. 7: Lot 1-4;

Sec. 7: E2,E2W2;

Sec. 8: ALL;

Sec. 30: Lot 1-4;

Sec. 30: E2,E2W2;

Garfield County

Colorado 2261.840 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit GJ-1AA to protect soils in the Baxter/Douglas slump area:

T. 0060S., R 1020W., 6TH PM

Sec. 7: Lot 1,2;

Sec. 30: Lot 3,4;

Sec. 30: SENE,NESW;

The following lands are subject to Exhibit GJ-2GP to protect scenic and natural values in a scenic highway corridor:

T. 0060S., R 1020W., 6TH PM

Sec. 6: Lot 16-23;

Sec. 7: Lot 3,4;

Sec. 7: E2,E2W2;

Sec. 8: NENE,W2E2,W2;

The following lands are subject to Exhibit GJ-3JA to protect steep slopes in excess of 40%:

T. 0060S., R 1020W., 6TH PM

Sec. 6: Lot 16-21,23;

Sec. 7: Lot 1,3,4;

Sec. 7: NE,E2W2,W2SE,SESE;

Sec. 8: NENE,S2NE,W2,SE;

Sec. 30: Lot 1-4;

Sec. 30: NE,E2W2,N2SE,SWSE;

BLM; GJDO: GJRA

**Attachment B - Parcels Recommended for Deferral from Leasing
November 2011 - Colorado Competitive Oil & Gas Lease Sale**

Available Portion of Parcel ID: 5888

None

Deferred All of Parcel ID: 5888 in order to conduct public site visits to address resource concerns included in the Master Leasing Plan recommendation.

T. 0090S., R 0960W., 6TH PM
Sec. 30: Lot 3,4,9,10,12;
Sec. 31: Lot 3,4;

Mesa County
Colorado 174.370 Acres

.....

Available Portion of Parcel ID: 5891

None

Deferred All of Parcel ID: 5891 in order to conduct public site visits to address resource concerns included in the Master Leasing Plan recommendation.

T. 0090S., R 0960W., 6TH PM
Sec. 30: Lot 11;
Sec. 31: Lot 1,2,5,6,9-14;

Mesa County
Colorado 402.310 Acres

.....

Available Portion of Parcel ID: 5968

None

Deferred All of Parcel ID: 5968 in order to conduct public site visits to address resource concerns included in the Master Leasing Plan recommendation.

T. 0100S., R 0960W., 6TH PM
Sec. 7: SEE EXBT A M&B DESC;
Sec. 7: NENE WITHIN COC63679;

Mesa County
Colorado 0.129 Acres

.....

Available Portion of Parcel ID: 6067

None

Deferred All of Parcel ID: 6067 in order to conduct public site visits to address resource concerns included in the Master Leasing Plan recommendation.

T. 0100S., R 0960W., 6TH PM
Sec. 9: 26575 AND 0102696;
Sec. 9: RESVR ROW COC;
Sec. 10: RESVR ROW COC 26575;
Sec. 16: COC 0102696;
Sec. 16: RESVR ROW;

Mesa County
Colorado 258.300 Acres

.....
Available Portion of Parcel ID: 5909

None

Deferred All of Parcel ID: 5909 in order to conduct public site visits to address resource concerns included in the Master Leasing Plan recommendation.

T. 0070S., R 0970W., 6TH PM
Sec. 32: TR 58;
Sec. 33: TR 58;

Garfield County
Colorado 160.000 Acres

.....
Available Portion of Parcel ID: 5894

None

Deferred All of Parcel ID: 5894 in order to conduct public site visits to address resource concerns included in the Master Leasing Plan recommendation.

T. 0080S., R 0970W., 6TH PM
Sec. 10: W2NW;

Garfield County
Colorado 80.000 Acres

.....
Available Portion of Parcel ID: 5912

None

Deferred All of Parcel ID: 5912 in order to conduct public site visits to address resource concerns included in the Master Leasing Plan recommendation.

T. 0080S., R 0970W., 6TH PM
Sec. 21: NE,E2NW;
Sec. 22: N2,N2S2;

Mesa County
Colorado 720.000 Acres

.....
Available Portion of Parcel ID: 6068

None

Deferred All of Parcel ID: 6068 in order to conduct public site visits to address resource concerns included in the Master Leasing Plan recommendation.

T. 0080S., R 0970W., 6TH PM
Sec. 10: NE,E2NW,S2;
Sec. 14: W2SW,SESW;
Sec. 15: ALL;
Sec. 23: W2W2;

Mesa County
Garfield County
Colorado 1480.000 Acres

.....
Available Portion of Parcel ID: 6070

None

Deferred All of Parcel ID: 6070 in order to conduct public site visits to address resource concerns included in the Master Leasing Plan recommendation.

T. 0080S., R 0970W., 6TH PM
Sec. 24: SENW,NESW;
Sec. 25: NENE,S2N2,NWNW;
Sec. 25: S2SW,E2SE;
Sec. 26: E2E2,SESW,SWSE;
Sec. 35: NE,NENW,S2NW;
Sec. 36: N2;

Mesa County
Colorado 1320.000 Acres

.....
Available Portion of Parcel ID: 6071

None

Deferred All of Parcel ID: 6071 in order to conduct public site visits to address resource concerns included in the Master Leasing Plan recommendation.

T. 0080S., R 0970W., 6TH PM
Sec. 24: NENW;

Mesa County
Colorado 40.000 Acres

Available Portion of Parcel ID: 5889

None

Deferred All of Parcel ID: 5889 in order to conduct public site visits to address resource concerns included in the Master Leasing Plan recommendation.

T. 0090S., R 0970W., 6TH PM
Sec. 2: Lot 1-4;
Sec. 2: S2N2;
Sec. 3: Lot 1;
Sec. 3: SENE;
Sec. 11: S2NE,S2;
Sec. 12: S2N2,S2;

Mesa County
Colorado 1281.380 Acres

Available Portion of Parcel ID: 5913

None

Deferred All of Parcel ID: 5913 in order to conduct public site visits to address resource concerns included in the Master Leasing Plan recommendation.

T. 0100S., R 0970W., 6TH PM
Sec. 12: NESW,N2SE;

Mesa County
Colorado 120.000 Acres

Available Portion of Parcel ID: 5914

None

Deferred All of Parcel ID: 5914 in order to conduct public site visits to address resource concerns included in the Master Leasing Plan recommendation.

T. 0080S., R 0980W., 6TH PM
Sec. 3: Lot 1-4;
Sec. 3: S2N2;

Garfield County
Colorado 319.840 Acres

Available Portion of Parcel ID: 5915

None

Deferred All of Parcel ID: 5915 in order to conduct public site visits to address resource concerns included in the Master Leasing Plan recommendation.

T. 0090S., R 0980W., 6TH PM
Sec. 13: W2NW,NWSW;
Sec. 14: N2,N2S2;

Mesa County
Colorado 600.000 Acres

.....

Available Portion of Parcel ID: 5899

None

Deferred All of Parcel ID: 5899 in order to conduct public site visits to address resource concerns included in the Master Leasing Plan recommendation.

T. 0050S., R 1000W., 6TH PM
Sec. 1: Lot 5-7;
Sec. 1: S2NE,S2;
Sec. 1: TR 37 LOT A,B;
Sec. 12: N2,N2S2;

Garfield County
Colorado 1133.900 Acres

.....

Available Portion of Parcel ID: 5902

None

Deferred All of Parcel ID: 5902 in order to conduct public site visits to address resource concerns included in the Master Leasing Plan recommendation.

T. 0060S., R 1010W., 6TH PM
Sec. 14: N2;

Garfield County
Colorado 320.000 Acres

.....

Available Portion of Parcel ID: 5905

None

Deferred All of Parcel ID: 5905 in order to conduct public site visits to address resource concerns included in the Master Leasing Plan recommendation.

T. 0060S., R 1010W., 6TH PM

Sec. 13: ALL;
Sec. 14: S2;

Garfield County
Colorado 960.000 Acres

.....

Available Portion of Parcel ID: 5900

None

Deferred All of Parcel ID: 5900 in order to conduct public site visits to address resource concerns included in the Master Leasing Plan recommendation.

T. 0080S., R 1010W., 6TH PM
Sec. 2: Lot 5-16;
Sec. 2: S2;

Garfield County
Colorado 719.240 Acres

.....

Available Portion of Parcel ID: 5893

None

Deferred All of Parcel ID: 5893 in order to conduct public site visits to address resource concerns included in the Master Leasing Plan recommendation.

T. 0050S., R 1020W., 6TH PM
Sec. 25: SWNW,N2SW,SESW;
Sec. 36: Lot 1,2;
Sec. 36: NW,N2SW;

Garfield County
Colorado 480.540 Acres

.....

Available Portion of Parcel ID: 5969

None

Deferred All of Parcel ID: 5969 in order to conduct public site visits to address resource concerns included in the Master Leasing Plan recommendation.

T. 0050S., R 1020W., 6TH PM
Sec. 25: W2SE;
Sec. 36: Lot 3;
Sec. 36: W2NE,NWSE;

Garfield County
Colorado 240.130 Acres

.....
Available Portion of Parcel ID: 5906

None

Deferred All of Parcel ID: 5906 in order to conduct public site visits to address resource concerns included in the Master Leasing Plan recommendation.

