

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

**Environmental Assessment
DOI-BLM-WY-090-EA10-157**

November 2010

May 2011 Lease Parcels

High Desert District Office
280 Highway 191 North
Rock Springs, Wyoming 82003



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BUREAU OF LAND MANAGEMENT
HIGH DESERT DISTRICT OFFICE
ENVIRONMENTAL ASSESSMENT FOR
MAY 2011 COMPETITIVE OIL AND GAS LEASE SALE
DOI-BLM-WY-090-2010-142-EA

INTRODUCTION

Bureau of Land Management's (BLM) policy derived from various laws, including the Mineral Leasing Act of 1920 (MLA), as amended [30 U.S.C. 181 *et seq.*] and the Federal Land Policy and Management Act of 1976, is to make mineral resources available for disposal and to encourage development of mineral resources to meet national, regional, and local needs. As required under the MLA, the Federal Onshore Oil and Gas Leasing Reform Act of 1987 (FOOGLRA), and Title 43 Code of Federal Regulations (CFR) 3120.1-2(a), the BLM Wyoming State Office (WSO) 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 WSO at least 90 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.

As part of the May 2011 lease sale preparation process the BLM Wyoming State Office submitted the draft parcel list to the High Desert District Office (HDD), Kemmerer Field Office (KFO), and Rawlins Field Office (RFO) for review and processing. (Note: all parcels on the May 2011 list are located within the Rawlins and Kemmerer Field Offices.) The respective Field Office staffs, in coordination and consultation with the District Office, have reviewed the legal descriptions of the parcels to determine if they are in areas open to leasing; if appropriate stipulations have been included or additional stipulations are needed; whether or not new information is available since the land use plan was approved; if appropriate consultations have been conducted or if additional consultations are needed; and if there are special resource conditions of which potential bidders should be made aware. This Environmental Assessment (EA) has been prepared by the HDD to document this review, as well as to disclose the affected environment, the anticipated impacts, and proposed mitigation of impacts.

The following Environmental Assessment (EA) documents the HDD, RFO, and KFO review of the 34 parcels containing 51,334.42 acres (10 parcels/14,260.91 acres in RFO and 24 parcels/37,073.51 acres in KFO) that would be offered in the May 2011 Competitive Oil and Gas Lease Sale. It serves to verify conformance with the approved Rawlins and Kemmerer land use plans and provides the rationale for offering, deferring or deleting parcels from a lease sale as well as providing rationale for attaching lease stipulations to specific parcels.

1.0 Purpose and Need

The BLM's purpose for offering parcels and subsequent issuance of leases in the May 2011 lease sale is to provide areas for the potential exploration and development of additional oil and gas resources to help meet the nation's current and expanding need for energy sources. Wyoming is

a major source of natural gas for heating and electrical energy production in the United States. The offering for lease, sale, and subsequent issuance of oil and gas leases is needed to meet the requirements of MLA, FLPMA, and the minerals management objectives in the Rawlins and Kemmerer Resource Management Plans (RMP). Oil and gas leasing provides oil and gas companies the opportunity to expand existing areas of production and to locate previously undiscovered oil and gas resources to help meet the public's energy demands.

Decisions to be made based on this analysis include which parcels would be offered for lease, which parcels would be deferred from the May 2011 lease sale, which parcels are not available for leasing, and what stipulations will be placed on the parcels that would be offered for lease

1.1 Conformance with Applicable Land Use Plan and Other Environmental Assessments

Pursuant to 40 Code of Federal Regulations (CFR) 1508.28 and 1502.21, this EA tiers to and conforms with the approved Rawlins Resource Management Plan (RRMP) and Final Environmental Impact Statement (FEIS) (2008). The Final RMP was approved by a Record of Decision (ROD) signed in December 2008. The EA also tiers to and is compliant with the approved Kemmerer Resource Management Plan (KRMP)/Final Environmental Impact Statement (FEIS) (2010)

The Rawlins and Kemmerer RMPs identify lands open closed and unavailable for leasing, and provide specific stipulations that would be attached to new leases offered in certain areas.

Of the 10 parcels in the Rawlins Field Office, two (2) are completely unavailable for leasing based on decisions in the Rawlins RMP/ROD. Of the 24 nominated parcels in the Kemmerer Field Office Area, 13 parcels are completely unavailable for leasing based on decisions in the Kemmerer RMP/ROD, and five (5) parcels are partially unavailable. An additional parcel (033) and portions of 4 others (021, 029, 031, and 032) fall within the Cokeville Meadows National Wildlife Refuge and are not available for leasing per 43 CFR 3101.5-1, which species federal minerals within National Wildlife Refuges are not available for oil and gas leasing unless drainage is occurring through non-federal wells. There are no producing federal or nonfederal in proximity to the Refuge.

THE FOLLOWING WHOLE PARCELS ARE UNAVAILABLE FOR LEASING AND ARE DELETED IN WHOLE FROM THIS SALE:

1. WY-1105-008 - Within the Rawlins RMP Upper Muddy Creek/Grizzly and Cow Butte/Wild Cow Wildlife Habitat Management Areas (WHMAs) (1650.540 acres)
2. WY-1105-009 - Within the Rawlins RMP Upper Muddy Creek/Grizzly WHMA (648.410 acres)
3. WY-1105-013 - Within the Kemmerer RMP Bear River Divide Special Management Area (SMA) (2400.000 acres).
4. WY-1105-014 - Within the Kemmerer RMP Rock Creek/Tunp SMA (1889.050 acres).
5. WY-1105-015 - Within the Kemmerer RMP Rock Creek/Tunp SMA (797.210 acres).
6. WY-1105-016 - Within the Kemmerer RMP Rock Creek/Tunp SMA (1280.000 acres).
7. WY-1105-018 - Within the Kemmerer RMP Rock Creek/Tunp SMA (2556.640 acres).
8. WY-1105-019 - Within the Kemmerer RMP Rock Creek/Tunp SMA (2516.410 acres).
9. WY-1105-020 - Within the Kemmerer RMP Rock Creek/Tunp SMA (1984.130 acres).
10. WY-1105-022 - Within the Kemmerer RMP Rock Creek/Tunp SMA (2009.510 acres).

11. WY-1105-023 - Within the Kemmerer RMP Rock Creek/Tunp SMA (1874.320 acres).
12. WY-1105-024 - Within the Kemmerer RMP Rock Creek/Tunp SMA (2040.880 acres).
13. WY-1105-025 - Within the Kemmerer RMP Rock Creek/Tunp SMA (2224.510 acres).
14. WY-1105-026 - Within the Kemmerer RMP Rock Creek/Tunp SMA (483.060 acres).
15. WY-1105-028 - Within the Kemmerer RMP Rock Creek/Tunp SMA (768.590 acres).
16. WY-1105-033 – Within the Cokeville Meadows National Wildlife Refuge (81.240 acres).

THE FOLLOWING PORTIONS OF PARCELS ARE UNAVAILABLE FOR LEASING AND ARE DELETED FROM THIS SALE:

1. WY-1105-011 1955.380 Acres (Within the Kemmerer RMP Rock Creek/Tunp SMA)
T.0210N, R.1190W, 06th PM, WY
Sec. 001 LOTS 5-8;
001 S2N2,N2S2;
001 SWSW (EXCL .92 AC IN RR
001 ROW WYW0294448);
002 LOTS 5-8;
002 S2N2,N2S2,SESE;
003 LOTS 5;
004 LOTS 7,8;
004 N2SW,SWSW;
004 SESW (EXCL .50 AC IN RR
004 ROW WYW0294448);
005 LOTS 5-8;
005 S2N2,S2;
2. WY-1105-012 1653.800 Acres (Within the Kemmerer RMP Rock Creek/Tunp SMA)
T.0210N, R.1190W, 06th PM, WY
Sec. 006 LOTS 8-10,13,14;
006 S2NE,SENE,E2SW,SE;
006 LOTS 11,12 (EXCL 10.10 AC
006 IN RR ROW WYW0294448);
007 LOTS 5,6;
007 NENW;
007 S2 OF LOT 8;
007 N2 OF LOT 7 (EXCL 6.43 AC
007 IN RR ROW WYW0294448);
008 S2SE;
017 N2NE,SENE,E2NW,NESE;
018 LOTS 5-8;
018 NE,E2W2,W2SE
3. WY-1105-017 779.53 Acres (Within the Kemmerer RMP Rock Creek/Tunp SMA)
T.0220N, R.1190W, 06th PM, WY
Sec. 018 LOTS 35;
019 E2E2,SWSE (EXCL 22.96 AC
019 IN RR ROW WYW0294448);
030 NE,N2SE,SESE (EXCL
030 17.91 AC IN RR ROW WYW0294448);
031 NENE,SE;
031 LOT 12,E2SW (EXCL 13.31
031 AC IN RR ROW WYW0294448);
4. WY-1105-029 929.300 Acres (Within the Kemmerer RMP Rock Creek/Tunp SMA)
T.0240N, R.1190W, 06th PM, WY
Sec. 033 SESE;
034 LOTS 3,4,9,10,13;
034 W2;
035 LOTS 1,4,6,18,21,23,25-27;

- 035 NENW;
- 036 LOTS 5,6,22,26,27;
- 036 TR 118A,118B;
- 5. WY-1105-030 880.00 Acres (Within the Kemmerer RMP Bear River Divide SMA)
T.0210N, R.1200W, 06th PM, WY
Sec. 001 SENE,E2SE (EXCL 32.14 AC
001 IN RR ROW WYW0294448 AND
001 RR ROW UNDER ACT OF
001 3/3/1875);
013 NE,NENW,S2NW,S2;
14 S2S2,NESE
- 6. WY-1105-017 649.18 Acres (Within Cokeville Meadows National Wildlife Refuge 43 CFR 3101.5-1)
T.0220N, R.1190W, 06th PM, WY
Sec. 018 LOTS 6,17,20,33;
018 LOTS 37 (EXCL 3.67 AC IN
018 RR ROW WYW0294448);
019 W2NE,NWSE;
019 LOTS 16-19 (EXCL 22.96 AC
019 IN RR ROW WYW0294448);
030 LOTS 8-10;
030 LOT 5,SEnw,NESW (EXCL
030 17.91 AC IN RR ROW
030 WYW0294448).
- 7. WY-1105-021 833.29 acres (Within Cokeville Meadows National Wildlife Refuge 43 CFR 3101.5-1)
T.0230N, R.1190W, 06th PM, WY
Sec. 006 LOTS 9-11,13,14,18,19,22-24;
006 SENW,NESW;
007 LOTS 10,11,19,20,23-27;
007 SENW,E2SW;
018 LOTS 13,27,28,30;
19 LOTS 11;
- 8. WY-1105-029 206.51 acres (Within Cokeville Meadows National Wildlife Refuge 43 CFR 3101.5-1)
T.0240N, R.1190W, 06th PM, WY
Sec. 031 LOTS 14,19;
31 E2SW,W2SE
- 9. WY-1105-031 869.88acres (Within Cokeville Meadows National Wildlife Refuge 43 CFR 3101.5-1)
T.0220N, R.1200W, 06th PM, WY
Sec. 003 E2SE;
010 LOTS 1,4;
010 E2NE,SWNE,W2SE;
011 LOTS 6,7,17,29;
014 LOTS 5;
015 LOTS 1,4,5,7;
015 NWNE,E2NW;
021 LOTS 6;
022 SWNW;
025 LOTS 2,17;
025 SENE,NESE;
035 LOTS 20,21,24,25;
36 LOTS 9-12;
- 10. WY-1105-032 469.95 acres (Within Cokeville Meadows National Wildlife Refuge 43 CFR 3101.5-1)
T.0230N, R.1200W, 06th PM, WY
Sec. 013 E2, E2SW;
024 LOTS 1,4,7;
024 NENW;

Total acreage deleted from the May 2011 lease parcel offering: 34,431.32 acres.

The following partial parcels are recommended for DEFERRAL from leasing per WY-IM-2010-013 due to parcels being within Greater Sage-grouse core area pending completion of the Greater Sage-grouse amendment to the Kemmerer RMP (Note, these partial parcels adjoin areas in parcels WY-1105-011 and WY-1105-012 that fall within SMAs identified in the Kemmerer RMP as unavailable for leasing). Parcel WY-1105-010 would be deferred pending field review for Lands with Wildneress Characteristics determination:

1. WY-1105-011 318.540 Acres
T.0210N, R.1190W, 06th PM, WY
Sec. 003 LOTS 7,8;
004 LOTS 5,6;
004 S2N2;
2. WY-1105-012 80.000 Acres
T.0210N, R.1190W, 06th PM, WY
Sec. 018 E2SE;
3. WY-1105-010 2260.170 Acres
T.0140N, R.0980W, 06th PM, WY
Sec. 007 LOTS 3-4;
007 E2SW,SE;
018 LOTS 3-4;
018 E2SW,SE;
019 LOTS 1-4;
019 E2,E2W2;
030 LOTS 1-4;
030 E2,E2W2;
031 LOTS 1-4 ;
031 E2W2;

Total acres deferred from the May 2011 lease sale: 2,658.71 acres

1.2 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.

RFO and KFO wildlife biologists/endangered species specialists reviewed each parcel for this environmental assessment. Individual parcels may contain threatened, endangered, candidate, and BLM sensitive species (see Section 3.0 and Appendix A). The administrative act of offering and subsequent issuance of oil and gas lease parcels is consistent with the decisions in the Rawlins and Kemmerer RMPs, including the decision relating to threatened, endangered, candidate, and BLM sensitive species. Offering and subsequent issuance of oil and gas leases is also consistent with the Biological Assessment and Biological Opinion for these RMPs. No further consultation with the USFWS is required at this stage.

Compliance with Section 106 responsibilities of the National Historic Preservation Act are adhered to by following the BLM Wyoming- State Historic Preservation Officer (SHPO) protocol agreement, which is authorized by the National Programmatic Agreement between

BLM, the Advisory Council on Historic Preservation, and the National Conference of SHPOs, and other applicable BLM handbooks.

1.3 Federal Leasing of Fluid Minerals

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 Field Office 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.

The offering and subsequent issuance of oil and gas leases is strictly an administrative action, which, in and of itself, does not cause or directly result in any surface disturbance. The issuance of an oil and gas lease, however, does convey to the lessee the rights to occupy, explore, and extract oil & gas resources from the lease with prior approval of the Authorized Officer. These post-leasing actions can result in surface impact.

As part of the lease issuance process, nominated parcels are reviewed against the appropriate land use plan, and stipulations are attached to mitigate any known environmental or resource conflicts that may occur on a given lease parcel. As stated above, on-the-ground impacts would potentially occur when a lessee applies for and receives approval to explore, occupy and/or drill on the lease. The BLM cannot determine at the leasing stage whether or not a nominated parcel will actually be leased, or if it is leased, whether or not the lease would be explored or developed. According to the Tenth Circuit Court of Appeals, site-specific NEPA analysis at the leasing stage may not be possible absent concrete development proposals. Whether such site-specific analysis is required depends upon a fact-specific inquiry. Often, where environmental impacts remain unidentifiable until exploration can narrow the range of likely drilling sites, filing of an APD to drill may be the first useful point at which a site-specific environmental appraisal can be undertaken (*Park County Resource Council, Inc. v. U.S. Department of Agriculture*, 10th Cir., April 17, 1987). In addition, the IBLA has decided that, "BLM is not required to undertake a site-specific environmental review prior to issuing an oil and gas lease when it previously analyzed the environmental consequences of leasing the land. . . ." (*Colorado Environmental Coalition, et. al, IBLA 96-243, decided June 10, 1999*). However, when site-specific impacts are reasonably foreseeable at the leasing stage, NEPA requires the analysis and disclosure of such reasonably foreseeable site specific impacts. (*N.M ex rel. Richardson v. BLM*, 565 F.3d 683, 718-19 (10th Cir. 2009). BLM has not received any development proposals concerning the proposed lease parcels addressed in this EA. While the EA does not provide site-specific development analysis, it does provide generic analysis of 3 plausible development scenarios for analysis purposes. Accordingly, additional NEPA documentation would be prepared at the time an APD(s) or field development proposal are submitted. This site-specific environmental documentation would provide site-specific analysis for the well pad location or locations. Additional conditions of approval (mitigation) may be applied at that time.

The Energy Policy Act of 2005 categorically excludes certain oil and gas development activities from further NEPA analysis. However, excluded projects must conform to the applicable RMP including any restrictions to development presented in the Plan.

Offering, sale and issuance of leases would not be in conflict with any local, county, or state plans.

Once a parcel is sold and the lease is issued, the lessee 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 (43 CFR 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, then ownership of the minerals leased revert back to the federal government and may be leased again.

Drilling of wells on a lease is not permitted until the lessee or operator secures approval of a drilling permit and a surface use plan specified in 43 CFR 3162.

1.4 Scoping and Public Involvement

1.4.1 Scoping

Internal BLM scoping determined the parcels individually or collectively contain one or more of the following resource issues or concerns:

- Crucial big game winter habitat
- Greater sage-grouse leks and nesting habitat
- Greater sage-grouse core areas
- Mountain plover nesting habitat
- Raptor nesting habitat
- Sensitive Spices
- Water depletion affects to downstream threatened and endangered fish species
- Sensitive soils
- Slopes greater than 25 percent
- Riparian and live water habitat
- Air quality, including green house gases
- Surface and groundwater quality
- Wilderness characteristics
- Visual resource management (VRM)
- Recreation
- Socioeconomics
- Vegetation, including invasive non-native species
- Cultural and paleontological resources, including historic trails
- Leasable coal resources
- Prominity to residences
- Livestock grazing
- Watershed and hydrology

1.4.2 Public Participation

Public participation was initiated with this EA was entered into the Kemmerer Field Office NEPA tracking database on the KFO website in September 2010. The new release was issued on

October 6, 2010 notifying the public that the draft EA was posted on the BLM-Wyoming website for a 30 day public comment period. As required by BLM Policy on federal split estate mineral resources, letters were sent soliciting comment from all surface owners of parcels on the May 2011 list with split estate federal minerals. Three letters of comment were received from the public at large. An additional letter of comment was received from the US Fish and Wildlife Service. No comments were received from the split estate owners. All comments were reviewed and taken into consideration in the completion of the final EA. Changes were made to the EA where appropriate. Refer to Appendix E for individually coded substantive comments and agency responses, including references to text changes.

PROPOSED ACTION AND ALTERNATIVES

2.0 Alternatives Including the Proposed Action

Thirty-four (34) lease parcels (51,334.42 acres) were originally nominated and proposed for inclusion in the May 2011 Competitive Oil and Gas Lease Sale. Ten parcels are governed by the Rawlins RMP and 24 parcels by the Kemmerer RMP. Fifteen (15) parcels and portions of five (5) additional parcels fall within RMP designated areas that are unavailable for leasing and are therefore not carried into the proposed action or any other alternative (see Section 1.1).

2.1 Alternative A -- No Action

Under the No Action Alternative BLM-Wyoming would not offer any of the nominated parcels for lease at the May 2011 lease sale. 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 all thirty-four (34) lease parcels would be withdrawn from lease sale. It is not expected that demand for energy, including oil and gas, will go down; choosing the NO Action alternative, would not prevent future leasing in these areas consistent with land use planning decisions, and subject to appropriate stipulations, identified in the respective Rawlins and Kemmerer RMPs. Therefore, it is fully anticipated that these parcels would be nominated and offered at a future date. While future leases may contain more restrictive lease terms, it is reasonable to assume that a substantial portion of the development possible under current planning decisions would also be possible under future leases.

2.2 Alternative B -- Proposed Action

Under the Proposed Action BLM-Wyoming would offer nine (9) whole parcels and portions of five (5) additional parcels covering 14,244.36 acres of federal minerals that are available under the Rawlins and Kemmerer RMPs/RODs for oil and gas leasing. Standard terms and conditions/stipulations would apply. Lease stipulations (as required by 43CFR 3131.3) were added to each parcel as identified by the RFO and KFO to address site specific concerns or new information not identified in the land use planning process.

Additionally, two (2) partial parcels (WY-1105-011 and 012) containing approximately 398.54 acres per WY Instruction Memorandum (IM) No. WY-2010-013 would be deferred from offering for lease pending completion of the Greater Sage-grouse amendment to the Kemmerer RMP (see Section 1.1). Parcel WY-1105-010 (2260.17 acres) would be deferred pending field review for Lands with Wilderness Characteristics determination in accordance with Secretarial

Order 3310 and draft BLM Manual 6300-1. No lease stipulations would be attached to the portions of the three (3) parcels that would be deferred.

The following parcels would be offered for the lease with the lease stipulations and lease notices. Parcel number, acreage, and location of parcels are listed in Appendix A, with the attached stipulations.

WY-1105-001 (entire parcel)	637.01 acres
WY-1105-002 (entire parcel)	308.00 acres
WY-1105-003 (entire parcel)	480.00 acres
WY-1105-004 (entire parcel)	2232.87 acres
WY-1105-005 (entire parcel)	2433.20 acres
WY-1105-006 (entire parcel)	2490.71 acres
WY-1105-007 (entire parcel)	1120.00 acres
WY-1105-021 (partial parcel,	36.01 acres (not in Cokeville Meadows NWR)
WY-1105-027 (entire parcel)	1362.04 acres
WY-1105-029 (partial parcel)	32.32 acres (not in Cokeville Meadows NWR)
WY-1105-030 (partial parcel)	1190.61 acres
WY-1105-031 (partial parcel)	1148.35 acres (not in Cokeville Meadows NWR)
WY-1105-032 (partial parcel)	390.75 acres (not in Cokeville Meadows NWR)
WY-1105-034 (entire parcel)	382.52 acres
TOTAL	14,244.39 acres

2.3 Alternative C-Maximum Parcels Offering

Under Alternative C BLM –Wyoming would offer all the parcels under Alternative B, plus it would offer all parcels deferred under Alternative B. This alternative would make approximately 16,903.10 acres available for leasing. All other aspects of this alternative is the same as the proposed action. Under Alternative C the following parcels/partial parcels would be offered for leasing:

WY-1105-001 (entire parcel)	637.01 acres
WY-1105-002 (entire parcel)	308.00 acres
WY-1105-003 (entire parcel)	480.00 acres
WY-1105-004 (entire parcel)	2232.87 acres
WY-1105-005 (entire parcel)	2433.20 acres
WY-1105-006 (entire parcel)	2490.71 acres
WY-1105-007 (entire parcel)	1120.00 acres
WY-1105-010 (entire parcel)	2260.17 acres
WY-1105-011 (partial parcel)	318.54 acres
WY-1105-012 (partial parcel)	80.00 acres
WY-1105-021 (partial parcel,	36.01 acres (not in Cokeville Meadows NWR)
WY-1105-027 (entire parcel)	1362.04 acres
WY-1105-029 (partial parcel)	32.32 acres (not in Cokeville Meadows NWR)
WY-1105-030 (partial parcel)	1190.61 acres
WY-1105-031 (partial parcel)	1148.35 acres (not in Cokeville Meadows NWR)
WY-1105-032 (partial parcel)	390.75 acres (not in Cokeville Meadows NWR)
WY-1105-034 (entire parcel)	382.52 acres
TOTAL.....	16,903.10 acres

2.4 Alternatives Considered But Not Analyzed in Detail

An alternative was considered that would offer for leasing all 34 parcels from the original preliminary draft parcel list including the fifteen (15) entire parcels and portions of five (5) additional parcels that are located in an areas closed to leasing under the RFO and KFO RMPs (see sections 1.1 and 2.0 above). However, inclusion of the parcels and portions of parcels that are in areas that are not available for leasing would not be in conformance with the respective land use plans; therefore this alternative was deleted from detailed analysis in this EA.

An alternative was considered that would offer all of the parcels that are administratively available for leasing with a no surface occupancy stipulation. This alternative was deleted from detailed analysis because it does not meet the purpose and needed of providing areas for the potential exploration and development of additional oil and gas resources to help meet the nation's current and expanding need for energy sources. Additionally, it prohibits surface occupancy for oil and gas development; whereas other non-oil & gas occupancy would not be similarly constrained. Further, it unnecessarily constrains oil and gas occupancy when less restrictive stipulations would adequately mitigate the anticipated impact.

No other alternatives to the proposed action were apparent which would meet the purpose and need of the proposed action.

AFFECTED ENVIRONMENT

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 focus on the relevant major resources or issues. Only those aspects of the affected environment that are potentially impacted are described in detail. The following are not present on any of the parcels or partial parcels available for offer: Prime or Unique Farmlands and Woodlands/Forestry.

The proposed lease parcels are located in Albany, Carbon, Laramie, Lincoln, Sweetwater, and Uinta Counties, Wyoming. All parcels were reviewed against the Master Leasing Plan (MLP) requirements in BLM Washington Office IM-2010-117. None of the parcels were determined to be in an area that met the criteria; see Appendix D for more information.

3.1 NO ACTION ALTERNATIVE

3.1.1 Socioeconomics Resources

Table 3.1.1 shows changes in population for each county between 1980 and 2000. Laramie County was the fastest-growing county, increasing its population by a more than 16, 000 individuals; Albany County had the smallest population change which was closest to the national average. Carbon County declined in population by about thirty percent (28.5%), and Sweetwater County declined in population by 7 percent.

Table 3.1.1: Population by County, 1980-2000

Area	Population in 1980	Population in 2000	Change 1980-2000	
			Total	Percent
Albany County	29,062	32,014	1,298	4.5
Carbon County	21,896	15,639	-6,257	-28.5
Laramie County	68,649	81,607	16,735	24.4
Lincoln County	12,177	14,573	4,206	34.5
Sweetwater County	41,723	37,613	-2,960	-7.1
Uinta County	13,021	19,742	7192	55.2
Wyoming	469,557	493,782	45,447	9.7

Sources: U.S. Census Bureau

Social conditions in the Rawlins and Kemmerer Field Office areas that concern human communities include towns, cities, rural areas, and the custom, culture, and history of the area as it relates to human settlement, as well as current social values. BLM management actions can impact social conditions in the area and in nearby communities. The area considered for this analysis is comprised of the counties of Uinta, Lincoln, Carbon, Albany, Laramie, and Sweetwater Counties.

In 2005, Sweetwater was the most populous county in the area, with 37,975 people, Albany County had 29,060, Carbon County had 15,437, Lincoln County had 15,999 people, and Uinta County had 19,939 people (Wyoming Economic Analysis Division 2006a). All five counties experienced rising populations in the late 1970s and early 1980s during the previous oil and gas boom, and population decreases following the oil and gas bust in the mid-1980s.

A substantial proportion of the population of the study area lives outside incorporated cities and towns. For instance, about 8,750 people in Lincoln County, or about 55 percent of the county's population, lived outside incorporated areas in 2005. Similarly, 24 percent of the people in Uinta County (4,900 people) and 18 percent of those in Sweetwater County (about 6,700 people) lived outside cities and towns in 2005 (Wyoming Economic Analysis Division 2006a). This population pattern contributes to the largely rural and small-town character of the study area.

The economy of the study area is based primarily on resource development (e.g., mining, agriculture) and services. Mining, including oil and gas, provides a large part of the employment and income of the communities in the area. Mining has been the key economic driver for development of the communities in southwestern Wyoming and continues to provide much of the economic base in terms of jobs, household incomes, and tax revenues that allow governments at the local, state, and national level to attempt to meet the demand for essential services that is being driven by the growth in the oil and gas sector.

Although the U.S. Census Bureau (2006) does not make available all data on employee counts and payrolls due to confidentiality requirements, the data that are provided help to show the economic importance of mineral commodities. Oil and gas extraction and operations support activities contribute substantially to mining-related earnings in all three counties. Oil and gas extraction and operations support contributes at least 120 jobs in Lincoln County (at least 20

percent of mining-related jobs), at least 590 jobs in Sweetwater County (at least 35 percent of mining-related jobs), and all of the 1,015 mining-related jobs in Uinta County (100%).

In general, resource development and protection are both important to sustaining the values within the area. However, the challenge is seeking an appropriate balance between resource development and protection, which is central to the BLM's mission and the RMP process. Therefore, even though some individuals and groups give a high priority to resource protection, while others give a high priority to resource development; it is incumbent on the BLM to find an appropriate balance between these two competing philosophies.

