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Bureau of Land Management

Environmental Assessment
DOI-BLM-WY-050-2010-99-EA

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Lease Parcel Review
November 2010

Lander Field Office
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Affected Resources EA Checklist

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Determination	Resource	Rationale for Determination
PI	Air Quality	No effects associated with leasing. Minimal affects possible under expected actual development. Effects from surface disturbing activities were analyzed in the Lander RMP/FEIS (page 294). New information about current air quality in the Lander Field Office is available.
NI	Areas of Critical Environmental Concern	Effects from surface disturbing activities were analyzed in the Lander RMP/FEIS and specific management identified for each ACEC. Appropriate mitigation measures are attached to lease parcels in ACECs not closed to leasing. (FEIS pg 32-36, ROD pg 27, 32-33, 40, 43, 45, 50, 57, 60-66, 69).
NP	BLM Natural Areas	
NI	Cultural Resources	Effects from surface disturbing activities were analyzed in the Lander RMP with appropriate mitigation measures attached to lease parcels(Table 2-2, pages 32-36 and in ROD on page 1 and Map 1 on page 2).
PI	Greenhouse Gas Emissions	No direct greenhouse gas emissions associated with leasing. Minimal emissions possible under expected actual development. New information on greenhouse gas emissions available.
NI	Environmental Justice	No additional information on environmental justice is available beyond what was analyzed in the 1987 RMP. Site-specific analysis will be done when APDs are received.
NP	Farmlands (Prime or Unique)	
NI	Fish and Wildlife Excluding Federally Listed Species	Effects from surface disturbing activities were analyzed in the Lander RMP/FEIS with appropriate mitigation measures attached to lease parcels (FEIS pg 32-36 and Appendix 2 pg 359; ROD pg 27, 32-33, 40, 43, 45, 50, 57, 60-66, 69).
NP	Floodplains	

NP	Fuels/Fire Management	
NI	Geology/Mineral Resources/Energy Production	Effects from surface disturbing activities were analyzed in the Lander RMP/FEIS by management unit (Table 2-2 pgs. 32-36; Table 2-3 pgs. 59-60; pg. 212-213; Table 4-3 pgs. 228-242; pgs. 290-306; Appendix 1) with appropriate mitigation measures attached to lease parcels (FEIS Appendix 2; pgs. 27-73).
NI	Hydrologic Conditions	Effects from surface disturbing activities were analyzed in the Lander RMP/FEIS (pages 211-213) with appropriate mitigation measures attached to lease parcels as described by management unit, in the RMP/ROD.
NI	Invasive Species/Noxious Weeds	The Lander Field Office operates under IPM principles as set forth in the following documents: BLM Manual 9011, Departmental Manual 517, Vegetation Treatment on BLM Lands in the Seventeen Western States FEIS and ROD (2007); Management Plan for Invasive Weeds in the Lander Field Office (WY-050-EA3-048), Executive Order 13112-1999 provides guidance to federal agencies on Invasive Species Management; Cooperative agreements with weed and pest control districts: KAA051040, L08AC14483 (Fremont County), KAA051010, L08AC1435 (Natrona County)
NI	Lands/Access	Effects from surface disturbing activities were analyzed in the Lander RMP/FEIS (pg 32-36).
NI	Livestock Grazing	Effects from surface disturbing activities were analyzed in the Lander RMP/Grazing Supplement with appropriate mitigation measures attached to lease parcels (Page 34).
NI?PI	Migratory Birds	Leasing will have no effect on this resource. Effects from surface disturbing activities on some species of migratory birds, primarily raptors and sage-grouse, were analyzed in the Lander RMP/FEIS with appropriate mitigation measures attached to lease parcels (FEIS pg 32-36 and Appendix 2 pg 359; ROD pg 27, 32-33, 40, 43, 45, 50, 57, 60-66, 69). Site specific NEPA for proposed surface disturbing activities would further analyze effects and mitigation applied in compliance with the Migratory Bird Species-Interim Management Guidance Policy

		(included within WO Instruction Memorandum No. 2008-050).
NI	Native American Religious Concerns	Effects from surface disturbing activities were analyzed in the Lander RMP with appropriate mitigation measures attached to lease parcels(Table 2-2, pages 32-36 and in ROD on page 1 and Map 1 on page 2).
NP	Non-WSA Lands with Wilderness Characteristics	Not present. None of the leases is in BLM identified non-WSA lands with wilderness characteristics or in the citizens' proposal. Based on determinations made after analysis and documented in the LFO MSA (2009) wilderness characteristics are not present in proposed lease parcels. See section 3.3.
NI	Paleontology	Effects from surface disturbing activities were analyzed in the Lander RMP with appropriate mitigation measures attached to lease parcels(Table 2-2, pages 32-36 and in ROD on page 1 and Map 1 on page 2).
PI	Rangeland Health Standards	Effects from surface disturbing activities were analyzed in the LFO RMP/FEIS with mitigation to attach to lease parcels and subsequent analysis at the site-specific livestock grazing permit renewal stage and as part of S&Gs.
NI	Recreation	Effects from surface disturbing activities were analyzed in the LFO RMP/FEIS with appropriate mitigation measures attached to lease parcels.
PI	Socio-Economics	Socioeconomic data was updated, and analysis based on more recent information is provided.
NI	Soils	Effects from surface disturbing activities were analyzed in the Lander RMP/FEIS (pages 211-213) with appropriate mitigation measures attached to lease parcels as described, by management unit, in the RMP/ROD.
PI	Threatened, Endangered or Candidate Plant Species	Effects from surface disturbing activities were analyzed in the Lander RMP/FEIS (pg 138-139 and Appendix 2 pg 359). A stipulation is applied to all leases indicating the potential presence of resource in the lease area. New information and policy changes are discussed further in the EA.
PI	Threatened, Endangered or Candidate Animal Species	Effects from surface disturbing activities were analyzed in the Lander RMP/FEIS for species present at the time. A stipulation is applied to all leases indicating the potential presence of

		resource in the lease area. New information and policy changes are discussed further in the EA.
NP	Wastes (hazardous or solid)	Appropriate regulation of hazardous waste is analysis at the APD level with BMPs.
NI	Water Resources/Quality (drinking/surface/ground)	Effects from surface disturbing activities were analyzed in the Lander RMP/FEIS by management unit (Table 2-2 pgs. 32-36; Table 2-3 pgs. 59-60; pg. 212-213; Table 4-3 pgs. 228-242; pgs. 290-306; Appendix 1) with appropriate mitigation measures attached to lease parcels (FEIS Appendix 2; pgs. 27-73).
PI	Wetlands/Riparian Zones	Effects from surface disturbing activities were analyzed in the Lander RMP/FEIS with appropriate mitigation measures attached to lease parcels (FEIS Appendix 2 pg 359).
NP	Wild and Scenic Rivers	
NP	Wilderness/WSA	
NP	Woodland/Forestry	Effects from surface disturbing activities were analyzed in the Lander RMP with appropriate mitigation measures attached to lease parcels (Page 34).
NI	Vegetation Excluding Federally Listed Species	Effects from surface disturbing activities were analyzed in the Lander RMP with appropriate mitigation measures attached to lease parcels (Page 34).
NI	Visual Resources	Effects from development were analyzed in the Lander RMP/FEIS with appropriate mitigation measures attached to lease parcels. In addition the VRM BMPs would be implemented based on a site specific NEPA if development were initiated.
NP	Wild Horses and Burros	Effects from Mineral Leasing would have no effect on this resource. Site specific NEPA for proposed surface disturbing activities would further analyze affects to wild horses. These effects would include, for example; loss of forage, additional fencing which would limit the wild and free roaming character of wild horses, roads and pipelines which would impact habitat fragmentation, etc.

DETERMINATION –
NP – not present in the area impacted by the proposed or alternative actions
NI – present, but adequately analyzed in RMP/FEIS for leasing actions

PI – present, not analyzed in RMP/FEIS or new information requires further analysis in the EA

BUREAU OF LAND MANAGEMENT
LANDER FIELD OFFICE
ENVIRONMENTAL ASSESSMENT FOR
NOVEMBER 2010 LEASE SALE REVIEW
DOI-BLM-WY-050-2010-99-EA

1.0 INTRODUCTION

It is the policy of the Bureau of Land Management (BLM) as derived from various laws, including the Mineral Leasing Act of 1920, as amended [30 U.S.C. 181 *et seq.*] 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.

As required by 43 CFR 3120.1-2, the BLM Wyoming State Office conducts a quarterly competitive lease sale 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 BLM 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. Surface management of non-BLM administered land overlaying federal minerals is determined by BLM in consultation with the appropriate surface management agency or the private surface owner.

In the process of preparing a lease sale the BLM 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. Each Field Office confirms this review by preparing a Documentation of NEPA Adequacy (DNA) which supports BLM's decision that there have been no changed circumstances warranting further NEPA analysis. Once the draft parcel review and DNA 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).

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 following Environmental Assessment (EA) documents the Lander Field Office review of the 38 parcels that are offered for sale on the November 2010 NCLS. All parcels addressed in this EA are under the administration of the Lander Field Office. It serves to verify conformance with the approved land use plan, addresses new information, and provides the rationale for issuing parcels to be sold during the aforementioned lease sale.

Title, EA number, and type of project:
DOI-BLM-WY-050-2010-99-EA

Location of Proposed Action:
T. 37N R. 90W; T.26N R.92W; T.36N R92W; T.37N R93W; T.38N R. 92 W; T.39N R.92 W; T.26N R. 93 W; T.36N R. 93 W; T.37N R.93W; T.38N R 93W; T.38N R.93W; T.31N R.94W; T.34N R.94W; T.36N R.94W; T.37N R.94W; T.38N R 94W; T.39N R.94W; 6th PM, WY

Name and Location of Preparing Office:
Lead Office - Lander Field Office

1.1 Purpose and Need

The purpose of this document is to analyze the environmental impacts of issuing leases for parcels to be sold at the November 2010 competitive oil and gas lease sale to allow private individuals or companies to explore for and develop oil and gas resources on public lands. BLM has prepared this EA to analyze whether it remains appropriate to issue leases for these nominated parcels.

The need for the action is BLM's duty under the Federal Land Policy Management Act (FLPMA) and the Mineral Leasing Act to evaluate the authorization of activities allowed under the Lander Resource Management Plan (RMP). Continued sale and issuance of lease parcels 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 in areas authorized for oil and gas leasing.

1.2 Conformance with Applicable Land Use Plan and Other Environmental Assessments

Pursuant to 40 Code of Federal Regulations (CFR) 1508.28 and 1502.21, this environmental assessment (EA) tiers to and incorporates by reference the information and analysis contained in the Lander Resource Management Plan and Final Environmental Impact Statement (1987), approved by a Record of Decision (ROD) signed June 9, 1987.

Approximately 2,783,965 acres of BLM-administered mineral estate are open to oil and gas leasing consideration in the Lander RMP. Of the total acres open, approximately 111,000 acres are leased with a "no surface occupancy" stipulation. The rest of the planning area is subject to standard lease terms and conditions, and seasonal protections or other requirements. According to the Lander RMP ROD, approximately 25,136 acres of BLM-administered mineral estate are closed to leasing in the Dubois Badlands, Whiskey Mountain, and East Fork ACECs and around important cultural and recreation sites none of which are involved in the current proposal for issuing leases.

The RMP described specific stipulations that would be attached to new leases offered in certain areas.

1.3 Leasing:

Analysis as required by the National Environmental Policy Act (NEPA) of 1969, as amended (Public Law 91-90, USC 4321 *et seq*.) was conducted by LFO resource specialists who relied on personal knowledge of the areas involved and/or reviewed existing databases and file information to determine if appropriate stipulations had been attached to specific parcels prior to being made available for lease.

It is unknown when, where or if future well sites or roads might be proposed. Detailed site specific analysis of individual wells or roads would occur when a lease holder submits an Application for Permit to Drill (APD).

Issuance of leases would not be in conflict with any local, county, or state plans.

1.4 Federal, State or Local Permits, Licenses or Other Consultation Requirements

Purchasers of oil and gas leases are required to obey all applicable federal, state, and local laws and regulations including obtaining all necessary permits required should lease development occur.

Lander Field Office endangered-species specialists reviewed each parcel and identified impacts and analyzed those impacts in this EA. Consultation with the Wyoming Game and Fish (WGF) was also conducted; comments received have been incorporated in the analysis and mitigation. It was determined that leasing of the parcels would be in compliance with threatened and endangered species management guidelines as there are no documented T&E species, or their habitats, located within the parcels. No further consultation with the U.S. Fish and Wildlife Service is required at this stage.

2.0 PROPOSED ACTIONS AND ALTERNATIVES

A total of 38 lease parcels were nominated for the November 2010 sale; see map attached hereto. This section describes the alternatives considered for analysis.

2.1 Alternative A No Action:

The BLM NEPA Handbook (H-1790-1) states that for Environmental Assessments (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, and a lease would not be issued for that parcel.

Under the No Action alternative, the BLM would not issue any of the leases that have been nominated. Surface management would remain the same and ongoing oil and gas development would continue on surrounding federal, private, and state leases.

It is not expected that demand for energy oil and gas will go down, and a decision to not issue these leases would not prevent future leasing in these areas consistent with land use planning decisions, and subject to appropriate stipulations, identified in the Resource Management Plan. Therefore, it is anticipated that these parcels may be nominated and leased at a future date. While future leases may contain more restrictive lease terms, it is reasonable to consider that a substantial portion of the development possible under current planning decisions will be possible under future leases.

2.2 Alternative B Full Lease Issuance:

Under Alternative B, all 38 nominated parcels, approximately 49,470.09 acres, would be issued with the stipulations recommended at the time of nomination as detailed in Appendix A.

2.3 Alternative C Proposed Action:

Under Alternative B, 23 of the nominated parcels, approximately 31562.08 acres, would be issued with the stipulations recommended at the time of nomination as detailed in Appendix A. Lease stipulations (as required by Title 43 Code of Federal Registration 3131.3) were added to each parcel as identified by the Lander Field Office to address site specific concerns or new information not identified in the land use planning process.