T. 0060S., R 1020W., 6TH PM

- Sec. 6: Lot 16-23;
- Sec. 7: Lot 1-4;
- Sec. 7: E2,E2W2;
- Sec. 8: ALL;
- Sec. 30: Lot 1-4;
- Sec. 30: E2,E2W2;

Garfield County

Colorado 2261.840 Acres

**Attachment C - Parcels Available for Lease with Applied Stipulations
November 2011 - Colorado Competitive Oil & Gas Lease Sale**

PARCEL ID: 5890 SERIAL #:

T. 0090S., R 0940W., 6TH PM
 Sec. 18: Lot 1-3;
 Sec. 18: NE,E2NW,NESW,NWSE;
T. 0090S., R 0950W., 6TH PM
 Sec. 11: W2W2;
 Sec. 13: SENENE;

Mesa County
Colorado 610.340 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit GJ-3JA to protect steep slopes in excess of 40%:

T. 0090S., R 0940W., 6TH PM
 Sec. 18: Lot 2;
 Sec. 18: NENE,SWNE;

PVT/BLM;BLM; GJDO: GJRA

PARCEL ID: 5892 SERIAL #:

T. 0090S., R 0950W., 6TH PM
 Sec. 22: Lot 5;

Mesa County
Colorado 5.520 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

BLM; GJDO: GJRA

PARCEL ID: 5901 SERIAL #:

T. 0100S., R 0960W., 6TH PM
 Sec. 21: NESE,S2SE;
 Sec. 22: W2SW;

Mesa County
Colorado 200.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

All lands are subject to Exhibit GJ-12DA to protect deer and elk winter range.

The following lands are subject to Exhibit GJ-2GP to protect scenic and natural values in a highway corridor:

T. 0100S., R 0960W., 6TH PM
Sec. 21: S2SE;
BLM; GJDO: GJRA

PARCEL ID: 5921 SERIAL #:

T. 0100S., R 0960W., 6TH PM
Sec. 26: E2SW,SE;
Sec. 35: N2NE;

Mesa County
Colorado 320.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit GJ-12DA to protect deer and elk winter range:

T. 0100S., R 0960W., 6TH PM
Sec. 26: E2SW;

The following lands are subject to Exhibit GJ-12DB to protect deer and elk winter range:

T. 0100S., R 0960W., 6TH PM
Sec. 26: SE;
Sec. 35: N2NE;

The following lands are subject to Exhibit GJ-3JA to protect steep slopes in excess of 40%:

T. 0100S., R 0960W., 6TH PM
Sec. 35: NWNE;

All lands are subject to Exhibit CO-28 to protect perennial streams and riparian/wetland zones:

T. 0100 S., R. 0960 W., 6th PM
sec. 26: NESE;

The following lands are subject to Exhibit GJ-7BE to protect perennial streams and water quality:

T. 0100 S., R. 0960 W., 6th PM
sec. 26: NESE;

Attachment D - Exhibits Description

EXHIBIT CO-08

NO SURFACE OCCUPANCY STIPULATION

No surface occupancy or use is allowed on the lands described below (legal description or other description):

For the purpose of:

To protect special status plant species (including federally listed species, proposed species, and candidate species) on habitat areas.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

EXHIBIT CO-15

TIMING LIMITATION STIPULATION

No surface use is allowed during the following time period(s). This stipulation does not apply to operation and maintenance of production facilities.

December 16 through March 15

On the lands described below:

For the purpose of (reasons):

To protect grouse (including sage and mountain sharp-tailed grouse, and lesser and greater prairie chickens) crucial winter habitat

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of the stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

EXHIBIT CO-26

CONTROLLED SURFACE USE STIPULATION

Surface occupancy or use is subject to the following special operating constraints.

On the lands described below:

For the purpose of:

Protecting fragile soils. Prior to surface disturbance of fragile soils, it must be demonstrated to the Authorized Officer through a plan of development that the following performance objectives will be met.

Performance Objectives:

- I. Maintain the soil productivity of the site.
- II. Protect off-site areas by preventing accelerated soil erosion (such as land-sliding, gullyng, drilling, piping, etc.) from occurring.
- III. Protect water quality and quantity of adjacent surface and groundwater sources.
- IV. Select the best possible site for development in order to prevent impacts to the soil and water resources.

Fragile soil areas, in which the performance objective will be enforced, are defined as follows:

- a. Areas rated as highly or severely erodible by wind or water, as described by the Soil Conservation Service in the Area Soil Survey Report or as described by on-site inspection.
- b. Areas with slopes greater than or equal to 35 percent, if they also have one of the following soil characteristics:
 - (1) a surface texture that is sand, loamy sand, very fine sandy loam, fine sandy loam, silty clay or clay;
 - (2) a depth to bedrock that is less than 20 inches;
 - (3) an erosion condition that is rated as poor; or
 - (4) a K factor of greater than 0.32.

Performance Standards:

- I. All sediments generated from the surface-disturbing activity will be retained on site.
- II. Vehicle use would be limited to existing roads and trails.
- III. All new permanent roads would be built to meet primary road standards (BLM standards) and their location approved by the Authorized Officer. For oil and gas purposes, permanent roads are those used for production.
- IV. All geophysical and geochemical exploration would be conducted by helicopter, horseback, on foot, or from existing roads.
- V. Any sediment control structures, reserve pits, or disposal pits would be designed to contain a 100-year, 6-hour storm event. Storage volumes within these structures would have a design life of 25 years.

EXHIBIT CO-26 (continued)

- VI. Before reserve pits and production pits would be reclaimed, all residue would be removed and trucked off-site to an approved disposal site.
- VII. Reclamation of disturbed surfaces would be initiated before November 1 each year.
- VIII. All reclamation plans would be approved by the Authorized Officer in advance and might require an increase in the bond.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820. See also Geothermal PEIS ROD section 2.3.3 at page 2-6.)

EXHIBIT CO-28

CONTROLLED SURFACE USE STIPULATION

Surface occupancy or use is subject to the following special operating constraints.

On the lands described below:

For the purpose of:

To protect perennial water impoundments and streams, and/or riparian/wetland vegetation by moving oil and gas exploration and development beyond the riparian vegetation zone.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820. See also Geothermal PEIS ROD section 2.3.3 at page 2-6.)

Exception Criteria:

Exceptions may be granted only if an on-site impact analysis shows no degradation of the resource values.

EXHIBIT CO-34

ENDANGERED SPECIES ACT SECTION 7 CONSULTATION STIPULATION

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 will contribute to a need to list such a 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 that may affect any such species or critical habitat 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.

On the lands described below:

EXHIBIT CO-39

CONTROLLED SURFACE USE

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

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

On the lands described below:

EXHIBIT GJ-12DA
DEER AND ELK WINTER RANGE STIPULATION

In order to protect important seasonal wildlife habitat, lease activities such as exploration, drilling, and other development will be allowed only during the period from May 1 to December 1 on the following portions of this lease:

This limitation does not apply to maintenance and operation of producing wells.

This stipulation may be waived or reduced in scope if circumstances change, or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on the concern(s) identified.

EXHIBIT GJ-12DB
DEER AND ELK WINTER RANGE STIPULATION

In order to protect important seasonal wildlife habitat, lease activities such as exploration, drilling, and other development will be allowed only during the period from November 30 to April 30 on the following portions of this lease:

This limitation does not apply to maintenance and operation of producing wells.

This stipulation may be waived or reduced in scope if circumstances change, or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on the concern(s) identified.

EXHIBIT GJ-13EE
THREATENED AND ENDANGERED HABITAT STIPULATION

The following portions of this lease are within known threatened and endangered species habitat:

Threatened and endangered species:

Uinta Basin Hookless Cactus.

The lessee/operator shall submit a plan for avoidance or mitigation of impacts on the identified species to the authorized officer. This may require completion of an intensive inventory by a qualified biologist. The plan must be approved prior to any surface disturbance. The authorized officer may require additional mitigation measures such as relocation of proposed roads, drilling sites, or other facilities. Where impacts cannot be mitigated to the satisfaction of the authorized officer, surface occupancy on that area must be prohibited.

EXHIBIT GJ-1AA

NO SURFACE OCCUPANCY STIPULATION

No occupancy or other activity will be allowed on the following portions of this lease:

For the purpose of:

To protect soils in the Baxter/Douglas slump area.

This stipulation may be waived or reduced in scope if circumstances change, or if the lease can demonstrate that operations can be conducted without causing unacceptable impacts on the concern(s) identified. If this stipulation is waived or reduced in scope, any of the other attached stipulations (if any) may impact operations on this lease.

EXHIBIT GJ-1GN

NO SURFACE OCCUPANCY STIPULATION

No occupancy or other activity will be allowed on the following portions of this lease:

For the purpose of:

To protect visual resources on Hunter/Garvey Cliffs.

This stipulation may be waived or reduced in scope if circumstances change, or if the lease can demonstrate that operations can be conducted without causing unacceptable impacts on the concern(s) identified. If this stipulation is waived or reduced in scope, any of the other attached stipulations (if any) may impact operations on this lease.

EXHIBIT GJ-1IG

NO SURFACE OCCUPANCY STIPULATION

No occupancy or other activity will be allowed on the following portions of this lease:

For the purpose of:

To protect recreation resources in the Hunter/Garvey backcountry.

This stipulation may be waived or reduced in scope if circumstances change, or if the lease can demonstrate that operations can be conducted without causing unacceptable impacts on the concern(s) identified. If this stipulation is waived or reduced in scope, any of the other attached stipulations (if any) may impact operations on this lease.