3.2 ALTERNATIVE B: PROPOSED ACTION (OFFER 10 WHOLE PARCELS AND PORTIONS OF 5 ADDITIONAL PARCELS.)

3.2.1 AFFECTED ENVIRONMENT COMPONENTS OCCURRING WITHIN EACH THE PARCELS OFFERED UNDER ALTERNATIVE B.

SITE VISITS:

A site visit was conducted for parcel WY-1105-010 in August to review the Dispersed Recreation Use Area designation and other resource values identified in the Rawlins RMP. Parcel 010 was also reviewed through aerial photography to confirm the resource values identified in the RMP and the Rawlins Field Office GIS database. Parcels 001, 002, 003, 004, 005, 006, 007, 011, 012, 021, 027, 029, 030, 031, 032, and 034 were also reviewed through aerial photography to confirm the resource values identified in the Rawlins RMP and the Rawlins Field Office Geographic Information System (GIS) database and Kemmerer RMP and Kemmerer Field Office GIS database with accurate for the lease parcels. Site visits to parcels 001-007, 011, 012, 021, 027, 029-032, and 034 were conducted in January 2011. While all 15 parcels were snow covered, the site visits did not reveal any resource values that were not already apparent through the IDT review of the Rawlins and Kemmerer Field Office GIS databases and 2009 aerial photography of the parcels.

RESOURCE VALUES BY PARCEL:

WY-1105-001 (entire parcel is available to be offered for lease under Alternatives B and C): The entire parcel is split estate (private surface/federal minerals). The Rawlins RMP does not designate Visual Resource Management (VRM) classifications for non-federal lands; hence the private lands in parcel WY-1105-001 have no VRM designation. The parcel contains riparian habitat and slopes greater than 25 percent. The parcel is located in an area with the potential to provide habitat for Wyoming pocket gopher and mountain plover. The riparian area provides potential habitat for a variety of amphibian and/or reptilian species. The parcel does not fall within a sage grouse core area, nor does it fall within any BLM grazing allotments. Due to the private surface, the parcel has the potential to have occupied dwellings on or within ¼ mile. The vegetation type on the parcel is a combination of grasslands and riparian dominated by grasses, forbs, sedges in the lower lying areas and agricultural croplands. The parcel lies within the Platte River watershed and is subject to water depletion restrictions to protect threatened or endangered fish species occurring in the river proper. Refer to Appendices B, C, and D for sage-grouse core area, wilderness characteristics, and MLP determinations. The soils in parcel 001 are lower-elevation upland soils with a relatively thick, dark organic based surface and A horizons and a 15 to 17 inch annual precipitation average. They are moderately to highly productive and are

generally stable, but do have a low to moderate erosion potential. The parcel also contains some riparian soils that are moderately deep, productive, and have a low to moderate erosion potential.

WY-1105-002 (entire parcel is available to be offered for lease under Alternatives B and C): The entire parcel is split estate (private surface/federal minerals). The Rawlins RMP does not designate VRM classifications for non-federal lands; hence the private lands in parcel WY-1105-002 have no VRM designation. The parcel contains riparian habitat, but does not have slopes greater than 25 percent. The parcel is located in an area with the potential to provide habitat for Wyoming pocket gopher and mountain plover. The riparian area provides potential habitat for a variety of amphibian and/or reptilian species. The parcel does not fall within a sage grouse core area, nor does it fall within any BLM grazing allotments. Due to the private surface, the parcel has the potential to have occupied dwellings on or within ¼ mile. The vegetation type on the parcel is a combination of grasslands and riparian dominated by grasses, forbs, sedges. The parcel lies within the Platte River watershed and is subject to water depletion restrictions to protect threatened or endangered fish species occurring in the river proper. Refer to Appendices B, C, and D for sage-grouse core area, wilderness characteristics, and MLP determinations. The soils in parcel 002 are mid-elevation upland soils that are generally shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a thin organic based surface horizon and a 10 to 14 inch precipitation zone. They are moderately productive and are generally stable but do have areas with moderate or greater erosion potential, especially on slopes greater than 25 percent. The parcel also contains some riparian soils that are moderately deep, productive, and have a low to moderate erosion potential.

WY-1105-003 (entire parcel is available to be offered for lease under Alternatives B and C): The entire parcel is split estate (private surface/federal minerals). The Rawlins RMP does not designate VRM classifications for non-federal lands; hence the private lands in parcel WY-1105-003 have no VRM designation. The parcel contains riparian habitat and has slopes greater than 25 percent. The parcel provides crucial big game winter, sage-grouse winter concentration, and raptor nesting habitat. The parcel also potentially provides habitat for Wyoming pocket gopher and mountain plover. The riparian area provides potential habitat for a variety of amphibian and/or reptilian species. The parcel does not fall within a sage grouse core area. The parcel is located within the West Anschutz grazing allotment. Due to the private surface, the parcel has the potential to have occupied dwellings on or within ¼ mile. The parcel falls with sagebrush dominated shrublands with a variety of forbs and grasses. The parcel lies within the Platte River watershed and is subject to water depletion restrictions to protect threatened or endangered fish species occurring in the river proper. Refer to Appendices B, C, and D for sage-grouse core area, wilderness characteristics, and MLP determinations. The soils in parcel 003 are mid-elevation upland soils that are generally shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a thin organic based surface horizon and a 10 to 14 inch precipitation zone. They are moderately productive and are generally stable but do have areas with moderate or greater erosion potential, especially on slopes greater than 25 percent. The parcel also contains some riparian soils that are moderately deep, productive, and have a low to moderate erosion potential.

WY-1105-004 (entire parcel is available to be offered for lease under Alternatives B and C): The entire parcel is BLM administered surface and mineral estates. The parcel has a VRM Class III classification. The parcel contains riparian habitat and has slopes greater than 25 percent. A portion of parcel 004 falls within a sage-grouse core area. The parcel provides crucial big game

winter, sage-grouse winter concentration, sage grouse nesting, and raptor nesting habitat. The parcel also potentially provides habitat for black-footed ferret, white-tailed prairie dog, Wyoming pocket gopher, mountain plover, and Beaver Rim phlox. The riparian area provides potential habitat for a variety of amphibian and/or reptilian species. There are no known occupied dwellings within ¼ mile of the parcel. The parcel lies within the Platte River watershed and is subject to water depletion restrictions to protect threatened or endangered fish species occurring in the river proper. The predominant vegetation type is sagebrush dominated shrublands with a variety of forbs and grasses. The parcel also has the potential to contain sensitive cultural resource sites. The parcel falls within a designated coal lease area and within the West Anschutz livestock grazing allotment. Refer to Appendices B, C, and D for sage-grouse core area, wilderness characteristics, and MLP determinations. The soils in parcel 004 are mid-elevation upland soils that are generally shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a thin organic based surface horizon and a 10 to 14 inch precipitation zone. They are moderately productive and are generally stable but do have areas with moderate or greater erosion potential, especially on slopes greater than 25 percent. The parcel also contains some riparian soils that are moderately deep, productive, and have a low to moderate erosion potential.

WY-1105-005 (entire parcel is available to be offered for lease under Alternatives B and C): The entire parcel is located on split estate lands. The Rawlins RMP does not designate VRM classifications for non-federal lands; hence the private/state lands in parcel WY-1105-005 have no VRM designation. The parcel contains riparian habitat and slopes greater than 25 percent. The parcel provides crucial big game winter, sage-grouse winter concentration, and raptor nesting habitat. The parcel also potentially provides habitat for white-tailed prairie dog, Wyoming pocket gopher, boreal toad, persistent sepal yellowcress, and Beaver Rim phlox. The riparian area provides potential habitat for a variety of amphibian and/or reptilian species. The parcel does not fall within a sage grouse core area. The parcel would be located within portions of the South and West Anschutz grazing allotments. Due to the private surface, the parcel has the potential to have occupied dwellings on or within ¼ mile. The predominant vegetation type is sagebrush dominated shrublands with a variety of forbs and grasses. The parcel also potentially contains sensitive cultural resource sites, and falls within the viewshed of Overland National Historic Trail. The parcel falls within a designated coal lease area. The parcel lies within the Platte River watershed and is subject to water depletion restrictions to protect threatened or endangered fish species occurring in the river proper. Refer to Appendices B, C, and D for sage-grouse core area, wilderness characteristics, and MLP determinations. The soils in parcel 005 are mid-elevation upland soils that are generally shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a thin organic based surface horizon and a 10 to 14 inch precipitation zone. They are moderately productive and are generally stable but do have areas with moderate or greater erosion potential, especially on slopes greater than 25 percent. The parcel also contains some riparian soils that are moderately deep, productive, and have a low to moderate erosion potential.

WY-1105-006 (entire parcel is available to be offered for lease under Alternatives B and C): The parcel is a combination of split estate lands (private surface/federal minerals) and federal lands administered by the BLM. The Rawlins RMP does not designate VRM classifications for non-federal lands; hence the private lands in parcel WY-1105-006 have no VRM designation. The federal lands have a VRM Class III designation. The parcel contains riparian habitat and slopes greater than 25 percent. The parcel falls within sage-grouse core area, contains or is

within ¼ mile of a sage-grouse lek, and contains sage-grouse nesting and winter concentration habitat. It also provides crucial big game winter and raptor nesting habitat, as well as potential habitat for black-footed ferret, boreal toad, Wyoming pocket gopher, and Beaver Rim phlox. The riparian area provides potential habitat for amphibian and/or reptilian species. Due to the private surface, the parcel has the potential to have occupied dwellings on or within ¼ mile. The predominant vegetation type is sagebrush dominated shrublands with a variety of forbs and grasses. The parcel also potentially contains sensitive cultural resource sites, and falls within the viewshed of Lincoln Road and UPRR Grade historic property. The parcel falls within a designated coal lease area. The parcel lies within the Platte River watershed and is subject to water depletion restrictions to protect threatened or endangered fish species occurring in the river proper. Refer to Appendices B, C, and D for sage-grouse core area, wilderness characteristics, and MLP determinations. The parcel falls within the Chace Block grazing allotment. The soils in parcel 007 are mid-elevation upland soils that are generally shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a thin organic based surface horizon and a 10 to 14 inch precipitation zone. They are moderately productive and are generally stable but do have areas with moderate or greater erosion potential, especially on slopes greater than 25 percent. The parcel also contains some riparian soils that are moderately deep, productive, and have a low to moderate erosion potential.

WY-1105-007 (entire parcel is available to be offered for lease under Alternatives B and C): The parcel is a combination split estate lands (private surface/federal minerals) and federal lands administered by the BLM. The Rawlins RMP does not designate VRM classifications for non-federal lands; hence the private lands in parcel WY-1105-007 have no VRM designation. The federal lands have a VRM Class III designation. The parcel contains riparian habitat and slopes greater than 25 percent. The parcel is not within a sage-grouse core area, but does provide sage-grouse nesting habitat and contains a sage-grouse lek. It also provides potential habitat for Wyoming pocket gopher, and white-tailed prairie dogs. The riparian area provides potential habitat for a variety of amphibian and/or reptilian species. Due to the private surface, the parcel has the potential to have occupied dwellings on or within ¼ mile. The predominant vegetation type is sagebrush dominated shrublands with a variety of forbs and grasses. The parcel also potentially falls within the viewshed of Cherokee Trail. The parcel lies within the Platte River watershed and is subject to water depletion restrictions to protect threatened or endangered fish species occurring in the river proper. A 1½ mile stretch of Deep Creek falls within the parcel. The parcel falls within the Deep Creek Pasture and Cherokee grazing allotments. Refer to Appendices B, C, and D for sage-grouse core area, wilderness characteristics, and MLP determinations. The soils in parcel 007 are mid-elevation upland soils that are generally shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a thin organic based surface horizon and a 10 to 14 inch precipitation zone. They are moderately productive and are generally stable but do have areas with moderate or greater erosion potential, especially on slopes greater than 25 percent. The parcel also contains some riparian soils that are moderately deep, productive, and have a low to moderate erosion potential.

WY-1105-021 (part of this parcel is available to be offered for lease under Alternative B and C): A portion of the parcel is split estate (private surface/federal minerals), the rest is federal land administered by BLM. Additionally, the entire split estate portion of the parcel, as well as part of the federal land falls within the Cokeville Meadows National Wildlife Refuge (NWR). The BLM lands have a VRM Class IV designation. Parcel 21 does not fall within Greater Sage-grouse core area, but does provide Greater Sage-grouse nesting habitat, as well as potential

habitat for Wyoming pocket gopher. The portion of the parcel within the NWR potentially provides habitat for Utes Ladies Tresses. The parcel contains riparian habitat and floodplains, but does not contain slopes greater than 25 percent or sensitive soils. The parcel provides spring, summer, and fall habitat for pronghorn, moose, and mule deer. The vegetation type on the parcel is a combination of grassland and riparian dominated by grasses, forbs, sedges in the lower lying areas and sagebrush dominated shrublands on the uplands. There are no occupied dwellings within ¼ mile of the parcel; however due to the private surface within and adjoining the parcel occupied dwellings could occur in the future. The parcel lies within the Bear River watershed and is subject to water depletion restrictions to protect threatened or endangered fish species occurring in the river proper. The BLM lands in the parcel fall within the Christy Canyon grazing allotment. Refer to Appendices B, C, and D for sage-grouse core area, wilderness characteristics, and MLP determinations. Parcel 21 contains upland soils in the 10-14 inch precipitation zone. Dominant parent materials include residuum formed over sediments; colluvium, including landslide and earth-flow deposits; and alluvium on footslopes and drainages. Geologic overthrusting and the resulting mixed exposures have produced variable soil textures and complex soil/geomorphic relationships. In the narrow valleys and drainages, very deep and well-drained reddish and brown soils are common. The upland ridges are characterized by soils of varying depths. Lower areas have an increased salinity potential. The soils are stable and have a low erosion potential. The parcel also contains floodplains and riparian areas that are highly productive. These soils are generally comprised of silty clays with a gravel or rock component. They are stable with a low to moderate erosion potential.

WY-1105-027 (entire parcel is available for offer under Alternatives B and C): The parcel is predominantly federal surface and federal minerals; however there is a sliver of split estate land within the parcel. The federal lands have a VRM Class II designation. The parcel falls within the viewshed of a Class I National Historic Trail (NHT). Parcel 27 does not fall within Greater Sage-grouse core area, but does provide Greater Sage-grouse nesting habitat, as well as potential habitat for Wyoming pocket gopher. The parcel contains crucial big game winter range, as well as spring, summer, and fall habitat for multiple big game species. The parcel does not contain riparian habitat, floodplains, slopes greater than 25 percent, or sensitive soils. The vegetation type in the parcel is sagebrush dominated shrublands with a variety of forbs and grasses, and provides potential habitat for Trelease's milkvetch and entire-leaved peppergrass. There are occupied dwellings within ¼ mile of the parcel. The parcel lies within the Bear River watershed and is subject to water depletion restrictions to protect threatened or endangered fish species occurring in the river proper. Parcel 27 also lies approximately ½ mile south of Spring Creek and ½ mile north of Sublette Creek, both of which contain conservation populations of Bonneville cutthroat trout. The parcel is located within the Siezmore grazing allotment. Refer to Appendices B, C, and D for sage-grouse core area, wilderness characteristics, and MLP determinations. Parcel 27 contains upland soils in the 10-14 inch precipitation zone. Dominant parent materials include residuum formed over sediments; colluvium, including landslide and earth-flow deposits; and alluvium on footslopes and drainages. Geologic overthrusting and the resulting mixed exposures have produced variable soil textures and complex soil/geomorphic relationships. In the narrow valleys and drainages, very deep and well-drained reddish and brown soils are common. The upland ridges are characterized by soils of varying depths. Lower areas have an increased salinity potential. The soils are stable and have a low erosion potential. The parcel also contains floodplains and riparian areas that are highly productive. These soils are generally comprised of silty clays with a gravel or rock component. They are stable with a low to moderate erosion potential.

WY-1105-029 (parts of this parcel are available to be offered for lease under Alternatives B and C): A portion of the parcel that is available to be offered for lease is split estate (private surface/federal minerals). Additionally, the split estate lands also fall within the Cokeville Meadows NWR. The Kemmerer RMP does not designate VRM classifications for non-federal lands, hence the available lands in parcel WY-1105-029 have no VRM designation; the adjoining public lands have a Class III VRM designation. The parcel does not fall within a Greater Sage-grouse core area, but does provide potential habitat for Wyoming pocket gopher. The parcel does not fall within any BLM livestock grazing allotments. The parcel contains riparian habitat, but does not contain slopes greater than 25 percent, floodplains, or sensitive soils. The parcel provides spring, summer, and fall habitat for pronghorn, moose, and mule deer. The vegetation type on the parcel is a combination of grasslands and riparian dominated by grasses, forbs, and sedges in the lower lying areas and sagebrush dominated shrublands on the uplands. There are no occupied dwellings within ¼ mile of the parcel; however due to the private surface within and adjoining the parcel occupied dwellings could occur in the future. The parcel lies within the Bear River watershed and is subject to water depletion restrictions to protect threatened or endangered fish species occurring in the river proper. Refer to Appendices B, C, and D for sage-grouse core area, wilderness characteristics, and MLP determinations. Parcel 29 contains upland soils in the 10-14 inch precipitation zone. Dominant parent materials include residuum formed over sediments; colluvium, including landslide and earth-flow deposits; and alluvium on footslopes and drainages. Geologic overthrusting and the resulting mixed exposures have produced variable soil textures and complex soil/geomorphic relationships. In the narrow valleys and drainages, very deep and well-drained reddish and brown soils are common. The upland ridges are characterized by soils of varying depths. Lower areas have an increased salinity potential. The soils are stable and have a low erosion potential. The parcel also contains floodplains and riparian areas that are highly productive. These soils are generally comprised of silty clays with a gravel or rock component. They are stable with a low to moderate erosion potential.

WY-1105-030 (parts of this parcel are available to be offered for lease under Alternatives B and C): The entire parcel is federal surface/minerals and falls within Class III VRM. The parcel is outside sage-grouse core areas, but does contain crucial big game winter range for multiple species, a sage grouse lek, sage-grouse nesting habitat, and potential habitat for Wyoming pocket gopher. The parcel contains riparian habitat and floodplains, but does not contain slopes greater than 25 percent or sensitive soils. The parcel falls with sagebrush dominated shrublands with a variety of forbs and grasses, and provides potential habitat for Beaver Rim phlox, Fremont bladderpod, and meadow pussytoes. The parcel falls within the viewshed of the Oregon/Mormon Trail. There are no occupied dwellings within ¼ mile of the parcel; however due to the private surface adjoining the parcel occupied dwellings could occur in the future. The parcel lies within the Bear River watershed and is subject to water depletion restrictions to protect threatened or endangered fish species occurring in the river proper. Refer to Appendices B, C, and D for sage-grouse core area, wilderness characteristics, and MLP determinations. The parcel is located in the Leefe grazing allotment. Parcel 30 contains upland soils in the 10-14 inch precipitation zone. Dominant parent materials include residuum formed over sediments; colluvium, including landslide and earth-flow deposits; and alluvium on footslopes and drainages. Geologic overthrusting and the resulting mixed exposures have produced variable soil textures and complex soil/geomorphic relationships. In the narrow valleys and drainages, very deep and well-drained reddish and brown soils are common. The upland ridges are

characterized by soils of varying depths. Lower areas have an increased salinity potential. The soils are stable and have a low erosion potential. The parcel also contains floodplains and riparian areas that are highly productive. These soils are generally comprised of silty clays with a gravel or rock component. They are stable with a low to moderate erosion potential.

WY-1105-031 (part of this parcel is available to be offered for lease under Alternative B and C): A portion of the parcel is split estate (private surface/federal minerals), the rest is BLM-administered public lands. Additionally, part of the split estate portion falls within the Cokeville Meadows NWR. The Kemmerer RMP does not designate VRM classifications for non-federal lands, hence the private lands in parcel WY-1105-031 have no VRM designation; however, the public lands have a Class IV VRM designation. Parcel 31 does not fall within Greater Sage-grouse core area, but does provide potential habitat for Wyoming pocket gopher, white-faced ibis, Trelease's milkvetch, northern leopard frog, entire-leaved peppergrass, and Beaver Rim phlox. The parcel contains riparian habitat and floodplains, but does not contain slopes greater than 25 percent or sensitive soils. The parcel provides spring, summer, and fall habitat for pronghorn, moose, and mule deer. The vegetation type on the parcel is a combination of grassland and riparian dominated by grasses, forbs, and sedges in the lower lying areas and sagebrush dominated shrublands on the uplands. The parcel contains portions of the Oregon/Mormon NHT. There are occupied dwellings within the parcel. The parcel lies within the Bear River watershed and is subject to water depletion restrictions to protect threatened or endangered fish species occurring in the river proper. The BLM lands in the parcel fall within the South Lake grazing allotment. Refer to Appendices B, C, and D for sage-grouse core area, wilderness characteristics, and MLP determinations. Parcel 31 contains upland soils in the 10-14 inch precipitation zone. Dominant parent materials include residuum formed over sediments; colluvium, including landslide and earth-flow deposits; and alluvium on footslopes and drainages. Geologic overthrusting and the resulting mixed exposures have produced variable soil textures and complex soil/geomorphic relationships. In the narrow valleys and drainages, very deep and well-drained reddish and brown soils are common. The upland ridges are characterized by soils of varying depths. Lower areas have an increased salinity potential. The soils are stable and have a low erosion potential. The parcel also contains floodplains and riparian areas that are highly productive. These soils are generally comprised of silty clays with a gravel or rock component. They are stable with a low to moderate erosion potential.

WY-1105-032 (part of this parcel is available to be offered for lease under Alternative B and C): A portion of the parcel is split estate (private surface/federal minerals), the rest is BLM-administered public lands. Additionally, part of the split estate and BLM lands fall within the Cokeville Meadows NWR. The Kemmerer RMP does not designate VRM classifications for non-federal lands, hence the private lands in parcel WY-1105-032 have no VRM designation; however, the public lands have a Class IV VRM designation. Parcel 32 does not fall within a Greater Sage-grouse core area, but does provide potential habitat for Wyoming pocket gopher, white-faced ibis, and Trelease's milkvetch. The parcel contains riparian habitat, but does not contain slopes greater than 25 percent, floodplains, or sensitive soils. The parcel provides spring, summer, and fall habitat for pronghorn, moose, and mule deer. The parcel falls with sagebrush dominated shrublands with a variety of forbs and grasses. The parcel contains portions of the Oregon/Mormon NHT. There are no occupied dwellings within ¼ mile of the parcel; however due to the private surface within and adjoining the parcel occupied dwellings could occur in the future. The parcel lies within the Bear River watershed and is subject to water depletion restrictions to protect threatened or endangered fish species occurring in the river proper. The

BLM lands in the parcel fall within the Goblin Gulch and Christy Canyon grazing allotments. Refer to Appendices B, C, and D for sage-grouse core area, wilderness characteristics, and MLP determinations. During the public comment period the US Fish and Wildlife Service (USFWS) notified BLM of a possible lek in the vicinity of parcel 32. Based on follow-up information from the Cokeville Meadows National Wildlife Refuge Manager, refuge personnel observed between 15 and 20 sage grouse displaying typical courtship behavior in Section 12, Township 23 North, Range 120 West in the vicinity of a historic lek location during the spring of 2010. A review of BLM GIS (Geographic Information System) Database, confirmed that a lek once existed in the area described by the USFWS. The lek was previously known as the Christy Canyon 1 lek and was first observed in 1956. In 2003, the Wyoming Game and Fish Department (WGFD) classified the lek as unoccupied and abandoned and thereby removed this lek from the database due to inactivity (see WGFD SG definitions and lek monitoring techniques). Based on WGFD lek survey protocols a follow-up confirmation determination of lek activity is required for a lek to be designated 'active'; therefore the USFWS siting is considered a 'potential lek' until such confirmation occurs.

The BLM coordinates and shares sage grouse information with the WGFD. The WGFD is the proprietary agency charged with maintaining these data sets and wildlife populations. The BLM will work with the USFWS and WGFD to confirm this potential location during the next breeding season (spring 2011). The BLM cannot place a lek stipulation on a lease until a lek is confirmed. Therefore, the BLM will continue to add Lease Notice #3 to each lease parcel to protect Greater Sage-grouse habitat. BLM also added a stipulation to this lease protecting BLM sensitive species. The CSU (Controlled Surface Use) Stipulation states, in part, "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."

Additionally, under the lease terms, Section 6 - Conduct of operations states that, "Lessee must conduct operations in a manner that minimizes adverse impacts to the land, air and water, to cultural, biological, visual, and other resources, and to other land uses or users. Lessee must take reasonable measures deemed necessary by the lessor to accomplish the intent of this section. To the extent consistent with the lease rights granted, such measures may include, but are not limited to, modification to siting or design of facilities, timing of operations, and specification of interim and final reclamation measures."

Parcel 32 contains upland soils in the 10-14 inch precipitation zone. Dominant parent materials include residuum formed over sediments; colluvium, including landslide and earth-flow deposits; and alluvium on footslopes and drainages. Geologic overthrusting and the resulting mixed exposures have produced variable soil textures and complex soil/geomorphic relationships. In the narrow valleys and drainages, very deep and well-drained reddish and brown soils are common. The upland ridges are characterized by soils of varying depths. Lower areas have an increased salinity potential. The soils are stable and have a low erosion potential. The parcel also contains floodplains and riparian areas that are highly productive. These soils are generally comprised of silty clays with a gravel or rock component. They are stable with a low to moderate erosion potential.

WY-1105-034 (the entire parcel is available to be offered for lease under Alternative B and C): The majority of the parcel is split estate (private surface/federal minerals), the rest is BLM-administered public lands. The Evanston Airport falls with part of the parcel. The Kemmerer RMP does not designate VRM classifications for non-federal lands, hence the private lands in parcel WY-1105-034 have no VRM designation; however, the public lands have a Class II VRM designation. Parcel 34 does not fall within a Greater Sage-grouse core area, but does provide potential habitat for Wyoming pocket gopher, prostrate bladderpod, and tufted twinpod. The parcel does not contain riparian habitat, slopes greater than 25 percent, floodplains, or sensitive soils. The parcel provides spring, summer, and fall habitat for pronghorn and mule deer and nesting habitat for sage-grouse. The parcel falls with sagebrush dominated shrublands with a variety of forbs and grasses. There are no occupied dwellings within ¼ mile of the parcel; however due to the private surface within and adjoining the parcel occupied dwellings could occur in the future. The parcel lies within the Bear River watershed and is subject to water depletion restrictions to protect threatened or endangered fish species occurring in the river proper. The parcel does not fall within a BLM grazing allotment. Refer to Appendices B, C, and D for sage-grouse core area, wilderness characteristics, and MLP determinations. Parcel 34 contains upland soils in the 10-14 inch precipitation zone. Dominant parent materials include residuum formed over sediments; colluvium, including landslide and earth-flow deposits; and alluvium on footslopes and drainages. Geologic overthrusting and the resulting mixed exposures have produced variable soil textures and complex soil/geomorphic relationships. In the narrow valleys and drainages, very deep and well-drained reddish and brown soils are common. The upland ridges are characterized by soils of varying depths. Lower areas have an increased salinity potential. The soils are stable and have a low erosion potential. The parcel also contains floodplains and riparian areas that are highly productive. These soils are generally comprised of silty clays with a gravel or rock component. They are stable with a low to moderate erosion potential.

3.2.1.1 Other considerations for the Parcels that would be Offered under Alternative B.

A. There is a risk of drainage to Federal mineral resources due to development of nearby non-Federal parcels if the parcel is not leased.

Parcels 1105-001, 002, 003, 004, 005, 006, 007, 021, 027, 029, 030, 031, 032, and 034 are not in the nearby vicinity of non-federal oil and gas development that would pose a drainage risk if the parcels were not leased.

B. In undeveloped areas, non-mineral resource values are greater than potential mineral development values.

Based on the Minerals Occurrence and Development Potential Reports for the Rawlins and Kemmerer RMPs parcels 1105-001, 002, 003, 004, 005, 006, 021, 027, 029, 030, 031, 032, and 034 have a low potential for oil and gas development; whereas parcel 007 has a high potential. All fourteen parcels have multiple surface resources values (see the affected environment discussions above). Whether the surface resource values for a given parcel are greater or lesser than the potential oil and gas development potential is subjective. Persons interested in preserving the surface resources would very likely say those values are greater than the potential mineral development value; whereas somebody interested in securing and developing one of the leases would likely say that the mineral value is greater. Public

comments expressed opinions that the various surface values on parcels 003, 004, 005, 006, 021, 027, 029, 030, 031, and 032 warranted precluding the parcels from leasing, (refer to Appendix E); however the EA does not identify any overriding surface values that would preclude offering these parcels for lease.

C. Stipulation constraints in existing or proposed leases make access to and/or development of the parcel or adjacent parcels operationally infeasible, such as an NSO parcel blocking access to parcels beyond it or consecutive and overlapping timing restrictions that do not allow sufficient time to drill or produce the lease without harm to affected wildlife resources.

Parcels 003, 004, 005, 006, and 011 have multiple timing limitation stipulations that restrict activity from November 15 through July 31. Parcels 012, 027, and 030 have multiple timing limitation stipulations that restrict activity from November 15 through July 15. Oil and gas operators have successfully conducted operations within the portion of the year falling outside these restrictions for the past 2 to 3 decades.