Additionally, there would be a recommendation to the State Director to defer the issuance 15 parcels containing approximately17,908.02 acres. Parcels WY-1011-121, 122, 123, 124, 125, 126, 133, 134, 135, 136, 143, 144, 145, 154, and 155 would be recommended for deferral. Two of the parcels (154 and 155) are isolated parcels and 13 are contained within an area being analyzed for special management in the RMP revision.

A portion, or all, of the parcels are located in potential sage-grouse habitat. The BLM will, at the time development activities are proposed, conduct a site-specific analysis of the proposal and the current key sage-grouse habitat boundaries (such as the State of Wyoming Governor's Core Areas). Consistent with decisions that have recognized the ability of the BLM to impose reasonable protection measures at the time lease development activities are proposed based on site-specific environmental analysis, (*Yates Petroleum Corporation*, 176 IBLA 144, 2008) the BLM may require additional avoidance and/or impact minimization measures in order to manage sage-grouse habitat in support of Wyoming's Sage Grouse Conservation Strategy and Wyoming Game and Fish Department Sage Grouse objectives. These measures may include, but are not limited to, disturbance density limitations or surface use and timing restrictions in proximity to certain habitats (e.g., severe winter relief habitat, sage-grouse leks, etc.). Restrictions and prohibitions for surface use activities may be applied for distances and time periods more restrictive than current RMP stipulation guidance if supported by site-specific NEPA analysis of a development proposal. Such restrictions could be applied as Conditions of Approval for exploration and development activities associated with this lease. These measures may be necessary to meet BLM policy goals for the management of sage grouse habitat and populations as Special Status Species as directed in BLM Manual 6840. Given the designation of Greater Sage Grouse as a Candidate species by US Fish and Wildlife Service (April 2010) BLM will consider more restrictive measures for Oil & Gas activities as needed to prevent the need for listing Greater Sage Grouse as a threatened species.

All parcels identified by Alternative C for deferral are listed in Appendix B with the parcel number, acreage, and location.

2.4 Common to All Alternatives:

Once sold, the lease purchaser has the right to use so much of the leased lands as is reasonably necessary to explore and drill for all of the oil and gas within the lease boundaries, subject to the stipulations attached to the lease (Title 43 Code of Federal Registration 3101.1-4).

Oil and gas leases are issued for a 10-year period and continue for as long thereafter as oil or gas is produced in paying quantities. If a lessee fails to produce oil and gas, does not make annual rental payments, does not comply with the terms and conditions of the lease, or relinquishes the lease; ownership of the minerals leased revert back to the federal government and may be leased again.

Before a lease owner or operator conducts any surface disturbing activities on the lease, BLM must first approve and Application for Permit to Drill (APD) and a surface use plan specified in Title 43 Code of Federal Registration 3162.

Surface use restrictions, including timing limitation stipulations (TLS), NSO stipulations, and controlled surface use (CSU) stipulations, as well as unavailable for leasing designations, cannot be retroactively applied to valid, existing oil and gas leases or to valid, existing use authorizations (e.g., Application for Permit to Drill [APD]). Post-lease actions/authorizations (e.g., APDs, road/pipeline ROWs), however, could be encumbered by TLS and CSU restrictions on a case-by-case basis, as required through project-specific NEPA analysis or other environmental review.

3.0 Description of Affected Environment

This section describes the environment that would be affected by implementation of the alternatives described in Section 2. Aspects of the affected environment described in this section addresses relevant major resources and issues. Certain critical environmental components require analysis under BLM policy. Only those aspects of the affected environment that are potentially impacted by the alternatives are described in detail. This environmental assessment (EA) tiers to and incorporates by reference the information and analysis contained in the Lander Resource Management Plan, June, 1987. The Affected Environment chapter of the RMP/FEIS provides a more detailed description of the areas being analyzed.

The proposed lease parcels are located in Fremont and Sweetwater Counties, Wyoming.

In addition to the air quality information in the RMP, new information about Green House Gases (GHGs) and their effects on national and global climate conditions has emerged since the RMPs were prepared. On-going scientific research has identified the potential impacts of 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 sources 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.

3.1 Air Resources

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 air quality standards (NAAQS) for criteria pollutants. Criteria pollutants include carbon monoxide (CO), nitrogen dioxide (NO2), ozone (O3), particulate matter (PM10 and PM2.5), sulfur dioxide (SO2), and lead (Pb). Air pollutant concentrations greater than the NAAQS are considered to represent a risk to human health.

EPA has delegated regulation of air quality to the State of Wyoming. Air quality in Wyoming is administered by the Wyoming Department of Environmental Quality. Wyoming Ambient Air Quality Standards (WAAQS) and NAAQS identify maximum limits for concentrations of criteria air pollutants at all locations to which the public has access. The WAAQS and NAAQS are legally enforceable standards. Concentrations above the WAAQS 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.

The counties that lie within the jurisdictional boundaries of the Lander Field Office are classified as in attainment of all state and national ambient air quality standards as defined in the Clean Air Act of 1977, as amended. Modeling conducted to date by the WYDEQ does not indicate that air quality is likely to exceed any limits specified by the Clean Air Act in the near future.

Various state and federal agencies monitor air pollutant concentrations, visibility, and atmospheric deposition throughout Wyoming, and there are four monitors in the Lander planning area (Lander, South Pass, South Pass City, and Sinks Canyon). Table 3.1.1 lists the available air quality monitoring sites in the planning area and in other nearby planning areas. The Wyoming Department of Environmental Quality (DEQ) operates a PM2.5 monitor as part of the State and Local Monitoring Site (SLAMS) network in Lander. The SLAMS monitor at South Pass measures ozone, nitrous oxides, PM10, and SO2. A new air quality monitoring station is being established in the Frenchie Creek area. The USFS operates an IMPROVE monitor in the North Absaroka Wilderness Area in Park County (in the Bighorn Basin Planning Area) and another IMPROVE monitor is operated at Pinedale in neighboring Sublette County. The Sinks Canyon and South Pass City monitors, which the BLM operate as part of the National Acid Deposition Program (NADP), measure atmospheric deposition (wet) of NH4+, sulfate (SO4), and various metals.

Table 3.1.1 Available Air Quality Monitoring Sites

County	Site Name	Type of Monitor	Parameter	Operating Schedule	Location	
					Longitude	latitude
Fremont	Lander	SLAMS	$PM_{2.5}$	Once every 3 days	-108.733	42.833
	South Pass	SLAMS	O_3, NO×, PM_{10}, SO_2	Hourly & 1/3(PM_{10})	-108.431	42.315
	South Pass City	NADP	NH_4, NO_3, SO_4, wet deposition, precipitation	Daily Precipitation, weekly concentrations	-108.832	42.494
	Sinks Canyon	NADP	NH_4, NO_3, SO_4, wet deposition, precipitation	Daily Precipitation, weekly concentrations	-108.850	42.734
Park	North Absaroka	IMPROVE	$PM_{2.5}$, NH_4, NO_3, nitric acid, SO_4, SO_2, and meteorology	Once every 3 days	-109.382	44.745
Sublette	Bridger Wilderness	IMPROVE	$PM_{2.5}$, NH_4, NO_3, nitric acid, SO_4, SO_2, and meteorology	Once every 3 days	-109.758	42.975
Uinta	Murphy Ridge	SLAMS	CO	Hourly	-111.042	41.373

Sources: REF 1591; REF 1677; REF 1678
CO Carbon Monoxide
IMPROVE Interagency Monitoring of Protected Visual Environments
NADP National Acid Deposition Program
NH_4 Ammonium
NO_x Nitrogen Oxides
NO_3 Nitrate
O_3 Ozone
$PM_{2.5}$ Particulate matter less than 2.5 microns in diameter
PM_{10} Particulate matter less than 10 microns in diameter
SLAMS State and Local Monitoring Site
SO_2 Sulfur Dioxide

SO_4 Sulfate

With a limited number of air quality monitors in the Lander planning area, it is difficult to accurately assess existing air quality conditions throughout the area. As previously noted, a new monitoring station is being established in the Frenchie Creek 1 area. However, air quality, visibility, and atmospheric deposition are monitored throughout Wyoming, including adjacent planning areas. Therefore, the assessment of recent air quality conditions in the Lander planning area has been conducted by examining data collected at the monitors within the area supplemented by various monitors in neighboring planning areas, as summarized in Table 3-1.2. The examination of these data indicates that the current air quality for criteria pollutants in the planning area is considered good overall. Based on measurements within the area, visibility in the planning area is considered excellent. Table 3.1.2 provides an overview of applicable primary WAAQS and NAAQS and recent representative pollutant concentrations measured in the planning area and at nearby sites.

Table 3-1.2. Applicable National and State Primary Air Quality Standards for Criteria Pollutants and Existing Representative Concentrations for the Planning Area

Pollutant	Averaging Time	NAAQS			WAAQS			Representative Concentrations		
		(ppm)	(ppb)	(µg/m³)	(ppm)	(ppb)	(µg/m³)	(ppm)	(ppb)	(µg/m³)
Carbon Monoxide (CO)	1 hour[1]	35	35,000	40,000	35	35,000	40,000	0.7	700	801
	8 hour[1]	9	9,000	10,000	9	9,000	10,000	0.9	900	1,029
Nitrogen Dioxide (NO_2)	Annual[2] (Arithmetic Mean)	0.053	5.3	100	0.053	53	100	0.002	2	3.4
Ozone (O_3)	8 hour[3]	0.075	75	147	0.075	75	0.075	0.066	66	129
PM_{10}	24 hour[4]	N/A	N/A	150	N/A	N/A	150	N/A	N/A	78
$PM_{2.5}$	24 hour[5]	N/A	N/A	35	N/A	N/A	65	N/A	N/A	24.2
	Annual[6]	N/A	N/A	15	N/A	N/A	15	N/A	N/A	7.6
Sulfur Dioxide (SO_{52})	24 hour[7]	0.140	140	365	0.099	99	260	0.001	0.57	1.48
	Annual[7] (Arithmetic Mean)	0.031	31	80	0.023	23	60	0.0003	0.25	0.66

Source: REF 1520
N/A Not Applicable
NAAQS National Ambient Air Quality Standards
$PM_{2.5}$ particulate matter less than 2.5 microns in diameter
PM_{10} particulate matter less than 10 microns in diameter
ppm parts per million
ppb parts per billion
µg/m³ microgram per cubic meter
SLAMS State and Local Air Monitoring Station
WAAQS Wyoming Ambient Air Quality Standards
WARMS Wyoming Air Resource Monitoring System
[1]Not to be exceeded more than once per year. Data collected at Murphy Ridge in 2008.
[2]Thunder basin data, 2008.
[3]To attain this standard, the three-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor in an area over each year must not exceed 75 ppb. Measured fourth highest concentration for 2008 for the South Pass site.
[4]Not to be exceeded more than once per year on average over three years. Maximum 24-hour average for 2008 at the South Pass site.
[5]To attain this standard, the three-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor in an area must not exceed 35 µg/m³. Maximum 24-hour average for 2006 for the Lander SLMS site.
[6]To attain this standard, the three-year average of the weighted annual mean $PM_{2.5}$ concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m³. Annual average for 2008 for the Lander SLAMS site.
[77]Maximum 24-hour and annual averages for 2008 for the Sheridan WARMS site.

Climate

With the exception of the mountain areas, the local climate of this area can be described as a semiarid, continental cold desert climate. The mountains have a sub humid continental climate. Temperatures can

range from winter lows of almost -50 degrees Fahrenheit to summertime highs of in excess of 100 degrees. Annual air temperatures on the sagebrush-covered rangelands average 33 to 45 degrees Fahrenheit, and, on forested mountain areas, 33 to 38 degrees.

Summers are generally short and hot and winters long and cold. Precipitation has historically been low, though greater at higher elevations, and distributed across the year, with the exception of the drier summer months. Wind speeds are variable but strong, which helps disperse airborne pollutants. Table 3.1.3 lists temperature, precipitation, and wind speed data for the planning area. This information is derived from daily ambient measurements at the Lander Airport, a National Weather Service office for much of this period, from 1971 through 2000.

Table 3.1.3 Climate Data Summary for Lander, WY

Climate Component	Lander, WY
Mean maximum summer temperature (degrees Fahrenheit)	86.3
Mean minimum winter temperature (degrees Fahrenheit)	8.7
Mean annual temperature)(degrees Fahrenheit)	45
Mean annual precipitation (inches)	13.4
Mean annual snowfall (inches)	103.6
Mean annual wind speed (miles per hour)	6.8
Prevailing wind direction	Southwesterly

Long term average annual precipitation varies from less than 6 inches in the area north of the town of Shoshoni, to 20 inches or more in the mountainous area near Dubois. Away from the truly arid area north of Shoshoni, most annual precipitation occurs as snow. In most areas, there is a peak precipitation period in the spring and a secondary peak in the fall. As a rule, the highest elevations in the mountains receive the most precipitation and the lowest elevations the least. Table 3.1.4 lists average annual precipitation data for representative locations derived from various monitors, as archived by the National Oceanic and Atmospheric Administration.