EXHIBIT GJ-2GN

SCENIC AND NATURAL VALUES STIPULATION

Special design and reclamation measures may be required to protect the outstanding scenic and natural landscape value of the following portion(s) of this lease:

For the protection of:

To protect scenic and natural values on Hunter/Garvey.

Special design and reclamation measures may include transplanting trees and shrubs, fertilization, mulching, special erosion control structures, irrigation, site recontouring to match the original contour, buried tanks and low profile equipment, and painting to minimize visual contrasts. Surface disturbing activities may be denied in sensitive areas, such as unique geologic features and rock formations, visually prominent areas, and high recreation use areas.

This stipulation may be waived or reduced in scope if circumstances change or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on the concerns(s) identified.

EXHIBIT GJ-2GP

SCENIC AND NATURAL VALUES STIPULATION

Special design and reclamation measures may be required to protect the outstanding scenic and natural landscape value of the following portion(s) of this lease:

For the purpose of protecting:

the Highway Corridor, Visual Resource Management.

Special design and reclamation measures may include transplanting trees and shrubs, fertilization, mulching, special erosion control structures, irrigation, site recontouring to match the original contour, buried tanks and low profile equipment, and painting to minimize visual contrasts. Surface disturbing activities may be denied in sensitive areas, such as unique geologic features and rock formations, visually prominent areas, and high recreation use areas.

This stipulation may be waived or reduced in scope if circumstances change or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on the concern(s) identified.

EXHIBIT GJ-2IG

SCENIC AND NATURAL VALUES STIPULATION

Special design and reclamation measures may be required to protect the outstanding scenic and natural landscape value of the following portion(s) of this lease:

For the protection of:

To protect recreation resources on Hunter/Garvey Benches.

Special design and reclamation measures may include transplanting trees and shrubs, fertilization, mulching, special erosion control structures, irrigation, site recontouring to match the original contour, buried tanks and low profile equipment, and painting to minimize visual contrasts. Surface disturbing activities may be denied in sensitive areas, such as unique geologic features and rock formations, visually prominent areas, and high recreation use areas.

This stipulation may be waived or reduced in scope if circumstances change or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on the concerns(s) identified.

EXHIBIT GJ-3JA

STEEP SLOPE STIPULATION

All or part of this lease may include land with greater than 40 percent slopes. In order to avoid or mitigate unacceptable impacts to soil, water, and vegetation resources on these lands, special design practices may be necessary and higher than normal costs may result. Where impacts cannot be mitigated to the satisfaction of the authorized officer, no surface-disturbing activities shall be allowed.

This stipulation may be waived or reduce in scope if circumstances change, or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on the concern(s) identified.

On the lands described below:

EXHIBIT GJ-7BE

PERENNIAL STREAMS WATER QUALITY STIPULATION

In order to reduce impacts to water quality, surface-disturbing activities within 100 feet of perennial streams is limited to essential roads and utility crossings. The affected portions of this lease are:

This stipulation may be waived or reduced in scope if circumstances change, or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on the concern(s) identified.

EXHIBIT GS-CSU-04

CONTROLLED SURFACE USE STIPULATION

Surface occupancy or use is subject to the following special operating constraints.

On the lands described below:

For the Purpose of protecting:

Erosive Soils and Slopes Greater Than 30 Percent: special design, construction, and operation and reclamation measures will be required to limit the amount of surface disturbance, to reduce erosion potential, to maintain site stability and productivity, and to insure successful reclamation in identified areas of highly erosive soils and of slopes greater than 30 percent. Highly erosive soils are soils in the “severe” and “very severe” erosion classes based on NARCS Erosion Condition mapping. Areas identified in the RMP as Erosion Hazard Areas and Water Quality Management Areas are also included in this stipulation. Implementation may include relocation of operations beyond 200 meters.

The surface use plan of the APD submitted for wells on erosive soils or slopes greater than 30 percent must include specific measures to comply with the GSRA Reclamation Policy, such as stabilizing the site to prevent settling, land sliding, slumping, and highwall degradation, and controlling erosion to protect the site and adjacent areas from accelerated erosion and sedimentation and siltation of nearby water sources.

Specific performance objectives for the plan include:

- Limitation of total disturbance to 3.0 acres for the wellpad;
- Limitation of the interim “in use” area to 0.5 acres; and
- Maximizing the area of interim reclamation that is shaped to a grade of 3:1 or less; any planned highwall must be demonstrated to be safe and stable and include enhanced reclamation and erosion prevention measures as needed.

The operator must also provide an evaluation of the site’s reclamation potential based on problematic characteristics of the site (slope, aspect, vegetation, depth of soils, soil salinity and alkali content) and a comparison of the site with comparable sites already constructed. When the proposed site is comparable to sites where reclamation has not been successful, the operator will be required to make adjustments to reclamation techniques. Special measures might include: locating production facilities off-site; building roads to higher standards, including surfacing; constructing sediment catchments; reclaiming the reserve pit immediately after use; and applying fertilizers, mulches, soil additives and geotextile fabrics. The Authorized Officer will evaluate plans submitted by the operator and approve a design and any special measures that best accomplish the performance objectives, achieving a reasonable balance of site stability and re-vegetation potential and minimizing overall disturbance.

Any changes to this stipulation will be made in accordance with the land use plan/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

EXHIBIT GS-CSU-05

CONTROLLED SURFACE USE STIPULATION

Surface occupancy or use is subject to the following special operating constraints.

On the lands described below:

For the Purpose of protecting:

Visual Resource Management (VRM) Class II Areas: protection may include special design requirements, relocation of operations by more than 200 meters, and other measures to retain the overall landscape character. Such measures would be designed to blend the disturbance in with the natural landscape so that it does not attract attention from key observation points. BLM acknowledges that activities on private lands may alter the landscape character and such modifications will be considered when evaluating mitigation proposals relative to the visual quality of the overall landscape.

Any changes to this stipulation will be made in accordance with the land use plan/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

EXHIBIT GS-NSO-12

NO SURFACE OCCUPANCY STIPULATION

No surface occupancy/or use is allowed on the lands described below (Legal subdivision or other description):

For the Purpose of protecting:

Threatened or Endangered Species: NSO on habitat areas for those species listed by the federal or state government as endangered or threatened, and for federal proposed or candidate species. Habitat areas include occupied habitat and habitat necessary for the maintenance or recovery of the species.

Any changes to this stipulation will be made in accordance with the land use plan/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Exception Criteria:

Surface occupancy may be authorized, pending Section 7 consultation with the U.S. Fish and Wildlife Service on federal Threatened or Endangered Species or with the Colorado Division of Wildlife for state listed species. The AO will consider the type and amount of surface disturbance, plant frequency and density, relative abundance of habitat, species and location, topography, and other related factors.

EXHIBIT GS-NSO-15

NO SURFACE OCCUPANCY STIPULATION

No surface occupancy/or use is allowed on the lands described below (Legal subdivision or other description):

For the Purpose of protecting:

Steep Slopes: To maintain site stability and site productivity, on slopes greater than 50 percent. This NSO does not apply to pipelines.

Any changes to this stipulation will be made in accordance with the land use plan/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Exception Criteria:

In the event the lessee demonstrates that operations can be conducted without causing unacceptable impacts and that less restrictive measures will protect the public interest, an exception may be approved by the Authorized Officer. A request for an exception must include an engineering and reclamation plan which provides a high level of certainty that such operations can be conducted consistent with the objectives of the GSRA Reclamation Policy. All elements of the Erosive Soils and Steep Slope CSU would apply (Exhibit GSCSU-04). In addition, the operator must provide sufficient on-site analysis of soil types, vegetation types, aspect, depth to bedrock, nature of subsurface materials and potential for below ground seeps or springs. The lessee must also provide an evaluation of past practices on similar terrain and be able to demonstrate success under similar conditions. Previous success under similar conditions would be a critical element in the Authorized Officer's determination.

EXHIBIT GS-TL-01

TIMING LIMITATION STIPULATION

No surface use is allowed during the following time period(s). This stipulation does not apply to operation and maintenance of production facilities.

December 1 to April 30

On the lands described below:

For the purpose of protecting:

Big Game Winter Habitat (includes mule deer, elk, pronghorn antelope and bighorn sheep) which includes severe big game winter range and other high value winter habitat as mapped by the Colorado Division of Wildlife.

Any changes to this stipulation will be made in accordance with the land use plan/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Exception Criteria:

Under mild winter conditions, the last 60 days of the seasonal limitation period may be suspended after consultation with the CDOW. Severity of the winter will be determined on the basis of snow depth, snow crusting, daily mean temperatures, and whether animals were concentrated on the winter range during the winter months. This limitation may apply to work requiring a Sundry Notice pending environmental analysis of any operational or production aspects.

EXHIBIT WR-TL-09

TIMING LIMITATION STIPULATION

No surface use is allowed during the following time period(s). This stipulation does not apply to operation and maintenance of production facilities.

This stipulation will not take effect until direct and indirect impacts to suitable summer range habitats exceed 10 percent of that available within the individual Game Management Units (GMU). When this threshold has been reached, no further development activity will be allowed from May 15 through August 15. (Development is allowed until 10 percent of individual GMU summer habitat has been affected, then additional development is allowed from August 16 through May 14.)

On the lands described below:

For the purpose of (reasons):

Protecting: DEER & ELK SUMMER RANGE. This area is located within deer and elk summer ranges, which due to limited extent, are considered critical habitat within appropriate Colorado Division of Wildlife GMUs.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see Bureau of Land Management Manuals 1624 and 3101 or Forest Service Manuals 1950 and 2820.)