D. Parcel configurations would lead to unacceptable impacts to resources on the parcels or on surrounding lands and cannot be remedied by reconfiguring.

Parcel 001 has 3 subparcels, but all are corner connected. The existing parcel configuration would not result in impacts greater than those disclosed in this EA.

Parcel 004 has 4 subparcels and falls within a checkerboard land ownership area with intervening of private surface and private minerals. Three of the subparcels are corner connected. The fourth is separated by a mile. The resource conditions between the corner connected and the separated subparcels are the same as that found within the subparcels; consequently the existing configuration would not result in impacts greater than those disclosed in this EA.

Parcel 005 has 7 subparcels and falls within a checkerboard land ownership area with intervening of private surface and private minerals. Four of the subparcels are corner connected. The other three are separated by a mile or less. The resource conditions between the corner connected and the separated subparcels are the same as that found within the subparcels; consequently the existing configuration would not result in impacts greater than those disclosed in this EA. If the parcel was not in the checkerboard, parcel reconfiguration may be beneficial.

Parcel 006 has 5 subparcels and falls within a checkerboard land ownership area with intervening of private surface and private minerals. All 5 subparcels are separated from the next by a mile. The resource conditions between separated subparcels are the same as that found within the subparcels; consequently the existing configuration would not result in impacts greater than those disclosed in this EA. If the parcel was not in the checkerboard, parcel reconfiguration may be beneficial.

Parcel 007 has 3 subparcels, but all are corner connected. The existing parcel configuration would not result in impacts greater than those disclosed in this EA.

Parcel 010 has 2 subparcels that are separated by ½ mile. The resource conditions between the separated subparcels are the same as that found within the subparcels; consequently the existing configuration would not result in impacts greater than those disclosed in this EA. Parcel reconfiguration to one contiguous parcel would be beneficial.

Parcel 030 has 2 subparcels that are separated by ½ mile. The subparcels are separated by portions of a phosphorus mine; consequently the existing configuration would not result in impacts greater than those disclosed in this EA.

Parcel 031 has 2 subparcels that are separated by ½ mile. The resource conditions between the separated subparcels are the same as that found within the subparcels; consequently the existing configuration would not result in impacts greater than those disclosed in this EA. Parcel reconfiguration to one contiguous parcel would be beneficial.

Parcel 034 has 3 subparcels that are separated by ¼ mile. The subparcels are separated by portions of the Evanston Airport runway; consequently the existing configuration would not result in impacts greater than those disclosed in this EA.

E. The topographic, soils, and hydrologic properties of the surface will not allow successful final landform restoration and revegetation in conformance with the standards found in Chapter 6 of the Gold Book, as revised.

Areas within parcels 001, 003, 004, 005, 006, 007, and 010 have slopes of 25 percent or greater. Construction on these slopes would increase the difficulty of achieving successful reclamation and landform restoration. These parcels also have areas suitable for construction where there would be a high potential for successful reclamation. Parcel 010 has the driest sites of all the parcels and it has a plugged and abandoned well that has been reclaimed. Vegetation is reoccupying the reclaimed area, but monitoring by the Rawlins Field Office indicates the progress is slow. The well pad has not been released from bond liability.

F. Construction and use of new access roads or upgrading existing access roads to an isolated parcel would have unacceptable impacts to important resource values.

Parcel 001 adjoins irrigated cropland and has an upgraded road within ¼ mile of the parcel. Parcel 002 is bisected by Albany County Road #57. Parcel 003 is within ¼ mile of Carbon County Road #3 and has a constructed upgraded road bisecting the parcel. Parcel 004 has approximately 2 miles of Carbon County Road #3 passing through it. Parcel 005 adjoins Carbon County Road #3, is within ½ of I-80, is within ¾ mile of State Highway 72, is within ¼ mile of Carbon County Road #115, and is bisected by a cross-county natural gas pipeline. Parcel 006 lies within ¾ mile of State Highway 72, is within ¼ mile of Carbon County Road #115, has an old railroad grade through one of the subparcels, and a constructed road through another subparcel. Parcel 007 lies within ¾ mile of Carbon County Road #503 and within 1½ mile of BLM Road #3309. Parcel 010 has a plugged and abandon well (Yates Wrangler #1) with reclaimed road that could be reconstructed with no new surface disturbance. Parcels 021, 029, 031, and 032 are bordered by Lincoln County Road #207. Parcel 027 lies within ¼ mile of Lincoln County Road #207 and is bisected by BLM Road #4211. Parcel 030 is traversed by an upgraded access road to a phosphorus mine. Parcel 034 adjoins the Evanston Airport.

G. Leasing would result in unacceptable impacts to the resources or values of any unit of the National Park System or national wildlife refuge.

Parcel 033 and portions of parcels 017, 021, 029, 031, and 032 initially fell within the boundary of the Cokeville Meadows National Wildlife Refuge but are being deleted per 43 CFR 3101.5-1.

The Cokeville Meadows National Wildlife Refuge:

- Provides wetland habitat for migratory, summer breeding, and resident birds as well as numerous conservation-priority non-game species (Fish and Wildlife Service 1990, 1992, 2002a; Nicholoff 2003; Wyoming Game and Fish Dept 2005).
- Is considered an important bird area, over 65 species of water birds have been observed in the Cokeville Meadows NWR area, with 32 recorded as nesting species. Sora, Forster's tern, greater sandhill crane, redhead, trumpeter swan and Wilson's phalarope all utilize the wetland and riparian areas on the refuge and the surrounding area. The refuge supports one of the highest densities of nesting waterfowl in Wyoming, and was historically recognized as the best redhead duck production area in the state. It is situated on one of the main migration corridors for the species in their movement to the Texas Gulf Coast. The area also supports numerous other diving and dabbling duck species such as northern pintail, canvasback and cinnamon teal, and breeding and migratory populations of greater sandhill cranes.
- Contains other wetland-associated species include colonies of white-faced ibis, snowy egret, long-billed curlew, black tern, great blue heron, American bittern, black-crowned night heron, and numerous other marsh and shorebirds. Bald eagles commonly use the area in spring and fall while peregrine falcons can be seen during migration. The occasional whooping crane has been seen using the area in the summer, while rough-legged hawk, and northern shrike are common winter residents. Riparian areas support populations of migratory birds including the olive-sided flycatcher, western wood peewee, and yellow warbler.
- In conjunction with adjacent BLM, state of Wyoming, and private lands provides upland habitat for species such as Greater Sage-grouse, Brewer's sparrow, short-eared owl, burrowing owl, mountain plover, sage thrasher, sage sparrow, ferruginous hawk, small mammals such as the pygmy rabbit. Big game species such as mule deer, elk, and pronghorn use the area for its water resources and wintering grounds. Many upland and big game species depend on water resources and wintering grounds found in the area. Grizzly bear, black bear, wolverine, and lynx use the upper portion of the Bear River watershed.
- Contains tributaries in the upper reaches of the Bear River that were never inundated by historic Lake Bonneville and fishes there evolved in a riverine system. Fluvial reproduction patterns are common with fish moving from large rivers to small streams for spawning. Aquatic habitat in the area supports populations of Bear River Bonneville cutthroat trout, bluehead sucker, leatherside chub, mountain whitefish, mottled and Paiute sculpin, longnose and speckled dace, redbreast shiners, Utah and mountain suckers, as well as northern leopard frogs.

Leasing the portions of parcels 021, 029, 031, and 032 that fall outside the Refuge with the stipulations specified in Appendix A and Tables 4.2a and 4.2b is not anticipated to have unacceptable impacts to the Refuge or its resources.

H Leasing would result in unacceptable impacts to specially designated areas (whether Federal or non-Federal) and would be incompatible with the purpose of the designation.

Parcels 008, 009, 021, 022, 023, 024, 025, 026, 028, and portions of parcels 011, 012, 017, and 029 fall with Special Management Areas designated by the Kemmerer or Rawlins RMPs. These SMAs are unavailable for leasing and are being deleted. Portions of parcels 011 and 012 fall outside an identified SMA, but fall within a sage grouse core area designated through Executive Order by the Governor of Wyoming. The portions of 011 and 012 within the sage grouse core area would be deferred from the May 2011 lease sale in order to not preclude alternative development in the requisite RMP amendment process for sage grouse. Parcel 010 falls within the Dispersed Recreation Use Area (DRUA) established through the Rawlins RMP. Parcel 010 would be deferred pending field review for Lands with Wilderness Characteristics.

3.2.2 AFFECTED ENVIRONMENT COMPONENTS COMMON TO ALL OF THE PARCELS IN ALTERNATIVE B.

3.2.2.1 Air Resources:

In addition to the air quality information in the RMPs cited above, new information about greenhouse 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 gasses 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, typically referred to as global warming.

This EA incorporates an analysis of the contributions of the proposed action to GHG emissions and a general discussion of potential impacts to climate.

Air quality, climate, and visibility are the components of air resources, which include applications, activities, and management of the air resource. BLM must consider and analyze the potential effects of authorized activities on air resources as part of the planning and decision making process. Both the Rawlins and Kemmerer RMP's include air quality analysis. It is important to reiterate the offering and issuing leases are administrative actions, and the offering and the issuing of leases, in and of themselves, do not create air quality impacts.

3.2.2.1.1 Air Quality

Regional air quality is influenced by the interaction of meteorology, climate, the magnitude and spatial distribution of local and regional air pollutant sources, and the chemical properties of emitted air pollutants. The following sections summarize the existing climate and air quality within the area potentially affected by the parcels under consideration for leasing.

A variety of pollutants can affect air quality; these pollutants and their effects on health, visibility, and ecology are described in the following sections, along with data on existing air quality conditions found within the Rawlins and Kemmerer Field Office areas.

The Environmental Protection (EPA) has delegated regulation of air quality to the State of Wyoming and is administered by the Wyoming Department of Environmental Quality-Air Quality Division (WDEQ-AQD). Wyoming Ambient Air Quality Standards (WAAQS) and National Ambient Air Quality Standards (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 (CAA). Currently, the WDEQ-AQD does not have regulations regarding greenhouse gas emissions, although these emissions are regulated indirectly by various other regulations.

Concentrations:

Pollutant concentration can be defined as the mass of pollutant present in a volume of air and is reported in units of micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), parts per million (ppm), or parts per billion (ppb). The State of Wyoming has used monitoring and modeling to determine that the Rawlins and Kemmerer Field Office areas are currently in compliance with Wyoming and federal concentration standards. In addition, non-reference method monitoring systems are operational, including the *Clean Air Status and Trends Network* (CASTNet) and *Wyoming Air Resources Monitoring System* (WARMS). Data from these systems have been determined to be representative of the area. Established, referenced monitoring stations occur outside of the Kemmerer Field Office area near Pinedale (north) and Green River (southeast). There are two monitoring station in Rawlins Field Office, the Wamsutter station operated by Wyoming Department of Environmental Quality and a station in the Altalntic Rim area operated by Anadarko E&P Company LP. The referenced data is the most current and predictive for the region.

Criteria air pollutants are those for which national concentration standards have been established; pollutant concentrations greater than the established standards represent a risk to human health or welfare. Table 3.2.1.1 presents background concentrations of criteria air pollutants as determined by the WDEQ-AQD.

Background concentrations are in compliance with applicable Wyoming and national ambient air quality standards (WAAQS/NAAQS). Also included in Table 3.2.1.1 are Prevention of Significant Deterioration (PSD) increments for Class I areas (wilderness areas with protected air quality status due to their pristine condition) and Class II areas (wilderness areas with protected air quality status due to their sensitive condition). All NEPA analysis comparisons to the PSD increments are intended to evaluate a threshold of concern and do not represent a regulatory PSD

Increment Consumption Analysis. NAAQS/WAAQS have been established for the following criteria pollutants:

Carbon monoxide (CO) is an odorless, colorless gas formed during combustion of any carbon-based fuel, such as during operation of engines, fireplaces, furnaces, etc. Because carbon monoxide data are generally collected only in urban areas where automobile traffic levels are high, recent data are often unavailable for rural areas. Background carbon monoxide data were collected in Ryckman Creek (BLM 1983) in southwest Wyoming and in Rifle and Mack, Colorado during the late 1970s and the early 1980s. These are the most representative available data for the Project Area. Background carbon monoxide concentrations were 5.6–14% of the applicable WAAQS (Table 3.2.1.1)

Nitrogen dioxide (NO₂) is a highly reactive compound formed at high temperatures during operation of fossil fuel combustion. At high concentrations, it can form a red-brown gas. At concentrations in excess of the EPA air quality standard, it is a respiratory irritant; however, all areas of the United States are in compliance with this air quality standard. During fossil fuel combustion, NO is released into the air which reacts in the atmosphere to form NO₂. NO plus NO₂ is a mixture of nitrogen gases, collectively called nitrogen oxides (NO_x). NO_x emissions can convert to ammonium nitrate particles and nitric acid which can cause visibility impairment and atmospheric deposition. Nitrogen dioxide can contribute to “brown cloud” conditions and ozone formation, and can convert to ammonium (NH₄), nitrate particles (NO₃), and nitric acid (HNO₃). Internal combustion engines are one source of NO_x. However, coal fired power plants often have the highest NO_x emissions although any combustion source will produce NO_x. Figure 3.1 shows mean annual concentrations of nitrogen compounds at the Pinedale CASTNet site from 1989 through 2004. Nitrogen dioxide data were collected in Green River, Wyoming, from January 2001 to December 2001. Background concentrations of nitrogen dioxide were 3.4% of the applicable WAAQS (Table 3.2.1.1).

Ozone (O₃) is a faint blue gas that is generally not emitted directly into the atmosphere but is formed in the atmosphere from complex photochemical reactions involving NO₂ and volatile reactive organic compounds (VOC). Sources of VOCs include automotive emissions, paint, varnish, oil and gas operations and some types of vegetation. The faint acrid smell common after thunderstorms is caused by ozone formation by lightning. O₃ is a strong oxidizing chemical that can burn lungs and eyes, and damage plants. Ozone is a severe respiratory irritant at concentrations in excess of the federal standards. On January 6, 2010, EPA proposed that the primary ozone standard be set between 0.060 and 0.070 ppm.

Table 3.2.1.1: Air Pollutant Background Concentrations, NAAQS/WAAQS and Prevention of Significant Deterioration (PSD) Increments ($\mu\text{g}/\text{m}^3$).					
Pollutant/Averaging Time	Background Concentration ($\mu\text{g}/\text{m}^3$)	NAAQS and WAAQS ($\mu\text{g}/\text{m}^3$)	Percent of NAAQS and WAQSS	Incremental Increase Above Legal Baseline ^a	
				PSD Class I	PSD Class II
CO					
1-hour	3,336 [†] 2,229 ^{††}	40,000	8.3% [†] 5.6% ^{††}	n/a	n/a
8-hour	1,381 [†] 1,148 ^{††}	10,000	13.8% [†] 11.5% ^{††}	n/a	n/a
NO₂[‡]					
Annual	3.4	100	3.4%	2.5	25
(O₃)[€]					
8-hour	147	157	93.6%		
PM₁₀ⁱ					
24-hour	48	150	32.0%	8	30
Annual	25	50-WAAQS	50.0%	4	17
PM_{2.5}ⁱ					
24-hour	15	35-NAAQS 65-WAAQS	42.9% 23.1%	n/a	n/a
Annual	7.8	15	52.0%	n/a	n/a
(SO₂)ⁱⁱ					
3-hour	29	1,300	2.2%	25	512
24-hour (National)	43	365	11.8%	5	91
24-hour (Wyoming)	18	260	6.9%	5	91
Annual (National)	9	80	11.3%	2	20
Annual (Wyoming)	5	60	8.3%	2	20
<p>n/a = not applicable, PSD = prevention of significant deterioration.</p> <p>a All NEPA analysis comparisons to the PSD increments are indented to evaluate a threshold of concern and do not represent a regulatory PSD Increment Consumption Analysis.</p> <p>[†] Background data collected by Amoco at Ryckman Creek for an 8-month period during 1978–1979, summarized for the Riley Ridge Project (BLM 1983)</p> <p>^{††} Background data collected at Rifle and Mack, Colorado in conjunction with proposed oil shale development during the early 1980's.</p> <p>[‡] Background data collected at Green River Basin Visibility Study site, Green River, Wyoming, during the period January–December 2001 (Air Resource Specialists 2002).</p> <p>[€] Background data collected at Green River Basin Visibility Study site, Green River, Wyoming, during the period June 10, 1998, through December 31, 2001 (Air Resource Specialists 2002).</p> <p>ⁱ Background data for PM₁₀ collected by Wyoming Department of Environmental Quality/Air Quality Division (WDEQ/AQD) at Rock Springs, Wyoming, in 2005. PM_{2.5} based on a 1:3.2 PM_{2.5}:PM₁₀ ratio based on three full years of PM₁₀ data (1997-1999) collected in Rock Springs as part of the Green River Basin Visibility Study. These data have been determined by WDEQ/AQD to be the most representative data available.</p> <p>ⁱⁱ Background data for Wyoming (3 hour, 24 hour and annual) collected at the Craig Power Plant site and oil shale areas 1980-1984</p>					

Figure 3.2.1.1: Mean Annual Concentrations of Nitrogen Compounds near Pinedale, Wyoming. Concentrations typical in remote areas are: $\text{HNO}_3 = 0.3$ ppb, $\text{NO}_3 = 0.2$ ppb, $\text{NH}_4 = 0.3$ ppb. Data taken from CASTNET Pinedale Station PND165.

In March 2008 the U.S. Environmental Protection Agency (EPA) promulgated the current National Ambient Air Quality Standard (NAAQS) for ozone. The ozone standard was lowered from 0.08 parts per million (ppm) to 0.075 ppm based on the fourth highest 8-hour average value per year at a site, averaged over three years. Based on monitoring results from 2006 through 2008, the entire state of Wyoming is in compliance with this standard except for at a single monitor, the Boulder monitor, in Sublette County. The WDEQ-AQD evaluated whether a nonattainment area should be designated due to the monitored results at the Boulder monitor. The WDEQ-AQD recommended that the Upper Green River Basin (UGRB) be designated as nonattainment for the 2008 ozone National Ambient Air Quality Standard (NAAQS). The WDEQ-AQD based this recommendation on a careful review of the circumstances surrounding the incidence of elevated ozone events. Elevated ozone in the UGRB is associated with distinct meteorological conditions. These conditions have occurred in February and March in some (but not all) of the years since monitoring stations began operation in the UGRB in 2005. The UGRB does not include any lands within the Rawlins or Kemmerer Field Offices.

Ozone data were collected in Green River, Wyoming, from 1998 to 2001 and show background concentrations of ozone to be 93.6% of the applicable WAAQS (Table 3.2.1.1). Additional ozone monitoring at the Pinedale CASTNet site shows that concentrations of ozone there are typical of remote areas.

Particulate matter (PM) refers to the small particles (i.e., soil particles, pollen, etc.) suspended in the air that settle to the ground slowly and may be re-suspended if disturbed. Ambient air particulate matter standards are based on the size of the particle. The two types of particulate matter are:

- PM_{10} (particles with diameters less than 10 micrometers): small enough to be inhaled and capable of causing adverse health effects.
- $\text{PM}_{2.5}$ (particles with diameters less than 2.5 micrometers): small enough to be drawn deeply into the lungs and cause serious health problems. These particles are also the main cause of visibility impairment.

Background concentrations of PM₁₀ are 32-50% of the applicable WAAQS (Table 3.2.1.1). Other regulatory monitoring of particulate matter showed that concentrations were in compliance with applicable WAAQS.

The WDEQ-AQD monitors particulate matter throughout the State of Wyoming with the State and Local Air Monitoring System (SLAMS). Table 3.2.1.2 summarizes particulate matter concentrations in Wyoming during 2001. Annual PM₁₀ background concentrations for the MAA exceed the statewide average, while MAA PM_{2.5} concentrations fall below the statewide average.

Table 3.2.1.2: Wyoming Particulate Summary for 2001 (µg/m³).		
Pollutant	Annual Background for MAA	Annual Statewide Average
PM ₁₀	33	22
PM _{2.5}	5	8

Sulfur dioxide (SO₂) and sulfates (SO₄) form during combustion from trace levels of sulfur in coal or diesel fuel. Sulfur dioxide also participates in chemical reactions and can form sulfates and sulfuric acid in the atmosphere. Background concentrations of sulfur dioxide are 2–12% of the applicable WAAQS (Table 3.2.1.1).

Sulfur dioxide concentrations typically range from 1 to 10 ppb (2.6 to 26 µg/m³) in remote areas, and from 20 to 200 ppb (52 to 520 µg/m³) in polluted areas (Seinfeld 1986). Average weekly concentrations of sulfur dioxide at the Pinedale CASTNet site are 0.3 ppb (0.8 µg/m³) and are typical of remote or unpolluted areas.

Mean annual sulfate concentrations are typically 0.6 ppb (2.5 µg/m³) or less in remote areas, and 2.5 ppb (10 µg/m³) or more in urban areas (Stern et al. 1973). Mean annual concentrations of sulfate are 0.5 ppb (2 µg/m³) at the Pinedale CASTNet site and are typical of remote or unpolluted areas.

3.2.2.1.2 Climate And Climate Change

The Rawlins and Kemmerer Field Offices are located in a semi-arid, mid-continental climate regime typified by dry, windy conditions, limited rainfall, and long, cold winters (Trewatha and Horn 1980). Table 3.2.1.3 summarizes climate components in the area potentially affected by the potential leased parcels, based on data collected at several long-term meteorological stations located in and near the Rawlins and Kemmerer Field Office areas.

Table 3.2.1.3: Summary of Climate (1958–2005).	
Wyoming Meteorological Station	Description
Kemmerer Water Treatment Station	Mean annual temperature: 39.3 °F Mean annual precipitation: 9.78 inches Mean annual snow depth: 2 inches Mean annual snowfall: 50.9 inches
Rock Springs	Mean annual temperature: 44.1 °F Mean annual precipitation: 8.51 inches Mean annual snow depth: 1 inch Mean annual snowfall: 49.2 inches
LaBarge	Mean annual temperature: 39 °F Mean annual precipitation: 8.03 inches Mean annual snow depth: 1 inch Mean annual snowfall: 31.7 inches
Rawlins	Mean annual temperature: 43.0 °F Mean annual precipitation: 9.00 inches Mean annual snow depth: 2 inches Mean annual snowfall: 51.6 inches
Source: (Western Regional Climate Center 2006)	

The region is subject to strong, gusty winds that are often accompanied by snow and blizzard conditions during winter months. Winds frequently originate from the west to northwest, and the mean annual wind speed is 9 miles per hour.

Wind strength and frequency affects dispersion of noises, odors, and transport of dust and other airborne elements. Therefore, the region’s strong winds increase the potential for atmospheric dispersion of pollutants.

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). Global mean surface temperatures have increased nearly 1.8°F from 1890 to 2006. Models indicate that average temperature changes are likely to be greater in the Northern Hemisphere. Northern latitudes (above 24°N) have exhibited temperature increases of nearly 2.1° F since 1900, with nearly a 1.8°F increase since 1970 alone. Temperature in southwestern Wyoming is expected to increase by 0.25 to 0.40 degrees Fahrenheit per decade while temperatures in surrounding locations in Utah, Wyoming, and Colorado are expected to increase by 0.40 to 1.2 degrees Fahrenheit per inches per decade with the largest decrease expected in southwestern Wyoming (Figure 3.2.1.2). Precipitation across western Wyoming is expected to decrease by 0.1 to 0.6 inches per decade with the largest decrease expected in southwestern Wyoming (Figure 3.2.1.2).

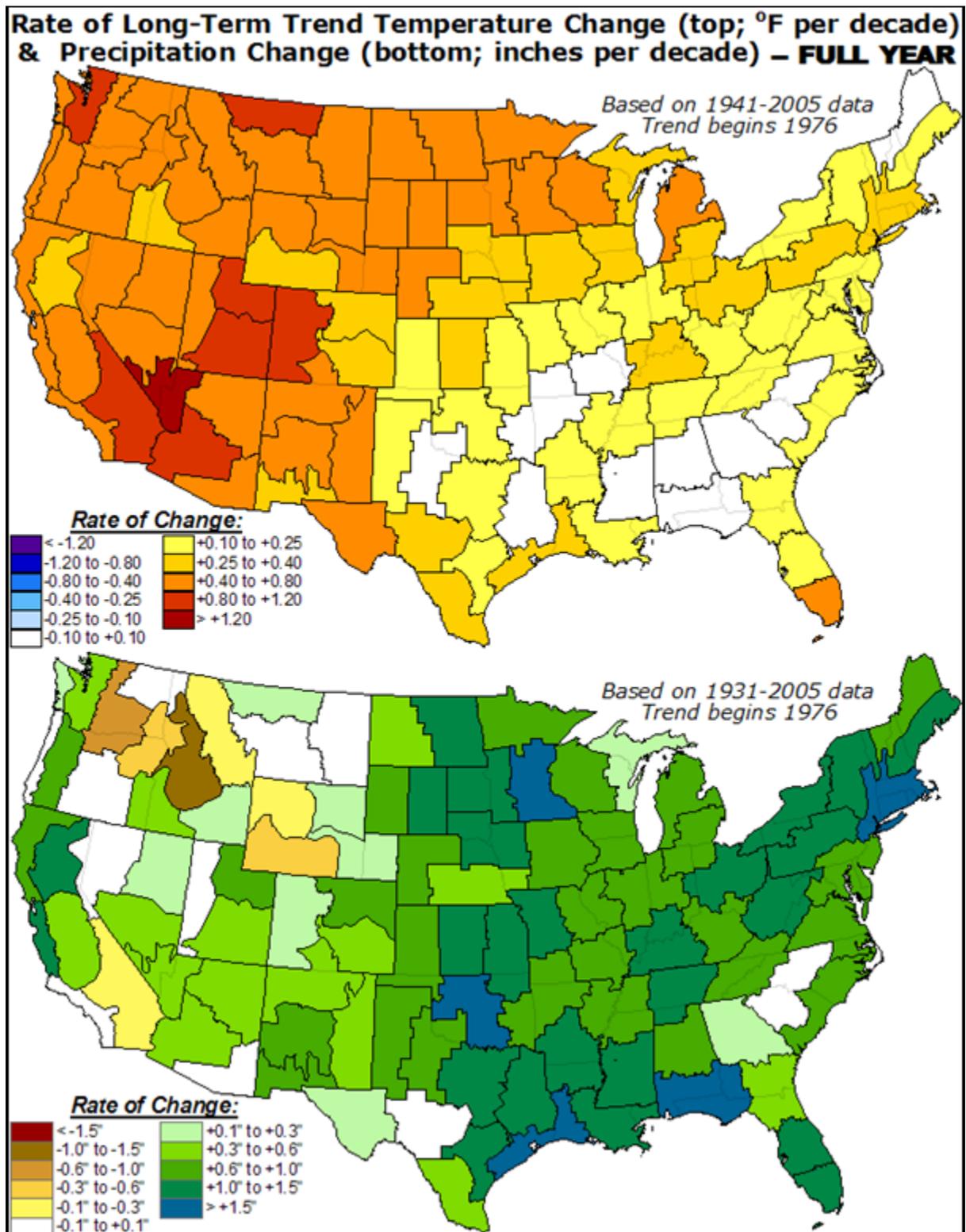


Figure 3.2.1.2: Long-term Temperature (top) and Precipitation (bottom) Trends in the United States from NOAA Climate Prediction Center (<http://www.cpc.noaa.gov>).

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). Several activities that occur in the Rawlins and Kemmerer Field Office areas contribute to the phenomena of climate change, including large wildfires and activities using combustion engines; changes to the natural carbon cycle; changes to radiative forces and reflectivity (albedo); and emissions of greenhouse gases (GHGs), especially carbon dioxide and methane, from fossil fuel development.

Greenhouse gases are composed of molecules that absorb and reradiate infrared electromagnetic radiation. When present in the atmosphere the gas contributes to the greenhouse effect. Some GHGs such as carbon dioxide occur naturally and are emitted to the atmosphere through natural processes and human activities. Other GHGs (e.g., fluorinated gases) are created and emitted solely through human activities. The primary GHGs that enter the atmosphere as a result of anthropogenic activities include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases such as hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Fluorinated gases are powerful GHGs that are emitted from a variety of industrial processes including production of refrigeration/cooling systems, foams and aerosols. Fluorinated gases are not primary to the activities authorized by the BLM and will not be discussed further in this document.

The Center for Climate Strategies (CCS) prepared the Wyoming Greenhouse Gas Inventory and Reference Case Projection 1990-2020 (Inventory) for the WDEQ 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 *gross* 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.

Ongoing scientific research has identified the potential impacts of anthropogenic 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 carbon dioxide equivalent (CO₂e) 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 global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations” (IPCC 2007.)