Table 3.1.4 Average Annual Precipitation for Locations in the Planning Area

Location	Inches of Total Precipitation (inches of snow)
South Pass	13.3 (119.4)
Muddy Gap	9.9 (50.8)
Sand Draw	9.6 (52.7)
Dubois	8.8 (41.7)
Boysen Dam	9.0 (13.7)
Lander	13.4 (98.8)

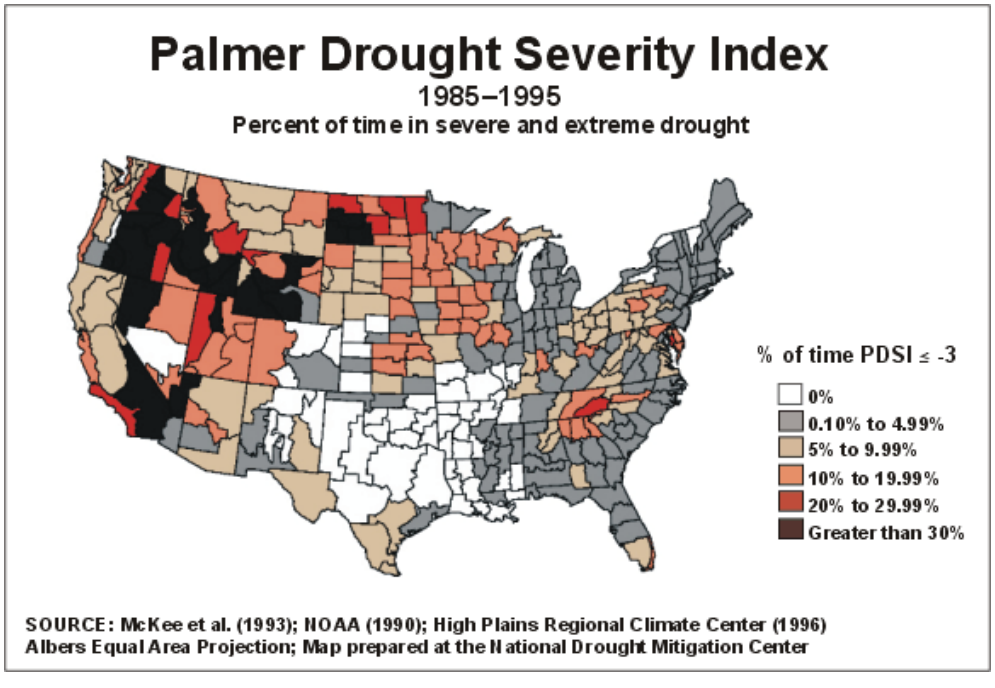
In most areas, there is a peak period in the spring and a secondary peak in the fall. Table 3.1.4 depicts Lander's monthly average precipitation and shows the April, May, June and mid-September to mid-November peaks. The precipitation patterns in the northern part of the planning area would more closely track the data for Boysen Dam; the southern leases would more closely compare to Muddy Gap and Sand Draw in Table 3.1.4.

Early freezes in the fall and late in the spring are characteristic. This results in long winters and short growing seasons. The average frost-free period for much of the LFO is 90 to 110 days, with possibly an

additional 20 days more in the 9 inch, or lower, precipitation zones and 20 to 30 days less than this figure in the mountains.

The planning area receives a high amount of sunshine, from 60 percent of the possible amount during winter to about 75 percent during the summer. Mountain areas receive less sunshine, and in winter the estimated amount over the mountains is about 45 percent. Because the altitude provides less atmosphere for the sun's rays to penetrate and because of the small amount of fog, haze, and smoke, the intensity of sunshine is especially high. The average relative humidity is low, which, with the high percentage of sunshine and rather high winds, all contribute to a high rate of evaporation. The overall average amount of evaporation ranges from 30 to approximately 50 inches.

Precipitation in the LFO is subject to extreme variation with periods of intense drought followed by far wetter periods. The Palmer Drought Severity Index map shown below, for the fairly average decade from 1985 through 1995, shows that the percent of time LFO has spent in severe and extreme drought is greater than thirty percent.



Although Wyoming is windy and ranks first in the United States with an annual average wind speed of 12.9 miles per hour, Lander and much of the Wind River Basin have average daily wind speeds of about half the state average

Climate change refers to any significant change in measures of climate (e.g., temperature or precipitation) lasting for an extended period of time (decades or longer). Climate change may result from natural processes, such as changes in the sun's intensity; natural processes within the climate system (such as changes in ocean circulation); human activities that change the atmosphere's composition (such as burning fossil fuels) and the land surface (such as urbanization) (IPCC 2007).

Greenhouse gases that are included in the US Greenhouse Gas Inventory are: carbon dioxide

(CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). CO2 and methane (CH4) are typically emitted from combustion activities or are directly emitted into the atmosphere. On-going scientific research has identified the potential impacts of greenhouse gas emissions (including CO2; CH4; nitrous oxide (N2O), water vapor; and several trace gasses) on global climate. Through complex interactions on at regional and global scales, these greenhouse gas emissions cause a net warming effect of the atmosphere (which making makes surface temperatures suitable for life on Earth), primarily by decreasing the amount of heat energy radiated by the Earth back into space. Although greenhouse gas levels have varied for millennia (along with corresponding variations in climatic conditions), recent industrialization and burning of fossil carbon sources have caused CO2 concentrations to increase dramatically, and are likely to contribute to overall climatic changes, typically referred to as global warming. Increasing CO2 concentrations also lead to preferential fertilization and growth of specific plant species.

Global mean surface temperatures have increased nearly 1.0°C (1.8°F) from 1890 to 2006 (Goddard Institute for Space Studies, 2007). However, observations and predictive models indicate that average temperature changes are likely to be greater in the Northern Hemisphere. Data indicates that northern latitudes (above 24° N) have exhibited temperature increases of nearly 1.2°C (2.1°F) since 1900, with nearly a 1.0°C (1.8°F) increase since 1970 alone. It also shows temperature and precipitation trends for the conterminous United States. For both parameters we see varying rates of change, but overall increases in both temperature and precipitation. Without additional meteorological monitoring systems, it is difficult to determine the spatial and temporal variability and change of climatic conditions, but increasing concentrations of greenhouse gases are likely to accelerate the rate of climate change.

In 2001, the Intergovernmental Panel on Climate Change indicated that by the year 2100, global average surface temperatures would increase 1.4 to 5.8°C (2.5 to 10.4°F) above 1990 levels. The National Academy of Sciences (2006) has confirmed these findings, but also indicated that there are uncertainties regarding how climate change may affect different regions. Computer model predictions forecasts indicate that increases in temperature will not be evenly or equally distributed, but are likely to be accentuated at higher latitudes. Warming during the winter months is expected to be greater than during the summer, and increases in daily minimum temperatures is more likely than increases in daily maximum temperatures.

Currently, the WDEQ-AQD does not have regulations regarding greenhouse gas emissions, although these emissions are regulated indirectly by various other regulations.

Some greenhouse gases such as carbon dioxide occur naturally and are emitted to the atmosphere through natural processes and human activities. Other greenhouse gases (e.g., fluorinated gases) are created and emitted solely through human activities. The primary greenhouse gases that enter the atmosphere as a result of anthropogenic activities include carbon dioxide (CO2), methane (CH4), nitrous oxide (N20), and flourinated gases such as hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. These synthetic gases are powerful GHGs that are emitted from a variety of industrial processes.

Ongoing scientific research has identified the potential impacts of anthropogenic greenhouse gas (GHG) emissions and changes in biological sequestration due to land management activities on global climate.

Through complex interactions on a regional and global scale, these GHG emissions and net losses of biological carbon sinks 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, recent industrialization and burning of fossil carbon sources have caused CO2 concentrations to increase dramatically, and are likely to contribute to overall global climatic changes. The Intergovernmental Panel on Climate Change (IPCC) recently concluded that "warming of the climate system is unequivocal" and "most of the observed increase in globally average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations."

Several activities contribute to the phenomena of climate change, including emissions of GHGs (especially carbon dioxide and methane) from fossil fuel development, large wildfires and activities using combustion engines; changes to the natural carbon cycle; and changes to radiative forces and reflectivity (albedo). It is important to note that GHGs will have a sustained climatic impact over different temporal scales. For example, recent emissions of carbon dioxide can influence climate for 100 years. In contrast, black carbon is a relatively short-lived pollutant, as it remains in the atmosphere for only about a week. It is estimated that black carbon is the second greatest contributor to global warming behind CO2 (Ramanathan and Carmichael, 2008).

The lack of scientific tools designed to predict climate change at regional or local scales limits the ability to quantify potential future impacts. However, potential impacts to air quality due to climate change are likely to be varied. Several activities occur within the planning area that may generate greenhouse gas emissions: oil, gas, and coal development, large fires, livestock grazing, and recreation using combustion engines which can potentially generate CO2 and methane.

Some activities within the Planning Area generate greenhouse gas (GHG) emissions. Oil and gas development activities can generate carbon dioxide (CO2) and methane (CH4). CO2 emissions result from the use of combustion engines, while methane can be released during processing. Wildland fires also are a source of other GHG emissions, while livestock grazing is a source of methane. Other activities in the Resource Area with the potential to contribute to climate change include soil erosion from disturbed areas and fugitive dust from roads, which have the potential to darken snow-covered surfaces and cause faster snow melt. A description of the potential greenhouse gas emissions associated with the proposed leasing activities is included in Section 4.

Visibility

There are two National Parks, four National Forests, two national recreation areas, and seven wilderness areas in or adjacent to the Wind River Basin. Table 3.1.6 lists areas designated as Class I or Class II airsheds. National Parks, Monuments and some state designated Wilderness Areas are designated as Class I. The Clean Air Act "declares as a national goal the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I Federal areas . . . from manmade air pollution." 42 U.S.C. § 7491(a)(1).25. Under the BLM Manual Section 8560.36, BLM lands, including wilderness areas not designated as Class I, are managed as Class II, which provides that moderate deterioration of air quality associated with industrial and population growth may occur.

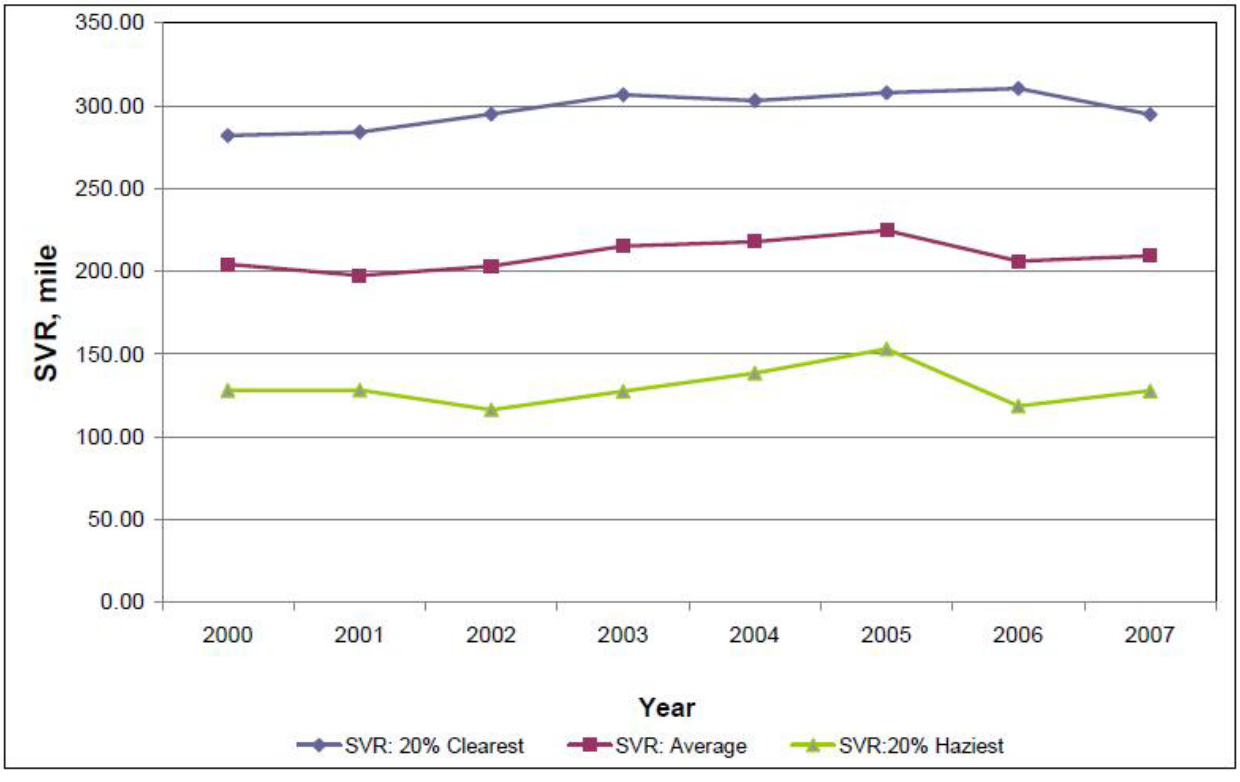
Table 3.1.6 Class I or Class II areas

Area Type	Area Name	Closest Distance to the Wind River Basin	Direction from the Wind River Basin	Clean Air Act Status of the Area
National Park	Grand Teton National Park	18	West	Class I
	Yellowstone National Park	22	Northwest	Class I
Recreation Area	Flaming Gorge National Recreation Area	67	Southwest	
	Bighorn Canyon National Recreation Area	81	North	Class II
Wilderness Area	Fitzpatrick Wilderness Area	In		Class I
	Bridger Wilderness Area	Adjacent	West	Class I
	Washakie Wilderness Area	Adjacent	North	Class I
	Teton Wilderness Area	Adjacent	Northwest	Class I
	North Absaroka Wilderness Area	37	North	Class I
	Cloud Peak Wilderness Area	48	Northeast	Class II
	Popo Agie Wilderness Area	In	West	Class II
National Forest	Shoshone National Forest	In		
	Bridger National Forest	Adjacent	East	
	Bighorn National Forest	40	Northeast	Class II
	Teton National Forest	Adjacent	East	

Estimates of visibility in the Wind River Basin are primarily derived from air quality and meteorological measurements taken at the Bridger Wilderness IMPROVE site. To supplement these measurements, the BLM used recent data collected at the nearby Cloud Peak IMPROVE monitor to assess regional visibility conditions.