EXCEPTION:

The Area Manager may grant an exception if an environmental analysis indicates that the proposed action could be conditioned to have no additional influence on the utility or suitability of summer range habitats. An exception may also be granted if the proponent, Bureau of Land Management, and Colorado Division of Wildlife negotiate compensation that would satisfactorily offset anticipated impacts to summer range function or habitat. Exceptions may also be granted for actions specifically intended to enhance the long term utility or availability of suitable habitat.

MODIFICATION:

The Area Manager may modify the size and time frames of this stipulation if Colorado Division of Wildlife monitoring information indicates that current animal use patterns are inconsistent with dates established for animal occupation. Modifications may also be authorized if the proposed action could be conditioned to have no additional influence on the utility or suitability of summer range habitats.

WAIVER:

This stipulation may be waived if the Colorado Division of Wildlife determines that all or specific portions of the area no longer satisfy this functional capacity or that these summer ranges no longer merit critical habitat status. Waivers will also be applied to delineated summer range occurring below 2,250 meters (7,350 feet) in elevation.

Attachment E - Public Comment Review

COMMENT REVIEW DOI-BLM-CO-130-2011-0043 Lease Sale EA

Commentor	Comment	Category	Issue? Y/N	If No, why? If Yes, issue statement	Significant Issue -or - Additional necessary to make reasoned choice? If No, Why?
Lee Cassin	<p>This leasing action threatens to contribute significantly to Clean Air Act violations of the NAAQS ozone standard and to also worsen PM-10 levels. Leasing is for the purpose of exploration and production and those activities have known emissions, which should be evaluated in the EA, with appropriate stipulations included in the lease sale. Otherwise, the BLM will not be preventing or eliminating damage to the environment, as NEPA requires. Further, NEPA intends to ensure that environmental factors are weighted equally with other factors in decisions to proceed. In the preliminary EA, the BLM suggests approving the leases and hoping that the connected direct and indirect and cumulative environmental impacts are addressed by other agencies in the future or through the APDs. However, the BLM does not apply stipulations in the APD's that ensure mitigation of air quality health impacts on nearby residents or regional populations. Analysis of environmental impacts should not be deferred until the APD stage. The lease approval stage is the best and possibly only opportunity for BLM to ensure proper environmental protections.</p> <p>The alternative approved by the BLM should be one that applies stipulations as a condition of lease approval that will address and minimize air quality health impacts and avoid exceedances. In particular, the BLM is aware that the new ozone standard will be announced by the EPA in July of 2011 and that the new standard will be more difficult to meet than the existing standard. Oil and gas exploration and drilling are significant, if not the largest contributors to potential violations in western Colorado. Levels above or very close to the new standard have been recorded at a number of locations downstream from the proposed lease areas. Emissions from these lease parcels will contribute to and worsen likely exceedances of the standard if alternatives that include mitigation requirements are not evaluated and approved instead of the proposed leases without air quality conditions. Numerous strategies exist and are required in other states and areas, to reduce the precursor emissions from lease activities approved by the BLM. Those strategies should be included as stipulations now when the leases are approved.</p> <p>Connected direct and indirect actions to these leases include additional traffic and evaporation ponds and disposal facilities. Emissions from these can and should be evaluated using national emission standards. Those emissions need to be disclosed in the EA and alternatives with controls need to be included in the EA. A variety of common mitigation measures for these facilities are also used elsewhere and should be required in the preferred alternative for these leases.</p> <p>Leasing will also result in BTEX emissions which are a significant health concern for nearby residents and those emissions should be described in the EA as well. Alternatives that reduce those emissions should be included in the EA. Leasing will add significant greenhouse gas emissions in amounts that can be reasonably quantified and should be addressed in the EA. Measures to minimize or offset these emissions should be analyzed in the EA.</p>	Air Quality/Climate	Y	Leasing may cause air quality problems including clean air act violations	No - Issue is associated with possible significant effect, however an analysis and disclosure of possible air quality impacts is already included in the EA. Additional analysis will take place at the APD stage. It is impossible for the BLM to predict the exact air quality impacts of development of these leases at this time because we do not know the precise locations or extent of development to take place and we do not know under what construction, production and emissions controls technologies the development will take place. The new standard the commenter refers to is not in place at this time and we cannot speculate on what the final standard will be. Development will take place under laws and regulations that protect air quality, this lease sale does not exempt the lessee from air quality regulations. We cannot attach air quality stipulations at this time because they are not included in our current RMP, however if needed to attain AQ standards, we can attach COAs at the APD stage. Additional discussion of reasonably foreseeable pipelines, roads, and disposal facilities was added to the EA.
CNE and CEC	This EA defers analysis of air quality impacts until the APD stage of the process. We would ask BLM to begin analyzing air quality issues at the leasing stage. BLM has the ability to determine a reasonably foreseeable development scenario at this stage of the process. This would help BLM and the public to determine if leasing in this area is appropriate.	Air Quality/Climate	N	Just a request for more analysis, does not point to a dispute, debate or disagreement surrounding an anticipated effect	Analysis and disclosure of possible air quality impacts is already included in the EA. Additional analysis will take place at the APD stage. It is impossible for the BLM to predict the exact air quality impacts of development of these leases at this time because we do not know the precise locations or extent of development to take place and we do not know under what construction, production and emissions controls technologies the development will take place. Development will take place under laws and regulations that protect air quality, this lease sale does not exempt the lessee from air quality regulations. If needed to attain AQ standards, we can attach COAs at the APD stage.
Lee Cassin	The preliminary EA failed to analyze the environmental effects of hydraulic fracturing. Fracking fluids contain 29 chemicals that are known or possible human carcinogens, regulated under the Safe Drinking Water Act, or listed as hazardous air pollutants under the Clean Air Act. These chemicals end up in fluids evaporation ponds where some become airborne. Their effects on the health of nearby residents, as well as regional effects from those emissions should be analyzed (for example methanol that contributes to ozone formation) along with groundwater impacts.	fracking	Y	fracking can impact water and air quality	No - The impacts of fracking on soils and water are discussed in the EA as well as the disclosure that water disposal facilities are necessary for oil and gas production and could impact air quality. Some additional clarification was added to the EA to be sure it was obvious that this has been disclosed.
CNE and CEC	BLM failed to analyze the effects of hydraulic fracturing on the effected environment. This practice is standard in natural gas extraction and can be analyzed at this stage of the process. An April 18, 2011 report issued by the US House of Representatives Committee on Energy and Commerce found that hydraulic fracturing fluids contain 29 chemicals that are known or possible human carcinogens, regulated under the Safe Drinking Water Act, or listed as hazardous air pollutants under the Clean Air Act, including benzene, toluene, xylene, ethylbenzene, and lead. What materials are being used for hydraulic fracturing this formation, and do they present a potential for contamination or pollution? Will the groundwater and surface streams be threatened? How will the introduction of such toxic chemicals into the ecosystem impact species health? Does the geology or other factors present challenges for well casing, and other techniques intended to minimize the probability of adverse impacts? We ask that BLM analyze these issues at this point in the process to determine if leasing these parcels is appropriate.	fracking	Y	fracking can impact water and air quality	No - The impacts of fracking on soils and water are discussed in the EA as well as the disclosure that water disposal facilities are necessary for oil and gas production and could impact air quality. Some additional clarification was added to the EA to be sure it was obvious that this has been disclosed. It is impossible to analyze any geological issues with fracking of the specific wells to be developed without the site specific proposal in hand. These questions can only be answered at the APD stage. However natural gas development is common in this area and there is no evidence to suggest that leasing these parcels poses unique risks.