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 climate change behind CO₂ (Ramanathan and Carmichael, 2008). Without additional meteorological monitoring systems, it is difficult to determine the spatial and temporal variability and change of climatic conditions, but increasing concentrations of GHGs are likely to accelerate the rate of climate change.

Some authorized activities within the Rawlins and Kemmerer Field Offices generate GHG emissions. Oil and gas development activities can generate CO₂ and NH₄ (during processing). Carbon dioxide emissions result from the use of combustion engines for OHV and other recreational activities. Wildland fires also are a source of CO₂ and other GHG emissions, and livestock grazing is a potential source of methane. Other activities in the Rawlins and Kemmerer Field Office 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 GHG emissions associated with the parcels proposed for leasing is included in Section 4.

3.2.2.1.3 Visibility

The 1997 CAA amendments declared “as a National Goal the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I Federal areas in which impairment results from manmade air pollution.” The CAA gives federal managers the affirmative responsibility, but no regulatory authority, to protect air quality-related values, including visibility, from degradation.

PSD increments limit air quality degradation and ensure that areas with clean air continue to meet NAAQS, even during economic development. The PSD program goal is to maintain pristine air quality required to protect public health and welfare from air pollution effects and “to preserve, protect and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreation, scenic or historic value.”

PSD increments have been established for NO₂, SO₂, and PM₁₀. Comparisons of potential PM₁₀, NO₂, and SO₂ concentrations with PSD increments are intended only to evaluate a threshold of

concern. The allowable PSD increment depends on an area’s classification. Class I areas have lower increments, due to their protected status as pristine areas. PSD Class I and other sensitive areas located in close proximity to the Rawlins and Kemmerer Field Offices and the distance of each from the field office are shown on Map 3-1. Federal Class I areas are listed in Table 3.2.1.4. Several additional areas are classified as PSD Class II, where lower incremental air quality limits are imposed due to less pristine background air quality. PSD Class II areas are listed in Table 3.2.1.5.

Table 3.2.1.4: Distances and Direction to Class I Areas.

Class I Area	Distance From KFO (km)	Direction From KFO	Distance From RFO (km)	Direction From RFO
Bridger Wilderness Area	95	North	240	Northwest
Fitzpatrick Wilderness Area	105	North	240	Northwest
Grand Teton National Park	170	North	400	Northwest
Mount Zirkel Wilderness Area	261	East	120	Southeast
Savage Run/Platte River Wilderness Area	230	Southeast	60	Southeast
Teton Wilderness Area	120	North	400	Northwest
Washakie Wilderness Area	186	North	320	North

Table 3.2.1.5: Distances and Direction to Class II Sensitive Areas and other areas of concern in southern Wyoming.

Sensitive Class II Areas	Distance From KFO (km)	Direction From KFO	Distance From RFO (km)	Direction From RFO
Fossil Butte National Monument	In	In	250	West
Popo Agie Wilderness Area	108	Northeast	160	Northwest
Seedskaadee National Wildlife Refuge	Adjacent	Northeast	230	West
Cokeville Meadows National Wildlife Refuge	Adjacent	West	260	West

A wide variety of pollutants can impact visibility, including particulate matter, nitrogen dioxide, nitrates (compounds containing NO₃), and sulfates (compounds containing SO₄). Fine particles suspended in the atmosphere decrease visibility by blocking, reflecting, or absorbing light.

Two types of visible impairment can be caused by emission sources: plume impairment and regional haze. Plume impairment occurs when a section of the atmosphere becomes visible due to the contrast or color difference between a discrete pollutant plume and a viewed background, such as a landscape feature. Regional haze occurs when pollutants from widespread emission sources become mixed in the atmosphere and travel long distances.

Visibility is quantified in terms of the deciview (dv), which is defined as a change in visibility that is perceptible to the average human, and in terms of the standard visible range (SVR), which is defined as the distance that an average human can see. Visibility data are calculated for each day, ranked from cleanest to haziest, and reported into three categories:

- 20% cleanest: mean visibility for the 20% of days with the best visibility
- Average: the annual mean visibility
- 20% haziest: mean visibility for the 20% of days with the poorest visibility

Visibility data were collected in the Bridger Wilderness from 1989 to 2003. The mean annual SVR varies from 198–162 miles (or 2–4 dv) on clear days, 133–109 miles (or 6–8 dv) on average days, and 12–10 miles (or 10–12 dv) on hazy days (Figure 3.2.1.3).

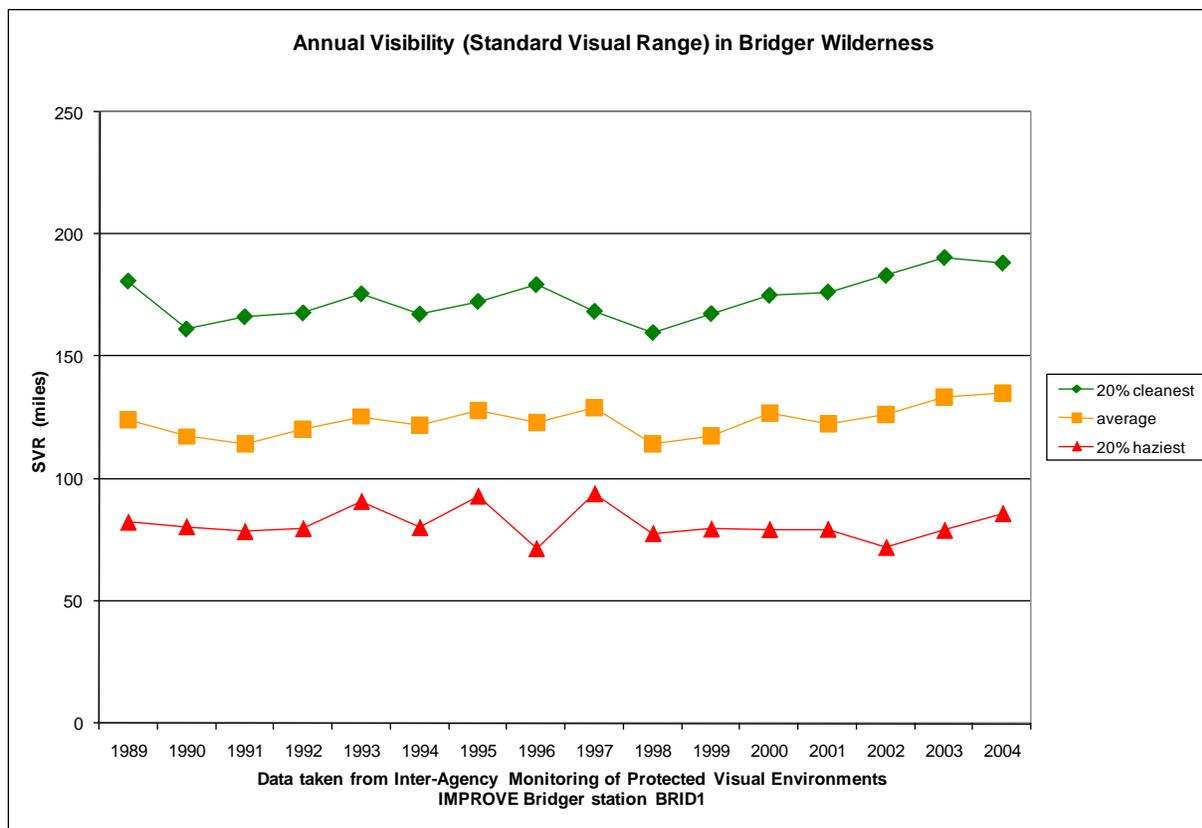


Figure 3.2.1.3: Visibility in the Bridger Wilderness.

Deposition:

Through a process called atmospheric deposition, air pollutants fall out of the atmosphere and are deposited on terrestrial and aquatic ecosystems. These pollutants are deposited via wet deposition (precipitation) and dry deposition (gravitational settling of particles and gaseous pollutants that adhere to soil, water, and vegetation). Substances deposited include:

- Acids, such as sulfuric acid and nitric acid (HNO₃) (sometimes referred to as “acid rain”)
- Air toxins, such as pesticides, herbicides, and VOCs
- Nutrients, such as nitrate and ammonium (NH₄⁺)

Deposition is reported as the mass of material deposited on an area (kilogram per hectare per year). Total deposition refers to the sum of airborne material transferred to the Earth’s surface by both wet and dry deposition.

A brief summary of current atmospheric deposition in the region is included in Table 3.1.2.6. These data represent several locations in the region, including Pinedale, Gypsum Creek, and Yellowstone National Park.

The natural acidity of rainwater is represented by pH values ranging from 5.0 to 5.6 (Seinfeld 1986). Precipitation pH values lower than 5.0 are considered acidified and may adversely affect plants and animals. A voluntary level of concern for a decrease in pH levels in rainwater has been estimated to be 0.1–0.2 (U.S. Department of Agriculture 1989).

Deposition Component	Description
Precipitation pH	Precipitation pH demonstrates some acidification <ul style="list-style-type: none"> • Pinedale: 4.8–5.4 • Gypsum Creek: 5.0–5.4 • Yellowstone National Park: 5.2–5.6
Total nitrogen deposition	Total nitrogen deposition is less than levels of concern <ul style="list-style-type: none"> • Pinedale: 1.0–1.5 kg/ha-year
Total sulfur deposition	Total sulfur deposition is less than levels of concern <ul style="list-style-type: none"> • Pinedale: 1–2 kg/ha-year

Total deposition voluntary levels of concern have been estimated for several areas (U.S. Department of Agriculture 1989). Estimated total deposition guidelines include the “red line” (defined as the total deposition that the area can tolerate) and the “green line” (defined as the acceptable level of total deposition).

Total nitrogen deposition guidelines for the Bridger Wilderness include the red line (set at 10 kg/ha-year) and the green line (set at 3–5 kg/ha-year). Actual mean annual total nitrogen deposition ranged from below 1.5 kg/ha-year to above 3.5 kg/ha-year (Figure 3.1.2.4). Total sulfur depositions guidelines for include the green line (set at 5 kg/ha-year) and the red line (set at 20 kg/ka-year). Mean annual total sulfur deposition ranged from 1 kg/ha-year to nearly 3 kg/ha-year (Figure 3.1.2.5). For sulfur, the measured baseline deposition is well below the voluntary levels of concern (green line). For Nitrogen, some deposition levels exceed the lower limits of the green line.

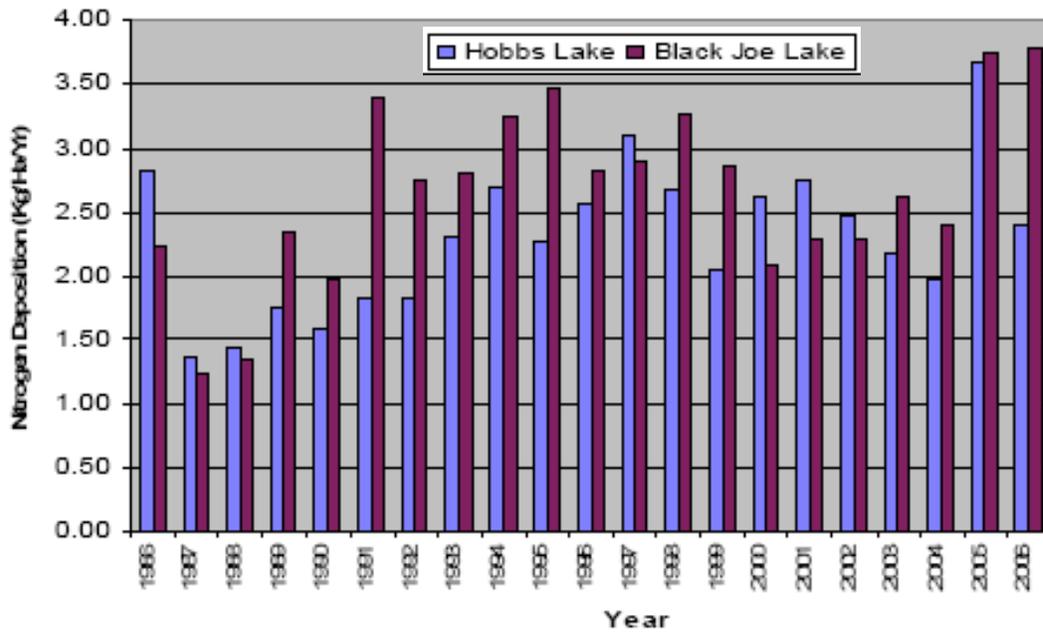


Figure 3.1.2.4: Mean Annual Nitrogen Deposition for Hobbs Lake and Black Joe Lake.

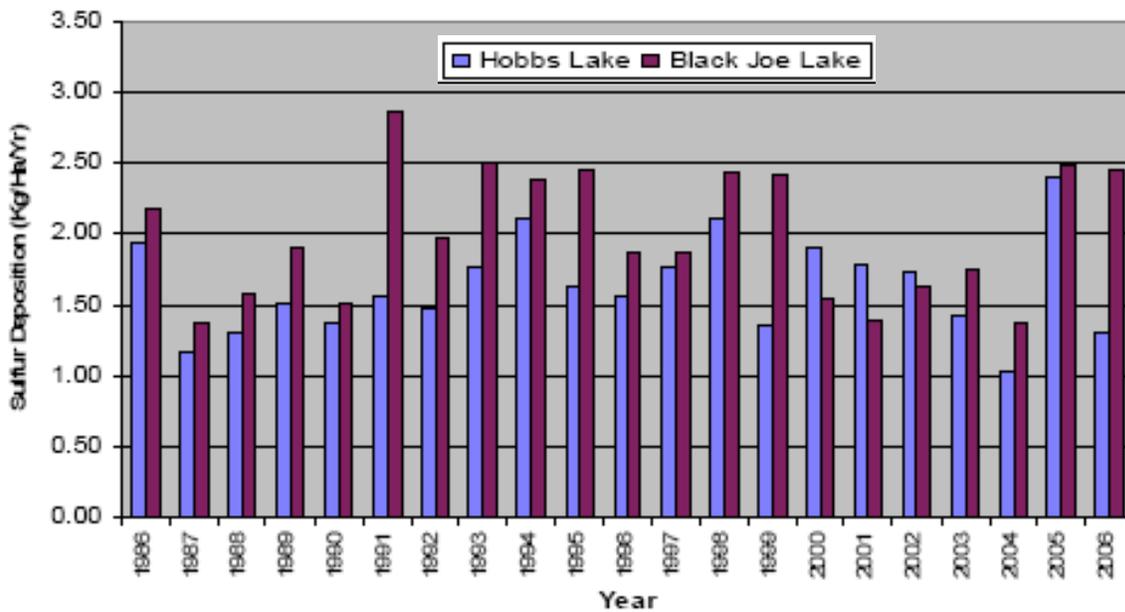


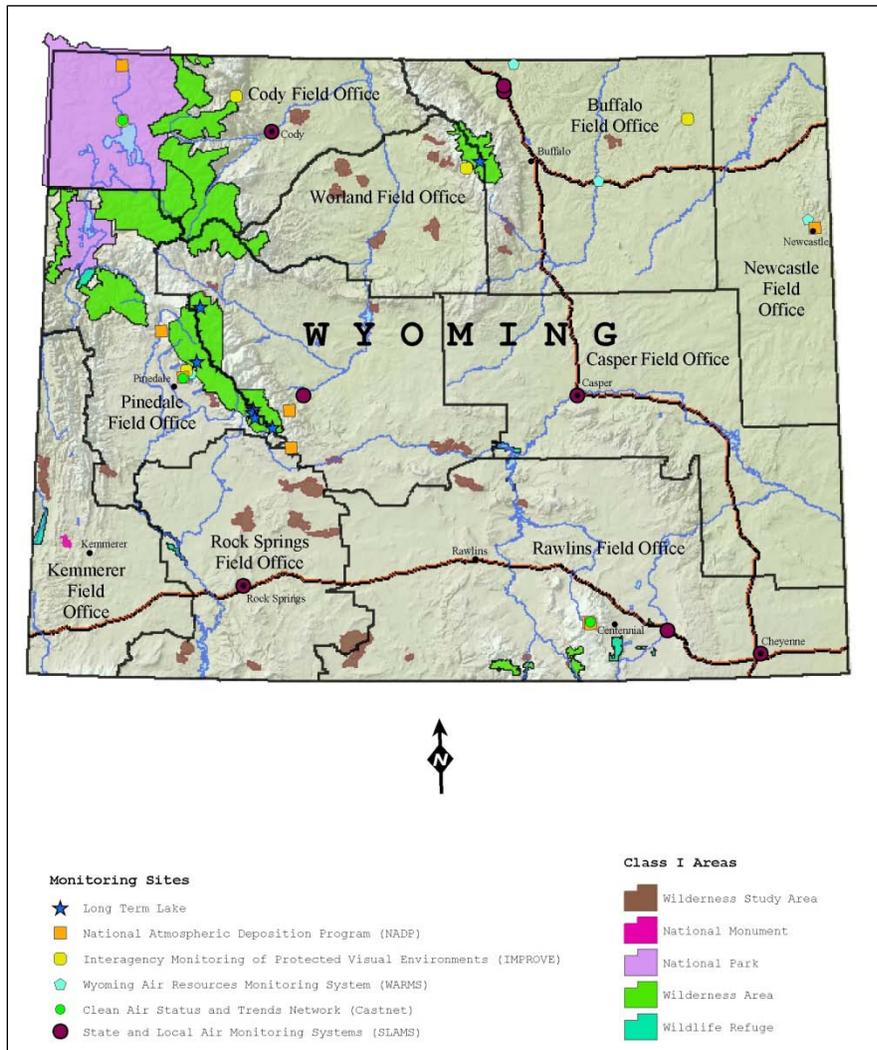
Figure 3.2.1.5: Mean Annual Sulfur Deposition for Hobbs Lake and Black Joe Lake.

Atmospheric deposition of nitrogen and sulfur compounds can cause acidification of lakes and streams. One expression of lake acidification is a change in acid neutralizing capacity (ANC), which is a lake’s ability to resist acidification from atmospheric deposition. ANC is expressed in units of micro-equivalents per liter ($\mu\text{eq/l}$). Lakes with ANC values of 25 to 100 $\mu\text{eq/l}$ are considered to be sensitive to atmospheric deposition; lakes with ANC values of 10 to 25 $\mu\text{eq/l}$ are considered to be very sensitive; and lakes with ANC values of less than 10 are considered to be extremely sensitive. Table 3.2.1.7 summarizes distances and direction from RFO and KFO to sensitive lakes in the region.

Table 3.2.1.7: Distance and Direction to Sensitive Lakes				
Sensitive Lake Receptors	Distance From KFO (km)	Direction from KFO	Distance From RFO (km)	Direction from RFO
Black Joe Lake, Bridger Wilderness Area	142	North	182	Northwest
Deep Lake, Bridger Wilderness Area	139	North	180	Northwest
Upper Frozen Lake, Bridger Wilderness Area	137	North	175	Northwest
Ross Lake, Fitzpatrick Wilderness Area	194	North	250	Northwest
Lower Saddlebag Lake, Popo Agie Wilderness Area.	140	North	160	Northwest

Site-specific lake water chemistry background data (pH, ANC, total bulk deposition of nitrate, sulfate etc.) have been collected by the USFS in several high mountain lakes in the nearby Wilderness Areas. Deposition data – total nitrogen and sulfur, nitrate and sulfate – from 1986 through 2006 are shown below.

Lake acidification is measured in terms of change in ANC, which is the lake’s buffering capacity to resist acidification from atmospheric deposition of acid compounds such as sulfates and nitrates. Measured background ANC data for USFS identified sensitive lakes within the modeling domain are provided in Table 3.2.1.8. The 10th percentile lowest ANC values were calculated for each lake, following procedures provided by the USFS. The ANC values proposed for use in this analysis, and the number of samples used in the calculation of the 10th percentile lowest ANC values, are provided in Table 3.2.1.8.



Map 3.2.1.1: Class I Airshed and Air Quality Monitoring Stations in Wyoming.

Table 3.1.2.8: Background Acid Neutralizing Capacity Values for Acid Sensitive Lakes.

Lake	Wilderness Area	10th Percentile Lowest ANC Value (µeq/l)	Number of Samples	Sensitivity
Black Joe	Bridger	67.1	67	Sensitive
Deep	Bridger	59.7	64	Sensitive
Upper Frozen	Bridger	6.0	8	Extremely Sensitive

Ross	Fitzpatrick	60.4	33	Sensitive
Lower Saddlebag	Popo Agie	54.2	32	Sensitive

The USFS considers lakes with ANC values greater than 25 microequivalents per liter ($\mu\text{eq/l}$) to be sensitive to atmospheric deposition and lakes with ANC values less than or equal to 25 $\mu\text{eq/l}$ are considered extremely sensitive. Of the lakes for which data is presented in Table 3.1.2.8, Upper Frozen and Lazy Boy lakes are considered extremely acid sensitive.

The USFS has identified a specific methodology to determine acceptable changes in ANC, which are used to evaluate potential air quality impacts from deposition at acid sensitive lakes. The USFS has established a level of acceptable change (LAC) of no greater than a 1 $\mu\text{eq/l}$ change in ANC (from human causes) for lakes with existing ANC levels less than or equal to 25 $\mu\text{eq/l}$. A limit of 10 percent change in ANC reduction was adopted for lakes with an ANC greater than 25 $\mu\text{eq/l}$.

3.2.2.2 Wildlife

Wildlife resource associated with each parcel/partial parcel available to offer for leasing are listed under the parcel headings above. Studies conducted by Matt Holloran for the Greater Sage-grouse, Joel Berger for pronghorn, and Hall Sawyer for mule deer demonstrated that intense oil and gas development such as that occurring on the Pinedale Anticline can affect these species use of the habitat in close proximity to development.

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 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.

The BLM's Special Status Species Policy outlined in BLM Manual 6840 and IM WY-2010-027; (Update of the Bureau of Land Management, Wyoming, Sensitive Species List - 2010) 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 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 Kemmerer and Rawlins 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 Rawlins and Kemmerer RMPs have 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. Greater sage-grouse are distributed in sagebrush habitat throughout the RMPPA, 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 Wyoming Game and Fish Department (WGFD) have identified core areas, which represent these relatively productive areas, and have suggested special management for these areas.

Policy was issued by the Wyoming BLM in December 2009 under IM WY-2010-012 (Greater Sage-grouse Habitat Management Policy on Wyoming Bureau of Land Management (BLM) Administered Public Lands including the Federal Mineral Estate) and WY-2010-013 (Oil and Gas Lease Screen for Greater Sage-grouse); additional policy was issued by the Washington Office BLM under IM WO 2010-071 (Gunnison and Greater Sage-grouse Management Considerations for Energy Development (Supplement to *National Sage-Grouse Habitat Conservation Strategy*)). The processed Oil and Gas Lease Screen for Greater Sage-grouse for the parcels that would be offered for lease can be found in Appendix B.

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 introduce an artificial components to the natural habitat. 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. To date, there is only one known case of West Nile in sage grouse within the HDD. However, the potential does exist for the virus to occur more frequently within the Kemmerer and Rawlins Field Offices due to water impoundments, reservoirs, stock tanks or other features that would create an environment suitable for mosquito larva to persist.

Greater sage-grouse have been declining across the west, which has prompted several petitions to list them as threatened under the ESA, including a recent petition that led to the March 5, 2010 finding by the USFWS of warranted for listing but precluded. The areas in central and western Wyoming where sagebrush dominates landscapes and grouse populations remain relatively contiguous and intact cumulatively represent one of the species' last strongholds. The number of male sage-grouse counted per lek in Wyoming decreased 17 percent between 1985 and 1995 (RRMP), and regional declines as high as 73 percent between 1988 and 1999 have been recorded. No causative factors have been identified that explain population reductions

throughout Wyoming, although changes in the sagebrush-dominated areas where the birds typically reside are thought to be among the principal factors.

Parcels 011, 012, 021, 027, 029, 030, 031, 032 and 034 are located in the Bear River drainage. Portions of the Bear River and its tributaries in the Cokeville area contain conservation populations of Bonneville cutthroat trout (BCT) or are identified as having the potential for BCT expansion. The BCT is a designated sensitive species. In 2008 the USFWS determined that there is a viable, self-sustaining Bonneville cutthroat trout populations well distributed throughout its historic range and that the populations are being restored or protected in all currently occupied watersheds; it was subsequently determined that the Bonneville cutthroat trout did not warrant listing as a threatened or endangered species under the Endangered Species Act.

Parcels 001, 002, 003, 004, 005, 007, and 007 are located in the Platte River drainage which provides habitat for the threatened and endangered pallid sturgeon fish species. Parcel 010 lies within the Colorado River drainage which provides habitat for the threatened and endangered Colorado pikeminnow, razorback sucker, bonytail and humpback chub fish species.

3.2.2.3 Lands With Wilderness Characteristics

Wilderness characteristics are resource values that include naturalness, outstanding opportunities for solitude, and outstanding opportunities for primitive and unconfined recreation. Areas evaluated for wilderness characteristics generally occur in undeveloped locations of sufficient size (typically greater than 5,000 contiguous acres) to be practical to manage for these characteristics.

The BLM Land Use Planning Handbook (H-1601-1) states that the BLM must consider the management of lands with wilderness characteristics during the land use planning process. The criteria used to identify these lands are essentially the same criteria used for determining wilderness characteristics for wilderness study areas (WSA). 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, FLPMA does not apply to new WSA proposals and consideration of new WSA proposals on BLM-administered public lands is no longer valid. The BLM is still required to inventory lands to determine whether they possess wilderness characteristics (refer to Appendix C). Subsequent to the completion of the evaluation shown in Appendix C, Secretorial Order 3310 was issued on December 22, 2010 and BLM Draft Manual 6300-1 was issued on December 27, 2010. Both re-emphasize LWC inventory requirement. Accordingly, the parcels were rescreened/reinventoried based on the criteria in draft manual 6300-1 through which it was confirmed that parcels 001-007, 011, 012, 021, 027, 029-032, and 034 still did not meet the Land with Wilderness Characteristics requirements.

Parcel WY-1105-010 falls within the Adobe Town Dispersed Recreation Use Area (DRUA) that was developed through the Rawlins RMP analysis of a Citizen's Wilderness Proposal (CWP). The parcel has been influenced by man through the construction of an access road and well pad for the Yates Wrangler #1 well within the parcel. The well has subsequently been plugged and abandoned. Both the road and well pad have been recontoured and are in the process of being revegetated; however final reclamation has not been achieved. BLM is monitoring the site. The well pad has not been released from bond liability by BLM. The rescreening/reinventory

confirmed that Parcel WY-1105-010 meets the size criteria, but it was also determined that need additional field inventory to determine whether or not the area containing the parcel meet the other criteria if the reclaimed road and well pad are “cherry-stemmed” out. Based on this parcel 010 would be deferred from the May 2011 lease sale.

There are no congressionally designated wilderness areas on BLM-administered lands within the Rawlins or Kemmerer Field Offices, but there are five wilderness study areas located within the RFO and one KFO. They are as follows:

Rawlins Field Office

Adobe Town WSA
Ferris Mountains WSA
Encampment River Canyon WSA
Prospect Mountain WSA
Bennett Mountains WSA.

Kemmerer Field Office

Raymond Mountain WSA

WSAs are managed according to the non-impairment standard. Under this standard, these lands are managed in a manner so as not to impair the suitability of such areas for preservation as wilderness. At present, the BLM manages these lands in accordance with the Rawlins and Kemmerer RMPs, and the Interim Management Policy for Lands Under Wilderness Review until Congress either designates each WSA as “wilderness” or releases it from consideration and the land reverts to multiple-use management.

3.2.2.4 Cultural And Paleontology Resources

All parcels addressed in this EA, have the potential to contain surface and buried archaeological materials. Once the decision is made by the lessee to develop a lease, area specific cultural records review would be done to determine if there is a need for a cultural inventory of the areas that could be affected by the subsequent surface disturbing activities. Generally, a cultural inventory will be required prior to new surface disturbance and all historic and archaeological sites that are eligible for listing in the National Register of Historic Places or potentially eligible to be listed would be either avoided by the undertaking or have the information in the sites extracted through archaeological data recovery prior to surface disturbance.

The parcels addressed in the EA also have a potential to contain vertebrate fossils. Post-lease development proposals would be evaluated on a case-by-case basis to determine if paleontological surveys would be required.

3.2.2.5 Environmental Justice

Executive Order 12898 requires Federal agencies to assess projects to ensure there is no disproportionately high or adverse environmental, health, or safety impacts on minority and low income populations. A review of the parcels offered for lease indicates there are no impacts on minority and low-income populations.