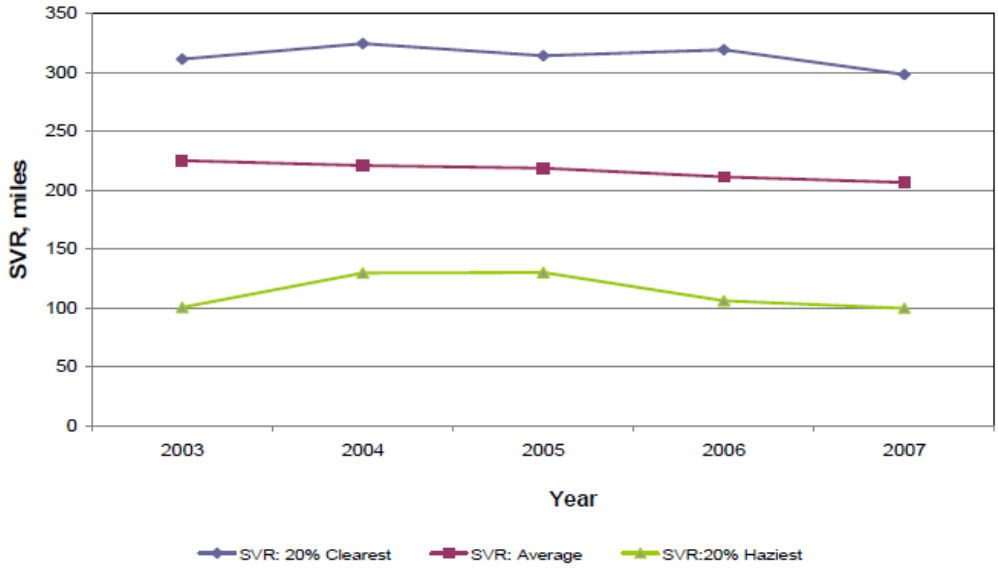
Figure 3.1.7 shows visibility estimates for the Bridger Wilderness site (West of Wind River Basin) for 2000 through 2007. The data indicate excellent visibility conditions, with no real trends in this limited period. Figure 3.1.8 shows visibility data for the Cloud Peak IMPROVE site (Northeast of Wind River Basin) for 2003 through 2007. The data for the Cloud Peak site are consistent with the Bridger Wilderness site, reflecting excellent visibility conditions.

Figure 3.1.7 Annual Visibility (SVR) for the Bridger Wilderness IMPROVE site



Source: REF 1677
IMPROVE Interagency Monitoring of Protected Visual Environments
SVR Standard Visual Range

Figure 3.1.8 Annual Visibility (SVR) for the Cloud Peak IMPROVE site



Source: REF 6152
IMPROVE Interagency Monitoring of Protected Visual Environments
SVR standard visual range

3.2 Wildlife--Special Status Species

Section 7 of the Endangered Species Act (ESA) requires that BLM land managers ensure that any action authorized, funded, or carried out by the BLM is not likely to jeopardize the continued existence of any threatened or endangered species and that it avoids any appreciable reduction in the likelihood of recovery of affected species. Consultation with the US Fish and Wildlife Service is required on any action proposed by the BLM or another federal agency that affects a listed species or that jeopardizes or modifies critical habitat.

In addition to BLM's obligations under the ESA, the BLM's Special Status Species policy outlined in BLM Manual 6840 is to conserve listed species and the ecosystems on which they depend and to ensure that actions authorized or carried out by BLM are consistent with the conservation needs of special status species and do not contribute to the need to list any of these species. The BLM's policy is intended to ensure the survival of those species that are rare or uncommon, either because they are restricted to specific uncommon habitat or because they may be in jeopardy due to human or other actions.

By BLM policy, species proposed for federal listing under the ESA are to be managed with the same level of protection provided for threatened and endangered species. The policy for federal candidate species and BLM sensitive species is to ensure that no action that requires federal approval should contribute to the need to list a species as threatened or endangered.

Other management direction is based on RMP management objectives, activity level plans, and other aquatic habitat and fisheries management direction, including 50 CFR 17, the Land Use Planning Handbook, Appendix C, Part E, Fish and Wildlife.

The RMP evaluated the need to protect habitat necessary for the success of species identified through these regulations and policies. New information regarding the status of the greater sage-grouse has elevated its status from a BLM sensitive species to a federal candidate species. The greater sage-grouse is a candidate species for listing under provisions of the ESA as determined by the USFWS and documented in a March 5, 2010 Federal Register notice declaring that listing of the Greater Sage Grouse was warranted but precluded. Policy was issued by the Wyoming BLM in December, 2009 under Information Memoranda 2010-012 and 2010-013; additional policy was issued by the Washington Office BLM under Information Memoranda 2010-071.

Greater sage-grouse are distributed in sagebrush habitat throughout the Wind River and Sweetwater River watersheds, where habitat fragmentation and degradation has not reduced habitat to unsuitable. Greater sage-grouse leks are generally at mid elevations within sagebrush habitat. Nesting and brood-rearing habitat is sometimes associated with the lek and sometimes found at a distance from the lek in sagebrush habitat. These remaining suitable sagebrush habitat areas could be productive for greater sage-grouse; however, fragmentation and degradation might limit the distribution and abundance of greater sage-grouse. The WGFD has identified core areas, which represent these relatively productive areas, and has suggested special management for these areas. Wyoming has adopted the core-area strategy as the approach for oil and gas management to avoid adverse impacts to greater sage-grouse (Wyoming IM 2010-012 and 013.)

There are many sources of habitat fragmentation, all of which may affect the greater sage-grouse. Industrial development, livestock and wildlife grazing, mining, gravel pit operations, oil and gas activity, land exchanges and disposal, vegetation manipulation, fuel reduction projects and other activities may cause an artificial component to a natural habitat condition. Structures such as powerlines and towers and industrial disruptive activities may cause avoidance and abandonment of habitat. Livestock grazing, fuels treatments, and weed spread infestations are factors which may cause habitat degradation depending upon severity, intensity, and design. West Nile virus, which recently has had lethal effects on greater sage-grouse in parts of Wyoming, could become an important factor in greater sage-grouse survival. Mosquitoes are a vector for the transmittal of West Nile virus. However, there has been little research to document the presence of the virus and its effect on greater sage-grouse in the Lander Field Office.

Greater sage-grouse have been declining across the west, which prompted the March 5, 2010 finding of warranted for listing but precluded. Population levels throughout the planning area declined during the mid 1990s. Since 2004, the levels have maintained or slightly increased. It is thought this resurgence was a result of well-timed precipitation events. These precipitation events promoted forage growth, which aided the survival of young. Population growth has varied throughout the planning area based on specific local conditions, with some areas showing little change; other areas have had a recent increase in lek count numbers.

A total of 38 parcels were proposed for leasing. Of these parcels, 22 are not in greater sage-grouse core area, 4 parcels are within core area, and 12 parcels are within core area and are also within an alternative being considered in the RMP revision EIS as a specially managed area that is closed to leasing. A portion, or all, of the parcels are located in potential sage-grouse habitat.

3.3 Lands with Wilderness Characteristics

The BLM Land Use Planning Handbook (H-1601-1) requires that the BLM consider the management of lands with wilderness characteristics that are not already managed as Wilderness Study Areas (WSAs) during the land use planning process. The criteria used to identify these lands are essentially the same criteria used for determining wilderness characteristics for WSAs. However, the authority set forth in Section 603(a) of FLPMA to complete the three-part wilderness review process (inventory, study, and report to Congress) expired on October 21, 1993; therefore, the BLM is not authorized to identify new WSAs.

The BLM is still required to inventory lands to determine whether they possess wilderness characteristics and need to be managed to maintain those characteristics (IM No. 2003-274 and IM No. 2003-275). These IMs contain several definitions of wilderness character and how RMPs can manage non-WSA lands containing wilderness character. The process for this analysis is identified in IM 2003-275:

> "When implementing land use plans, the BLM must, as with any new information, determine if the BLM wilderness inventories or public wilderness proposals contain significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or impacts that have not previously been analyzed."

As part of revising the 1987 RMP, the LFO evaluated all of the lands it managed for wilderness characteristics, including those lands identified by the Citizen Proposed Wilderness (CPW). The BLM utilized existing inventory data, comments made during public scoping during the LFO RMP revision, the LFO Recreation Opportunity Spectrum Inventory, the LFO roads inventory, and the existing 1979-1980 LFO wilderness inventory files. In addition, the BLM evaluated the information contained in the "Wilderness at Risk: Citizens' Wilderness Proposal for Wyoming BLM-administered Lands" submitted to the BLM by the Wyoming Wilderness Association in February 2004.

Subsequently, the BLM also reviewed the new Recreation Opportunity Spectrum GIS layer, roads layer, and the 2009 aerial photo imagery. These layers and images are up-to date and show three key concepts in regards to wilderness character (as defined by IM No. 2003-275): opportunities for primitive recreation, opportunities for solitude, and naturalness. The roads layer identifies the areas that are roadless.

Several areas (outside of the CPW) were found to be roadless but did not contain the required primitive recreation setting (contiguous acres away from roads, with not a-lot of people, and a natural environment). Without a primitive recreation setting, roadless areas do not meet BLM regulations for management as lands containing wilderness character.

With regard to those lands identified in the CPW, the information contained in the citizens' proposals did not provide any new information or environmental concerns that were not addressed in the earlier inventory or the Wyoming Wilderness Study Report and ROD (September, 1991) except in the case of the Little Red Creek area in Dubois. BLM agreed with the CPW's statement that the BLM's acquisition of a large block of private land in the Little Red Creek area which, when added to the original inventory did meet the naturalness criteria for wilderness. The area is also adjacent to the Fitzpatrick Wilderness

Area. Guidance for non-WSA lands containing wilderness character allows BLM to manage for one, some, or all wilderness characteristics. At present, the BLM manages all lands in accordance with the current RMPs; no specific management has been developed for these areas.

The remaining CPW were either in existing WSAs, were on state and private lands, or did not contain any wilderness characteristics.

The process used and conclusions reached by the BLM with regard to inventorying non-WSA lands containing wilderness characteristics, including those identified in the CPW, is identified in more detail in the Analysis of the Management Situation prepared as part of the revision of the RMP (see LFO webpage.)

4.0 ENVIRONMENTAL EFFECTS

4.1 Air Resources

Alternative A: No Action

Under the no action alternative no development would occur. Due to demand for oil and gas, it is expected that these parcels may be re-nominated in the future; consistent with appropriate land use planning decisions, and would be offered for sale with additional stipulations. There is no way to accurately predict what level of restrictions future leasing may require, but it can be assumed that a substantial portion of the development that would have been authorized under the leases currently sold would still be permitted under future leases albeit potentially subject to different stipulations. Nominations of parcels for lease under future land use plans and decisions would be screened for consistency with the land use plan in effect at the time, and the appropriate environmental analysis would be conducted to determine associated air quality impacts. Impacts to air quality from leases issued from any future sales would be analyzed in the appropriate environmental documents for those sales. Analysis of air quality impacts is also required at the time an application for a permit to drill is submitted.

A decision to not issue leases for any of the parcels would support continued current uses of these parcels. These uses are primarily associated with grazing, with some dispersed recreation such as hunting and hiking. These uses typically entail vehicle travel for access, and would be expected to continue at current rates.

Alternative B: Full Lease Issuance

Issuing leases for the subject tracts would have no direct impacts to air quality. Any potential effects to air quality would occur at a later time, if and when the leases were developed. Over the last 10 years, development of federal oil and gas mineral estate in the planning area has varied from as few as 10 wells drilled per year to as high as over 100 wells per year drilled on federal leases. Development rates are heavily dependent on the economic environment of the oil and gas industry in association with product pricing. These wells would contribute a small percentage of the total emissions (including GHG's) from oil and gas activities in Wyoming.

Potential impacts of development could include increased air borne soil particles associated with the construction of new well pads, pipelines, or roads, exhaust emissions from drilling equipment, compressors, vehicles, and dehydration and separation facilities, as well as potential releases of GHG and volatile organic compounds during drilling or production activities. The amount of increased emissions cannot be quantified at this time since it is unknown how many wells might be drilled, the types of equipment needed if a well were to be completed successfully (e.g. compressor, separator, dehydrator), or what technologies may be employed by a given company for drilling any new wells. The degree of impact will also vary according to the characteristics of the geologic formations from which production occurs. Emissions of all regulated pollutants (including GHGs) and their impacts will be quantified and evaluated at the time that a specific development is proposed.

In February 2009, the BLM Wyoming State Office Reservoir Management Group produced a second draft Reasonably Foreseeable Development Scenario (RFD) document for the RMP revision. This document demonstrates that approximately 118 conventional and coalbed natural gas wells could be drilled annually for Federal minerals in the entire planning area. (The petroleum resources specific to these leases in the Proposed Action are not known whether they are gas or oil or a combination thereof). The absolute density of drilling depends upon the technology available (vertical, directional, or horizontal) and the geology of the hydrocarbon-bearing zone. As a result, the specific number of wells that could potentially be drilled under a full field development scenario as a result of issuing the leases is not known. Current APD permitting trends within the field office indicate that from October 1999 through September 30, 2009 the Lander Field Office has approved 596 APDs, or an average of 60 APDs per year. These were not evenly spaced as the number of APDs varies directly with the commodity price of oil and gas.

Subsequent development of any leases issued would contribute a small incremental increase in overall hydrocarbon emissions, including GHGs. When compared to total national or global emissions, the amount released as a result of potential production from the proposed lease tracts would not have a measurable effect.

Coalbed methane development is currently being developed on an exploratory pilot project basis within the field office. The RFD does assume that over the next twenty years, up to 518 coalbed methane wells could be drilled which is included in the total number of wells that could be drilled in the Lander Field Office.

Mitigation

None

Alternative C: Proposed Action

Under this alternative, leases would be issued with the stipulations attached at the time of nomination. However, due to the smaller acreage under this alternative potentially subject to surface disturbing activities, drilling and production, the potential for adverse impacts are similar to, but have a lower probability of occurring and if they occurred, would be in smaller amounts, as under Alternative B.

4.2 Greenhouse Gas Emissions

Alternative A: No Action

A decision to not issue the leases would preclude oil and gas development that could contribute greenhouse gas emissions from these leases. However, as discussed previously under the no action alternative, this would not preclude future nomination, leasing, and development consistent with land use planning decisions at that time. Based on demand for oil and gas, it is expected that these parcels would be nominated in the future; consistent with appropriate land use planning decisions, and would be offered for sale with appropriate stipulations. There is no way to accurately predict what level of restrictions future leasing may require, but it can be assumed that a substantial portion of the development that would

have been authorized under the leases currently sold would still be permitted under future leases. This would result in a postponement of development, and the possibility of the development occurring with increased restriction on greenhouse gas emissions. The levels and types of restrictions would be determined at the time of lease, and submittal of development activities for approval, but are expected to allow for at least moderate development of areas open to leasing. Therefore, the no-action alternative would likely delay, and not prevent, greenhouse gas emissions. The no-action alternative may also result in reduced levels of emissions associated with future expanded restrictions.