COMMENT REVIEW DOI-BLM-CO-130-2011-0043 Lease Sale EA

Lee Cassin	I would like to thank the BLM for deferring the lease of 21 of the proposed parcels that fall within the Shale Ridges and Canyons Master Leasing Plan ("MLP") Areas, until the requisite site visits have been conducted.	NEPA process	N	Just a compliment to the BLM	No, simply complimenting the GJFO on it's attention to the issues.
Lee Cassin	The approach taken in this analysis is wanting in several areas. First, only two alternatives were considered – the no action alternative and the lease alternative for the four parcels. NEPA requires consideration of a range of alternatives, which should include leasing with specified stipulations. Some sections of the preliminary EA do this, such as the listing of detailed stipulations for mitigation to protect upland soils (page 19 for example). A similar range of alternatives should be evaluated with stipulations to address impacts in other areas, such as the critical issue of air quality. As it exists, the preliminary EA does not meet the requirement to propose measures to mitigate adverse effects.	NEPA process	N	Just a request for more alternatives, does not point to a dispute, debate or disagreement surrounding an anticipated effect. Alternatives will be developed if needed to address significant issues. No significant adverse effects were identified, therefore none need to be mitigated.	The EA considered 3 alternatives, leasing all nominated parcels, leasing none of the nominated parcels, and leasing only 4 of the 25 parcels. All leases would be issued with the stipulations provided by our current RMP. Additional alternatives will be analyzed if necessary to make a reasoned decision or if an issue raised by the public cannot be resolved within the current range of alternatives. The EA determined that current protection mechanisms (current stipulations, and site specific COAs at the APD stage) are sufficient to protect the special status species on the 4 parcels included in the proposed action.
CNE and CEC	We would also like to take this opportunity to commend the Bureau of Land Management ("BLM") on deferring the lease of 21 of the the proposed parcels that fall within the Shale Ridges and Canyons Master Leasing Plan ("MLP") Areas, until the requisite site visits have been conducted.	NEPA process	N	Just a compliment to the BLM	No, simply complimenting the GJFO on it's attention to the issues.
CNE and CEC	We do not feel that the alternatives that have been analyzed in the EA are sufficient to constitute full consideration of the impacts of the leasing and potential development, and adequate alternatives to adequately minimize and mitigate impacts. We ask that the NEPA analysis for this leasing consider a broader range of alternatives, including, but not limited to, leasing with more stringent stipulations to protect the Gunnison sage-grouse, DeBeque milkvetch and Canada lynx, leasing a reduced sized parcels, not leasing the proposed parcels at all, and other alternatives that will ensure proper analysis and decision making. It is very important that the range of alternatives allow the public to evaluate the trade-offs between the potential for development of energy resources in the area and impacts to the human environment.	NEPA Process	N	Just a request for more alternatives, does not point to a dispute, debate or disagreement surrounding an anticipated effect. Alternatives will be developed if needed to address significant issues.	The EA considered 3 alternatives, leasing all nominated parcels, leasing none of the nominated parcels, and leasing only 4 of the 25 parcels. All leases would be issued with the stipulations provided by our current RMP. Additional alternatives will be analyzed if necessary to make a reasoned decision or if an issue raised by the public cannot be resolved within the current range of alternatives. The EA determined that current protection mechanisms (current stipulations, and site specific COAs at the APD stage) are sufficient to protect the special status species on the 4 parcels included in the proposed action.
CNE and CEC	BLM has failed to analyze the impacts of connected actions. Oil and gas development requires pipelines and other facilities to transport the product to a holding or processing center. This necessary infrastructure will impact the environment in ways not analyzed in this EA. We ask that BLM consider the affects of this broader infrastructure when determining the affect of leasing these parcels.	NEPA Process	N	Just a request for more analysis, does not point to a dispute, debate or disagreement surrounding an anticipated effect	Clarification added to show that fragmentation caused by past present and reasonably foreseeable actions was considered. Additional discussion of reasonably foreseeable pipelines, roads, and disposal facilities was added to the EA.
CNE and CEC	NEPA analysis should include a thorough description and analysis of the likely effectiveness of any proposed mitigation measures and mitigating impacts. The BLM must evaluate the effectiveness of the mitigation measures used in leasing with the best available science. "The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA." 40 C.F.R. § 1500.1(b) (2009). "For this reason, agencies are under an affirmative mandate to 'insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements[.] identify any methodologies used and . . . make explicit reference by footnote to the scientific and other sources relied upon for conclusions[.]'" Env't. Def. v. U.S. Army Corps of Eng'rs, 515 F. Supp. 2d 69, 78 (D.D.C. 2007) (citing 40 C.F.R. § 1502.24 (2009)). This analysis should take into account the best available science on the impacts of energy development on Gunnison sage-grouse, Canada lynx, and DeBeque milkvetch, as well as the best available science on the status of and threats to these species. The NEPA analysis must acknowledge that the best available science suggests that the mitigation measures proposed in the EA will not prevent unavoidable adverse impacts to these species.	NEPA Process	N	Just a request for more analysis, does not point to a dispute, debate or disagreement surrounding an anticipated effect	Analysis in EA sufficiently discloses the possible impacts of development as a result of this leasing decision. Additional site specific analysis will be conducted at the APD stage.
CNE and CEC	Analysis of environmental impacts should not be deferred until the application for permit to drill stage. Analysis and surveys of these parcels should be conducted at the first instance possible and that is the leasing stage. Once a lease is granted resources are already committed to the development process. It will be more difficult for BLM to ensure proper protections for the human environment once leases are issued. Analysis of greenhouse gas emissions should be conducted now to determine if the added emissions from this lease sale is harmful to the environment. Biological resource surveys should also be conducted now to determine the occurrence of rare or threatened species on these parcels. This is even more appropriate when the BLM knows these types of species may be present. Finally, CNE requests that BLM conducts a more thorough and adequate NEPA analysis, which includes a more full discussion of a range of alternatives, analysis of direct, indirect, and cumulative impacts, and adequately addresses the environmental impacts of the proposed leasing on wildlife and ecosystems based on the best available science.	NEPA Process	N	Just a request for more analysis, does not point to a dispute, debate or disagreement surrounding an anticipated effect	Analysis in EA sufficiently discloses the possible impacts of development as a result of this leasing decision. BLM knows the types of resources to be affected by future development as a result of leasing but it is not feasible or cost effective for the BLM to fund and complete surveys of the entire parcels at this time. Surveys will take place prior to exploration and development so the site specific analysis can disclose, minimize, and mitigate any potential significant effects.

COMMENT REVIEW DOI-BLM-CO-130-2011-0043 Lease Sale EA

CNE and CEC	An important cumulative impact of oil and gas development in Western Colorado is habitat fragmentation, which reduces the viability of many species. BLM asserts that "considering only those parcels recommended for leasing, these principles of fragmentation are not known to be operating at a level that prompts imminent concern." Such a statement is antithetical to the principles behind cumulative impact analysis. If BLM considers "only those parcels recommended for leasing," then they, on face, are not considering the cumulative impact of fragmenting habitat caused by leasing hundreds of parcels for oil and gas development across Western Colorado. "Such reasoning disregards the reality that small, non-threatening injuries can incrementally lead to a fatal result, whether it is the 'straw that broke the camel's back' or 'death by a thousand cuts.'" In order to adequately analyze the environmental baseline and the direct, indirect and cumulative impacts of the proposed action in combination with other past, present and reasonably foreseeable actions, we request that BLM take these steps as part of the NEPA analysis in the final EA.	NEPA Process	Y	Cumulatively, habitat fragmentation could be significant.	No, this was analyzed adequately in the EA. Clarification added to show that fragmentation caused by past present and reasonably foreseeable actions was considered.
Mesa County	Parcel 5890 – the east side of the parcel is known as the Hawxhurst Ranch, and its surface is privately owned. The west side is located west of Kimball Creek Road and the surface owner is the BLM. The east parcel is accessed from Buzzard Creek Road. The west portion of parcel #5890 is accessed from Kimball Creek Road. Both of these roads are County maintained roads. The two County roads are not sized adequately to accommodate the heavy traffic associated with oil and gas drilling. The roads are not wide enough to accommodate two large trucks passing each other and the roads are not surfaced adequately for the anticipated weight and number of trucks. Upgrades to these roads will be required to adequately handle the traffic. Parcel # 5921- This parcel is accessed from County Road 52 1/2. This road is also identified as being inadequate for the anticipated oil and gas exploration and production traffic. This road will require upgrades prior to its use for oil and gas exploration and production.	Roads	Y	Development of some of the lease parcels could negatively impact county roads	No - 7/8/11 C. Ewing Spoke with Randy Price and 7/13/11 with Eric Bruton from Mesa County. They said additional road work may be needed for development. Randy said the BLM does notify the county when APDs are proposed, and they can comment to BLM in instances where the roads need work for development to occur so that we can analyze that in EAs at the APD stage and possibly attach COAs requiring company to work with county to upgrade roads. Language to be added to EA: "According to Mesa County, the county roads accessing parcels 5890 and 5921 would be impacted by expected oil and gas exploration and production traffic. At the APD stage, further analysis will be conducted, including analysis of transportation/access. At that time it is likely that our analysis will lead us to encourage the lessee to coordinate necessary road maintenance or potential agreed upon improvements with Mesa County to address this issue."
CNE and CEC	Our screen shows that approximately 5 acres of Parcel 5890 are within the CNAP Battlement Mesa Designated Natural Area. It is possible that this overlap is due to a boundary issue with our GIS screening data or with the GIS data provided by BLM. BLM should defer the parcel from leasing until this discrepancy in its data can be resolved, and conduct a site visit to verify that the parcel does not overlap with the CNAP Designated Natural Area. Even if the parcel proves not to overlap the Designated Natural Area, BLM should nevertheless withdraw portions of the parcel from leasing, or at the very least defer it from leasing to conduct further analysis because of its proximity to the Designated Natural Area. IM 2010-117 instructs BLM to consider whether "Leasing would result in unacceptable impacts to specially designated areas (whether Federal or non-Federal) and would be incompatible with the purpose of the designation." The disturbance that oil and gas development would cause to the ecosystem, wildlife, and quiet use of the adjacent wilderness area constitutes such an 'unacceptable impact,' and we believe that CNAP Designated Natural Areas constitute "specially designated areas" for the reasons outlined below. BLM should defer leasing the portions of Parcel 5890 within a Designated Natural area in order to uphold the Legislature's intent to protect the important ecological resources of the area. avoid leasing lands within this Natural Area. CNE also requests that BLM defer leasing the portions of Parcel 5890 that are within a CNAP designated Natural Area. Such areas have already been recognized for their high ecological and conservation values and should not be offered for leasing. CNE further asks BLM to withdraw the portions of parcel 5890 in the CNAP Battlement Mesa Natural Area. This area has been recognized for its high conservation value due to its unique and high-quality natural features of statewide significance.	Special Designations	Y	Leasing could impact special values associated with Special designations such as Battlement Mesa Natural area.	No - The information provided in the comment was inaccurate. Anna Lincoln of BLM contacted Brian Kurzel of CNAP on 7/14/11 and he said Battlement Mesa Natural Area is not a CNAP designated natural area. There are no wilderness areas adjacent or near the parcel.