3.2.2.6 Invasive, Non-Native Species

While there are no known populations of invasive or non-native species on the proposed parcels, infestations of noxious weeds can have a negative impact on biodiversity and natural ecosystems. Noxious weeds affect native plant species by out-competing native vegetation for light, water

and soil nutrients. Locally, regionally, and nationally noxious weeds infestations result in cause decreased quality of agricultural products due to high levels of competition from noxious weeds; decreased quantity of agricultural products due to noxious weed infestations; and increased costs to control and/or prevent the noxious weeds.

Furthermore, noxious weeds can negatively affect livestock and dairy producers by making forage either unpalatable or toxic to livestock, thus decreasing livestock productivity and potentially increasing producers' feed and animal health care costs. Increased costs to livestock and dairy producers are eventually borne by consumers.

Recent federal legislation has been enacted requiring state and county agencies to implement noxious weed control programs. Monies would be made available for these activities from the federal government, generated from the federal tax base. Therefore, all citizens and taxpayers of the United States are directly affected when noxious weed control prevention is not exercised. BLM works cooperatively with local Weed Control agencies to identify and manage noxious weeds within their field office boundaries.

3.2.2.7 Wastes, Hazardous Or Solid

There are no identified hazardous or solid waste sites on the parcels addressed in this EA. Should a parcel be leased and developed, generation and temporary storage of waste materials (solid and liquid) would likely occur. They would be managed in accordance with Onshore Orders 1 & 7, Resource Conservation and Recovery Act (RCRA), applicable Wyoming Department of Environmental Quality (WDEQ) regulations, and Wyoming Oil and Gas Conservation Commission (WOGCC) rules. Fluids associated with any subsequent drilling and/or production would either be treated, evaporated, or transferred to an approved WDEQ treatment facility; solids would be treated on site or transferred to a WDEQ approved facility.

3.2.2.8 Water Quality – Surface/Ground

Surface water within the area is affected by geology, precipitation, and water erosion. Factors that currently affect surface water resources include livestock grazing management, oil and gas development, recreational use, drought, and vegetation control treatments. No perennial surface water is found on public land in the proposed lease areas. Ephemeral drainages that discharge into perennial waters are located within the various parcels/partial parcels available for offer. Additionally, parcel 1105-003 (split estate) contains a short segment (approximately 0.3 mile) of Wagonhound Creek and parcel 006 contains a short stretch (approximately 0.4 mile) of Bear Creek. Both creeks are tributaries to the Medicine Bow River.

Groundwater within the area is affected by geology, precipitation, and water supply wells. The ground water across the Rawlins and Kemmerer Field Offices can vary from potable waters with low total dissolved solids (TDS) to highly saline, non-potable sources. Most of the groundwater in KFO and RFO area is used for industrial, domestic and livestock purposes. There are no known domestic water supply sources on or in the general vicinity of the available parcels/partial parcels.

3.2.2.9 Recreation

Recreational use of the available parcels and the surrounding areas is typically for hunting, fishing, camping, sightseeing, driving for pleasure, off-highway vehicle use, and other recreational activities. In the national survey of fishing, hunting and wildlife-associated recreation for activities in 2006, expenditures from fishing and hunting significantly increased.

In Wyoming, more than 320,000 people participated in fishing and hunting activities in 2006. Additionally, 716,000 people participated in some form of wildlife watching activity (USFWS 2006 National Survey of Fishing, Hunting, and Wildlife Associated Recreation). The total of hunting and fishing recreation days in Wyoming in 2008 was 3,683,371. Based on the number of recreation days and average expenditure per day, hunters, anglers and trappers expended approximately \$685 million in pursuit of their sport (WGFD Annual Report 2008). Non-consumptive users provided about \$420 million through wildlife watching, wildlife photography, etc. In total, wildlife associated recreation accounts for over \$1 billion dollars in income to the state for the year 2008 (WGFD Annual Report 2008).

3.2.2.10 Public Health And Safety

Oil and gas development, as well as other industrial use such as coal and trona mining has been occurring in the Rawlins and a Kemmerer Field Offices for many decades. Due to the scattered nature and the small area encompassed by the respective parcels coupled with the industrial safety programs, standards, and state and federal regulations, offering these parcels is not expected to materially increase health or safety risks to humans, wildlife, or livestock. The area containing the lease parcels has been under oil and gas development for many years. Leasing of the parcels analyzed in this EA would present no new or unusual health or safety issues not covered by existing state and federal laws and regulation.

3.2.2.11 Socioeconomics

Same as described under the Affected Environment for the Alternative A (No Action).

3.3 Alternative C: Maximum Lease Offering (Offer 17 complete and/or partial parcels).

3.3.1 Affected Environment Components Occurring within each the Parcels offered under Alternative C.

The parcels listed and described in Section 3.1.1, as well as the affected environment components described in Section 3.1.2 (air quality, wildlife, wilderness, cultural resources, etc.) also apply to Alternative C. Only those parcels that were not included in Section 3.1.1 are presented here.

WY-1105-010 (entire parcel is available to be offered for lease under Alternatives C): The entire parcel is federal lands and mineral estates administered by the BLM. The federal lands have a VRM Class III designation. The parcel is not within a sage-grouse core area. The parcel falls within the Adobe Town Dispersed Recreation Use Area (DRUA) that was derived through the Rawlins RMP analysis of a Citizen's Wilderness Proposal (CWP). The parcel does not contain riparian habitat or slopes greater than 25 percent. The parcel potentially contains habitat for Wyoming pocket gopher, burrowing owls, and white-tailed prairie dogs. The predominant vegetation type is sagebrush dominated shrublands with a variety of forbs and grasses. The parcel lies within the Colorado River watershed and is subject to water depletion restrictions to protect threatened or endangered fish species occurring in the river proper. The parcel falls within the Cow Creek grazing allotment. Refer to Appendices B, C, and D for sage-grouse core area, wilderness characteristics, and MLP determinations. The soils in parcel 010 are mid-elevation basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a very thin organic based surface horizon and a 5 to 9 inch precipitation zone. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential, especially on slopes greater than 25 percent. The parcel also

contains a plugged and abandoned well pad (Yates Wrangler # 1) , as well as a section of the access road to the pad. Both the road and well pad have been recontoured and are in the process of being revegetated; however final reclamation has not been achieved. BLM is monitoring the site. The well pad has not been released from bond liability.

WY-1105-011(a portion of the parcel is available to be offered for lease under Alternative C): The portion of the parcel that is available to be offered for lease is split estate (private surface/federal minerals). The Kemmerer RMP does not designate VRM classifications for non-federal lands, hence the available lands in parcel WY-1105-011 have no VRM designation; the adjoining public lands have a Class III VRM designation. The parcel falls within a Greater Sage-grouse core area and meets the criteria outlined in the sage-grouse habitat screen, has designated crucial big game winter habitat for mule deer, elk, and pronghorn, raptor nesting habitat, and sage-grouse nesting habitat and provides potential habitat for Wyoming pocket gopher habitat,. The parcel falls within the Orr livestock grazing allotment, contains a stock watering reservoir, contains HUD designated floodplains on an ephemeral drainage. There is no riparian habitat on the parcel or occupied dwellings within ¼ mile of the parcel. In addition to containing crucial big game winter habitat, the parcel also provides spring, summer, and fall habitat for these species. There are no sensitive soils or slopes greater than 25 percent. The parcel falls with sagebrush dominated shrublands with a variety of forbs and grasses. The parcel lies within the Bear River watershed and is subject to water depletion restrictions to protect threatened or endangered fish species occurring in the river proper. Refer to Appendices B, C, and D for sage-grouse core area, wilderness characteristics, and MLP determinations. Parcel 11 contains upland soils in the 10-14 inch precipitation zone. Dominant parent materials include residuum formed over sediments; colluvium, including landslide and earth-flow deposits; and alluvium on footslopes and drainages. Geologic overthrusting and the resulting mixed exposures have produced variable soil textures and complex soil/geomorphic relationships. In the narrow valleys and drainages, very deep and well-drained reddish and brown soils are common. The upland ridges are characterized by soils of varying depths, both red and brown in color. Most red soils along the upland ridges are highly susceptible to water erosion when disturbed. Lower areas have an increased salinity potential. The brown soils are more stable and have a lower erosion potential. The parcel also contains floodplains and riparian areas that are highly productive. These soils are generally comprised of silty clays with a gravel or rock component. They are stable with a low to moderate erosion potential.

WY-1105-012 (a portion of the parcel is available to be offered for lease under Alternative C): The portion of the parcel that is available to be offered for lease is split estate (private surface/federal minerals). The Kemmerer RMP does not designate VRM classifications for non-federal lands, hence the available lands in parcel WY-1105-012 have no VRM designation; the adjoining public lands have a Class III VRM designation. The parcel falls within a Greater Sage-grouse core area and meets the criteria outlined in the sage-grouse habitat screen, has designated crucial big game winter habitat for mule deer, elk, and pronghorn, and Greater Sage-grouse nesting habitat. The parcel falls within the Cumberland/Uinta livestock grazing allotment. The parcel is located within 500 feet of riparian habitat. In addition to containing crucial big game winter habitat, the parcel also provides spring, summer, and fall habitat for these species. The parcel does not contain any mapped sensitive soils; slopes greater than 25 percent; or floodplains. There are no occupied dwellings within ¼ mile of the parcel. The parcel

falls with sagebrush dominated shrublands with a variety of forbs and grasses, and provides potential habitat for Beaver Rim phlox. The parcel contains portions of the Oregon/Mormon NHT. The parcel lies within the Bear River watershed and is subject to water depletion restrictions to protect threatened or endangered fish species occurring in the river proper. Refer to Appendices B, C, and D for sage grouse core area, wilderness characteristics, and MLP determinations. Parcel 12 contains upland soils in the 10-14 inch precipitation zone. Dominant parent materials include residuum formed over sediments; colluvium, including landslide and earth-flow deposits; and alluvium on footslopes and drainages. Geologic overthrusting and the resulting mixed exposures have produced variable soil textures and complex soil/geomorphic relationships. In the narrow valleys and drainages, very deep and well-drained reddish and brown soils are common. The upland ridges are characterized by soils of varying depths, both red and brown in color. Most red soils along the upland ridges are highly susceptible to water erosion when disturbed. Lower areas have an increased salinity potential. The brown soils are more stable and have a lower erosion potential. The parcel also contains floodplains and riparian areas that are highly productive. These soils are generally comprised of silty clays with a gravel or rock component. They are stable with a low to moderate erosion potential.

ENVIRONMENTAL IMPACTS

4.0 Description of Impacts-

4.0.1 General Discussion

As previously stated, the issuance of oil and gas leases is strictly an administrative action. Nominated leases are reviewed against the appropriate land use plan, and stipulations are attached to mitigate any known environmental or resource conflicts that may occur on a given lease parcel. On-the-ground impacts would occur when a lessee applies for and receives approval to drill on the lease. The BLM cannot determine at the leasing stage whether or not a proposed parcel will actually be sold, or if it is sold and issued, whether or not the lease would be explored or developed. Consequently, we cannot determine exactly where a well or wells may be drilled. Because well location(s) cannot be determined at this point, the impacts listed below are more generic, rather than site-specific. Additional NEPA documentation would be prepared at the time an APD(s) is submitted. This additional environmental documentation would provide site-specific analysis for that well location. Additional conditions of approval (mitigation) may be applied at that time

According to the Tenth Circuit Court of Appeals, site-specific NEPA analysis at the leasing stage may not be possible absent concrete development proposals. Whether such site-specific analysis is required depends upon a fact-specific inquiry. Often, where environmental impacts remain unidentifiable until exploration can narrow the range of likely drilling sites, filing of an APD to drill may be the first useful point at which a site-specific environmental appraisal can be undertaken (*Park County Resource Council, Inc. v. U.S. Department of Agriculture*, 10th Cir., April 17, 1987). In addition, the IBLA has decided that, "BLM is not required to undertake a site-specific environmental review prior to issuing an oil and gas lease when it previously analyzed the environmental consequences of leasing the land. . . ." (*Colorado Environmental Coalition, et. al, IBLA 96-243, decided June 10, 1999*). However, when site-specific impacts are reasonably foreseeable at the leasing stage, NEPA requires the analysis and disclosure of such reasonably foreseeable site-specific impacts. (*N.M ex rel. Richardson v. BLM, 565 F.3d 683,*

718-19 (10th Cir. 2009). BLM has not received any development proposals concerning the proposed lease parcels addressed in this EA.

4.1 Impacts of Alternative A (No Action)

Under this alternative none of the parcels designated as available (14 parcels in Alternative B and 20 in Alternative C) would be offered for lease and there would be no subsequent physical impact to the existing environment caused by post-lease well development. The only impact resulting from the No Action Alternative would be to socioeconomics.

4.1.1 Socioeconomic Resource:

Based on the assumption that all of parcels and partial parcels that are designated as available for sale and would be sold and based on the minimum acceptable bid of \$2.00 per acre, the government would lose the opportunity to collect a minimum of \$33,009 under Alternative B and \$40,026 under Alternative C in lease fees, as well as any royalties that would be collected from any subsequent hydrocarbon production. Typically, lease bids are substantially higher than the \$2.00 minimum; consequently the economic loss would likely be much higher than that projected. Many communities in southwest Wyoming rely heavily on oil and gas development for part of their economic base. The employment and purchasing opportunities associated with developing and producing wells on the leases is also foregone, as would the opportunity to provide oil and gas resources from these lease parcels to help meet the nation's energy needs. Refer to the Rawlins and Kemmerer FEISs for additional socioeconomic analysis.

4.2 Impacts of Alternative B (Proposed Action)

Alternative B would result in 9 entire parcels and 5 partial parcels being offered at the May 2011 BLM-Wyoming oil and gas lease sale. Again the reader is reminded that at the leasing stage BLM cannot predict whether or not any of the parcels will actually be sold, if they are sold and a lease is issued whether or not they will actually be developed, and if development does occur what the development level would be. Tables 4.1a and 4.1b display the stipulations that would be applied to each parcel to mitigate impacts.

Table 4.1a Lease Notices, Timing Limitation Stipulations (TLS) and No Surface Occupancy (NSO) Stipulations Applied to the Lease Parcels Based on Affected Resources Elements Identified In the Affect Environment Section

Parcel # WY-1105-	Lease Notice #1 ¹	Lease Notice #2 ²	Lease Notice #3 ³	Big Game Winter TLS	Sage-grouse Nesting TLS	Raptor Nesting TLS	Mountain Plover TLS	Airport NSO
001	<i>applied</i>	<i>applied</i>	<i>applied</i>				<i>applied</i>	
002	<i>applied</i>	<i>applied</i>	<i>applied</i>				<i>applied</i>	
003	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>		
004	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	
005	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>		
006	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>		
007	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>			
010	<i>applied</i>	<i>applied</i>	<i>applied</i>			<i>applied</i>		
021	<i>applied</i>	<i>applied</i>	<i>applied</i>					
027	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>			
029	<i>applied</i>	<i>applied</i>	<i>applied</i>					
030	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>			
031	<i>applied</i>	<i>applied</i>	<i>applied</i>					
032	<i>applied</i>	<i>applied</i>	<i>applied</i>					
034	<i>applied</i>	<i>applied</i>	<i>applied</i>					<i>applied</i>

1 Lease Notice 1 is applied to all parcels and prohibits or restricts surface disturbing activities on slopes over 25%, within 500' of riparian/wetland areas, with specified distances of highways, within ¼ mile of occupied dwellings, and construction with frozen ground .

2 Lease Notice 2 is applied to all parcels and alerts lessees that that the lease may contain National Historic Trails that may affect development operations.

3 Lease Notice 3 is applied to all parcels and alerts the lessee that they may be required to implement s measures to reduce impacts to sage-grouse.

**Table 4.1b Controlled Surface Use (CSU) and No Surface Occupancy (NSO) Stipulations Applied to the Lease Parcels
Based on Affected Resource Elements Identified In the Affect Environment Section**

Parcel # WY- 1105-	SG Lek CSU	Raptor CSU	Burrowing Owl CSU	Amphib. Species CSU	Cultural Resource CSU	Historic Trails CSU	Sensitive Species CSU	DRUA CSU	VRM II CSU	Coal CSU
001				<i>applied</i>			<i>applied</i>			
002				<i>applied</i>			<i>applied</i>			
003				<i>applied</i>			<i>applied</i>			
004		<i>applied</i>		<i>applied</i>	<i>applied</i>		<i>applied</i>			<i>applied</i>
005		<i>applied</i>		<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>			<i>applied</i>
006	<i>applied</i>	<i>applied</i>		<i>applied</i>		<i>applied</i>	<i>applied</i>			<i>applied</i>
007	<i>applied</i>			<i>applied</i>		<i>applied</i>	<i>applied</i>			
010		<i>applied</i>	<i>applied</i>	<i>applied</i>			<i>applied</i>	<i>applied</i>		
021							<i>applied</i>			
027	<i>applied</i>					<i>applied</i>	<i>applied</i>			
029						<i>applied</i>	<i>applied</i>			
030						<i>applied</i>	<i>applied</i>			
031							<i>applied</i>			
032						<i>applied</i>	<i>applied</i>			
034							<i>applied</i>		<i>applied</i>	

4.2.1 Air Resources

4.2.1.1 Air Quality

Offering any of these parcels and the subsequent issuing of leases would have no direct impacts to air quality. Any potential effects to air quality would occur if and when the leases were developed. Any proposed development project would be subject to additional analysis of possible air effects before approval. The analysis may include air quality modeling for the activity. Over the last 10 years, the post lease development on federal oil and gas mineral estate in the Rawlins and Kemmerer Field Offices has resulted in an average of 262 wells being spudded annually (68 in KFO and 194 in RFO). These wells would incrementally 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.

The Reasonably Foreseeable Development (RFD) in the Rawlins RMP assumes that 3711 federal wells would be drilled over a 20 life of project assumption (LOP), which equates to approximately 186 wells drilled per year. The RFD was derived for analysis purposes, and is not intended to be a development cap. For additional discussion and details, see the Rawlins RMP ROD, Reasonably Foreseeable Development, Section 1.1.2, pg 1-7. The Reasonably Foreseeable Development Scenario (RFD) document for the Kemmerer Field Office RMP estimated that approximately 100 wells would be drilled annually for Federal minerals. Drilling density (i.e., wells per square mile) and number of wells drilled annually depend on a number of variables including market trends, technology available (vertical, directional, or horizontal), and the geology of the hydrocarbon-bearing zone. As a result, it is unknown the specific numbers of wells that could potentially be drilled under a full field development scenario as a result of offering the leases. However, the RFD takes these assumptions into account, and on a field office-wide basis, is still valid. Current APD permitting trends within the field offices confirm that these assumptions are still accurate. From fiscal years 2000 to 2009 (October 1999 through September 30, 2009), the RFO approved 2036 APDs, or an average of 204 APDs per year and the KFO approved 431 APDs, or an average of 43 APDs per year

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.

Coal-bed methane development currently exists within the RFO and, therefore, emissions can be expected from this source as well. Approximately 8.5 percent of the active wells in the RFO are

coal-bed methane wells. The RFD grouped coal-bed methane wells and conventional wells together in the scenario. Conversely, coalbed methane development does not currently exist within the KFO and, therefore, there are no expected emissions from this source in KFO. The RFD does predict the possibility of up to 32 coalbed methane wells could be drilled annually within the Kemmerer planning area over the next 20 years.

4.2.1.2 Greenhouse Gas Emissions

The administrative act of leasing 10 entire parcels and portions of 5 additional parcels covering 16,504.56 acres would not result in any direct GHG 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: offering the proposed tracts may contribute to drilling new wells.

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 of the inventory report, 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 the assumption of decreased carbon dioxide emissions from venting at processing plants.

As of 2008, the Inventory indicates that there over 33,000 active gas and oil wells in the State, 45 operational gas processing plants, 5 oil refineries, and over 9,000 miles of gas pipelines, there are significant uncertainties associated with estimates of Wyoming's GHG emissions from this sector. This is compounded by the fact that there are no regulatory requirements to track CO₂ or CH₄ emissions. Therefore, estimates based on emissions measurements in Wyoming are not possible at this time. (Wyoming GHG Inventory and Reference Case Projection CCS, Spring 2007)

However, as reported by the same CCS inventory report, emissions from this (fossil fuel production) sector grew by 101% from 1990 to 2005 and are projected to increase by a further 10% between 2005 and 2020. The natural gas industry is the major contributor to both GHG emissions and emissions growth, with CH₄ emissions from coal mining second. That said, it is worth noting that a significant portion of the emissions attributed to the natural gas industry are due to vented gas from a few processing plants, which process gas largely used for injection in enhanced oil recovery operations.

Some information and projections of impacts beyond the project scale are becoming increasingly available. Chapter 3 of the Climate Change Supplementary Information Report for Montana, North Dakota, and South Dakota (Climate Change SIR, 2010) describes impacts of climate change in detail at various scales, including the state scale when appropriate. The following bullet points summarize potential changes identified by the EPA (EPA, 2008) that are expected to occur at the regional scale, where the proposed action and its alternatives are to take place. The EPA identifies this area as part of the Mountain West and Great Plains region (<http://www.epa.gov/Region8/climatechange/pdf/ClimateChange101FINAL.pdf>):

- The region is expected to experience warmer temperatures with less snowfall.
- Temperatures are expected to increase more in winter than in summer, more at night than in the day, and more in the mountains than at lower elevations.
- Earlier snowmelt means that peak stream flow would be earlier, weeks before the peak needs of ranchers, farmers, recreationalist, and others. In late summer, rivers, lakes, and reservoirs would be drier.
- More frequent, more severe, and possibly longer-lasting droughts are expected to occur.
- Crop and livestock production patters could shift northward; less soil moisture due to increased evaporation may increase irrigation needs.
- Drier conditions would reduce the range and health of ponderosa and lodgepole pine forests, and increase the susceptibility to fire. Grasslands and rangelands could expand into previously forested areas.
- Ecosystems would be stressed and wildlife such as the mountain line, black bear, long-nose sucker, marten, and bald eagle could be further stressed.

Other impacts could include:

- Increased particulate matter in the air as drier, less vegetated soils experience wind erosion.
- Shifts in vegetative communities which could threaten plant and wildlife species.
- Changes in the timing and quantity of snowmelt which could affect both aquatic species and agricultural needs.

Projected and documented broad-scale changes within ecosystems of the U.S. are summarized in the Climate Change SIR (2010). Some key aspects include:

- Large-scale shifts have already occurred in the ranges of species and the timing of the seasons and animal migrations. These shifts are likely to continue (USGCRP 2009, as cited in the Climate Change SIR, 2010). Climate changes include warming temperatures throughout the year and the arrival of spring an average of 10 days to 2 weeks earlier through much of the U.S. compared to 20 years ago. Multiple bird species now migrate north earlier in the year.
- Fires, insect epidemics, disease pathogens, and invasive weed species have increased and these trends are likely to continue. Changes in timing of precipitation and earlier runoff increase fire risks.
- Insect epidemics and the amount of damage that they may inflict have also been on the rise. The combination of higher temperatures and dry conditions have increases insect populations such as pine beetles, which have killed trees on millions of acres in western U.S. and Canada. Warmer winters allow beetles to survive the cold season, which would normally limit populations; while concurrently, drought weakens trees, making them more susceptible to mortality due to insect attack

While long-range regional changes might occur within this project area, it is impossible to predict precisely when they could occur. The following example summarizing climate data for the West North Central Region (MT, ND, SD, WY) illustrates this point at the regional scale. A potential regional effect of climate change is earlier snowmelt and associated runoff. This is directly related to spring-time temperatures. Over a 112 year record, overall warming is clearly evident with temperatures increasing 0.21 degrees per decade (Figure E). This would suggest that runoff may be occurring earlier than in the past. However, data from 1991-2005 indicates a 0.45 degree per decade cooling trend (Figure F). This example is not an anomaly, as several other 15-year windows can be selected to show either warming or cooling trends.

Some of these year-to-year fluctuations in temperature are due to natural processes, such as the effects of El Niños, La Niñas, and the eruption of large volcanoes (summarized in the Climate Change SIR 2010). This information illustrates the difficulty of predicting actual regional or site specific changes or conditions which may be due to climate change during any specific time frame.

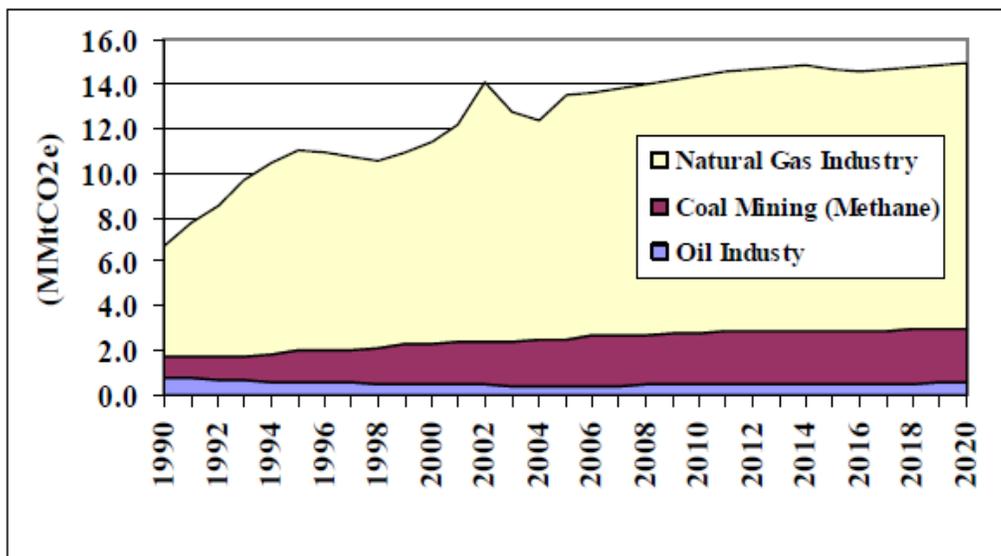
Table E2. Methane Emissions and Projections from the Fossil Fuel Industry

(Million Metric Tons CO ₂ e)	1990	1995	2000	2005	2010	2015	2020
Fossil Fuel Industry	6.7	11.0	11.4	13.5	14.4	14.7	14.9
Natural Gas Industry	5.0	9.0	9.2	11.0	11.6	11.8	12.0
Production (CH ₄)	0.2	0.3	0.8	1.6	2.3	2.5	2.6
Processing (CO ₂ & CH ₄)	4.1	7.9	7.7	8.2	7.6	7.6	7.5
Methane Emissions (CH ₄)	1.4	1.4	1.3	1.2	1.6	1.7	1.8
Vented Gas (CO ₂ & CH ₄)	2.6	6.5	6.4	6.9	6.0	5.9	5.7
Transmission (CH ₄)	0.6	0.7	0.6	1.1	1.6	1.6	1.7
Distribution (CH ₄)	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Oil Industry	0.8	0.6	0.5	0.4	0.5	0.5	0.5
Production (CH ₄)	0.7	0.6	0.5	0.4	0.5	0.5	0.5
Refineries (CH ₄)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Coal Mining (CH₄)	1.0	1.4	1.8	2.1	2.3	2.4	2.4

The value 0.00 in the above table indicates emissions less than 0.005 MMtCO₂e.

Figure E1 displays the CH₄ emissions from coal mining and natural gas and oil systems, on an MMtCO₂e basis.

Figure E1. Fossil Fuel Industry Emission Trends (MMtCO₂e)



Source: CCS calculations based on approach described in text.

Of the fifteen (15) lease parcels that are available for leasing themselves, one (1) parcel (6.7%) is located within an area defined as having high potential for oil and gas development. Two (2) parcels (13.3%) are located within an area defined as having moderate potential for oil and gas development. Ten (10) parcels (66.7%) are located within an area defined as having low potential for oil and gas development. The remaining two (2) parcels (13.3%) are located within an area defined as having very low potential for oil and gas development.

See Section 4.30 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.

4.2.1.3 Climate

The assessment of GHG emissions and climate change is in its formative phase. It is currently not feasible to know with certainty the net impacts from the proposed action on climate. The inconsistency in results of scientific models used to predict climate change at the global scale coupled with the lack of scientific models designed to predict climate change on regional or local scales, limits the ability to quantify potential future impacts of decisions made at this level. When further information on the impacts to climate change is known, such information would be incorporated into the BLM's planning and NEPA documents as appropriate.

4.2.1.4 Mitigation

The BLM holds 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). RFO and KFO would work 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.

4.2.2 Wildlife

4.2.2.1 Special Status Species

Under this alternative, nine(99) parcels and five partial parcels would be offered. Additionally, three (3) partial parcels would be deferred from the May 2011 sale pending a sage-grouse amendment to the Kemmerer and Rawlins RMPs. Due to IM WY-2010-012 and IM WY-2010-013 the BLM is currently amending 6 RMPs across the state. These RMP amendments will provide for public input during scoping. The goal of the RMP amendments is to have a plan state-wide that is consistent with the Governor of Wyoming's Executive Order 2010-4, the IMs and to have stipulations match across field office boundaries in order to avoid a potential ESA listing of the sage grouse.