See Section 4.5 for a discussion of the impacts of these potential greenhouse gas emissions on global climate change.

Alternative B: Full Lease Issuance

The issuance of leases in itself would not result in any direct greenhouse gas emissions. However, in regard to future development, the assessment of GHG emissions and climate change is in its 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: issuing the proposed tracts may contribute to drilling new wells.

The Center for Climate Strategies (CCS) prepared the Wyoming Greenhouse Gas Inventory and Reference Case Projection 1990-2020 (Inventory) for the Wyoming Department of Environmental Quality (WYDEQ) through an effort of the Western Regional Air Partnership (WRAP). This inventory report presents a preliminary draft greenhouse gas (GHG) emissions inventory and forecast from 1990 to 2020 for Wyoming. This report provides an initial comprehensive understanding of Wyoming's current and possible future GHG emissions. The information presented provides the State with a starting point for revising the initial estimates as improvements to data sources and assumptions are identified.

The inventory report discloses that activities in Wyoming accounted for approximately 56 million metric tons (MMt) of *gross1* carbon dioxide equivalent (CO2e) emissions in 2005, an amount equal to 0.8% of total US gross GHG emissions. These emission estimates focus on activities in Wyoming and are *consumption-based;* they exclude emissions associated with electricity that is exported from the State. Wyoming's gross GHG emissions increased 25% from 1990 to 2005, while national emissions rose by only 16% from 1990 to 2004. Annual sequestration (removal) of GHG emissions due to forestry and other land-uses in Wyoming are estimated at 36 MMtCO2e in 2005. Wyoming's per capita emission rate is more than four times greater than the national average of 25 MtCO2e/yr. This large difference between national and State per capita emissions occurs in most of the sectors – Wyoming's emission per capita significantly exceed national emissions per capita for the following sectors: electricity, industrial, fossil fuel production, transportation, industrial process and agriculture. The reasons for the higher per capita intensity in Wyoming are varied but include the State's strong fossil fuel production industry and other industries with high fossil fuel consumption intensity, large agriculture industry, large distances, and low population base. Between 1990 and 2005, per capita emissions in Wyoming have increased, mostly due to increased activity in the fossil fuel industry, while national per capita emissions have changed relatively little.

Wyoming's gross GHG emissions are expected to continue to grow to 69 MMtCO2e by 2020, 56% above 1990 levels. As shown in Figure ES-3, demand for electricity is projected to be the largest contributor to future emissions growth, followed by emissions associated with transportation. Although GHG emissions from fossil fuel production had the greatest increase by sector in the period 1990 to 2005, the growth from this sector is projected to decline due to assumption of decreased carbon dioxide emissions from venting at processing plants.

As of 2008, the Inventory indicates that there over 33,000 oil and gas wells in the State.

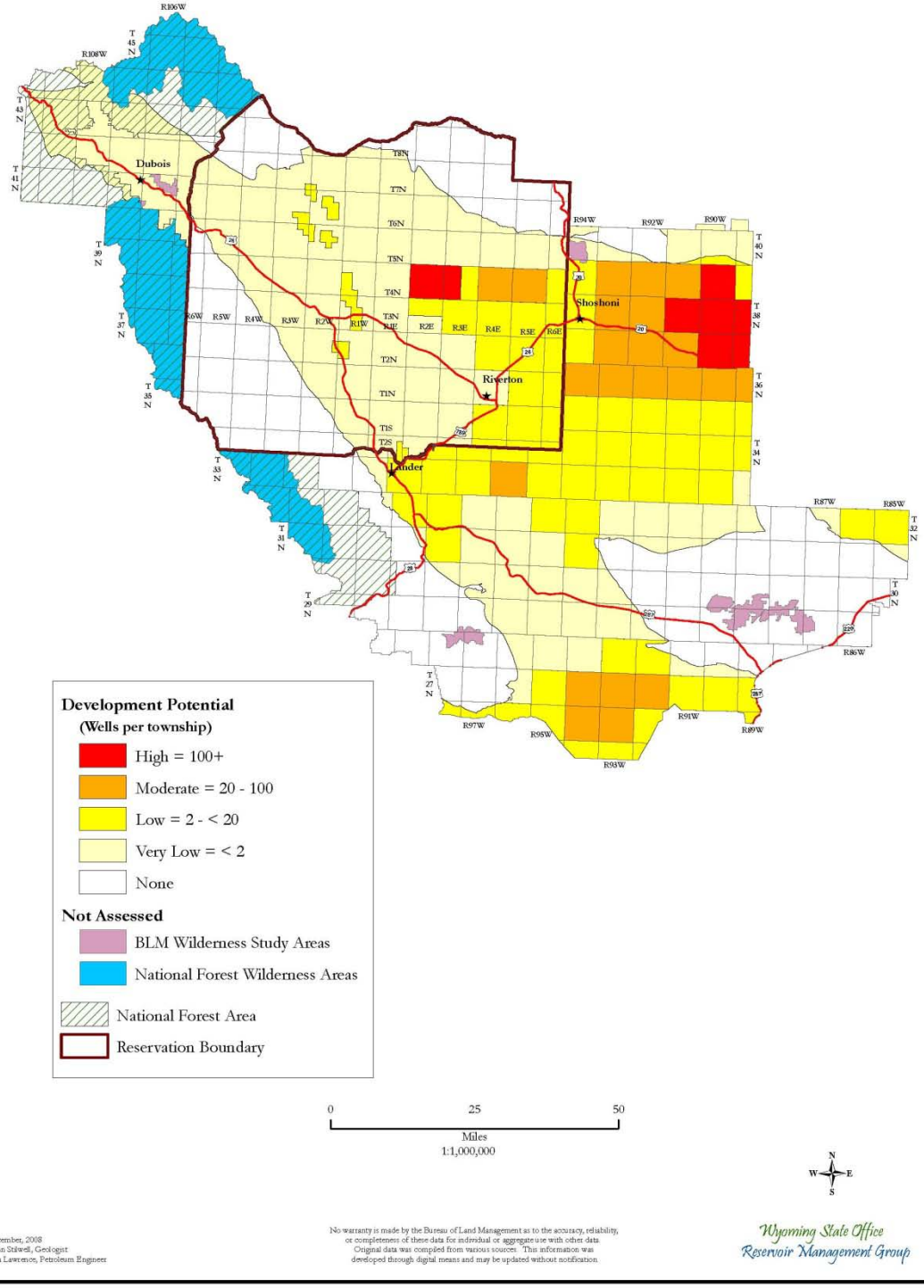
There are approximately 887 existing Federal conventional and coalbed natural gas wells in the Lander Field Office, which account for approximately 2.7 percent of the total Federal wells in Wyoming. Therefore, GHG emissions from all wells within the field office amount to approximately 1.4896 metric tons annually (mt) (19.6 mt X 0.027 = 0.5292 mt), assuming steady production and emission venting.

Based on this emission factor, each potential well that may be drilled on these parcels, if issued, could emit approximately 0.00059 mt of CO_2e. It is unknown what the drilling density may be for these parcels, if they were to be developed; therefore, it is impossible to predict what level of emissions could occur from development at this stage under the proposed action.

All of the four parcels are located within an area defined as having Moderate Potential for Oil and Gas development in the 2009 Draft Reasonably Foreseeable Development (RFD) Scenario Document produced by the WY State Office Reservoir management Group for the Lander RMP revision process. The 2009 draft RFD Scenario document is shown below in Figure 28.

See Section 4.6 for a discussion of the impacts of these potential greenhouse gas emissions on global climate change. Emissions of all regulated pollutants (including GHGs) and their impacts will be quantified and evaluated at the time that a specific development project is proposed.

Figure 28.
Oil and gas (excluding coalbed natural gas) development potential and projected drilling densities within the Lander Planning Area for 2008 through 2027.



December, 2008
Dean Stilwell, Geologist
Stan Lawrence, Petroleum Engineer

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data was compiled from various sources. This information was developed through digital means and may be updated without notification.

Wyoming State Office
Reservoir Management Group

Mitigation

The BLM has regulatory jurisdiction over portions of natural gas and petroleum systems identified in the EPA Inventory of US Greenhouse Gas Emissions and Sinks document. Exercise of this regulatory jurisdiction has led to development of "Best Management Practices (BMPs)" designed to reduce emissions from field production and operations. Analysis and approval of future development on the lease parcels would include applicable BMPs as conditions of approval (COAs) in order to reduce or mitigate GHG emissions. Additional measures developed at the project development stage would be incorporated as COAs in the approved APD or with a programmatic EIS, which are binding on the operator.

Such mitigation measures may include, but are not limited to:

- Flare hydrocarbon and gases at high temperatures in order to reduce emissions of incomplete combustion through the use of multi-chamber combustors;
- "Green" (flareless) completions,
- Water dirt roads during periods of high use in order to reduce fugitive dust emissions;
- Require that vapor recovery systems be maintained and functional in areas where petroleum liquids are stored;
- Installation of liquids gathering facilities or central production facilities to reduce the total number of sources and minimize truck traffic,
- Use of natural gas fired or electric drill rig engines,
- The use of selective catalytic reducers on diesel-fired drilling engines; and,
- Re-vegetate areas of the pad not required for production facilities to reduce the amount of dust from the pads.

The EPA Inventory data show that adoption by industry of the BMPs proposed by the EPA's Natural Gas Energy Star program has reduced emissions from oil and gas exploration and development (Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2006). The LFO works with industry to facilitate the use of the relevant BMPs for operations proposed on federal mineral leases where such mitigation is consistent with agency policy.

See Section 4.5 for a discussion of the impacts of these potential greenhouse gas emissions on global climate change.

Alternative C: Proposed Action

Under this alternative, leases would be issued with the appropriate stipulations, except those listed in Appendix B. However, due to the smaller acreage under this alternative potentially subject to surface disturbing activities, drilling and production, the potential for greenhouse gas emissions are similar to, but have a lower probability of occurring, and if occurring, in smaller amounts, as under Alternative B.

4.3 Wildlife Special Status Species

Alternative A: No Action

Under the No-Action alternative, oil and gas development of the 38 parcels would not occur at this time. Therefore, no adverse impacts would result from BLM actions. As discussed above, it is likely that these parcels could be leased in the future, subject to the special status species guidance at the time. For parcels located in sage-grouse core and non-core areas, standard greater sage-grouse stipulations would apply at the time of lease issuance, including lek avoidance and timing limitations.

Alternative B: Full Issuance

Under this alternative, all leases would be issued with the stipulations as detailed in Appendix A. However, due to the larger acreage under this Alternative potentially subject to surface disturbing activities, the potential for impacts are similar to, but have a higher probability of occurring and at a greater intensity, as under Alternative C. At the APD or site-specific stage, compliance with the WY Greater Sage-Grouse Core Area Conservation Strategy as adopted by BLM for the parcels located in core area would be implemented. This strategy is designed to avoid the listing of the greater sage-grouse as a T&E species.

However, the issuance of the leases in the proposed Government Draw/ Upper Sweetwater ACEC (Parcels WY-1011-121, 122, 123, 124, 125, 126, 133, 134, 135, 136, 143, 144, and 145) would preclude adopting Alternative B's special management for those areas in the RMP revision in violation of CEQ requirements, 40 C.F.R. Part 1506.1(a)(2). BLM may analyze alternatives if they are reasonable even if not authorized (Answer 2A of NEPA's 40 Most Asked Questions).

Alternative C: Proposed Action

Under this alternative, leases for 23 parcels would be issued and 15 lease parcels would be deferred pending revision of certain wildlife lease stipulations and revision of the Lander RMP. Approximately 17,908.02 acres of development would be curtailed until stipulations in accordance with the sage-grouse Core Area strategy could be attached to leases for the affected parcels. All other impacts are the same as those described in the Lander RMP as they relate to sage-grouse.

Mitigation

Modification of the stipulations for the parcels are recommended to ensure continued population and habitat objectives for the Greater Sage Grouse. Additional mitigation and/or Conditions of Approval could be identified at the development stage to further minimize impacts associated with oil and gas development. Development of those parcels in core area would be analyzed for number of energy disturbances and acres of disturbance to minimize habitat loss or modification as a strategy to avoid listing the greater sage-grouse.

4.4 Non-WSA Lands with Wilderness Characteristics

Since none of the 38 parcels have wilderness characteristics and are not managed for wilderness characteristics under any of the alternatives, there is no difference in impacts between the three alternatives. Information regarding the analysis of non-WSA lands containing wilderness characteristics and the citizens' proposed wilderness, see the Analysis of the Management Situation on the web page for the Lander RMP Revision.

Mitigation

None

4.5 Cultural and Historical Resources

Alternative A: No Action

Under the No-Action alternative, oil and gas development of the 38 parcels would not occur at this time. Therefore, no adverse impacts would result from BLM actions. It is likely that these parcels would be leased in the future, subject to stipulations developed in the Lander RMP for regional historic trails and early highways (i.e., National Park to Park Highway, Lander to Thermopolis Road). Such stipulations would be designed to protect the historic setting of the trails.

Alternative B: Full Lease Issuance

Under this alternative, all leases would be issued with the stipulations as detailed in Appendix A. However, due to the larger acreage under this Alternative potentially subject to surface disturbing activities, the potential for impacts are similar to, but have a higher probability of occurring and at a greater intensity, as under Alternative C. At the APD or site-specific stage, Section 106 of the National Historic Preservation Act would be followed and cultural resource inventories completed. Site-specific mitigation measures would be developed to minimize impacts, both physical and visual, to cultural resources. It is anticipated that adverse impacts to cultural resources would be rare.