COMMENT REVIEW DOI-BLM-CO-130-2011-0043 Lease Sale EA

<p>CNE and CEC</p>	<p>BLM failed to adequately analyze potential direct, indirect and cumulative impacts of the proposed leasing on the Gunnison sage-grouse, DeBeque milkvetch, Canada lynx, and other species. BLM notes that "Leasing and subsequent development of one or more of these lease parcels is likely to contribute to a sustained reduction in the overall abundance of most affected species through direct and indirect impacts, but it would not be expected to elevate cumulative effects to levels that would compromise the viability of any wildlife population or the utility of broader landscapes as habitat." BLM asserts that TL and NSO stipulations attached to the leases may serve as adequate mitigation for these impacts. Yet no TL or NSO stipulations are attached to any of the parcels except for Parcels 5901 and 5921, which has such stipulations only for deer and elk. No lease stipulations are attached for any of the species discussed above, and thus such stipulations cannot serve as adequate mitigation for the potential cumulative impacts of oil and gas development on such species.</p>	<p>Special Status Species - all 3</p>	<p>Y</p>	<p>Leasing may adversely affect special status species such as the lynx, sage grouse, and milkvetch</p>	<p>No, Of these parcels only two acres of the 5890 parcel are mapped by BLM as potential winter habitat for Lynx. The additional acreage the commentor refers to is from an outdated USFS habitat mapping effort and is mostly mostly arid pinyon-juniper (not lynx habitat). The USFS has recently remapped their Lynx Analysis Units (done in October 2010 by district biologists on the Grand Mesa, Uncompahgre and Gunnison National Forests) and the BLM land and adjacent Forest Service land is no longer mapped as habitat. In addition CDOW telemetry data from Lynx shows the Lynx do not use this area. Because the area does not connect to more recently mapped Forest service habitat and the area mapped is not large enough to support Lynx it was determined by the BLM biologist that Lynx are not likely to occur and therefore would not be affected. The BLM discussed this determination with USFWS and they agreed. Sage Grouse (HLP) These parcels are within the mapped historic distribution of gunnison sage grouse. However the historic distribution was coarsly mapped (at a scale of 1:2,000,000) and site specific analysis reveals that the areas to be leased are not within an area that historically supported sage brush. No stipulations are attached for Sage Grouse because their habitat is not present. Other Species (HLP) Lease development is likely to affect individuals, directly and indirectly, but is not expected to lead to a downward trend in populations as a whole, in the special status species section this refers to raptors, specifically the northern goshawk as discussed in the text of the EA. The EA also says the CSU's and BMP's will be applied at the time of authorization to minimize impacts. TL's for raptors are referenced and would be applied as raptors are detected as authorized under Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal. Further clarification will be added to the EA</p>
<p>CNE and CEC</p>	<p>Debeque milkvetch is a BLM G2/S2 species. The EA states notes that Parcel 5901 has "a high probability of containing the BLM sensitive DeBeque milkvetch. Biological surveys completed in 2010 recorded a large population of the milkvetch immediately south of the proposed leased parcel. While it is unknown if lease parcel 5921 contains DeBeque milkvetch, the parcel does contain suitable habitat for the species." In spite of this recognition, the EA does not recommend any substantive protections for the species, besides noting that "BLM will require biological surveys to be completed prior to well pad location approval," and that "protections are anticipated to be greater in the future under the guidance of the revised RMP, and the state wide oil and gas stipulations."</p> <p>Even though BLM recognizes that the forthcoming guidelines will provide stronger protections, including buffers, for the DeBeque milkvetch, it nevertheless does not include any stipulations to protect it in the EA. The protections that will soon be offered to the DeBeque milkvetch are just as necessary today as they will be in a few months when the GJFO RMP revision is complete. BLM should defer the lease of parcels 5901 and 5921 until the GJFO RMP and the BLM draft state wide oil and gas stipulations have been completed. BLM should also survey the parcels for Debeque milkvetch to determine how leasing will affect this species prior to leasing, rather than operating based on its current uncertainty. This analysis should be conducted prior to leasing to ensure that appropriate stipulations are attached to protect this species. At the very least, we ask that BLM follow the "Recommended Best Management Practices for Plants of Concern" attached to this Comment as "Attachment 2". BLM should use the upcoming guidelines to protect the DeBeque Milkvetch and include new stipulations that provide that protection as part of the preferred alternative. Further, BLM should ensure that leasing and exploration of parcels 5901 and 5921 does not affect the Debeque milkvetch. We ask that the BLM defer leasing in order to survey these parcels to ensure protection of this species, and consider withdrawing all or part of the parcels if necessary to protect the species, or adding stipulations to the lease to protect the species and its habitat.</p>	<p>Special Status Species - De Beque Milkvetch</p>	<p>Y</p>	<p>Leasing may adversely affect special status species such as the milkvetch without upcoming guidelines</p>	<p>No - BLM currently has mechanisms in place to protect sensitive species such as the milkvetch. COAs routinely are be attached at the APD stage to minimize impacts to special status species (additional description added to EA). At the APD stage site specific analysis will be completed, and well pad locations and ancillary features will be designed to avoid or minimize impacts to both plant and animal species of concern. The GJFO RMP revision will not be complete in a few months. Waiting for new guidelines would require no leasing anywhere, any time, because there is always new policy and guidelines for management of one resource or another being considered at the COSO and WO levels.</p>

COMMENT REVIEW DOI-BLM-CO-130-2011-0043 Lease Sale EA

CNE and CEC	CNE asks that BLM analyze an alternative that excludes DeBeque milkvetch occurrences and buffer zones from parcel 5901 and 5921. BLM defer leasing until it has conducted a survey to determine the locations of such occurrences prior to leasing, rather than operating based on the uncertainty that such occurrences may or may not exist. BLM should adopt the Best Management Practices included in Attachment 2 to guide its treatment of the DeBeque milkvetch in the leases.	Special Status Species - De Beque Milkvetch	Y	Leasing may adversely affect special status species such as the milkvetch	No - BLM currently has mechanisms in place to protect sensitive species such as the milkvetch. The suggested alternative is not feasible because we do not know where the occurrences are. It is not feasible or cost effective for the BLM to fund and complete surveys of the entire parcels at this time. Surveys will take place prior to exploration and development so the site specific analysis can disclose, minimize, and mitigate any potential significant effects. The BMPs suggested were written with input from the GJFO and COSO BLM botanist/ecologist. These are the types of BMPs BLM routinely employs as site specific COAs at the APD stage.
CNE and CEC	CNE also requests that BLM defer leasing parcel 5890 in order to conduct further and more detailed analysis of the potential impacts of leasing the areas of the proposed parcels that have been identified as potential lynx habitat by BLM, Colorado Division of Wildlife ("CDOW"), FWS, and the United States Forest Service ("USFS"). Despite the potential for significant negative impacts on lynx that could result from leasing of the proposed parcels, BLM failed to apply a No Surface Occupancy stipulation to protect lynx habitat on the proposed parcel, prepare sufficient NEPA analysis of the impacts on the lynx of leasing the proposed parcels, and complete the §7 consultation required by the ESA prior to deciding to lease parcels in lynx habitat. The recommendations and requirements in the LCAS represent the USFS' assessment of Best Management Practices ("BMP"), based on the Best Available Science. Given that IM 2010-117 requires BLM to make leasing decisions based on the same standard, it is reasonable that, even though BLM's CA has lapsed, BLM should apply the same standards as USFS in making decisions about how to protect the lynx. BLM should therefore defer leasing the parcels in question until it has developed and applied Timing Limitation (TL) stipulations, restrictions on snow compacting activities, and appropriate reclamation plans to ensure that leasing the proposed parcels will not have negative impacts on the lynx and its habitat.	Special Status Species - Lynx		Leasing may adversely affect special status species such as the lynx	No, Of these parcels only two acres of the 5890 parcel are mapped by BLM as potential winter habitat for Lynx. The additional acreage the commentor refers to is from an outdated USFS habitat mapping effort and is mostly mostly arid pinyon-juniper (not lynx habitat). The USFS has recently remapped their Lynx Analysis Units (done in October 2010 by district biologists on the Grand Mesa, Uncompangre and Gunnison National Forests) and the BLM land and adjacent Forest Service land is no longer mapped as habitat. In addition CDOW telemetry data from Lynx shows the Lynx do not use this area. Because the area does not connect to more recently mapped Forest service habitat and the area mapped is not large enough to support Lynx it was determined by the BLM biologist that Lynx are not likely to occur and therefore would not be affected, therefore the area will not be managed to support Lynx habitat objectives. We determined that the lease sale would have "no effect" on lynx. We discussed this determination with USFWS and they agreed. Since we determined that this action would result in "No Effect" to lynx, no consultation is necessary. Further clarification/correction will be added to the EA.
CNE and CEC	GJFO should defer lease of the proposed parcels until it has taken into account the numerous developments in lynx conservation that have occurred since it last updated its RMP. BLM should therefore defer leasing the parcels in question until it has developed and applied Timing Limitation (TL) stipulations, restrictions on snow compacting activities, and appropriate reclamation plans to ensure that leasing the proposed parcels will not have negative impacts on the lynx and its habitat.GJFO should also defer leasing of the proposed parcels until FWS has properly designated critical habitat for the lynx. The FWS' critical habitat designation for the Canada lynx has recently been remanded to the Agency for a re-designation which may include habitat in Colorado. GJFO should avoid leasing any parcels that may be classified as critical habitat in order to allow FWS to designate the areas of greatest ecological importance to the lynx as critical habitat, rather than having to make decisions based on which less valuable areas have not yet been compromised by oil and gas development.Oil and gas development and exploration on the proposed parcels may have substantial direct, indirect and cumulative impacts on lynx. Oil and gas exploration and development may result in loss of denning habitat, disturbance in denning habitat during critical time periods, cover type conversions, an increase in movement barriers and fragmentation, increased road densities, increased vehicular traffic and human disturbance, facilitation of increased access to lynx habitat by competitors or predators, increased illegal trapping or shooting of lynx, and increased potential for invasion of non-native plant species. The proposed leasing could also contribute to the potential impacts of global climate change on lynx through a variety of mechanisms.	Special Status Species - Lynx	Y	Leasing may adversely affect special status species such as the lynx	No, The acreage the commentor refers to is from an outdated USFS habitat mapping effort and is mostly mostly arid pinyon-juniper (not lynx habitat). The USFS has recently remapped their Lynx Analysis Units (done in October 2010 by district biologists on the Grand Mesa, Uncompangre and Gunnison National Forests, in coordination with BLM and USFWS) and the BLM land and adjacent Forest Service land is no longer mapped as habitat. In addition CDOW telemetry data from Lynx shows the Lynx do not use this area. For these reasons, the BLM biologist determined that Lynx are not likely to occur and therefore would not be affected, therefore the area will not be managed to support Lynx habitat objectives. If it is designated critical habitat in the future, BLM would consult with USFWS prior to any development that may affect the critical habitat or the species. Further clarification/correction will be added to the EA.
CNE and CEC	Under §7 of the ESA, BLM must consult with FWS prior to issuing oil and gas leases in lynx habitat. BLM has not completed programmatic §7 consultation to determine whether or not implementation of the existing CO BLM RMPs will result in jeopardy to the lynx. Activity or program specific plans (such as plans for oil and gas leasing programs and issuance of specific oil and gas leases), and specific project plans (such as applications for a permit to drill on an individual lease) constitute points at which a decision is made to commit resources. Section 7 consultation is required not only when the RMP for a planning area is finalized, but also at both the activity or program specific planning stage (e.g. during programmatic analysis of oil and gas leasing programs, and prior to issuance of oil and gas leases), and at the stage when specific project plans are proposed (e.g. application of a permit to drill on a specific lease parcel). BLM has not completed the required ESA Section 7 consultation regarding impacts of the issuance of the protested oil and gas lease parcels on Canada lynx, and should defer leasing until such consultation has occurred.	Special Status Species - Lynx	Y	Leasing may adversely affect special status species such as the lynx, so BLM should consult with USFWS.	No, since we determined that this action would result in "No Effect" to lynx, no consultation is necessary.