IM WY-2010-012 directs the BLM to analyze "an alternative that limits development to one disturbance location per 640 acres within the State's Core Areas to coincide with the Governor's Executive Order (EO, Order 2010-4). The one location and cumulative value of existing disturbance in the area will not exceed five percent (5%) of sagebrush habitat within those same 640 acres." IM WY-2010-013 directs the BLM to screen each parcel for sage grouse core areas. If the parcel is within "core" then the BLM is to indentify if grouse habitat is involved. Under step two of the screen it is assumed that if the parcel is within "core" then there is associated habitat. Step three is to identify if the parcel is within eleven square miles (11 mi²) of contiguous, manageable, unleased federal minerals. If the parcel is within this 11 mi², then the BLM's Reservoir Management Group (RMG) is contacted to identify any potential fluid mineral drainage concerns. If there are not any drainage concerns then the parcel is recommended for deferral from leasing. At a minimum, the sage grouse screening process would continue until the RMP amendments are completed. Refer to the sage-grouse core area screen in Appendix B to see which parcels fall within core area and meet the manageability criteria. Post-lease projects within "core" would be analyzed as directed by IM WY-2010-012.

Portions or all of parcels WY-1105-003, 004, 005, 006, 007, 027, and 030 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 may be more restraining than current RMP stipulation guidance if supported by site-specific NEPA analysis of a development proposal. Such restrictions could be applied as COA 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 FWS in 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.

Parcels WY-1105-004 and 006 fall within a designated Greater Sage-grouse core area, but would not be deferred because neither parcel meets the 11 square mile contiguous habitat criteria in IM WY-2010-013. Both parcels are located in the federal railroad grant corridor (checkerboard) for the Union Pacific Railroad. Based on the checkerboard land ownership pattern, the lease parcels and or segments of lease parcels are bordered by private and state mineral and/or surface estate. The maximum contiguous federal mineral and/or surface estate within and surrounding parcels 004 and 006 is one (1) square mile. Surface disturbing and/or disruptive activities within 2 miles of a grouse lek or other known nesting habitats during the nesting period; within winter concentration areas, and/or within ¼-mile of leks during the breeding season could cause undue or unnecessary impacts to sage-grouse. Impacts could include reduced breeding success and/or nest abandonment as well as causing the sage grouse to move to less suitable winter habitat. This would be the same for habitat within and outside core areas. The private and state surface and/or mineral estate within or adjoining parcels 004 and 006 are not subject to BLM leasing or lease development regulations. As stated in Section 1.3, it is not possible at the lease offering stage to accurately predict whether a parcel will actually be leased; if it is leased, whether or not a given parcel would have exploration or development activities; and if it does receive exploration or development activity what that level (down-hole and surface well pad spacing) would be. Should activity occur that is analogous to that occurring on Pinedale Anticline, it could be assumed that impacts similar the those shown in the Halloran study could occur.

All other impacts are the same as those described in the Kemmerer RMP and Rawlins RMPs as they relate to sage grouse.

4.2.2.2 Other wildlife (Avian, Aquatic, and Terrestrial)

Post-lease actions (construction and drilling) during the plover breeding and nesting period (April 10 to July 10) in the vicinity of plover nests (if plovers actually inhabit any of the parcels) may cause unnecessary impacts to nesting birds, such as egg or hatchling abandonment. Operations during the breeding season could result in reduced breeding success. Conservation recommendations under the required biological opinion written by the USFWS on behalf of the endangered and sensitive Bear River, Platte River, and Colorado River fishes shall be adhered to.

Post-lease exploration and/or development (well-pad, road, and pipeline construction; well drilling and completion operations; road maintenance and dust abatement) would result in water depletions from which ever drainage the activity was occurring in. It could also result in some increased siltation. The depletion quantities would vary depending on the number of wells being drilled and completed and whether or not non-contributing sources of water could be utilized. Any increased siltation would depend on the amount of surface disturbance, its proximity to live water, and erosion control measures implemented.

Surface disturbing and/or disruptive activities from February 1 to July 31, up to September 15th in the case of burrowing owls, may cause undue impacts to nesting and/or burrowing owls raptors if presence is found. The primary impact would be from nesting disturbance which could result in nest abandonment, and/or increased egg and chick mortality. Some raptors, such as Ferruginous hawks, golden eagles, bald eagles and red-tailed hawks, are more sensitive to vehicular traffic than others. Site-specific wildlife surveys would be developed at the APD stage.

Surface disturbing and/or disruptive activities on the parcels during the crucial big game wintering period could cause unnecessary impacts to wintering moose, mule deer, antelope, and elk, such as causing animals to move to less suitable winter habitat and conceivably causing fetal abortion by pregnant females. As stated in Section 1.3, it is not possible at the lease offering stage to accurately predict whether a parcel would actually be leased; if it is leased, whether or not a given parcel would have exploration or development activities; and if it does receive exploration or development activity what that level (down-hole and surface well pad spacing) will be. Should activity occur that is analogous to that occurring on Pinedale Anticline, it could be assumed that impacts similar the those shown in the Sawyer, Holloran, and Berger studies would occur.

Well-pad, road, and pipeline development into areas currently void of surface disturbance would result in habitat fragmentation, which, depending on the intensity of the development, vegetative cover, and terrain could affect a variety of typically ground dwelling species, such as but not limited to sage-grouse, mule deer, antelope, and elk. Should post-lease development actually occur on any of the parcels, the related surface disturbance would result in short-term and long-term losses of wildlife habitat. Short-term habitat loss would include all initial surface disturbance associated with the project and typically would be on-going until those portions of a well pad not needed for production operations, road disturbance outside the shoulders, and the pipeline disturbance are reclaimed. Long-term habitat loss would include those portions of the pad needed for production operations for the life of the well and travel path and shoulders of the access roads.

Water depletions for well pad and road construction, well drilling, well completion operations, pipeline hydrostatic testing, and dust abatement would potentially reduced stream flows in the Bear, Colorado, and Platte River systems and could affect threatened and endangered fish species in those respective river systems. All depletions in these river systems are subject the US FWS mitigation requirements (depletion fund payments); specific project proposals resulting in a may affect determination are required to undergo formal consultation with the USFWS prior to any project approval. Any lease-related construction activities in or through the riparian/surface water areas in the parcel could affect amphibian and reptilian species using those resources.

4.2.2.3 Mitigation

As prescribed by the Rawlins and Kemmerer RMPs, wildlife impacts at the leasing stage would be mitigated through seasonal restrictions. See Tables 4.1a and 4.1b for a reference to the stipulations to be applied and to Appendix a for the specific wildlife stipulations applied to each parcel.

4.2.3 Multiple Use Lands with Wilderness Characteristics

Under this alternative, nine (9) parcels and five partial parcels would be offered. Additionally, one (1) entire parcel and five (5) partial parcels would be deferred from the May 2011 sale. As stated above, no parcel offered for lease contains areas that have been identified as containing wilderness characteristics (refer to Appendix C). Parcel WY-1105-010 is located approximately 4 miles west of the Adobe Town Wilderness Study Area. The parcel falls within a Citizen's Wilderness Proposal area evaluated through the Rawlins RMP and was determined that the area would not be managed for wilderness. However, the area was determined to have suitable values for dispersed recreational use and was designated in the Rawlins RMP as such. Parcel 010 would be deferred pending field evaluation to determine if the area meets the LWC criteria. Based on the parcel deferrals and the wilderness inventory results for the remaining parcels, the implementation of alternative B would not impact wilderness characteristics.

4.2.3.1 Mitigation

None

4.2.4 Cultural and Paleontological Resources

Once the decision is made by the lessee to develop a lease, area specific cultural records review would be done to determine if there is a need for a detailed cultural inventory of those areas that could be affected by the subsequent surface disturbing activities. Generally, a cultural inventory will be required and all identified historic and archaeological sites that are eligible for listing in the National Register of Historic Places or potentially eligible to be listed would be either avoided by the undertaking or have the information in the sites extracted through archaeological data recovery prior to surface disturbance. The same basic process applies to paleontological resources.

4.2.4.1 Mitigation

Lease Notice No. 2 is applied to all parcels offered for leasing. Avoidance measures would be imposed wherever cultural and/or paleontological resources are impacted (refer to Table 4.1b and Appendix A for the parcels with cultural and historic stipulations).

4.2.5 Soils

While the act of leasing parcel would not physically cause impacts to the soils resource, any subsequent surface disturbing development of the lease would physically disturb the topsoil and would expose the substratum soil on subsequent project areas. Direct impacts resulting from the oil and gas construction of well pads, access roads, and reserve pits include removal of vegetation, exposure of the soil, mixing of horizons, compaction, loss of top soil productivity and susceptibility to wind and water erosion. Wind erosion could be a moderate contributor to soil erosion given the average wind speeds in the area. Dust from vehicle traffic would also be a factor. These impacts could result in increased indirect impacts such as runoff, erosion and off-site sedimentation. Activities that could cause these types of indirect impacts include construction and operation of well sites, access roads, gas pipelines and facilities.

Contamination of soil from drilling and production wastes mixed into soil or spilled on the soil surfaces could cause a long-term reduction in site productivity. Some of these direct impacts can be reduced or avoided through proper design, construction and maintenance, and implementation of best management practices.

Additional soil impacts associated with lease development would occur when heavy precipitation causes water erosion damage. When water saturated segment(s) on the access road become impassable, vehicles may still be driven over the road. Consequently, deep tire ruts would develop. Where impassable segments are created from deep rutting, unauthorized driving may occur outside the designated route of access roads. Unsuccessful reclamation could result in increased erosion and reduced soil productivity.

Based on the Rawlins and Kemmerer RMPs, surface disturbance is restricted on slopes over 25 percent and also within floodplains; consequently impacts to these resources/landforms are not anticipated from post-leasing development.

4.2.5.1 Mitigation

The operator would stockpile the topsoil from the surface of well pads which would be used for surface reclamation of the well pads. The impact to the soil would be remedied upon reclamation of well pads when the stockpiled soil that was specifically conserved to establish a seed-bed is spread over well pads and vegetation re-establishes.

Reserve pits would be closed, re-contoured and reseeded as described in COAs attached to APDs. Upon abandonment of wells and/or when access roads are no longer in service the Authorized Officer would issue instructions and/or orders for surface reclamation/restoration of the disturbed areas.

4.2.6 Vegetation

At this stage (lease sale) there are no impacts. Impacts (both direct and indirect) would occur when the lease is developed in the future. The potential impacts would be analyzed on a site specific basis prior to oil and gas development.

Should post-lease development actually occur on any of the parcels, the related surface disturbance would result in short-term and long-term losses of vegetation. Short-term vegetation loss would include all initial surface disturbance associated with the project until those portions of a well pad not needed for production operations, road disturbance outside the shoulders, and the pipeline disturbance are reclaimed. Long-term habitat loss would include those portions of the pad needed for production operations for the life of the well and travel path and shoulders of the access roads.

Surface disturbance within areas containing special status plant species result in the loss individual plants or groups of plants; however the Special Status Species Controlled Surface Use (CSU) stipulation prohibits or restricts activity in such areas; consequently impacts are expected to be negligible.

4.2.6.1 Mitigation

Refer to Tables 4.1a, 4.1b and Appendix A for parcels with the Special Status Species CSU stipulation.

4.2.7 Invasive, Non-native Species

While the act of leasing Federal minerals produces no impacts, subsequent development produces impacts in the form of surface disturbance. The construction of an access road and well pad may unintentionally contribute to the establishment and spread of noxious weeds.

Noxious weed seed could be carried to and from the project areas by construction equipment, the drilling rig and transport vehicles. The main mechanism for seed dispersion on the road and well pad is by equipment and vehicles that were previously used and or driven across or through noxious weed infested areas. The potential for the dissemination of invasive and noxious weed seed may be elevated by the use of construction equipment typically contracted out to companies that may be from other geographic areas in the region.

4.2.7.1 Mitigation

In the event noxious weeds are discovered during construction of any access roads and well pads, measures will be taken to mitigate those impacts. Washing and decontaminating the equipment prior to transporting onto and exiting the construction areas would minimize this impact. Additionally, seed mixes used for reclamation are required to be certified weed-free and all Operators must have an approved Weed Management Plan.

4.2.8 Wastes, Hazardous or Solid

The lease parcels fall under environmental regulations that impact exploration and production waste management and disposal practices and impose responsibility and liability for protection of human health and the environment from harmful waste management practices or discharges.

Any potential for waste impact would not occur until post-lease development activities are initiated. Impacts could be in the form of drilling fluid spills, solid chemical spills, trash scatter on and off the well pads, and hydrocarbon or gas releases.

4.2.8.1 Mitigation

The lease sale parcels are regulated under the Resource Conservation and Recovery Act (RCRA), Subtitle C regulations, which are extremely stringent. As well as, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which provides for the exclusion of petroleum (including crude oil or any fraction thereof) from the definition of hazardous substance, pollutant, or contaminant. Additionally, waste management requirements are included in the 13 point surface use plan and the 8 point drilling plan attached to the APDs. Companies would be required to have approved Spill Prevention Control and Countermeasure Plans and comply with NTL-3A for reporting of undesirable events.

4.2.9 Water Quality: Surface and Groundwater

While the act of leasing a parcel would produce no impacts, subsequent development of the lease can lead to surface disturbance from the construction of well pads, access roads, pipelines, and powerlines, which can result in degradation of surface water quality and groundwater quality from nonpoint source pollution, point source pollution including spills, increased soil losses, and increased gully erosion. Surface disturbance associated with well-drilling (pad/road/pipeline construction) in close proximity (less than 500 feet) to the wetland/riparian areas discussed in the Affected Environment section could increase silt loads in these water courses.

Potential direct impacts that would occur due to construction of well pads, access roads, pipelines, and powerlines include increased surface water runoff and off-site sedimentation brought about by soil disturbance; increased salt loading and water quality impairment of surface waters; channel morphology changes due to road and pipeline crossings; and possible contamination of surface waters by produced water discharged at the surface, and uncontrolled and unremediated spills.

The magnitude of these impacts to water resources would depend on the proximity of the disturbance to the drainage channel, slope aspect, and gradient, degree and area of soil disturbance, soil character, duration and time within which construction activity would occur, and the timely implementation and success or failure of mitigation measures.

Direct impacts would likely be greatest shortly after the start of construction activities and would likely decrease in time due to natural stabilization, and reclamation efforts. Construction activities would occur over a relatively short period; therefore, the majority of the disturbance would be intense but short lived. Spills or produced fluids (e.g., saltwater, oil, and/or condensate in the event of a breach, overflow, or spill from storage tanks) could result in contamination of the soil onsite, or offsite, and may potentially impact surface and groundwater resources in the long term.

Petroleum products and other chemicals, accidentally spilled, could result in surface and groundwater contamination. Similarly, possible leaks from reserve and evaporation pits could degrade surface and ground water quality. Authorization of the proposed projects would require full compliance with BLM directives and stipulations that relate to surface and groundwater protection.

Oil and gas wells are cased and cemented at a depth below all usable water zones; consequently impacts to springs and residential wells are not expected. Water wells developed for oil and gas drilling could result in a draw down in the quantity of water in the residential wells; however it is not possible to predict whether or not such water wells would be developed at this point in time. Water wells for oil and gas drilling/completion operations would require approval at the APD stage and would be mitigated at that time.

4.2.9.1 Mitigation

Lease Notice No. 1 is applied to all lease parcels and restricts surface disturbing activities within 500 feet of surface water and/or riparian areas, including floodplains, to protect the water and riparian resources. The use of plastic-lined reserve pits would reduce or eliminate seepage of drilling fluid into the soil and eventually reaching groundwater. The casing and cementing requirements imposed on proposed wells would reduce or eliminate the potential for groundwater contamination from drilling muds and other surface sources. Additional mitigation could include, but would not be limited to drilling oil and gas related water wells to aquifers below those providing residential water and then cementing from the nearest shale/clay zone below the deepest culinary/livestock water well in the vicinity back to the surface. This will insure that oil and gas related water wells are not drawing from the aquifers providing the residential water or allowing the mixing of lower quality waters with potable sources. Additionally, in area's where shallow groundwater may be in encountered, the use of closed-loop or semi-closed loop drilling systems may be required.

4.2.10 Watershed – Hydrology

While the act of leasing a parcel would produce no impacts, subsequent development of the lease would result in long term and short term alterations to the hydrologic regime. Peak flow and low flow of perennial streams, ephemeral, intermittent rivers and streams and their associate floodplains as defined and mapped by the Department of Housing and Urban Development (HUD) would be directly affected in the short-term by an increase in impervious surfaces resulting from the construction of the well pad and road. The potential hydrologic effects to peak flow is reduced infiltration where surface flows can move more quickly to perennial or

intermittent/ephemeral rivers and streams, causing peak flow to occur earlier and to be larger. Increased magnitude and volume of peak flow can cause bank erosion, channel widening, downward incision, and disconnection from the floodplain. The potential hydrologic effects to low flow is reduced surface storage and groundwater recharge, resulting in reduced baseflow to perennial and intermittent/ephemeral rivers and streams. The direct impact would be that hydrologic processes may be altered where the perennial, ephemeral, and intermittent river and stream system responds by changing physical parameters, such as channel configuration. These changes may in turn impact chemical parameters and ultimately the aquatic ecosystem.

Long-term direct and indirect impacts to the watershed and hydrology would continue for the life of wells and would decrease once all well pads and road surfacing material has been removed and reclamation of well pads, access roads, pipelines, and powerlines has taken place. Short term direct and indirect impacts to the watershed and hydrology from access roads that are not surfaced with impervious materials would occur and would likely decrease in time due to reclamation efforts.

4.2.10.1 Mitigation

Stormwater Pollution Prevention and Control Plans are required by the State of WY prior to any surface disturbance and on a case by case basis the Authorized Officer may require additional erosion control measures to reduce the volume of surface runoff and subsequent sediment transport. The operator would stockpile the topsoil from the surface of well pads which would be used for surface reclamation of the well pads. Reserve pits would be re-contoured and reseeded as described in the APD COA. Upon abandonment of the wells and/or when access roads are no longer in service the Authorized Officer would issue instructions and/or orders for surface reclamation/restoration of the disturbed areas as described in the APD COA.

4.2.11 Livestock Grazing

At the lease stage there are no impacts to livestock grazing. Post-lease development would result in short-term and long-term losses of vegetation (see Section 4.7), which correlates to short-term and long-term losses of livestock forage. Short-term losses would be until the portions of a well pad not needed for production operations, road disturbance outside the shoulders, and the pipeline disturbance, are reclaimed with established vegetation. Long-term losses would be the portions of the pad needed for production operations for the life of the well, as well as the maintained portions of the access roads. Increased traffic associated with well-field development increases the possibility of animals being injured or killed in collisions with vehicles.

4.2.11.1 Mitigation

Initiate site reclamation as soon as well completion operations are finished. Reclaim and revegetate all disturbed areas not needed for well production operations. Avoid range improvements by 500' standard lease term #1. Avoidance of trailing operations and securing of reserve pits and production facilities against live stock entry, use of cattleguards, fences and gates.

4.2.12 Recreation

While the act of leasing Federal minerals produces no impacts, subsequent development of a lease would generate impacts to recreation activities. For public land areas that are small or land-locked by private or state land, recreation opportunities would be limited or non-existent due to land patterns. Recreational use on larger blocks of public land recreation and on smaller

blocks of public land where there is public access could be impacted by post-lease oil and gas development activities. The quality of the recreational experience would likely be diminished by oil and gas development operations. Recreation on split estate lands would be at the discretion of the private landowner.

Construction and drilling operations would potentially cause game animals and birds to move away from the activity. Studies have shown that animals have moved 2 miles or more from logging operations and other similar activities. If such post-lease development operations would coincide with hunting season, it is expected that hunters may experience reduced success rates within a 2-mile area of the activity. Hunting success could potentially increase in areas beyond the 2 miles. In addition to facilitating mineral extraction, new oil and gas roads would also provide better access to the lease areas for recreational opportunities but can also negatively influence poaching activities. However, the presence of oil and gas facilities would likely diminish the recreational experience.

4.2.12.1 Mitigation

None.

4.2.13 Visual Resources

Visual resource management is broken into four VRM classes. The parcels addresses through Alternative B contain Classes II, III and IV.

The VRM Class II objective is to retain existing landscape character. The level of change to the characteristic landscape should be low. Management activities should not attract the attention of the casual observer. Changes would be required to repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

Modifications to a proposal would be required if the proposed change cannot be adequately mitigated to retain the character of the landscape. Depending on the production nature of the well site, multiple low-profile condensate and/or oil or produced water tanks would be necessary to accommodate the project.

The VRM Class III objective is to partially retain existing landscape character. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate a casual observer's view. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape. Facilities, such as produced water, condensate or oil storage tanks that rise above eight feet, would provide a geometrically strong vertical and horizontal visual contrast in form and line to the characteristic landscape and vegetation, which have flat, horizontal to slightly rolling form and line. The construction of an access road, well pad and other ancillary facilities, other than facilities greater in height than thirteen feet, would slightly modify the existing area visual resources. Facilities, such as condensate and produced water or oil storage tanks that rise above thirteen feet, would provide a geometrically strong vertical and horizontal visual contrast in form and line to the characteristic landscape and vegetation, which have flat, horizontal to slightly rolling form and line.

The VRM Class IV objective is to provide for management activities which require major modification of the existing landscape character. Every attempt, however, should be made to reduce or eliminate activity impacts through careful location, minimal disturbance, and repeating the basic landscape elements. Facilities, such as condensate and produced water or oil storage

tanks that rise above eight feet, would provide a geometrically strong vertical and horizontal visual contrast in form and line to the characteristic landscape and vegetation, which have flat, horizontal to slightly rolling form and line. The construction of an access road, well pad and other ancillary facilities would slightly modify the existing area visual resources.

Since well locations cannot be accurately determined at the leasing stage, it is not possible to accurately predict the visual impacts. Development intensity, terrain, and proximity to visual receptors (e.g., main travel corridors, towns, recreation facilities, etc.) will greatly influence the VRM impacts. For example, a single well pad screened by terrain at an area absent of visual receptors would have low to negligible impacts in Class III or IV areas; whereas well pads developed next to a major travel route on in the viewshed town or recreation facility may have substantial impact. It is possible that post-lease industrial development could result in portions or all of a VRM area to be downgraded to a lower classification.

4.2.13.1 Mitigation

The flat colors Shale Green, Covert Green, or Shadow Gray from the Standard Environmental Colors Chart would be used on all facilities to closely approximate the vegetation within the setting. All facilities, including the meter building, would be painted one of these colors as determined during a site-specific review. If the proposed area is in a scenic corridor use of landscape features for screening, use of low profile tanks, and/or offsite production may be recommended. A controlled surface use (CSU) stipulation would be applied to all parcels containing lands with a VRM Class II designation; see Table 4.1b and Appendix A.

4.2.14 Public Health and Safety

Public Health and Safety would not be impacted by the leasing of the parcels. Vehicle and equipment operations associated with the subsequent construction, drilling, and production operations could affect members of the public using the same roads and general areas. Releases of gas from the well bore and spills would also adversely affect members of the public in the vicinity. The level of affect would depend on the product released or spilled and the receptors susceptibility.

4.2.14.1 Mitigation

Prepare and implement safety contingency plans and comply with NTL-3A.

4.2.15 Socio-economics

Under this alternative, nine (9) parcels and five partial parcels would be offered for sale. Additionally, two (2) entire parcel and five (5) partial parcels would be deferred from the May 2011 sale. It is assumed that development of the offered leases would proceed at about the same rate of development that the Rawlins and Kemmerer Field Offices have experienced over the last ten years, i.e., about 247 wells per year. Specific economic impacts would be identified in the NEPA document supporting the APD, when a more accurate analysis is possible based on the speculative nature of leasing in relation to development.

Residences in proximity to active drilling and completion operations would likely experience noise impacts.

4.2.15.1 Mitigation

None

4.2.16 Environmental Justice

No minority or low income populations would be directly affected in the vicinity of the proposed actions from subsequent proposed oil or gas projects. Indirect impacts could include impacts due to overall employment opportunities related to the oil and gas and service support industry in the region, as well as the economic benefits to State and County governments related to royalty payments and severance taxes.

4.2.16.1 Mitigation

None.

4.2.17 Solid Leasable (Coal)

There are no impacts to coal from the offering and issuance of the lease parcels; however to insure no conflicts arise, parcels WY-1005-004, 005, and 006 are subject to the CSU for Coal/Oil and Gas Conflict Special Lease Stipulations for protecting the first in time valid existing rights of the lessee.

4.2.18.1 Mitigation

See Table 4.2b and Appendix A

4.3 Impacts of Alternative C (Maximum Parcel Offering)

Alternative C would have essentially the same impacts as those described for the Proposed Action. The primary difference between the alternatives is that Alternative C includes all or portions of parcels WY-1105-010, 011, 012, 017, and 033. Additionally, parcels WY-1105-021, 029, 031, 032, and 034 include more area than they do in Alternative B. Table 4.2a and 4.2b show the resources and corresponding stipulations/mitigation that are to be applied to the Alternative C parcels. Alternative C would result in sage-grouse core area being leased and subjected to post-lease disturbance and associated impacts, such as loss of core area habitat. It would also result in lands within the Cokeville Meadows NWR being leased and potentially subjected to post-lease disturbance and associated impacts, such as short- and long-term habitat loss. Alternative C would result in more acreage being offered for lease than Alternative B would. This would potentially result in more wells and surface disturbance, and a commensurately higher emissions discharge to the atmosphere.

Table 4.2a Lease Notices, Timing Limitation Stipulations (TLS) and No Surface Occupancy (NSO) Stipulations Applied to the Lease Parcels Based on Affected Resources Elements Identified In the Affect Environment Section

Parcel # WY-1105-	Lease Notice #1 ¹	Lease Notice #2 ²	Lease Notice #3 ³	Big Game Winter TLS	Sage-grouse Nesting TLS	Raptor Nesting TLS	Mountain Plover TLS	Airport NSO
001	<i>applied</i>	<i>applied</i>	<i>applied</i>				<i>applied</i>	
002	<i>applied</i>	<i>applied</i>	<i>applied</i>				<i>applied</i>	
003	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>		
004	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	
005	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>		
006	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>		
007	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>			
010	<i>applied</i>	<i>applied</i>	<i>applied</i>			<i>applied</i>		
011	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>		
012	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>			
021	<i>applied</i>	<i>applied</i>	<i>applied</i>					
027	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>			
029	<i>applied</i>	<i>applied</i>	<i>applied</i>					
030	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>			
031	<i>applied</i>	<i>applied</i>	<i>applied</i>					
032	<i>applied</i>	<i>applied</i>	<i>applied</i>					
034	<i>applied</i>	<i>applied</i>	<i>applied</i>					<i>applied</i>

- 1 Assumes an average unreclaimed disturbance of 38.4 acres for well pad, road, and pipeline (30 acre pads with 1 mile of road and pipeline/pad). Also assumes multiple wells will be drilled from the pad.
- 2 Assumes an average unreclaimed disturbance of 14.2 acres for well pad, road, and pipeline (10 acre pad with ½ mile of road and pipeline/pad). Also assumes multiple wells will be drilled from the pad.
- 3 Assumes an average unreclaimed disturbance of 6.1 acres for well pad, road, and pipeline (4 acre well pad with ¼ mile of road and pipeline/pad). Also assume only one well will be drilled from each pad.

**Table 4.2b Controlled Surface Use (CSU) and No Surface Occupancy (NSO) Applied to the Lease Parcels
Based on Affected Resource Elements Identified In the Affect Environment Section**

Parcel # WY-1105-	SG Lek CSU	Raptor CSU	Burrowing Owl CSU	Amphib. Species CSU	Cultural Resource CSU	Historic Trails CSU	Sensitive Species CSU	DRUA CSU	VRM II CSU	Coal CSU
001				<i>applied</i>			<i>applied</i>			
002				<i>applied</i>			<i>applied</i>			
003				<i>applied</i>			<i>applied</i>			
004		<i>applied</i>		<i>applied</i>	<i>applied</i>		<i>applied</i>			<i>applied</i>
005		<i>applied</i>		<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>			<i>applied</i>
006	<i>applied</i>	<i>applied</i>		<i>applied</i>		<i>applied</i>	<i>applied</i>			<i>applied</i>
007	<i>applied</i>			<i>applied</i>		<i>applied</i>	<i>applied</i>			
010		<i>applied</i>		<i>applied</i>			<i>applied</i>	<i>applied</i>		
011							<i>applied</i>		<i>applied</i>	
012	<i>applied</i>					<i>applied</i>	<i>applied</i>			
021							<i>applied</i>			
027	<i>applied</i>					<i>applied</i>	<i>applied</i>			
029						<i>applied</i>	<i>applied</i>			
030						<i>applied</i>	<i>applied</i>			
031							<i>applied</i>			
032						<i>applied</i>	<i>applied</i>			
034							<i>applied</i>		X	

4.4 Cumulative Impacts

Offering the subject parcels for lease, and the subsequent issuance of leases, in and of itself, would not result in any cumulative impacts. Cumulative impacts for well field development are provided in the Draft and Final EIS' for the Rawlins and Kemmerer RMPs.