Two regional historic trails and early highways are located within the lease parcels. Parcels WY-1011-129, 130, 131, 139, and 153 contain segments of the National Park to Park Highway, while parcel WY-1011-148 contains segments of the Lander to Thermopolis Road. These six parcels would be stipulated to protect the physical remnants of the trails as well as the historic setting. With these stipulations, it is anticipated that there would be No Adverse Effect to these resources from oil and gas development.

Alternative C: Proposed Action

Under this alternative, leases for 23 parcels would be issued and 15 lease parcels would be deferred. Approximately 17,908.02 acres would not be developed at this time. As such, total impacts to cultural resources would be similar to, but less than, those under Alternative B. Parcels containing the National Park to Park Highway and the Lander to Thermopolis Road would still be leased with stipulations, with No Adverse Effect to these resources anticipated from oil and gas development.

Mitigation

Following results of the cultural resource inventory, site-specific mitigation measures will be developed to minimize impacts, both physical and visual, to any significant cultural resources. The majority of projects are anticipated to have No Effect or No Adverse Effect to cultural resources. If a project will cause an Adverse Effect to cultural resources, BLM will consult with the operator and the State Historic Preservation Office to develop an acceptable mitigation plan such as data recovery.

The six parcels containing the National Park to Park Highway and the Lander to Thermopolis Road will be stipulated to protect the physical remnants of the trails as well as the historic setting. Surface occupancy or use within ¼ mile of these resources will be restricted or prohibited unless the operator and surface managing agency arrive at an acceptable plan for mitigation of anticipated impacts. With site-specific mitigation measures developed for each project within ¼ mile of the National Park to Park Highway or the Lander to Thermopolis Road, No Adverse Effect to these resources is anticipated.

4.6 Cumulative Impacts

There are approximately 877 federal producing wells in the Lander Field Office; of which 15 wells are coalbed natural gas wells.

Analysis of cumulative impacts for reasonably foreseeable development (RFD) of oil and gas wells on public lands in the Lander Field Office is presented in the 1987 Lander Resource Management Plans (RMP). Potential development of all available federal minerals in the planning area, including those in the proposed lease parcels, was included as part of the analysis.

As described in the analysis of environmental consequences, the proposed action and/or the alternative may contribute to the effects of climate change to some extent through GHG emissions. However, it is not currently possible to associate any of these particular actions with the creation of any specific climate-related environmental effects. The lack of scientific tools designed to predict climate change at regional or local scales limits the ability to quantify potential future impacts.

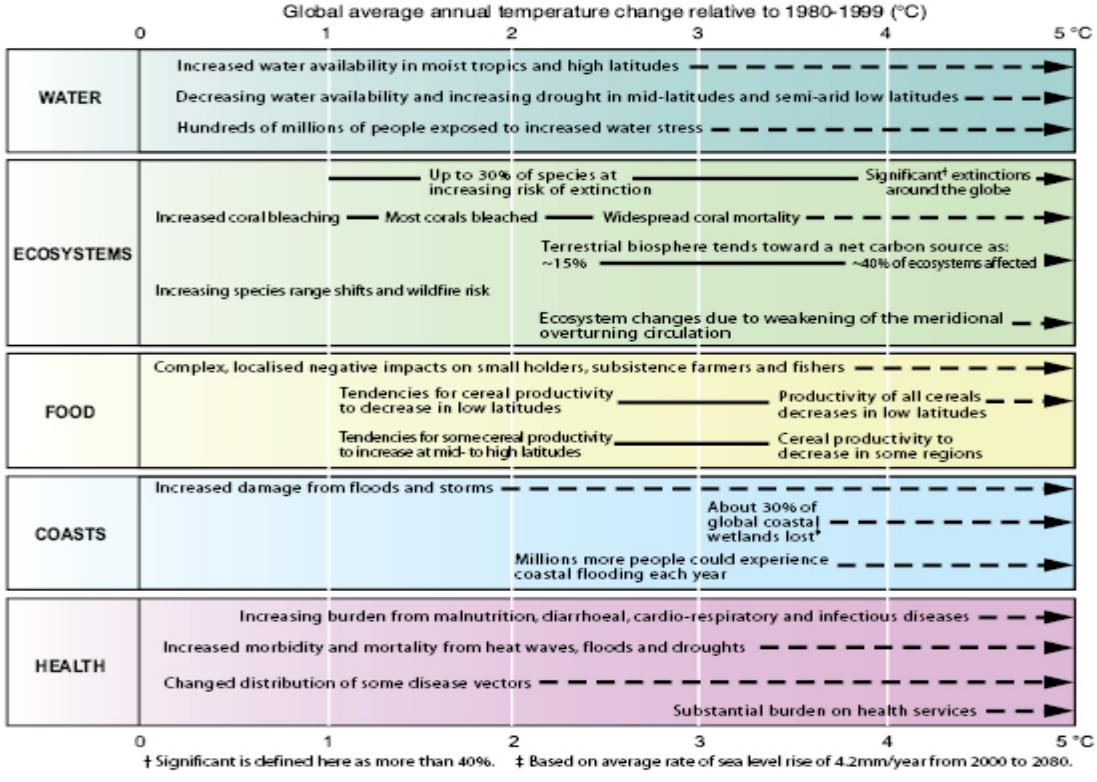
The assessment of greenhouse gas (GHG) emissions and climate change is still in its formative phase; therefore, it is not yet possible to know with confidence the net impact on climate. However, the Intergovernmental Panel on Climate Change (IPCC 2007) recently concluded that “warming of the climate system is unequivocal” and “most of the observed increase in globally average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic [man-made] greenhouse gas concentrations.” As the temperatures of the land and sea change, environmental factors such as weather patterns, sea levels, precipitation rates, the timing of the seasons, desert distribution, forest cover, and ocean salinity will also change. These changes influence the world’s climate systems and will have different impacts to different areas. Some agricultural regions may become more arid while others become wetter; some mountainous areas will experience greater summer precipitation, yet experience disappearing snowpack.

The average number of oil and gas wells drilled annually in the Field Office and probable GHG emission levels, when compared to the total GHG emission estimates from the total number of Federal oil and gas

wells in the State, represent an incremental contribution to the total regional and global GHG emission levels. This incremental contribution to global GHG gases cannot be translated into incremental effects on climate change globally or in the area of these site-specific actions. As oil and gas and natural gas production technology continues to improve in the future, one assumption is that it may be feasible to further reduce GHG emissions.

Based on research compiled for the International Panel on Climate Change Fourth Assessment Report, 2007, potential effects of climate change on resources in the affected environment are likely to be varied. Figure 4.1, taken from the Fourth Assessment Report indicates varying responses of the natural world to increasing temperatures as a result of increasing global temperatures.

Figure 4.1: Examples of impacts associated with global average temperature change (Impacts will vary by extent of adaptation, rate of temperature change and socio-economic pathway)



Within North America, the report specifically forecasts that: Warming in western mountains is projected to cause decreased snowpack, more winter flooding and reduced summer flows, exacerbating competition for over-allocated water resources; in the early decades of the century, moderate climate change is projected to increase aggregate yields of rain-fed agriculture by 5 to 20%, but with important variability among regions; major challenges are projected for crops that are near the warm end of their suitable range or which depend on highly utilized water resources; cities that currently experience heat waves are expected to be further challenged by an increased number, intensity and duration of heat waves during the course of the century, with potential for adverse health impacts and coastal communities and habitats will be increasingly stressed by climate change impacts interacting with development and pollution. Specific modeling and/or assessments of the potential effects for the Lander Field Office and for the State of WY currently do not exist.

In 2001, the Intergovernmental Panel on Climate Change (IPCC) pointed out that by the year 2100, global average surface temperatures would increase 2.5 to 10.4°F above 1990 levels (IPCC 2007). The National Academy of Sciences (2006) has confirmed these findings, but also indicated that there are uncertainties regarding how climate change may affect different regions. Computer model forecasts indicate that increases in temperature will not be evenly or equally distributed, but are likely to be accentuated at higher latitudes. Warming during the winter months is expected to be greater than during the summer, and increases in daily minimum temperatures is more likely than increases in daily maximum temperatures.

Regarding the linkage between climate-change related warming and associated impacts, an assessment of the IPCC states that difficulties remain in attributing observed temperature changes at smaller than continental scales. Therefore, it is currently beyond the scope of existing science to predict climate change on regional or local scales resulting from specific sources of GHG emissions. Emissions of all regulated pollutants (including GHGs) and their impacts will be quantified and evaluated at the time that a specific development project is proposed.

IPCC also discloses that significant uncertainties remain with respect to the estimates of the current level of emissions and projections of future production of fossil fuels as the oil and gas industry is difficult to forecast with the mix of drivers: economics, resource supply, demand, and regulatory procedures. The assumptions used for the projections, based on recent trends or State production trends in the near-term, and AEO2006 growth rates through 2020, do not include any significant changes in energy prices, relative to today's prices. Large price swings, resource limitations, or changes in regulations could significantly change future production and the associated GHG emissions. Other uncertainties include the volume of GHGs vented from gas processing facilities in the future, any commercial oil shale or coal-to-liquids production, and potential emissions-reducing improvements in oil and gas production, processing, and pipeline technologies.

One wind development project has been proposed that encompasses a portion of both the Lander and Casper Field Offices. The proposed project, "Black Mountain", is a 105 MW wind energy facility comprised of: 3,880 acres of BLM administered public lands (2,600 acres or 67% in the Casper Field Office and 1,280 acres or 33% in the Lander Field Office), 50 turbine towers approximately 260' in height (43 on BLM and 7 on private), 14.6 miles of 3-phase overhead transmission line (14.1 on BLM and 0.5 on private), 16.6 miles of road (14.3 on BLM 2.3 on private), 2 substations (both located on BLM), and 28.1 acres of underground collector electrical system (23.6 on BLM and 4.5 on private). The estimated acres of ground disturbance for all project features is 224.9 temporary acres (205.1 on BLM and 19.8 on private) and permanent acres is 40.7 (36.3 on BLM and 4.4 on private). None of the parcels nominated for the November 2010 sale would be impacted by this proposed wind development project.

5.0 Description of Mitigating Measures and Residual Impacts

The issuance of those leases identified under the proposed action will be mitigated by attaching appropriate conditions of approval to any subsequent requests for lease development either on a case by case basis or upon receipt of a multi-well project proposal. The Lander Field Office, Surface Use and Occupancy Requirements, Conditions of Approval, and the Lander Field Office's Special Leasing Stipulations, which are in place at the Wyoming State Office, will provide adequate mitigation for issuance of all lease parcels under the Proposed Action.

Direct, indirect, cumulative and residual impacts of leasing and lease development are generally described in the Lander Resource Management Plan and Record of Decisions, 1987. An environmental analysis will be prepared on a case-by-case basis upon receipt of future subsequent actions.

6.0 Consultation/Coordination

Lander Field Office BLM Staff
Debra Larsen, Land Law Examiner
Kristin Yannone, Planning and Environmental Coordinator

Wyoming State Office BLM Staff
Christopher Carlton, Planning and Environmental Coordinator
Merry Gamper, Physical Scientist

7.0 References

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U.S. Department of the Interior, Bureau of Land Management. 1998. Washakie Approved Resource Management and Plan Record of Decision. Worland, Wyoming

7.1 Authorities

Code of Federal Regulations (CFR) 3100

40 CFR All Parts and Sections inclusive Protection of Environment, Revised as of July 1, 2001.

43 CFR, All Parts and Sections inclusive - Public Lands: Interior. Revised as of October 1, 2000.

U.S. Department of the Interior, Bureau of Land Management and Office of the Solicitor (editors). 2001. The Federal Land Policy and Management Act, as amended. Public Law 94-579.

APPENDIX A

Lease Parcels Nominated (As Proposed)

WY-1011-118 200.000 Acres
T.0370N, R.0900W, 06th PM, WY
Sec. 031 N2NE,SENE,E2SE;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Nov 15 to Apr 30; (2) as mapped on the Lander Field Office GIS database; (3) protecting big game on crucial winter range.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Rorippa calycina (Persistent sepal yellowcress); Cynomys leucurus (White-tailed prairie dog); Penstemon haydenii (Blowout penstemon).

WY-1011-119 439.880 Acres
T.0370N, R.0900W, 06th PM, WY
Sec. 031 LOTS 1-4;
031 SWNE,E2W2,W2SE;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Nov 15 to Apr 30; (2) as mapped on the Lander Field Office GIS database; (3) protecting big game on crucial winter range.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Rorippa calycina (Persistent sepal yellowcress); Cynomys leucurus (White-tailed prairie dog); Penstemon haydenii (Blowout penstemon).

WY-1011-120 375.020 Acres
T.0370N, R.0910W, 06th PM, WY
Sec. 024 LOTS 1-3;
024 W2NE,E2NW,NESW,NWSE;
Fremont County

Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Raptors.
TLS (1) Nov 15 to Apr 30; (2) as mapped on the Lander Field Office GIS database; (3) protecting big game on crucial winter range.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Rorippa calycina (Persistent sepal yellowcress); Cynomys leucurus (White-tailed prairie dog).

WY-1011-121 2368.780 Acres
T.0260N, R.0920W, 06th PM, WY
Sec. 001 LOTS 1-4;
001 S2N2,S2;
002 LOTS 1-4;
002 S2N2,S2;
003 LOTS 1-2;
003 S2NE,S2;
004 LOTS 1-4;
004 SWNE,S2NW,S2;
Sweetwater County
Lander FO
Rawlins FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Raptors.
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Rawlins Field Office GIS database; (3) protecting nesting Raptors.
CSU (1) Surface occupancy or use within 1/4 mile of a Greater sage-grouse strutting/dancing ground will be restricted or prohibited unless the operator and surface managing agency arrive at an acceptable plan for mitigation of anticipated impacts; (2) as mapped on the Lander Field Office GIS database; (3) protecting Greater sage-grouse breeding habitat.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Centrocercus urophasianus (Greater sage-grouse); Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Brachylagus idahoensis (Pygmy rabbit); Species affected by water depletions from the Platte River system.
CSU (1) 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; (2) as mapped on the Rawlins Field Office GIS database and Lander Field Office GIS database; (3) protecting Species affected by water depletions from the Platte River system.
CSU (1) 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; (2) as mapped on the Rawlins Field Office GIS database and Rawlins Field Office GIS database; (3) protecting Species affected by water depletions from the Platte River system.