COMMENT REVIEW DOI-BLM-CO-130-2011-0043 Lease Sale EA

CNE and CEC	Furthermore, BLM has not applied any stipulations to the proposed leases to protect the lynx. Such stipulations may include, but are not limited to, No Surface Occupancy (NSO) Stipulations that preclude surface disturbance in lynx habitat, TL to prevent disturbance of lynx habitat during important times of the year, such as during the winter, and Controlled Surface Use (CSU) stipulations to further ensure that oil and gas exploration and development operations do not negatively impact the lynx. The IBLA and courts have consistently ruled that, absent non-waivable NSO stipulations across the entirety of a lease parcel, issuance of leases constitutes an irreversible and irretrievable commitment of resources. In this case, leasing without non-waivable NSO stipulations could result in jeopardy to a listed species. Thus the proposed leasing thus requires both a pre-leasing NEPA analysis, and consultation with the FWS. BLM has not conducted the required \$7 consultation prior to issuing the protested parcels for oil and gas leasing. Given that BLM frequently proposes to issue oil and gas leases in important lynx habitat, without conducting the required NEPA analysis, or the required \$7 consultation with FWS, and without taking into account significant new information, the no jeopardy determinations made by FWS in 2000 for BLM operations may no longer be valid. The leasing of the protested parcels in lynx habitat violates the ESA, and the parcels must be withdrawn until BLM has met its obligations under the ESA.	Special Status Species - Lynx	Y	Leasing may adversely affect special status species such as the lynx, so BLM should consult with USFWS.	No, the analysis used to complete the EA was sufficient. The acreage the commentor refers to is from an outdated USFS habitat mapping effort and is mostly mostly arid pinyon-juniper (not lynx habitat). The USFS has recently remapped their Lynx Analysis Units (done in October 2010 by district biologists on the Grand Mesa, Uncompahgre and Gunnison National Forests, in coordination with BLM and USFWS) and the BLM land and adjacent Forest Service land is no longer mapped as habitat. In addition CDOW telemetry data from Lynx shows the Lynx do not use this area. For these reasons, the BLM biologist determined that Lynx are not likely to occur and therefore would not be affected, therefore the area will not be managed to support Lynx habitat objectives. Since we determined that this action would result in "No Effect" to lynx, no consultation is necessary. Further clarification and correction will be added to the EA
CNE and CEC	Several of the proposed parcels overlap with Lynx Analysis Units (LAUs), and CNE's GIS analysis shows that Parcel 5890 contains 110 acres of mapped Lynx denning and winter habitat. The Southern Rockies Lynx Management Direction, Record of Decision (2008) specifically states that USFS' first objective is to "maintain or restore lynx habitat connectivity in and between LAUs, and in linkage areas." BLM should ostensibly be committed to this same objective, as well as additional objectives similar to those in the Forest Service's Southern Rockies Lynx Management Direction, because the agency has similar obligations to protect this and other federally listed species, as well as manage for the health of the nation's wildlife resources. Of even greater importance than protecting LAUs is protecting mapped denning and winter habitat, which is critical for the reproductive success of existing lynx and the long term viability of the species. BLM claims that "of [the proposed leasing] parcels, only two acres of the 5892 parcel are mapped as potential winter habitat for Lynx." At the very least, BLM must revise its EA to reflect that 110 acres of Parcel 5890 contain 110 acres of mapped lynx winter habitat. Leasing the proposed parcels will negatively impact lynx and the viability of critical movement corridors for lynx among core areas of habitat, and the parcels should be withdrawn from the sale accordingly.	Special Status Species - Lynx	Y	Leasing may adversely affect special status species such as the lynx, so BLM should consult with USFWS.	No, the analysis used to complete the EA was sufficient. The acreage the commentor refers to is from an outdated USFS habitat mapping effort and is mostly mostly arid pinyon-juniper (not lynx habitat). The USFS has recently remapped their Lynx Analysis Units (done in October 2010 by district biologists on the Grand Mesa, Uncompahgre and Gunnison National Forests, in coordination with BLM and USFWS) and the BLM land and adjacent Forest Service land is no longer mapped as habitat. In addition CDOW telemetry data from Lynx shows the Lynx do not use this area. For these reasons, the BLM biologist determined that Lynx are not likely to occur and therefore would not be affected, therefore the area will not be managed to support Lynx habitat objectives. Since we determined that this action would result in "No Effect" to lynx, no consultation is necessary. Further clarification/correction will be added to the EA.
CNE and CEC	The analysis that BLM does conduct for the impact of leasing the proposed parcels on the lynx is woefully insufficient. BLM states only that "While several of these parcels are within Lynx Analysis Units habitat on these parcels is marginal and according to more recent analysis does not meet habitat requirements for the species. Therefore leasing of these parcels will have no effect on lynx or their habitat." Such analysis does not constitute the "hard look" required by NEPA, nor does it come close to the requisite \$7 ESA consultation. BLM does not define what it means by marginal, nor does it provide any level of scientific analysis that would indicate that its assessment of the lands as marginal out to supersede previous BLM, FWS, and CDOW analysis indicating that the land is important lynx habitat. Furthermore, BLM does not provide a source for its "more recent analysis," nor does it specify the scientific credentials, methodology, or dates the analysis was conducted. Until BLM has fulfilled its statutory NEPA "hard look" requirements by considering the full direct, indirect, and cumulative impacts of its decision to lease the parcels on the lynx, based on the best available science, it may not legally lease the proposed parcels. BLM should defer leasing the proposed parcels until it has conducted an adequate NEPA analysis.	Special Status Species - Lynx	Y	Leasing may adversely affect special status species such as the lynx, so BLM should consult with USFWS.	No, the analysis used to complete the EA was sufficient. In the professional opinion of the BLM wildlife biologist (who is familiar with the project area and local conditions) lynx would not be affected.
CNE and CEC	CNE requests that BLM defer leasing parcel 5890 in order to conduct a more thorough analysis of its potential as lynx habitat. BLM should withdraw portions of the parcel containing LAUs and Lynx denning and winter habitat from the leasing process. BLM should defer leasing parcel 5890 until its analysis of the potential impacts on the lynx is more complete and based on the best available science.	Special Status Species - Lynx	Y	Leasing may adversely affect special status species such as the lynx.	This area is no longer mapped as core lynx habitat through to ongoing Lynx habitat remapping efforts agreed to with the USFWS and USFS, this data was updated in October 2010 by the USFS. The acreage the commentor refers to is from an outdated USFS habitat mapping effort and is mostly mostly arid pinyon-juniper (not lynx habitat). The USFS has recently remapped their Lynx Analysis Units (done in October 2010 by district biologists on the Grand Mesa, Uncompahgre and Gunnison National Forests, in coordination with BLM and USFWS) and the BLM land and adjacent Forest Service land is no longer mapped as habitat. In addition CDOW telemetry data from Lynx shows the Lynx do not use this area. For these reasons, the BLM biologist determined that Lynx are not likely to occur and therefore would not be affected, therefore the area will not be managed to support Lynx habitat objectives. Further clarification/correction will be added to the EA.