The following provides cumulative impacts information related to Air Quality/Green House Gases/Climate Change:

There are approximately 13,300 Federal producing wells in the within the High Desert District (5000 in Rawlins FO, 900 in Kemmerer FO, 2700 in Rock Springs FO, and 4700 in Pinedale FO). Of this number, approximately 424 wells (3.2%) are coal-bed methane wells. Based on the three development comparison scenarios in the Environmental Impact section development on the parcels could theoretically add 29, 102, or 407 new wells.

Analysis of cumulative impacts for RFD of oil and gas wells on public lands is included in the Rawlins, Kemmerer, Rock Springs, and Pinedale RMPs. Potential development of all available federal minerals in the field offices, 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.

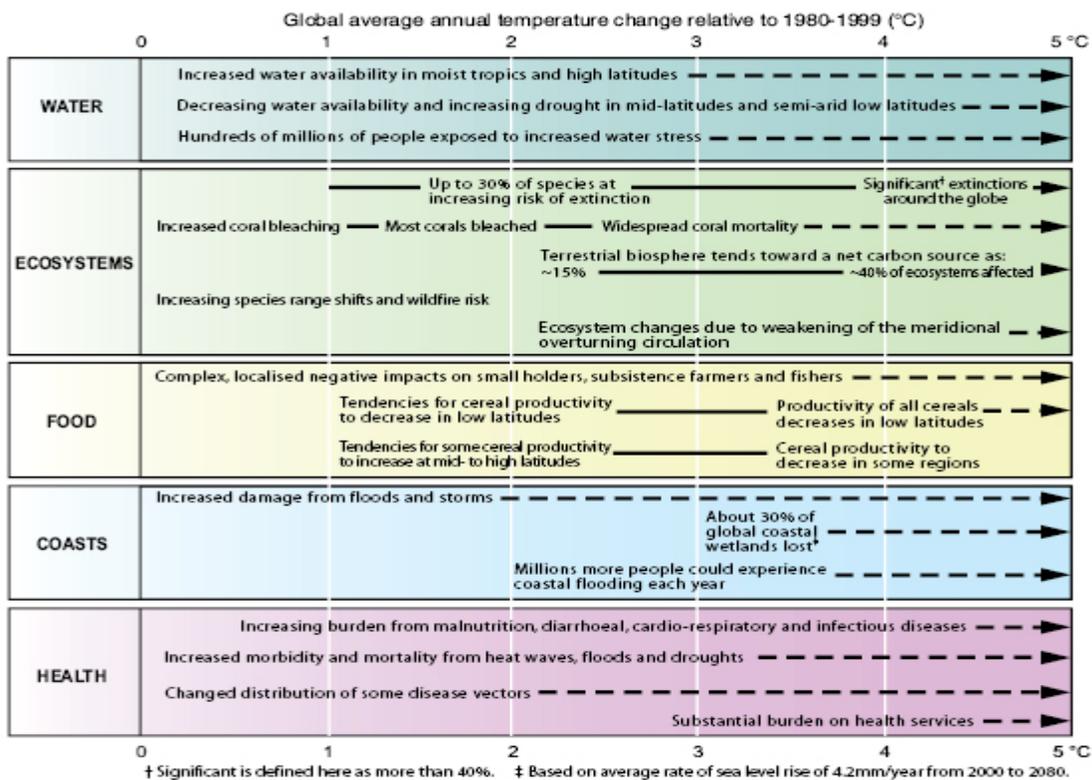
The assessment of greenhouse gas emissions and climate change is still in its formative phase; therefore, it is not yet possible to know with confidence the net impact on climate. However, the Intergovernmental Panel on Climate Change (IPCC 2007) recently concluded that “warming of the climate system 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] GHG 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 HDD 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 4.4.1, taken from the Fourth Assessment Report indicates varying responses of the natural world to increasing temperatures as a result of increasing global temperatures.

Figure 4.4.1: 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 HDD 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 AEO 2006 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.

5.0 Description of Mitigating Measures and Residual Impacts

The lease sale 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 project proposal (see tables 4.1a and 4.1b, as well as Appendix A). The RFO and KFO Surface Use and Occupancy Requirements, Conditions of Approval, and the Special Leasing Stipulations as specified in the respective RMPs 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 Rawlins RMP FEIS (2008), the Rawlins RMP ROD (2008), the Kemmerer RMP FEIS (2008), and the Kemmerer RMP ROD (2010). An environmental analysis will be prepared on a case-by-case basis upon receipt of future subsequent actions.

6.0 Consultation/Coordination

WYOMING GAME AND FISH DEPARTMENT

Comments were solicited from WFGD Biologists, Rich Guenzel and Mark Zornes, by the Rawlins and Kemmerer Field Office areas respectively. Rawlins FO received comments from the WFGD contact; Kemmerer FO did not.

US FISH AND WILDLIFE SERVICE

David Lucas, Chief of Refuge Planning, Region 6 (This consultation/coordination occurred during the public comment period)

6.1 List of Preparers/Reviewers

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7.0 References

Berger, Dr. Joel, et.al. July 2008, Wildlife and Energy Development, Pronghorn of the Upper Green River Basin-Year 3 Summary, Wildlife Conservation Society.

EPA Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2006. Environmental Protection Agency, Washington, D.C.

EPA, Natural Gas Star Program (2006 data) at: <http://www.epa.gov/gasstar/accomplish.htm>. Environmental Protection Agency, Washington, D.C.

Goddard Institute for Space Studies. 2007. Annual Mean Temperature Change for Three Latitude Bands. Datasets and Images. GISS Surface Temperature Analysis, Analysis Graphs and Plots. New York, New York. (Available on the Internet: <http://data.giss.nasa.gov/gistemp/graphs/fig.B.lrg.gif>.)

Holloran, M. J. 2005. Greater Sage-grouse (*Centrocercus urophasianus*) population response to natural gas field development in western Wyoming. PhD Dissertation. University of Wyoming. Laramie, Wyoming. 211pp.

Intergovernmental Panel on Climate Change (IPCC). 2007. Climate Change 2007: The Physical Basis (Summary for Policymakers). Cambridge University Press. Cambridge, England and New York, New York. (Available on the Internet: <http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf>)

IPCC, 2007: *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, Pachauri, R.K and Reisinger, A. (eds.)]. IPCC, Geneva, Switzerland, 104 pp.

National Academy of Sciences. 2006. Understanding and Responding to Climate Change: Highlights of National Academies Reports. Division on Earth and Life Studies. National Academy of Sciences. Washington, D.C. (Available on the Internet: <http://dels.nas.edu/basc/Climate-HIGH.pdf>.)

Ramanathan V. and G. Carmichael. 2008. Global and regional climate changes due to black carbon. *Nature Geoscience*. 1, pp. 221-227.

Sawyer, Hall, et.al. 2004 SUBLETTE MULE DEER STUDY (PHASE II): Long-term monitoring plan to assess potential impacts of energy development on mule deer in the Pinedale Anticline Project Area.

Climate Change SIR. 2010. Climate Change Supplementary Information Report for Montana, North Dakota, and South Dakota, Bureau of Land Management. Report on Greenhouse Gas Emissions and Climate Change for Montana, North Dakota, and South Dakota. Technical report prepared for the Montana/Dakotas Bureau of Land Management by URS Corporation. URS Project 22241790.

U.S. Department of the Interior, Bureau of Land Management. 2008. Rawlins Proposed Resource Management Plan and Final Environmental Impact Statement. Rawlins, Wyoming.

U.S. Department of the Interior, Bureau of Land Management. 2008. Rawlins Approved Resource Management Plan Record of Decision. Rawlins, Wyoming.

U.S. Department of the Interior, Bureau of Land Management. 2008. Kemmerer Proposed Resource Management Plan and Final Environmental Impact Statement.

U.S. Department of the Interior, Bureau of Land Management. 2010. Kemmerer Approved Resource Management Plan and Record of Decision. Kemmerer, Wyoming.

U.S. Department of the Interior, Bureau of Land Management Instruction Memorandum, WY-2010-012, dated December 29, 2009, “ Greater Sage-grouse Habitat Management Policy on Wyoming Bureau of Land Management (BLM) Administered Public Lands including the Federal Mineral Estate”

U.S. Department of the Interior, Bureau of Land Management Instruction Memorandum, WY-2010-013, dated December 29, 2009, “Oil and Gas Leasing Screen for Greater Sage-grouse”

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

RAWLINS FIELD OFFICE LEASE LIST

WY-1105-001 637.010 Acres

T.0180N, R.0600W, 06th PM, WY

Sec. 003 LOTS 1,3,4;
 003 S2NE,SWNW;
 004 LOTS 2;
 004 S2N2,NWSW;
 005 LOTS 1,2;

Laramie County

Rawlins FO

Formerly Lease No.

Stipulations:

Lease Notice No. 1

Lease Notice No. 2

Lease Notice No. 3

Special Lease Stipulation

TLS (1) April 10 to July 10 (2) as mapped on the Rawlins Field Office GIS database; (3) protecting nesting Mountain plover.

CSU (1) Surface occupancy or use 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 Rawlins Field Office GIS database; (3) protecting the habitats of identified amphibian/reptile species.

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; (3) protecting *Charadrius montanus* (Mountain plover); *Thomomys clusius* (Wyoming pocket gopher); Species affected by water depletions from the Platte River system.

WY-1105-002 308.000 Acres

T.0160N, R.0760W, 06th PM, WY

Sec. 026 SESW,SE;
 026 N2SW,SWSW (EXCL 12.00 AC
 026 IN RSVR ROW WYW0157363 &
 026 RSVR ROW WYW0157362);

Albany County

Rawlins FO

Formerly Lease No.

Stipulations:

Lease Notice No. 1

Lease Notice No. 2

Lease Notice No. 3

Special Lease Stipulation

TLS (1) April 10 to July 10 (2) as mapped on the Rawlins Field Office GIS database; (3) protecting nesting Mountain plover.

CSU (1) Surface occupancy or use 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 Rawlins Field Office GIS database; (3) protecting the habitats of identified amphibian/reptile species.

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; (3) protecting *Charadrius montanus* (Mountain plover); *Thomomys clusius* (Wyoming pocket gopher); Species affected by water depletions from the Platte River system.

WY-1105-003 480.000 Acres

T.0200N, R.0790W, 06th PM, WY

Sec. 008 N2,SW;

Carbon County

Rawlins 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 Mar 14; (2) as mapped on the Rawlins Field Office GIS database; (3) protecting wintering Greater Sage-grouse.

TLS (1) Feb 1 to Jul 31; (2) as mapped on the Rawlins Field Office GIS database; (3) protecting nesting raptors.

TLS (1) Nov 15 to Apr 30; (2) as mapped on the Rawlins Field Office GIS database; (3) protecting big game on crucial winter range.

CSU (1) Surface occupancy or use 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 Rawlins Field Office GIS database; (3) protecting the habitats of identified amphibian/reptile species.

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; (3) protecting *Centrocercus urophasianus* (Greater Sage-grouse); *Phlox pungens* (Beaver Rim phlox); *Rorippa calycina* (Persistent sepal yellowcress); *Thomomys clusius* (Wyoming pocket gopher); Species affected by water depletions from the Platte River system.

WY-1105-004 2232.870 Acres

T.0210N, R.0790W, 06th PM, WY

Sec. 018 LOTS 1-4;
 018 E2,E2W2;
 028 LOTS 1-16;
 032 LOTS 1,6-8;
 032 W2E2;
 034 ALL;

Carbon County

Rawlins FO

Formerly Lease No.

Stipulations:

Lease Notice No. 1

Lease Notice No. 2

Lease Notice No. 3

Special Lease Stipulation

TLS (1) Mar 1 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 Rawlins Field Office GIS database; (3) protecting nesting Raptors.

TLS (1) Nov 15 to Apr 30; (2) as mapped on the Rawlins Field Office GIS database; (3) protecting big game on crucial winter range.

TLS (1) Nov 15 to Mar 14; (2) as mapped on the Rawlins Field Office GIS database; (3) protecting wintering Greater Sage-grouse.

TLS (1) April 10 to July 10 (2) as mapped on the Rawlins Field Office GIS database; (3) protecting nesting Mountain plover.

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; (3) protecting *Buteo regalis* (Ferruginous hawk); *Centrocercus urophasianus* (Greater Sage-grouse); *Charadrius montanus* (Mountain plover); *Mustela nigripes* (Black-footed ferret); *Cynomys leucurus* (White-tailed prairie dog); *Phlox pungens* (Beaver Rim phlox); *Thomomys clusius* (Wyoming pocket gopher); Species affected by water depletions from the Platte River system.

CSU (1) Surface use or occupancy shall not be allowed by oil and gas lessee(s), operating rights holder(s), and/or oil and gas operator(s) on this Federal oil and gas lease to conduct any oil and gas operation, including drilling for, removing, or disposing of oil and/or gas contained in the Federal coal lease WYW-139975 unless a plan for mitigation of anticipated impacts is developed between the oil and gas and the coal lessees, and the plan is approved by the Authorized Officer; (2) as mapped on the Rawlins Field Office GIS database; (3) for the purpose of protecting the first in time valid existing rights of the coal lessee, the Authorized Officer reserves the right to alter or modify any oil and gas operations on the lands described in this lease ensuring: a.) the orderly development of the coal resource by surface and/or underground mining methods; b.) coal mine worker safety; and/or c.) coal production rates or recovery of the coal resource. The oil and gas lessee(s), operating rights holder(s), and/or oil and gas operator(s) of this Federal oil and gas lease shall not hold the United States as lessor, coal lessee(s), sub-lessee(s), and/or coal operator(s) liable for any damage or loss of the oil and gas resource, including the venting of coal bed methane gas, caused by coal exploration or mining operations conducted on Federal coal lease WYW-139975.

CSU (1) Surface occupancy or use 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 Rawlins Field Office GIS database; (3) protecting raptor nesting habitat.

CSU (1) Surface occupancy or use 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 Rawlins Field Office GIS database; (3) protecting the habitats of identified amphibian/reptile species.

CSU (1) Surface occupancy or use may be restricted or prohibited in areas with identified sensitive cultural values unless the operator and surface managing agency, through appropriate Native American consultation, arrive at an acceptable plan for avoidance or mitigation of anticipated impacts; (2) as mapped on the Rawlins Field Office GIS database; (3) protecting sensitive cultural values.

WY-1105-005 2433.200 Acres

T.0200N, R.0800W, 06th PM, WY

Sec. 004 LOTS 8-15;
 006 LOTS 9-18;
 008 ALL;
 010 N2,N2S2;
 012 LOTS 1-3;
 014 E2E2;
 024 E2;

Carbon County

Rawlins FO

Formerly Lease No.

Stipulations:

Lease Notice No. 1

Lease Notice No. 2

Lease Notice No. 3

Special Lease Stipulation

TLS (1) Mar 1 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 Rawlins Field Office GIS database; (3) protecting nesting raptors.

TLS (1) Nov 15 to Apr 30; (2) as mapped on the Rawlins Field Office GIS database; (3) protecting big game on crucial winter range.

TLS (1) Nov 15 to Mar 14; (2) as mapped on the Rawlins Field Office GIS database; (3) protecting wintering 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 Rawlins Field Office GIS database; (3) protecting *Centrocercus urophasianus* (Greater Sage-grouse); *Bufo boreas boreas* (Boreal toad); *Cynomys leucurus* (White-tailed prairie dog); *Phlox pungens* (Beaver Rim phlox); *Rorippa calycina* (Persistent sepal yellowcress); *Thomomys clusius* (Wyoming pocket gopher); Species affected by water depletions from the Platte River system.

CSU (1) Surface use or occupancy shall not be allowed by oil and gas lessee(s), operating rights holder(s), and/or oil and gas operator(s) on this Federal oil and gas lease to conduct any oil and gas operation, including drilling for, removing, or disposing of oil and/or gas contained in the Federal coal lease WYW 139975 unless a plan for mitigation of anticipated impacts is developed between the oil and gas and the coal lessees, and the plan is approved by the Authorized Officer; (2) as mapped on the Rawlins Field Office GIS database; (3) for the purpose of protecting the first in time valid existing rights of the coal lessee, the Authorized Officer reserves the right to alter or modify any oil and gas operations on the lands described in this lease ensuring: a.) the orderly development of the coal resource by surface and/or underground mining methods; b.) coal mine worker safety; and/or c.) coal production rates or recovery of the coal resource. The oil and gas lessee(s), operating rights holder(s), and/or oil and gas operator(s) of this Federal oil and gas lease shall not hold the United States as lessor, coal lessee(s), sub-lessee(s), and/or coal operator(s) liable for any damage or loss of the oil and gas resource, including the venting of coal bed methane gas, caused by coal exploration or mining operations conducted on Federal coal lease WYW 139975.

CSU (1) Surface occupancy or use 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 Rawlins Field Office GIS database; (3) protecting raptor nesting habitat.

CSU (1) Surface occupancy or use 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 Rawlins Field Office GIS database; (3) protecting the habitats of identified amphibian/reptile species.

CSU (1) Surface occupancy or use may be restricted or prohibited in areas with identified sensitive cultural values unless the operator and surface managing agency, through appropriate Native American consultation, arrive at an acceptable plan for avoidance or mitigation of anticipated impacts; (2) as mapped on the Rawlins Field Office GIS database; (3) protecting sensitive cultural values.

CSU (1) Surface occupancy or use may be restricted or prohibited within the setting contributing to the National Register of Historic Places eligibility unless the operator and surface managing agency arrive at an acceptable plan for mitigation of anticipated impacts; (2) as mapped on the Rawlins Field Office GIS database; (3) protecting historic and visual values of the Overland Trail.

WY-1105-006 2490.710 Acres
T.0210N, R.0800W, 06th PM, WY
Sec. 002 LOTS 1-4;
 002 S2N2,SW;
 004 LOTS 1-4;
 004 SWNE,SE,SW,S2S2;
 004 SENE,SWNW,N2S2(EXCL 25.72
 004 AC IN RR ROW UNDER ACT OF
 004 3/3/1875);
 006 LOTS 1,4,7;
 006 S2NE,E2SW,SE;
 006 LOTS 2,3,5,6,SE,SW (EXCL
 006 20.67 AC IN RR ROW UNDER
 006 UNDER ACT OF 3/3/1875);
 018 LOTS 1-4;
 018 E2W2;
 030 E2,E2W2;

Carbon County

Rawlins 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 Mar 14; (2) as mapped on the Rawlins Field Office GIS database; (3) protecting wintering Greater Sage-grouse.

TLS (1) Mar 1 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 Rawlins Field Office GIS database; (3) protecting nesting raptors.

TLS (1) Nov 15 to Apr 30; (2) as mapped on the Rawlins 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 Rawlins Field Office GIS database; (3) protecting *Buteo regalis* (Ferruginous hawk); *Centrocercus urophasianus* (Greater Sage-grouse); *Bufo boreas boreas* (Boreal toad); *Mustela nigripes* (Black-footed ferret); *Phlox pungens* (Beaver Rim phlox); *Thomomys clusius* (Wyoming pocket gopher); Species affected by water depletions from the Platte River system.

CSU (1) Surface occupancy or use within 1/4 mile of the perimeter 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 Rawlins Field Office GIS database; (3) protecting Greater Sage-grouse breeding habitat.

CSU (1) Surface occupancy or use 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 Rawlins Field Office GIS database; (3) protecting raptor nesting habitat.

CSU (1) Surface occupancy or use 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 Rawlins Field Office GIS database; (3) protecting the habitats of identified amphibian/reptile species.

CSU (1) Surface use or occupancy shall not be allowed by oil and gas lessee(s), operating rights holder(s), and/or oil and gas operator(s) on this Federal oil and gas lease to conduct any oil and gas operation, including drilling for, removing, or disposing of oil and/or gas contained in the Federal coal lease WYW-139975 unless a plan for mitigation of anticipated impacts is developed between the oil and gas and the coal lessees, and the plan is approved by the Authorized Officer; (2) as mapped on the Rawlins Field Office GIS database; (3) for the purpose of protecting the first in time valid existing rights of the coal lessee, the Authorized Officer reserves the right to alter or modify any oil and gas operations on the lands described in this lease ensuring: a.) the orderly development of the coal resource by surface and/or underground mining methods; b.) coal mine worker safety; and/or c.) coal production rates or recovery of the coal resource. The oil and gas lessee(s), operating rights holder(s), and/or oil and gas operator(s) of this Federal oil and gas lease shall not hold the United States as lessor, coal lessee(s), sub-lessee(s), and/or coal operator(s) liable for any damage or loss of the oil and gas resource, including the venting of coal bed methane gas,

caused by coal exploration or mining operations conducted on Federal coal lease WYW-139975.

CSU (1) Surface occupancy or use may be restricted or prohibited within 1/4 mile or the visual horizon, whichever is closer, of historic properties where the setting contributes to National Register of Historic Places (NRHP) eligibility unless the operator and surface managing agency arrive at an acceptable plan for mitigation of anticipated impacts; (2) as mapped on the Rawlins Field Office GIS database; (3) protecting historic and visual values of the Lincoln Highway/UPRR Grade historic property.

CSU (1) Surface occupancy or use may be restricted or prohibited within the setting contributing to the National Register of Historic Places eligibility unless the operator and surface managing agency arrive at an acceptable plan for mitigation of anticipated impacts; (2) as mapped on the Rawlins Field Office GIS database; (3) protecting historic and visual values of the Lincoln Highway/UPRR Grade historic property.

WY-1105-007 1120.000 Acres

T.0140N, R.0900W, 06th PM, WY

Sec. 017 SW;
 020 W2;
 029 E2;
 033 N2;

Carbon County

Rawlins FO

Formerly Lease No.

Stipulations:

Lease Notice No. 1

Lease Notice No. 2

Lease Notice No. 3

Special Lease Stipulation

TLS (1) Mar 1 to Jul 15; (2) as mapped on the Rawlins Field Office GIS database; (3) protecting nesting Greater Sage-grouse.

CSU (1) Surface occupancy or use may be restricted or prohibited within the setting contributing to the National Register of Historic Places eligibility unless the operator and surface managing agency arrive at an acceptable plan for mitigation of anticipated impacts; (2) as mapped on the Rawlins Field Office GIS database; (3) protecting historic and visual values of the Cherokee Trail.

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; (3) protecting *Centrocercus urophasianus* (Greater Sage-grouse); Cynomys leucurus (White-

tailed prairie dog); *Thomomys clusius* (Wyoming pocket gopher); Species affected by water depletions from the Colorado River system.

CSU (1) Surface occupancy or use within 1/4 mile of the perimeter 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 Rawlins Field Office GIS database; (3) protecting Greater Sage-grouse breeding habitat.

CSU (1) Surface occupancy or use 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 Rawlins Field Office GIS database; (3) protecting the habitats of identified amphibian/reptile species.

WY-1105-008 1650.540 Acres
T.0170N, R.0900W, 06th PM, WY
Sec. 012 NENE, SWNW, SW;
 013 LOTS 1-4;
 013 S2NW;
 026 ALL;
 035 LOTS 1-4;
 035 NW, N2SW, SE;

Carbon County
Rawlins FO
Formerly Lease No.

DELETE Entire Parcel is within the Upper Muddy Creek/Grizzly and Cow Butte/Wild Cow WHMAs. Area is closed to new oil and gas leasing per Dec 2008 Rawlins RMP pg. 2-41.

WY-1105-009 648.410 Acres
T.0180N, R.0910W, 06th PM, WY
Sec. 034 LOTS 1-3;
 034 SWNE, W2, SE;

Carbon County
Rawlins FO
Formerly Lease No.

DELETE Entire Parcel is within the Upper Muddy Creek/Grizzly WHMA Area is closed to new oil and gas leasing per Dec 2008 Rawlins RMP pg. 2-41.

WY-1105-010 2260.170 Acres
T.0140N, R.0980W, 06th PM, WY
Sec. 007 LOTS 3-4;
 007 E2SW, SE;
 018 LOTS 3-4;
 018 E2SW, SE;
 019 LOTS 1-4;
 019 E2, E2W2;
 030 LOTS 1-4;
 030 E2, E2W2;
 031 LOTS 1-4;

031 E2W2;

Sweetwater County
Rawlins FO
Formerly Lease No.
Stipulations:

Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3
Special Lease Stipulation

RECOMMEND DEFERRAL of WY-1105-010 for field inventory to determine if the parcels falls within an area meeting the Lands with Wilderness Characteristics

TLS (1) April 15 to Sept 15; (2) as mapped on the Rawlins Field Office GIS database; (3) protecting nesting Burrowing owls.

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 Rawlins Field Office GIS database; (3) protecting *Buteo regalis* (Ferruginous hawk); *Athene cunicularia* (Burrowing owl); *Thomomys clusius* (Wyoming pocket gopher); Species affected by water depletions from the Colorado River system.

CSU (1) Surface occupancy or use 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 Rawlins Field Office GIS database; (3) protecting raptor nesting habitat.

CSU (1) Surface occupancy or use 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 Rawlins Field Office GIS database; (3) protecting the habitats of identified amphibian/reptile species.

CSU (1) Surface occupancy or use 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 Rawlins Field Office GIS database; (3) protecting recreational opportunity class setting within the Adobe Town Dispersed Recreation Use Area.

KEMMERER FIELD OFFICE LEASE LIST

WY-1105-011 318.54 Acres
T.0210N, R.1190W, 06th PM, WY
Sec. 003 LOTS 7,8;
 004 LOTS 5,6;
 004 S2N2;

Lincoln County

Kemmerer FO

Formerly Lease No.

Stipulations:

Lease Notice No. 1

Lease Notice No. 2

Lease Notice No. 3

Special Lease Stipulation

TLS (1) Mar 15 to Jul 15; (2) as mapped on the Kemmerer Field Office GIS database; (3) protecting nesting Greater Sage-grouse.

TLS (1) Nov 15 to Apr 30; (2) as mapped on the Kemmerer Field Office GIS database; (3) protecting big game on crucial winter range.

TLS (1) Feb 1 to July 31; (2) as mapped on the Kemmerer 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 Kemmerer Field Office GIS database; (3) protecting *Centrocercus urophasianus* (Greater Sage-grouse); *Astragalus racemosus* (Tresease's Milkvetch); *Phlox pungens* (Beaver Rim phlox); *Thomomys clusius* (Wyoming pocket gopher); Species affected by water depletions from the Bear River system.

CSU (1) Surface occupancy or use 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 Kemmerer Field Office GIS database; (3) protecting Class I and II Visual Resource Management Areas.

RECOMMEND DEFERRAL of WY-1105-011 per IM WY-2010-013

WY-1105-012 80.00 Acres

T.0210N, R.1190W, 06th PM, WY
Sec. 018 E2SE;

Lincoln County

Kemmerer FO

Formerly Lease No.

Stipulations:

Lease Notice No. 1

Lease Notice No. 2

Lease Notice No. 3

Special Lease Stipulation

TLS (1) Mar 15 to Jul 15; (2) as mapped on the Kemmerer Field Office GIS database; (3) protecting nesting Greater Sage-grouse.

TLS (1) Nov 15 to Apr 30; (2) as mapped on the Kemmerer Field Office GIS database; (3) protecting big game on crucial winter range.

CSU (1) Surface occupancy or use within 1/4 mile or visual horizon of the trail, whichever is closer, may 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 Kemmerer Field Office GIS database; (3) protecting cultural and scenic values of the Oregon/Mormon Trail.

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 Kemmerer 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 Kemmerer Field Office GIS database; (3) protecting *Centrocercus urophasianus* (Greater Sage-grouse); *Phlox pungens* (Beaver Rim phlox); Species affected by water depletions from the Bear River system.

RECOMMEND DEFERRAL of WY-1105-012 per IM WY-2010-013

WY-1105-013 2400.000 Acres*

T.0210N, R.1190W, 06th PM, WY

Sec. 009 SE;

011 S2;

013 ALL;

014 ALL;

015 ALL;

Lincoln County

Kemmerer FO

Formerly Lease No.

Stipulations:

Lease Notice No. 1
Lease Notice No. 2
Lease Notice No. 3

Special Lease Stipulation

TLS (1) Mar 15 to Jul 15; (2) as mapped on the Kemmerer Field Office GIS database; (3) protecting nesting Greater Sage-grouse.

TLS (1) Nov 15 to Apr 30; (2) as mapped on the Kemmerer Field Office GIS database; (3) protecting big game on crucial winter range.