WY-1011-122 842.260 Acres
T.0260N, R.0920W, 06th PM, WY
Sec. 003 LOTS 3-4;
003 S2NW;
004 SENE;
013 ALL;
Sweetwater County
Lander FO
Rawlins FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.
TLS (1) Mar 15 to Jul 15; (2) as mapped on the Rawlins Field Office GIS database; (3) protecting nesting Greater sage-grouse.
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Raptors.
CSU (1) Surface occupancy or use within 1/4 mile of a Greater sage-grouse strutting/dancing ground will be restricted or prohibited unless the operator and surface managing agency arrive at an acceptable plan for mitigation of anticipated impacts; (2) as mapped on the Lander Field Office GIS database; (3) protecting Greater sage-grouse breeding habitat.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Centrocercus urophasianus (Greater sage-grouse); Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Brachylagus idahoensis (Pygmy rabbit); Species affected by water depletions from the Platte River system.

WY-1011-123 1346.140 Acres
T.0260N, R.0920W, 06th PM, WY
Sec. 005 LOTS 1-4;
005 S2N2;
006 LOTS 1-5;
006 S2NE,SENW;
007 E2NE,E2SW,SE;
008 N2,N2SE;
Sweetwater County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Raptors.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database and Lander Field Office GIS database; (3) protecting Centrocercus urophasianus (Greater sage-grouse); Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Brachylagus idahoensis (Pygmy rabbit); Species affected by water depletions from the Platte River system.

WY-1011-124 2560.000 Acres
T.0260N, R.0920W, 06th PM, WY
Sec. 009 ALL;
010 ALL;
011 ALL;
012 ALL;
Sweetwater County
Lander FO
Rawlins FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.

TLS (1) Mar 15 to Jul 15; (2) as mapped on the Rawlins Field Office GIS database; (3) protecting nesting Greater sage-grouse.
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Raptors.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database and Rawlins Field Office GIS database; (3) protecting Centrocercus urophasianus (Greater sage-grouse); Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Brachylagus idahoensis (Pygmy rabbit); Species affected by water depletions from the Platte River system.

WY-1011-125 2320.000 Acres
T.0260N, R.0920W, 06th PM, WY
Sec. 014 ALL;
015 ALL;
022 NE,E2NW,SW;
023 W2;
024 W2;
Sweetwater County
Lander FO
Rawlins FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.
TLS (1) Mar 15 to Jul 15; (2) as mapped on the Rawlins Field Office GIS database; (3) protecting nesting Greater sage-grouse.
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Raptors.
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Rawlins Field Office GIS database; (3) protecting nesting Raptors.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database and Rawlins Field Office GIS database; (3) protecting Centrocercus urophasianus (Greater sage-grouse); Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Brachylagus idahoensis (Pygmy rabbit); Species affected by water depletions from the Platte River system.

WY-1011-126 1897.610 Acres
T.0260N, R.0920W, 06th PM, WY
Sec. 019 LOTS 1-4;
019 E2,E2W2;
020 ALL;

021 LOTS 1-16;
Sweetwater County
Lander FO
Rawlins FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Raptors.
CSU (1) Surface occupancy or use within 1/4 mile of a Greater sage-grouse strutting/dancing ground will be restricted or prohibited unless the operator and surface managing agency arrive at an acceptable plan for mitigation of anticipated impacts; (2) as mapped on the Lander Field Office GIS database; (3) protecting Greater sage-grouse breeding habitat.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Centrocercus urophasianus (Greater sage-grouse); Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Brachylagus idahoensis (Pygmy rabbit); Species affected by water depletions from the Platte River system.

WY-1011-127 720.000 Acres
T.0360N, R.0920W, 06th PM, WY
Sec. 031 W2NE;
035 ALL;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.
TLS (1) Nov 15 to Apr 30; (2) as mapped on the Lander Field Office GIS database; (3) protecting big game on crucial winter range.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Centrocercus urophasianus (Greater sage-grouse); Charadrius montanus

(Mountain plover); Cynomys leucurus (White-tailed prairie dog); Rorippa calycina (Persistent sepal yellowcress); Penstemon haydenii (Blowout penstemon).

WY-1011-128 362.760 Acres
T.0370N, R.0920W, 06th PM, WY
Sec. 005 LOTS 1-4;
005 S2N2;
028 SWSW;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Centrocercus urophasianus (Greater sage-grouse); Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Rorippa calycina (Persistent sepal yellowcress); Cryptantha subcapitata (Owl creek miner's candle); Penstemon haydenii (Blowout penstemon).

WY-1011-129 2360.000 Acres
T.0380N, R.0920W, 06th PM, WY
Sec. 014 NW;
015 E2NW,NESW,N2SE;
017 S2S2;
022 ALL;
023 ALL;
024 LOTS 2,3;
024 W2E2,W2;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.
CSU (1) Surface occupancy or use within 1/4 Mile of the National Park to Park Highway will be restricted or prohibited unless the operator and surface managing agency arrive at an acceptable plan for mitigation of anticipated impacts; (2) as mapped on the Lander FO GIS database); (3) protecting significant historic properties.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Rorippa calycina (Persistent sepal yellowcress); Cryptantha subcapitata (Owl creek miner's candle); Penstemon haydenii (Blowout penstemon); Artemisia porteri (Porter's sagebrush).

WY-1011-130 1880.000 Acres
T.0380N, R.0920W, 06th PM, WY
Sec. 025 LOTS 2,6,7;
025 W2E2,W2;
026 ALL;
027 ALL;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.
CSU (1) Surface occupancy or use within 1/4 Mile of the National Park to Park Highway will be restricted or prohibited unless the operator and surface managing agency arrive at an acceptable plan for mitigation of anticipated impacts; (2) as mapped on the Lander FO GIS database); (3) protecting significant historic properties.
CSU (1) Surface occupancy or use within 1/4 mile of a Greater sage-grouse strutting/dancing ground will be restricted or prohibited unless the operator and surface managing agency arrive at an acceptable plan for mitigation of anticipated impacts; (2) as mapped on the Lander Field Office GIS database; (3) protecting Greater sage-grouse breeding habitat.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Rorippa calycina (Persistent sepal yellowcress); Cryptantha subcapitata (Owl creek miner's candle); Penstemon haydenii (Blowout penstemon); Artemisia porteri (Porter's sagebrush).

WY-1011-131 1297.160 Acres
T.0380N, R.0920W, 06th PM, WY
Sec. 031 LOTS 1-4;
031 E2,E2W2;
035 ALL;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:

Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Raptors.
TLS (1) Nov 15 to Apr 30; (2) as mapped on the Lander Field Office GIS database; (3) protecting big game on crucial winter range.
CSU (1) Surface occupancy or use within 1/4 Mile of the National Park to Park Highway will be restricted or prohibited unless the operator and surface managing agency arrive at an acceptable plan for mitigation of anticipated impacts; (2) as mapped on the Lander FO GIS database); (3) protecting significant historic properties.
CSU (1) Surface occupancy or use within 1/4 mile of a Greater sage-grouse strutting/dancing ground will be restricted or prohibited unless the operator and surface managing agency arrive at an acceptable plan for mitigation of anticipated impacts; (2) as mapped on the Lander Field Office GIS database; (3) protecting Greater sage-grouse breeding habitat.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Rorippa calycina (Persistent sepal yellowcress); Cryptantha subcapitata (Owl creek miner's candle); Penstemon haydenii (Blowout penstemon); Artemisia porteri (Porter's sagebrush).

WY-1011-132 79.800 Acres
T.0390N, R.0920W, 06th PM, WY
Sec. 003 LOTS 4;
003 SWNW;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Nov 15 to Apr 30; (2) as mapped on the Lander Field Office GIS database; (3) protecting big game on crucial winter range.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Artemisia porteri (Porter's sagebrush).

WY-1011-133 160.000 Acres
T.0260N, R.0930W, 06th PM, WY
Sec. 001 SE;
Sweetwater County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Raptors.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Centrocercus urophasianus (Greater sage-grouse); Brachylagus idahoensis (Pygmy rabbit).

WY-1011-134 1799.280 Acres
T.0260N, R.0930W, 06th PM, WY
Sec. 001 LOTS 1,2;
001 S2NE;
011 SWSW;
012 E2;
013 ALL;
021 SW;
022 LOTS 27-30;
023 LOTS 21,22,25-30;
Sweetwater County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Raptors.
CSU (1) 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; (2) as mapped on the Lander Field

Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Centrocercus urophasianus (Greater sage-grouse); Brachylagus idahoensis (Pygmy rabbit).

WY-1011-135 438.550 Acres
T.0260N, R.0930W, 06th PM, WY
Sec. 023 LOTS 17,18,23,24;
024 NE,N2NW,SENW;
Sweetwater County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Raptors.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Centrocercus urophasianus (Greater sage-grouse); Brachylagus idahoensis (Pygmy rabbit).

WY-1011-136 238.840 Acres
T.0260N, R.0930W, 06th PM, WY
Sec. 023 LOTS 31,32;
024 S2S2;
Sweetwater County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Raptors.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Centrocercus urophasianus (Greater sage-grouse); Brachylagus idahoensis (Pygmy rabbit).

WY-1011-137 1227.820 Acres
T.0360N, R.0930W, 06th PM, WY
Sec. 002 LOTS 4;
002 W2SW;
003 LOTS 1-4;
003 N2S2,SESW,SWSE;
011 W2W2;
013 N2;
014 NE,N2NW,SENW;
026 SWNW;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Raptors.
TLS (1) Nov 15 to Apr 30; (2) as mapped on the Lander Field Office GIS database; (3) protecting big game on crucial winter range.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Rorippa calycina (Persistent sepal yellowcress); Cryptantha subcapitata (Owl creek miner's candle); Centrocercus urophasianus (Greater sage-grouse).

WY-1011-138 2156.720 Acres
T.0370N, R.0930W, 06th PM, WY
Sec. 001 W2SW,SESW;
003 SW,N2SE,SWSE;
004 LOTS 1-4;
004 S2;
005 LOTS 1-4;
005 S2N2,S2;
006 LOTS 1-7;
006 S2NE,SENW,E2SW,SE;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation

TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Rorippa calycina (Persistent sepal yellowcress); Cryptantha subcapitata (Owl creek miner's candle); Centrocercus urophasianus (Greater sage-grouse).

WY-1011-139 2560.000 Acres
T.0380N, R.0930W, 06th PM, WY
Sec. 014 NENE;
015 ALL;
024 S2;
025 ALL;
026 N2NE,SENE,NWNW;
028 W2SE,SESE;
029 N2NE,SWNE,W2,NWSE;
030 E2E2;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Nov 15 to Apr 30; (2) as mapped on the Lander Field Office GIS database; (3) protecting big game on crucial winter range.
CSU (1) Surface occupancy or use within 1/4 Mile of the National Park to Park Highway will be restricted or prohibited unless the operator and surface managing agency arrive at an acceptable plan for mitigation of anticipated impacts; (2) as mapped on the Lander FO GIS database; (3) protecting significant historic properties.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Rorippa calycina (Persistent sepal yellowcress); Cryptantha subcapitata (Owl creek miner's candle).

WY-1011-140 1393.390 Acres
T.0380N, R.0930W, 06th PM, WY
Sec. 030 LOTS 1-4;
030 E2W2;
031 LOTS 1,3,4;
031 N2NE,NENW,E2SW,W2SE,SESE;

032 N2N2,SWNE,S2SW,SWSE;
033 N2;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Nov 15 to Apr 30; (2) as mapped on the Lander Field Office GIS database; (3) protecting big game on crucial winter range.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Rorippa calycina (Persistent sepal yellowcress); Cryptantha subcapitata (Owl creek miner's candle).

WY-1011-141 320.000 Acres
T.0390N, R.0930W, 06th PM, WY
Sec. 010 E2;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Raptors.
TLS (1) Nov 15 to Apr 30; (2) as mapped on the Lander Field Office GIS database; (3) protecting big game on crucial winter range.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Rorippa calycina (Persistent sepal yellowcress); Cryptantha subcapitata (Owl creek miner's candle); Physaria saximontana var. saximontana (Rocky mountain twinpod).

WY-1011-142 241.130 Acres
T.0310N, R.0940W, 06th PM, WY
Sec. 005 LOTS 4;
005 NESW,SE;
Fremont County

Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Raptors.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Centrocercus urophasianus (Greater sage-grouse); Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Cirsium aridum (Cedar rim thistle); Antennaria arcuata (Meadow pussytoes); Species affected by water depletions from the Platte River system.

WY-1011-143 970.710 Acres
T.0310N, R.0940W, 06th PM, WY
Sec. 018 LOTS 1-3;
018 E2NW,NESW,W2SE;
019 LOTS 1-4;
019 E2,E2W2;
020 SWSW;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Raptors.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Centrocercus urophasianus (Greater sage-grouse); Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Cirsium aridum (Cedar rim thistle); Antennaria arcuata (Meadow pussytoes); Species affected by water depletions from the Platte River system.

WY-1011-144 1262.720 Acres

T.0310N, R.0940W, 06th PM, WY
Sec. 029 ALL;
030 LOTS 1-4;
030 E2,E2W2;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Raptors.
TLS (1) Nov 15 to Apr 30; (2) as mapped on the Lander Field Office GIS database; (3) protecting big game on crucial winter range.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Centrocercus urophasianus (Greater sage-grouse); Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Cirsium aridum (Cedar rim thistle); Antennaria arcuata (Meadow pussytoes); Species affected by water depletions from the Platte River system.

WY-1011-145 1342.120 Acres
T.0340N, R.0940W, 06th PM, WY
Sec. 031 LOTS 1-4;
031 E2,E2W2;
032 ALL;
033 W2SW;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Raptors.
CSU (1) 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; (2) as mapped on the Lander Field

Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Rorippa calycina (Persistent sepal yellowcress); Centrocercus urophasianus (Greater sage-grouse).