COMMENT REVIEW DOI-BLM-CO-130-2011-0043 Lease Sale EA

Lee Cassin	The BLM should defer leasing the parcels pending the upcoming Proposed Listing and Proposed Critical Habitat designation for the Gunnison sage-grouse, so protecting actions will not be precluded.	Special Status Species - Sage Grouse	Y	Leasing may preclude USFWS' ability to list the sage grouse or designate critical habitat.	No - The analysis used to complete the EA was sufficient. These parcels are within the mapped historic distribution of Gunnison sage grouse. However the historic distribution was coarsly mapped (at a scale of 1:2,000,000) and site specific analysis reveals that the areas to be leased are not within an area that historically supported sage brush. There is no precedent to say that lands leased for fluid mineral development cannot be designated critical habitat. Further, in case listing and designation occur, the lease also would include Exhibit CO-34 that says in part, "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. "
CNE and CEC	CNE asks BLM to withdraw all parcels in Gunnison sage-grouse historical areas to ensure that leasing will not diminish the chances of reintroducing this species to the area. At the very least, CNE asks BLM to defer leasing the parcels pending the upcoming deadline for the Proposed Listing and Proposed Critical Habitat designation for the species, as established by the May 10, 2011 settlement between WildEarth Guardians and FWS. It is critical that BLM does not take action that will preclude the reintroduction of Gunnison Sage-grouse into their historic habitat, or prevent FWS from listing any of the species' historic range as critical habitat.	Special Status Species - Sage Grouse		Leasing may adversely affect special status species such as the sage grouse.	No - The analysis used to complete the EA was sufficient. These parcels are within the mapped historic distribution of gunnison sage grouse. However the historic distribution was coarsly mapped (at a scale of 1:2,000,000) and site specific analysis reveals that the areas to be leased are not within an area that historically supported sage brush. Reintroduction would not be possible in the habitat types to be leased. The lease also would included Exhibit CO-34 that says in part, "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. "
CNE and CEC	Should the parcels proposed for leasing be developed, such development would combine with current, potential, and future mining and other energy development to have a cumulative impact on the Gunnison sage-grouse. BLM fails to consider such a cumulative impact, despite being required to do so by NEPA. BLM should withdraw the proposed parcels from the leasing process in order to protect the Gunnison sage-grouse from such impacts, or defer leasing until such time as these cumulative impacts have been considered.	Special Status Species - Sage Grouse		Leasing may adversely affect special status species such as the sage grouse.	No - this is adequately analyzed in the EA. Clarification added in EA to make it obvious that past, present, and reasonably foreseeable actions were considered.
CNE and CEC	The analysis that BLM does conduct for Gunnison sage-grouse is inadequate. The Draft EA states that "The proposed lease parcels are within the historic range of Gunnison and Greater sage-grouse. The proposed lease parcels are dominated by pinion juniper woodlands and are therefore not likely to support sage grouse or sagebrush habitats." No biological or ecological study is cited supporting the conclusion that none of the parcels contain sage-grouse habitat, despite being within the historic range of both species. Even if the BLM's conclusion that none of the parcels contain any adequate Gunnison sage-grouse habitat is correct, BLM still fails to consider whether any of the parcels are nevertheless of potential importance to the species as migration and habitat connectivity corridors. BLM acknowledges that "The Sunnyside area, northwest of parcel 5892 contains wintering habitat for sage grouse." Given the close proximity of at least one of the proposed parcels to known habitat, it is probable that the parcels have the potential to serve, at the very least, as migration corridors to support efforts to restore healthy populations of sage-grouse. BLM should defer lease of the parcels until such time as it has conducted a more thorough vegetation survey of each parcel, and considered the potential each parcel may have to serve as habitat or a migration corridor for the Gunnison sage-grouse. CNE also asks BLM defer leasing all protested parcels in order to further analyze Gunnison sage-grouse historic range and protect areas where reintroduction would be possible and that may be designated as critical habitat absent oil and gas development. Should BLM decide to lease the parcels, the final EA should describe why the leased areas are not feasible reintroduction areas or migration corridors.	Special Status Species - Sage Grouse		Leasing may adversely affect special status species such as the sage grouse.	No - The analysis used to complete the EA was sufficient. These parcels are within the mapped historic distribution of gunnison sage grouse. However the historic distribution was coarsly mapped (at a scale of 1:2,000,000) and site specific analysis reveals that the areas to be leased are not within an area that historically supported sage brush. Reintroduction would not be possible in the habitat types to be leased. The lease also would included Exhibit CO-34 that says in part, "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. " Will add minor clarification to EA.
Lee Cassin	There are no mitigation measures proposed in the EA that will prevent unavoidable adverse impacts on air quality, threatened species or their habitats known to exist in the area. A number of commonly used mitigation measures and control strategies are available that should be part of a preferred alternative that allows leasing but in ways that significantly reduce environmental impacts. Reasonable understanding exists based on experience that BLM's GJFO has about the emissions and environmental impacts these leases will cause. We ask that these leases be approved only with stipulations that minimize the air quality impacts and address other areas discussed above.	stipulations	Y	Leasing without additional stipulations may adversely affect air quality, special status species and special designations.	We cannot attach additional stipulations at this time because they are not included in our current RMP, however as discussed in the EA, if needed to minimize impacts of development, we will attach COAs at the APD stage.

COMMENT REVIEW DOI-BLM-CO-130-2011-0043 Lease Sale EA

CNE and CEC	<p>For the reasons outlined above, we ask that the BLM avoid leasing parcels 5890, 5892, 5901, and 5921, or conduct further analysis at this stage of the process to determine if leasing is appropriate. At a minimum, the proposed leasing should be deferred until the BLM has considered whether Gunnison sage-grouse historical habitat should be managed as a reserve and set aside from energy development through land use plan revisions, and until the FWS has completed their listing obligations and designate critical habitat for the species, as required by the May 10, 2011 settlement. This is necessary in light of recent peer-reviewed scientific studies addressing the impacts of energy development and other human activities on sage-grouse, increasing authorization of energy development on public lands, the small numbers and continuing decline of Gunnison sage-grouse, the scientific consensus that it is necessary to conserve large, intact, interconnected expanses of sagebrush habitat in order to conserve sage-grouse, and new management guidance. The proposed leasing should also be deferred to allow FWS to complete its redesignation of critical habitat designation for the Canada lynx. This is necessary because the regulatory mechanisms in place under the current GFO RMP are inadequate to protect the Canada lynx. We further ask that the BLM consider the affects of leasing on the DeBeque milkvetch, and create management guidelines for the species according to the Best Management Practices included in Attachment 2. Additionally, we ask that BLM defer leasing the portions of Parcel 5890 that overlap with CNAP designated Natural Areas. Finally, we request that the full impacts of hydraulic fracturing and greenhouse gas emissions be analyzed more thoroughly at this stage of the process.</p>	Summary	Y	Leasing may adversely affect air quality, special status species and special designations.	No - The Battlement Mesa Natural Area is not a designated natural area. These parcels do not contain lynx habitat according to recent mapping efforts, lynx will not be affected. The mapped sage grouse habitat is not suitable for their reintroduction, and analysis and addition of site specific conditions of approval at the APD stage are adequate measures to protect the species (including the milkvetch) if necessary. Additionally if development may affect listed species or critical habitat, section 7 consultation with USFWS would occur to avoid jeopardizing the species. Potential air quality impacts were disclosed in the EA and additional analysis will take place at the APD stage under the regulations in place at that time.
Mesa County	<p>The eastern portion of parcel #5890 is located within the 5 mile radius of the town of Collbran's Drinking Water Protection Area. In October of 2010, Collbran passed an ordinance that pursuant to C.R.S 31-15-707(1)(b) the town may enact ordinances and regulations for the purpose of maintaining and protecting the Town's waterworks from injury and to protect the water from pollution in lands and territory occupied by such waterworks and over the streams or sources, including groundwater, from which the water is taken for five (5) miles above the point from which it is taken, and the Town's jurisdiction shall extend over such territory. Collbran obtains the majority of their drinking water from springs located near the lower portion of Buzzard Creek Road. The town has instituted a permitting process to permit oil and gas drilling activities within a 5 mile radius of their spring water intake. The contact for the Town of Collbran drinking water protection area is Lance Stewart, Collbran Town Manager (970) 487-3751, townmanager@townofcollbran.us.</p>	Water	Y	Development could affect Col	No 7/8/11 - C. Ewing spoke with L. Stewart of the Town of Collbran. He said these lease parcels are within federal units and if the companies acquire more leases within the units it is probably OK. The companies already have watershed protection permits with the town. He asked that we add language to the EA disclosing that if another company gets the leases, prior to development they would need to get a permit from the town of Collbran. additional language to be added to EA - " Collbran has town ordinance pursuant to C.R.S 31-15-707(1)(b) for the purpose of maintaining and protecting the Town's waterworks from injury and to protect the water from pollution in lands and territory occupied by such waterworks and over the streams or sources, including groundwater, from which the water is taken for five (5) miles above the point from which it is taken. The Town will require the lessee to obtain a watershed protection permit prior to development."