WY-1011-146 1987.840 Acres
T.0360N, R.0940W, 06th PM, WY
Sec. 029 E2,NESW,S2SW;
030 LOTS 4;
030 E2,E2W2;
031 LOTS 1-4;
031 E2,E2W2;
032 N2N2;
035 E2;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Greater sage-grouse.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Centrocercus urophasianus (Greater sage-grouse); Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Rorippa calycina (Persistent sepal yellowcress).

WY-1011-147 2452.510 Acres
T.0370N, R.0940W, 06th PM, WY
Sec. 001 LOTS 1-4;
001 S2N2,S2;
002 LOTS 1-4;
002 S2N2,S2;
003 LOTS 1-4;
003 S2N2,S2;
004 LOTS 3,4;
004 S2N2,S2;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Cryptantha subcapitata (Owl creek miner's candle); Rorippa calycina (Persistent sepal yellowcress).

WY-1011-148 1905.290 Acres
T.0370N, R.0940W, 06th PM, WY
Sec. 005 AC IN RR ROW WYW0240610
005 & WYW0240608);
006 LOTS 3,4;
006 LOTS 1,2 (EXCL 11.48 AC
006 IN RR ROW WYW0240610 &
006 WYW0240608);
007 LOTS 1-4;
008 ALL;
009 ALL;
005 LOTS 1,3;
005 SENW,SW,NWSE,S2SE;
005 LOT 4, SWNW (EXCL 11.03
Fremont County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
CSU (1) Surface occupancy or use within 1/4 Mile of the Lander to Thermopolis Trail will be restricted or prohibited unless the operator and surface managing agency arrive at an acceptable plan for mitigation of anticipated impacts; (2) as mapped on the Lander FO GIS database; (3) protecting significant historic properties.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Cryptantha subcapitata (Owl creek miner's candle); Rorippa calycina (Persistent sepal yellowcress).

WY-1011-149 2400.000 Acres
T.0370N, R.0940W, 06th PM, WY
Sec. 010 ALL;
011 ALL;
012 ALL;
014 N2,N2S2;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:

Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Nov 15 to Apr 30; (2) as mapped on the Lander Field Office GIS database; (3) protecting big game on crucial winter range.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Cryptantha subcapitata (Owl creek miner's candle); Rorippa calycina (Persistent sepal yellowcress).

WY-1011-150 2002.760 Acres
T.0370N, R.0940W, 06th PM, WY
Sec. 015 N2,N2S2;
017 ALL;
018 LOTS 1-4;
019 LOTS 1-4;
020 N2,N2S2,SWSW,SESE;
029 NE;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Nov 15 to Apr 30; (2) as mapped on the Lander Field Office GIS database; (3) protecting big game on crucial winter range.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Cryptantha subcapitata (Owl creek miner's candle); Rorippa calycina (Persistent sepal yellowcress).

WY-1011-151 1600.000 Acres
T.0370N, R.0940W, 06th PM, WY
Sec. 021 ALL;
022 S2N2,S2;
023 S2N2,S2;
Fremont County
Lander FO

Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Nov 15 to Apr 30; (2) as mapped on the Lander Field Office GIS database; (3) protecting big game on crucial winter range.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Cryptantha subcapitata (Owl creek miner's candle); Rorippa calycina (Persistent sepal yellowcress).

WY-1011-152 1280.000 Acres
T.0370N, R.0940W, 06th PM, WY
Sec. 027 ALL;
028 ALL;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Nov 15 to Apr 30; (2) as mapped on the Lander Field Office GIS database; (3) protecting big game on crucial winter range.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Cryptantha subcapitata (Owl creek miner's candle); Rorippa calycina (Persistent sepal yellowcress).

WY-1011-153 2320.000 Acres
T.0380N, R.0940W, 06th PM, WY
Sec. 014 W2NW;
024 ALL;
025 ALL;
026 S2N2,S2S2,NESE;
035 E2,E2W2,NWNW,W2SW;
Fremont County
Lander FO

Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Feb 1 to Jul 31; (2) as mapped on the Lander Field Office GIS database; (3) protecting nesting Raptors.
TLS (1) Nov 15 to Apr 30; (2) as mapped on the Lander Field Office GIS database; (3) protecting big game on crucial winter range.
CSU (1) Surface occupancy or use within 1/4 Mile of the National Park to Park Highway will be restricted or prohibited unless the operator and surface managing agency arrive at an acceptable plan for mitigation of anticipated impacts; (2) as mapped on the Lander FO GIS database; (3) protecting significant historic properties.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Cryptantha subcapitata (Owl creek miner's candle); Rorippa calycina (Persistent sepal yellowcress).

WY-1011-154 301.000 Acres
T.0380N, R.0940W, 06th PM, WY
Sec. 029 SWNW,N2SW,SWSW,NWSE;
030 LOTS 1-4;
Fremont County
Lander FO
Formerly Lease No.
Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Nov 15 to Apr 30; (2) as mapped on the Lander Field Office GIS database; (3) protecting big game on crucial winter range.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Cryptantha subcapitata (Owl creek miner's candle; Rorippa calycina (Persistent sepal yellowcress).

WY-1011-155 60.000 Acres
T.0390N, R.0940W, 06th PM, WY
Sec. 005 S2NWSE,SWSE;
Fremont County
Lander FO
BUREAU OF RECLAMATION
Formerly Lease No.

Stipulations:
Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation
TLS (1) Nov 15 to Apr 30; (2) as mapped on the Lander Field Office GIS database; (3) protecting big game on crucial winter range.
CSU (1) 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; (2) as mapped on the Lander Field Office GIS database; (3) protecting Charadrius montanus (Mountain plover); Cynomys leucurus (White-tailed prairie dog); Rorippa calycina (Persistent sepal yellowcress).

APPENDIX B

Lease Parcels for Deferral

WY-1011-121 2368.780 Acres
T.0260N, R.0920W, 06th PM, WY
Sec. 001 LOTS 1-4;
001 S2N2,S2;
002 LOTS 1-4;
002 S2N2,S2;
003 LOTS 1-2;
003 S2NE,S2;
004 LOTS 1-4;
004 SWNE,S2NW,S2;
Sweetwater County
Lander FO
Rawlins FO

WY-1011-122 842.260 Acres
T.0260N, R.0920W, 06th PM, WY
Sec. 003 LOTS 3-4;
003 S2NW;
004 SENE;
013 ALL;
Sweetwater County
Lander FO
Rawlins FO

WY-1011-123 1346.140 Acres
T.0260N, R.0920W, 06th PM, WY
Sec. 005 LOTS 1-4;
005 S2N2;
006 LOTS 1-5;
006 S2NE,SENW;
007 E2NE,E2SW,SE;
008 N2,N2SE;
Sweetwater County
Lander FO

WY-1011-124 2560.000 Acres
T.0260N, R.0920W, 06th PM, WY
Sec. 009 ALL;
010 ALL;
011 ALL;
012 ALL;
Sweetwater County
Lander FO
Rawlins FO

WY-1011-125 2320.000 Acres
T.0260N, R.0920W, 06th PM, WY
Sec. 014 ALL;
015 ALL;
022 NE,E2NW,SW;
023 W2;
024 W2;
Sweetwater County
Lander FO
Rawlins FO

WY-1011-126 1897.610 Acres
T.0260N, R.0920W, 06th PM, WY

Sec. 019 LOTS 1-4;
019 E2,E2W2;
020 ALL;
021 LOTS 1-16;
Sweetwater County
Lander FO
Rawlins FO

WY-1011-133 160.000 Acres
T.0260N, R.0930W, 06th PM, WY
Sec. 001 SE;
Sweetwater County
Lander FO

WY-1011-134 1799.280 Acres
T.0260N, R.0930W, 06th PM, WY
Sec. 001 LOTS 1,2;
001 S2NE;
011 SWSW;
012 E2;
013 ALL;
021 SW;
022 LOTS 27-30;
023 LOTS 21,22,25-30;
Sweetwater County
Lander FO

WY-1011-135 438.550 Acres
T.0260N, R.0930W, 06th PM, WY
Sec. 023 LOTS 17,18,23,24;
024 NE,N2NW,SENW;
Sweetwater County
Lander FO

WY-1011-136 238.840 Acres
T.0260N, R.0930W, 06th PM, WY
Sec. 023 LOTS 31,32;
024 S2S2;
Sweetwater County
Lander FO

WY-1011-143 970.710 Acres
T.0310N, R.0940W, 06th PM, WY
Sec. 018 LOTS 1-3;
018 E2NW,NESW,W2SE;
019 LOTS 1-4;
019 E2,E2W2;
020 SWSW;
Fremont County
Lander FO

WY-1011-144 1262.720 Acres
T.0310N, R.0940W, 06th PM, WY
Sec. 029 ALL;
030 LOTS 1-4;
030 E2,E2W2;
Fremont County
Lander FO

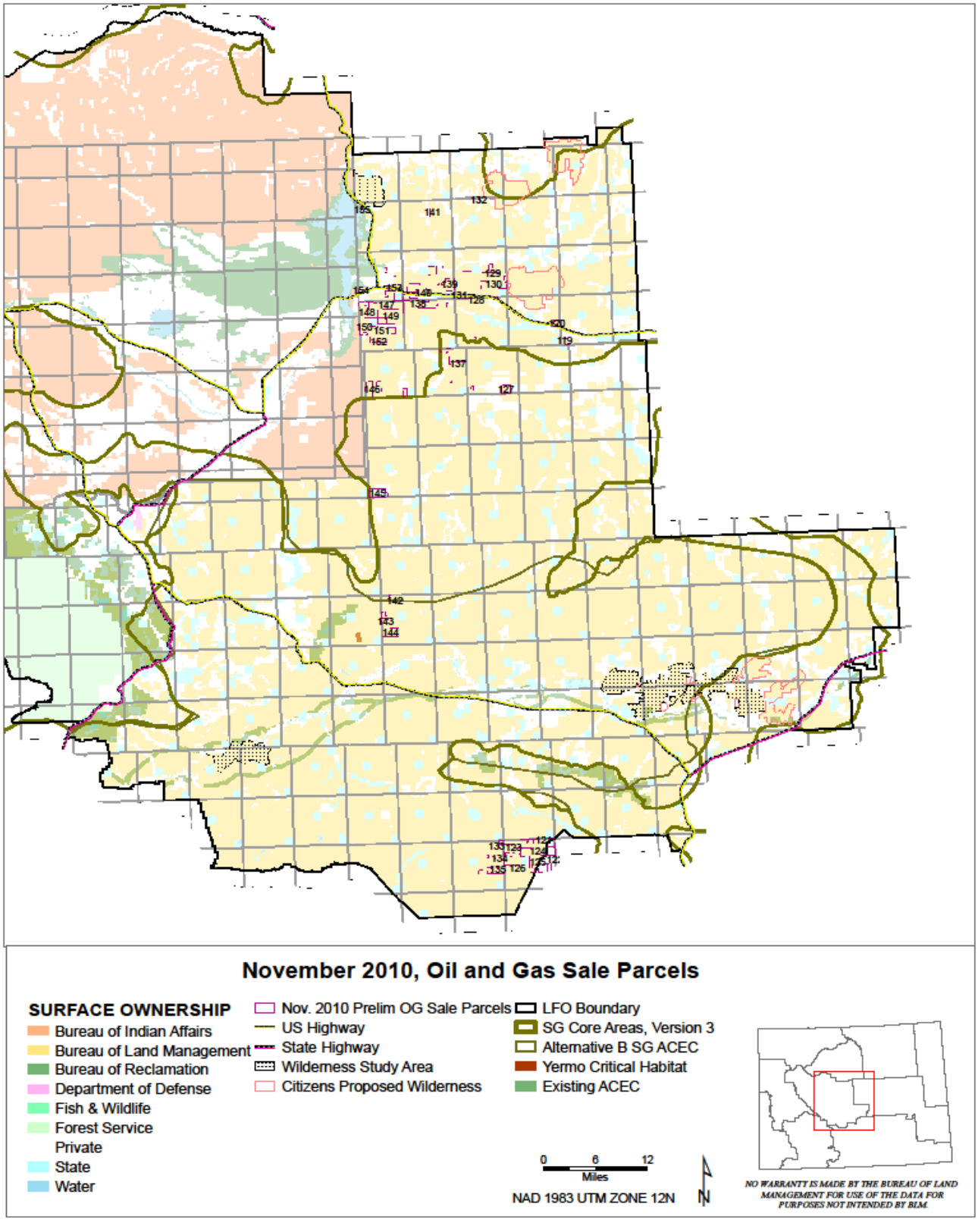
WY-1011-145 1342.120 Acres
T.0340N, R.0940W, 06th PM, WY
Sec. 031 LOTS 1-4;
031 E2,E2W2;
032 ALL;
033 W2SW;
Fremont County
Lander FO

WY-1011-154 301.000 Acres
T.0380N, R.0940W, 06th PM, WY
Sec. 029 SWNW,N2SW,SWSW,NWSE;
030 LOTS 1-4;
Fremont County
Lander FO

WY-1011-155 60.000 Acres
T.0390N, R.0940W, 06th PM, WY
Sec. 005 S2NWSE,SWSE;
Fremont County
Lander FO
BUREAU OF RECLAMATION

APPENDIX C

Map of Proposed Lease Parcels


November 2010, Oil and Gas Sale Parcels
SURFACE OWNERSHIP
Bureau of Indian Affairs
Bureau of Land Management
Bureau of Reclamation
Department of Defense
Fish & Wildlife
Forest Service
Private
State
Water
Nov. 2010 Prelim OG Sale Parcels
US Highway
State Highway
Wilderness Study Area
Citizens Proposed Wilderness
LFO Boundary
SG Core Areas, Version 3
Alternative B SG ACEC
Yermo Critical Habitat
Existing ACEC
0 6 12
Miles
NAD 1983 UTM ZONE 12N
N
NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT FOR USE OF THE DATA FOR PURPOSES NOT INTENDED BY BLM.