**DELETE parcel WY-1105-013 Unavailable for lease -
Kemmerer RMP Record of Decision May 2010.**

WY-1105-014 1889.050 Acres*

T.0220N, R.1190W, 06th PM, WY
Sec. 002 LOTS 5-9,11,13,20;
002 S2NE,SE;
003 LOTS 5,16;
011 LOTS 1,5,7;
011 E2,SW;
015 LOTS 1,6,7,14;
015 E2;
021 LOTS 11,12,21-24;
022 LOTS 1,5,7;
022 E2,SW;

Lincoln County
Kemmerer FO
Formerly Lease No.

**DELETE parcel WY-1105-014 Unavailable for lease -
Kemmerer RMP Record of Decision May 2010.**

WY-1105-015 797.210 Acres*

T.0220N, R.1190W, 06th PM, WY
Sec. 003 LOTS 11,12,22-24;
003 NWSW;
004 LOTS 16,18,21,22,30,32,34;
004 N2SE;
004 LOT 12 OF TR 50;
004 LOT 14 OF TR 50;
004 LOT 23 OR TR 50;
004 LOT 24 OF TR 50;
004 LOT 27 OF TR 50;
004 LOT 28 OF TR 50;
010 LOTS 8,10,13,14,21;
010 SE;
017 LOTS 22-25;
017 S2 OF LOTS 3-5 OF TR 40;
017 N2 OF LOTS 6-8 OF TR 40;

Lincoln County
Kemmerer FO

**DELETE parcel WY-1105-015 Unavailable for lease -
Kemmerer RMP Record of Decision May 2010.**

WY-1105-016 1280.000 Acres*
T.0220N, R.1190W, 06th PM, WY
Sec. 013 ALL;
 024 ALL;

Lincoln County

Kemmerer FO

Formerly Lease No.

**DELETE parcel WY-1105-016 Unavailable for lease -
Kemmerer RMP Record of Decision May 2010.**

WY-1105-017 649.18 Acres*
T.0220N, R.1190W, 06th PM, WY
Sec. 018 LOTS 6,17,20,33;
 018 LOTS 37 (EXCL 3.67 AC IN
 018 RR ROW WYW0294448);
 019 W2NE,NWSE;
 019 LOTS 16-19 (EXCL 22.96 AC
 019 IN RR ROW WYW0294448);
 030 LOTS 8-10;
 030 LOT 5,SENW,NESW (EXCL
 030 17.91 AC IN RR ROW
 030 WYW0294448);

Lincoln County

Kemmerer FO

Formerly Lease No.

Stipulations:

Lease Notice No. 1

Lease Notice No. 2

Lease Notice No. 3

Special Lease Stipulation

TLS (1) Mar 15 to Jul 15; (2) as mapped on the Kemmerer Field Office GIS database; (3) protecting nesting Greater Sage-grouse.

TLS (1) Nov 15 to Apr 30; (2) as mapped on the Kemmerer Field Office GIS database; (3) protecting big game on crucial winter range.

CSU (1) Surface occupancy or use within 1/4 mile or visual horizon of the trail, whichever is closer, may 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 Kemmerer Field Office GIS database; (3) protecting cultural and scenic values of the Oregon/Mormon Trail.

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 Kemmerer Field Office GIS database; (3) protecting *Centrocercus urophasianus* (Greater Sage-grouse); *Thomomys clusius* (Wyoming pocket gopher); Species affected by water depletions from the Bear River system.

CSU (1) Surface occupancy or use 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 Kemmerer Field Office GIS database; (3) protecting Class I and II Visual Resource Management Areas.

*** Parcel WY1105-117 is partially unavailable for lease - Kemmerer RMP Record of Decision May 2010, and partially not recommended for lease due to being in Cokeville Meadows National Wildlife Refuge (NWR). The legal description listed above is for this the portion of this parcel that is recommended for deferral due to the NWR.**

WY-1105-018 2556.640 Acres*
T.0220N, R.1190W, 06th PM, WY
Sec. 020 LOTS 2,3,6,7;
 020 W2E2,W2;
 027 ALL;
 028 ALL;
 029 ALL;

Lincoln County
Kemmerer FO
Formerly Lease No.

DELETE parcel WY-1105-018 Unavailable for lease - Kemmerer RMP Record of Decision May 2010.

WY-1105-019 2516.410 Acres*
T.0220N, R.1190W, 06th PM, WY
Sec. 032 ALL;
 033 ALL;
 034 N2,SW,SESE;
 035 LOTS 1-4;
 035 W2E2,W2;
 036 LOTS 1-7;

Lincoln County
Kemmerer FO
Formerly Lease No.

DELETE parcel WY-1105-019 Unavailable for lease - Kemmerer RMP Record of Decision May 2010.

WY-1105-020 1984.130 Acres*

T.0230N, R.1190W, 06th PM, WY
Sec. 001 LOTS 9,10,18-26;
001 S2S2,NESE;
001 TR 118C,118D,119A,119B;
002 LOTS 5-9,11,14,15;
002 S2NW,SW,S2SE;
003 LOTS 5-8;
003 S2N2,S2;
004 LOTS 5,6,29;
004 SENE,NESE,S2SE;

Lincoln County

Kemmerer FO

Formerly Lease No.

**DELETE parcel WY-1105-020 Unavailable for lease -
Kemmerer RMP Record of Decision May 2010.**

WY-1105-021 36.01 Acres*

T.0230N, R.1190W, 06th PM, WY

Sec. 006 LOTS 12;

Lincoln County

Kemmerer 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 Kemmerer Field Office GIS database; (3) protecting *Thomomys clusius* (Wyoming pocket gopher); Species affected by water depletions from the Bear River system.

*** Parcel 1105-021 is partially unavailable for lease-
Kemmerer RMP ROD May 2010. The legal description listed
above for this parcel is for the area that is available
for lease. The remainder of the legal description from
the original parcel is recommended for deletion per 43**

**CFR 3101.5-1 due to being in the Cokeville Meadows
National Wildlife Refuge.**

WY-1105-022 2009.510 Acres*

T.0230N, R.1190W, 06th PM, WY

Sec. 009 LOTS 17,18;
 009 NE,N2SE;
 010 LOTS 1-4;
 010 N2,N2S2;
 011 LOTS 1;
 011 N2,N2S2,SESW,S2SE;
 012 ALL;

Lincoln County

Kemmerer FO

Formerly Lease No.

**DELETE parcel WY-1105-022 Unavailable for lease -
Kemmerer RMP Record of Decision May 2010.**

WY-1105-023 1874.320 Acres*

T.0230N, R.1190W, 06th PM, WY

Sec. 013 LOTS 1;
 013 E2,NWNW,S2NW,N2SW,SESW;
 023 LOTS 9,10,13;
 023 W2NW,SW;
 024 LOTS 1,2,6,7,10,11,17,20,21;
 024 E2E2,NWNE;
 025 LOTS 1-4;
 025 N2,N2S2;

Lincoln County

Kemmerer FO

Formerly Lease No.

**DELETE parcel WY-1105-023 Unavailable for lease -
Kemmerer RMP Record of Decision May 2010.**

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WY-1105-024 2040.880 Acres*

T.0230N, R.1190W, 06th PM, WY

Sec. 014 LOTS 1,4-6,10,11,15-17,21,22;
 014 N2NE,SENE,NENW,NESE;
 015 LOTS 7,10,11,14,15,18;
 015 E2SW,SE;
 016 LOTS 18,21,23,25;
 021 N2,N2S2;
 022 ALL;

Lincoln County

Kemmerer FO

Formerly Lease No.

**DELETE parcel WY-1105-024 Unavailable for lease -
Kemmerer RMP Record of Decision May 2010.**

WY-1105-025 2224.510 Acres*
T.0230N, R.1190W, 06th PM, WY
Sec. 026 LOTS 1,2,5;
 026 N2,N2S2,SWSE;
 027 LOTS 1;
 027 N2,SW,N2SE,SWSE;
 028 LOTS 1,3;
 028 N2,N2S2,S2SE;
 029 LOTS 29;
 034 LOTS 25;
 035 LOTS 1,6,7,12-17;
 035 W2E2;

Lincoln County
Kemmerer FO
Formerly Lease No.

**DELETE parcel WY-1105-025 Unavailable for lease -
Kemmerer RMP Record of Decision May 2010.**

WY-1105-026 483.060 Acres*
T.0230N, R.1190W, 06th PM, WY
Sec. 033 LOTS 6,11,20,21;
 034 LOTS 2,3,6,7,14,15,18;
 034 NWNE,N2NW,SWNW,NWSW;
 036 LOTS 1-7;

Lincoln County
Kemmerer FO
Formerly Lease No.
Stipulations:

**DELETE parcel WY-1105-026 Unavailable for lease -
Kemmerer RMP Record of Decision May 2010.**

WY-1105-027 1362.040 Acres
T.0240N, R.1190W, 06th PM, WY
Sec. 003 LOTS 36,38,40,45;
 003 SESW,SWSE;
 003 LOT 35 OF TR 94;
 003 LOT 44 OF TR 94;
 004 LOT 43 OF TR 94;
 004 LOT 60 OF TR 94;
 009 LOTS 18,19,30,31;
 009 SENE,NESE;
 010 LOTS 1;
 010 NW,N2SW,SESW,S2SE;
 015 LOTS 1,4,5,8;
 015 NE,E2W2,N2SE;
 016 LOTS 23;

021 LOTS 1,19;
022 LOTS 1,2;
022 N2NW,SWNW;

Lincoln County

Kemmerer FO

Formerly Lease No.

Stipulations:

Lease Notice No. 1

Lease Notice No. 2

Lease Notice No. 3

Special Lease Stipulation

TLS (1) Mar 15 to Jul 15; (2) as mapped on the Kemmerer Field Office GIS database; (3) protecting nesting Greater Sage-grouse.

TLS (1) Nov 15 to Apr 30; (2) as mapped on the Kemmerer Field Office GIS database; (3) protecting big game on crucial winter range.

CSU (1) Surface occupancy or use within 1/4 mile or visual horizon of the trail, whichever is closer, may 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 Kemmerer Field Office GIS database; (3) protecting cultural and scenic values of the Oregon/Mormon Trail.

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 Kemmerer 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 Kemmerer Field Office GIS database; (3) protecting *Centrocercus urophasianus* (Greater Sage-grouse); *Thomomys clusius* (Wyoming pocket gopher); *Lepidium integrifolium* (entire-leaved peppergrass); *Astragalus racemosus* (Trelease's Milkvetch); Species affected by water depletions from the Bear River system.

CSU (1) Surface occupancy or use 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 Kemmerer Field Office GIS database; (3) protecting Class I and II Visual Resource Management Areas.

CSU (1) Surface occupancy or use within 3 miles of Class 1 historic trails 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 Kemmerer Field Office GIS database; (3) protecting viewsheds of Class 1 historic trails of the Tunp/Dempsey Trail area.

WY-1105-028 768.590 Acres*

T.0240N, R.1190W, 06th PM, WY

Sec. 023 LOTS 19;
 024 LOTS 9-12;
 024 SWSW;
 025 LOTS 3,27-30;
 025 N2NW,SENW,NWSW;
 026 LOTS 11,14-19;
 027 LOTS 17,24,25;
 027 S2SW;

Lincoln County

Kemmerer FO

Formerly Lease No.

**DELETE parcel WY-1105-028 Unavailable for lease -
Kemmerer RMP Record of Decision May 2010.**

WY-1105-029 32.32 Acres*

T.0240N, R.1190W, 06th PM, WY

Sec. 031 LOTS 15;
 031 E2SWSW;

Lincoln County

Kemmerer 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 or visual horizon of the trail, whichever is closer, may 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 Kemmerer Field Office GIS database; (3) protecting cultural and scenic values of the Oregon/Mormon Trail.

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 Kemmerer Field Office GIS database; (3) protecting *Thomomys clusius* (Wyoming pocket gopher); Species affected by water depletions from the Bear River system.

Parcel WY-1105-029: Partially Unavailable for lease-Kemmerer RMP ROD May 2010. The legal description listed above is for the area that is available for lease. The remainder of the legal description from the original parcel 1105-029 is either unavailable for lease, or recommended for deletion per 43 CFR 3101.5-1 due to being in the Cokeville Meadows Wildlife Refuge.

WY-1105-030 1182.75 Acres
T.0210N, R.1200W, 06th PM, WY
Sec. 001 LOTS 5-8;
 001 S2NW,NWSW;
 002 LOTS 5,6,11-18;
 002 S2NE,SESW,NESE,S2SE;
 011 NW;
 014 W2NW,SENW,NWSW;

Lincoln County

Kemmerer FO

Formerly Lease No.

Stipulations:

Lease Notice No. 1

Lease Notice No. 2

Lease Notice No. 3

Special Lease Stipulation

TLS (1) Mar 15 to Jul 15; (2) as mapped on the Kemmerer Field Office GIS database; (3) protecting nesting Greater Sage-grouse.

TLS (1) Nov 15 to Apr 30; (2) as mapped on the Kemmerer Field Office GIS database; (3) protecting big game on crucial winter range.

CSU (1) Surface occupancy or use within 1/4 mile or visual horizon of the trail, whichever is closer, may 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 Kemmerer Field Office GIS database; (3) protecting cultural and scenic values of the Oregon/Mormon Trail.

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 Kemmerer 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 Kemmerer Field Office GIS database; (3) protecting *Centrocercus urophasianus* (Greater Sage-grouse); *Thomomys clusius* (Wyoming pocket gopher); *Lesquerella fremontii* (Fremont bladderpod); *Antennaria arcuata* (meadow pussytoes); *Phlox pungens* (Beaver Rim phlox); Species affected by water depletions from the Bear River system.

**Parcel WY-1105-030: Partially Unavailable for lease-
Kemmerer RMP ROD May 2010. The legal description listed
above is for the area that is available for lease.**

WY-1105-031 1146.72 Acres*

T.0220N, R.1200W, 06th PM, WY

Sec. 003 LOTS 5-8;
 003 SW,W2SE;
 004 LOTS 5-8;
 009 LOTS 5-8;
 010 W2;
 015 W2NW;
 021 LOTS 6;

Lincoln County

Kemmerer 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 or visual horizon of the trail, whichever is closer, may 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 Kemmerer Field Office GIS database; (3) protecting cultural and scenic values of the Oregon/Mormon Trail.

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 Kemmerer Field Office GIS database; (3) protecting *Thomomys clusius* (Wyoming pocket gopher); *Rana pipiens* (northern leopard frog); *Plegadis chihi* (white-faced ibis); *Lepidium integrifolium* (entire-leaved peppergrass); *Phlox pungens* (Beaver Rim phlox); *Astragalus racemosus* (Trelease's Milkvetch); Species affected by water depletions from the Bear River system.

The legal description listed above for parcel WY-1105-031 is for the area that is available for lease. The remainder of the legal description from the original parcel is recommended for deletion per 43 CFR 3101.5-1 due to being in the Cokeville Meadows Wildlife Refuge.

WY-1105-032 390.75 Acres*
T.0230N, R.1200W, 06th PM, WY
Sec. 013 LOTS 1,4;
 013 NW;
 024 LOTS 5,13,14,17;
 024 W2NW,NWSW;

Lincoln County

Kemmerer 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 Kemmerer Field Office GIS database; (3) protecting *Thomomys clusius* (Wyoming pocket gopher); *Plegadis chihi* (white-faced ibis); *Astragalus racemosus* (Trelease's Milkvetch); Species affected by water depletions from the Bear River system.

The legal description listed above for parcel WY-1105-032 is for the area that is available for lease. The remainder of the legal description from the original parcel is recommended for deletion per 43 CFR 3101.5-1 due to being in the Cokeville Meadows Wildlife Refuge.

WY-1105-033 81.240 Acres*
T.0230N, R.1200W, 06th PM, WY
Sec. 025 LOTS 28;
 036 LOTS 23-26;

Lincoln County

Kemmerer FO

Formerly Lease No.

DELETE parcel WY-1105-033 Unavailable for lease per 43 CFR 3101.5-1 (Cokeville Meadows National Wildlife Refuge).

WY-1105-034 382.520 Acres
T.0150N, R.1210W, 06th PM, WY
Sec. 014 SENW,S2;
 022 LOTS 1;

Uinta County

Kemmerer FO

Formerly Lease No.

Stipulations:

Lease Notice No. 1

Lease Notice No. 2

Lease Notice No. 3

Special Lease Stipulation

TLS (1) Mar 15 to Jul 15; (2) as mapped on the Kemmerer Field Office GIS database; (3) protecting nesting Greater Sage-grouse.

CSU (1) Surface occupancy or use 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 Kemmerer Field Office GIS database; (3) protecting Class I and/or Class II Visual Resource Management Areas.

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 Kemmerer Field Office GIS database; (3) protecting *Centrocercus urophasianus* (Greater Sage-grouse); *Thomomys clusius* (Wyoming pocket gopher); *Lesquerella prostrate* (prostrate bladderpod); *Physaria condensate* (tufted twinpod); Species affected by water depletions from the Bear River system.

NSO (1) as mapped on the Kemmerer Field Office GIS database; (2) protecting area around municipal airport runways.

APPENDIX B

Greater Sage-grouse Screen

Sage-grouse Screen for Oil & Gas Lease Parcels_RFO						
Parcel #	Within Core Area (v.3) (Yes/No)	Habitat (Yes/No)	11 sq. mi. Manageable fed. land (Yes/No)	Drainage (Yes/No)	Defer Parcel (Yes/No)	Lease w/Lease Notice #3 (Yes/No)
1	No	No	No (Split Estate)	N/A	No	Yes
2	No	No	No (Split Estate)	N/A	No	Yes
3	No	Yes	No (Checkerboard w/ Split Estate)	N/A	No	Yes
4	Yes-Portion	Yes	No (Checkerboard w/ Split Estate)	N/A	No	Yes
5	No	Yes	No (Checkerboard w/ Split Estate)	N/A	No	Yes
6	Yes	Yes	No (Checkerboard w/ Split Estate)	N/A	No	Yes
7	No	Yes	No (Split Estate)	N/A	No	Yes
8	Yes	Yes	Yes	N/A	No	No-Within Upper Muddy Creek/Grizzly and Cow Butte/Wild Cow WHMA's. Entire Parcel is DELETED
9	Yes-Portion	Yes	No	N/A	No	NO-Within Upper Muddy Creek/Grizzly WHMA . Entire Parcel is DELETED
10	No	Yes	Yes	N/A	No	Yes

Sage-grouse Screen for Oil & Gas Lease Parcels-KFO

Parcel #	Within Core Area (Yes/No)	Habitat (Yes/No)	11 sq. mi. Manageable fed. land (Yes/No)	Drainage (Yes/No)	Defer Parcel (Yes/No)	Lease w/Lease Notice #3 (Yes/No)
WY-1105-011	Yes	Yes	Yes	No	Yes	No
WY-1105-012	Yes	Yes	Yes	No	Yes	No
WY-1105-013	Not evaluated. Parcel is in an area designated "Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED					
WY-1105-014	Not evaluated. Parcel is in an area designated "Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED					
WY-1105-015	Not evaluated. Parcel is in an area designated "Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED					
WY-1105-016	Not evaluated. Parcel is in an area designated "Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED					
WY-1105-017	Not evaluated. Part of the parcel is in an area designated "Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED. The other part of the parcel is within the Cokeville Meadows National Wildlife Refuge (CMNWR) and recommended for Deferral					
WY-1105-018	Not evaluated. Parcel is in an area designated "Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED					
WY-1105-019	Not evaluated. Parcel is in an area designated "Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED					
WY-1105-020	Not evaluated. Parcel is in an area designated "Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED					
WY-1105-021	No	Yes	No – borders existing leases. Part of the parcels is in the CMNWR is recommended for DEFERRAL	No	No	Yes
WY-1105-022	Not evaluated. Parcel is in an area designated "Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED					
WY-1105-023	Not evaluated. Parcel is in an area designated "Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED					
WY-1105-024	Not evaluated. Parcel is in an area designated "Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED					
WY-1105-025	Not evaluated. Parcel is in an area designated "Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED					
WY-1105-026	Not evaluated. Parcel is in an area designated "Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED					
WY-1105-027	No	Yes	No – The parcel is within a 1720 acres piece of federal surface and federal	No	No	Yes

			minerals that is surrounded by non-federal surface and non-federal minerals.			
WY-1105-028	Not evaluated. Parcel is in an area designated "Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED"					
WY-1105-029	No	Yes	Part of the parcel is in an area designated "Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED; part is in the CMNWR and is recommended for DEFERRAL; and part is available for leasing. The part available for leasing borders an area with existing leases	No	No	Yes
WY-1105-030	No (Part of the parcel falls within SMAs and is not available for leasing. The part of the parcel that is outside SMAs is also outside of, but is adjacent to a core area. The portion of the parcel west of the US 30, State Hwy 89, and railroad corridor is outside the core area)	Yes	Yes. Part of the parcel is in an "Unavailable for Oil and Gas Leasing area per Kemmerer RMP and is DELETED; and part is available for leasing. The part available for leasing borders an area of 11 sq. miles or more of contiguous federal surface and unleased federal minerals	No	No, (The parcel is not recommended for deferral because it is separated from designated core area by the highway & railroad corridor. It is also bordered by private lands where BLM cannot managed or control activities; therefore it is not considered manageable for core area)	Yes
WY-1105-031	No	Yes	No – The parcel is contains and is bordered by non-federal lands and is bordered by lands	No	No	Yes

			with non-federal minerals. Part of the parcels is within the CMNWR and is recommended for DEFFERAL.			
WY-1105-032	No	Yes	No – Part of the parcel is in the CMNWR and is recommended for DEFERRAL; and part is available for leasing. The part available for leasing borders an area with existing leases	No	No	Yes
WY-1105-031	No	Yes	No- The parcel is non-federal surface and is surrounded by other non-federal lands with non-federal minerals. The parcel is completely within the CMNWR and is recommended for DEFERRAL.			
WY-1105-034	No	Yes	No – The parcel is within checkerboard land and does NOT adjoin areas that have 11 sq. miles of contiguous federal surface or minerals	No	No	Yes

APPENDIX C

Wilderness Characteristics

Wilderness Review Checklist for Oil and Gas Lease Parcels (Rawlins Field Office)

Sec. 603 (43 USC 1782). The Wilderness Act states:

“A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man’s work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.”

Lease Parcel	More than 5000 of roadless land¹ (yes/no)	Imprint of man’s work substantially unnoticeable² (yes/no)	Outstanding opportunity for solitude or primitive recreation (yes/no)	Contains natural features of scientific, educational, scenic, or historical value (yes/no)	In Citizen Proposed Wilderness Area (yes/no. If yes but dropped during RMP process, state why)
WY-1105-001	No - Entire parcel is split-estate private surface	No-Private surface and surrounded by private surface	No- Private surface and surrounded by private surface	No- Private surface and surrounded by private surface	No
WY-1105-002	No-Road through parcel, Entire parcel is split-estate private surface	No-Private surface and surrounded by private surface	No-Private surface and surrounded by private surface	No-Private surface and surrounded by private surface	No
WY-1105-003	No-Road through parcel, parcel contains split-estate private surface and borders additional private surface.	No-Private surface and surrounded by private surface	No-Private surface and surrounded by private surface	No, but Wagonhound Creek in parcel/Medicine Bow River very near parcel	No
WY-1105-004	No- Road through parcel, parcel contains split-estate private surface and borders additional private surface.	No-Private surface and surrounded by private surface	No-Private surface and surrounded by private surface	No, but Medicine Bow River very near parcel	No

WY-1105-005	No- Road through parcel, parcel contains split-estate private surface and borders additional private surface	No-Private surface and mostly surrounded by private/state surface	No-Private surface and mostly surrounded by private/state surface	No, but Medicine Bow River very near parcel	No
WY-1105-006	No- Road through parcel, parcel contains split-estate private surface and borders additional private surface.	No-Mostly private surface and mostly surrounded by private/state surface	No-Mostly private surface and mostly surrounded by private/state surface	No, but historic Lincoln Highway within 0.5 miles	No
WY-1105-007	No- Parcel contains split-estate private surface and borders additional private surface.	No-Mostly private surface and mostly surrounded by existing leases	No-Mostly private surface and mostly surrounded by existing leases	No-Mostly private surface and mostly surrounded by existing leases	No
WY-1105-008	Parcel is in an area designated "Unavailable for Oil and Gas Leasing in the Rawlins RMP and is DELETED"				
WY-1105-009	Parcel is in an area designated "Unavailable for Oil and Gas Leasing in the Rawlins RMP and is DELETED"				
WY-1105-010	Yes-No roads within a 5000 acre block	No – the parcel contains the reclaimed Yates Wrangler #1 well pad and associated access road that are still very evident. Both the road and well pad have been recontoured and are in the process of being revegetated; however final reclamation has not been achieved. BLM is monitoring the site.	No-Borders some state surface / bordered by existing leases. <i>Deferred pending field review for LWC.</i>	Yes-DRUA	Yes-Within Citizens Proposed Wilderness Area; dropped in RMP and DRUA was result

		<p>The well pad has not been released from bond liability.</p> <p><i>Deferred pending field review for LWC.</i></p>			
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¹“The word ‘roadless’ refers to the absence of roads which have been improved and maintained by mechanical means to ensure relatively regular and continuous use. A ‘way’ maintained solely by the passage of vehicles does not constitute a road.”

² Examples of manmade features that may be considered substantially unnoticeable in certain cases are: trails, trail signs, bridges, fire towers, fire breaks, fire presuppression facilities, pit toilets, fisheries enhancement facilities, fire rings, hitching posts, snow gauges, water quantity and quality measuring devices, research monitoring markers and devices, radio repeater sites, air quality monitoring devices, fencing, spring developments, overgrown and barely visible two-track ways, and small reservoirs.

Wilderness Review Checklist for Oil and Gas Lease Parcels (Kemmerer Field Office)

Sec. 603 (43 USC 1782). The Wilderness Act states:

“A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.”

Lease Parcel	More than 5000 of roadless land¹ (yes/no)	Imprint of man's work substantially unnoticeable² (yes/no)	Outstanding opportunity for solitude or primitive recreation (yes/no)	Contains natural features of scientific, educational, scenic, or historical value (yes/no)	In Citizen Proposed Wilderness Area (yes/no. If yes but dropped during RMP process, state why)
WY-1105-011	No (Private Surface adjacent to US HWY 30)	No (Contains Stock Water Reservoir, adjacent to HWY 30)	No	No, but adjoins the Rock Creek/Tunp SMA	No
WY-1105-012	No (Split Estate/ Private Land)	No	No	No, but adjoins the Bear River Divide SMA	No
WY-1105-013	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED				
WY-1105-014	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED				
WY-1105-015	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED				
WY-1105-016	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED				
WY-1105-017	No (Contains Split Estate/ Private Land, State Hwy 89 traverses this parcel)	No (State Hwy 89 and railroad bisect this parcel)	No	Yes (Partially within the Rock Creek/Tunp SMA (DELETED) and partially within the Cokeville Meadows National Wildlife Refuge (part in NWR recommended for DEFERRAL))	No

WY-1105-018	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED				
WY-1105-019	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED				
WY-1105-020	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED				
WY-1105-021	No (Contains Split Estate/ Private Land)	No (Bisected by Lincoln County Road 207)	No	Yes (Partially within the Cokeville Meadows National Wildlife Refuge (part in NWR recommended for DEFERRAL))	No
WY-1105-022	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED				
WY-1105-023	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED				
WY-1105-024	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED				
WY-1105-025	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED				
WY-1105-026	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED				
WY-1105-027	No (parcel falls within a 1720 acre piece of public land that is surrounded by private land)	No (Bisected by BLM Road 4211)	No	No	No
WY-1105-028	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED				
WY-1105-029	No (Contains Split Estate/ Private Land)	No (Bisected by Lincoln County Road 207)	No	Yes (Partially within the Rock Creek/Tunp SMA (DELETED) and partially within the Cokeville Meadows National Wildlife Refuge (part in NWR recommended for DEFERRAL))	No
WY-1105-030	No (Parcel is bisected by Split Estate/ Private Land and US Hwy	No (Bisected US Hwy 30/State Hwy 89 and railroad)	No	No, but adjoins Cokeville Meadows National Wildlife Refuge	No

	30/State Hwy 89)				
WY-1105-031	No (Contains Split Estate/ Private Land)	No (Bisected by Lincoln County Road 207)	No	Yes (Partially within the Cokeville Meadows National Wildlife Refuge (part in NWR recommended for DEFERRAL))	No
WY-1105-032	No (Contains Split Estate/ Private Land)	No (Bisected by Lincoln County Road 207)	No	No	No
WY-1105-033	No (Entirely on split estate private surface)	No	No	Yes (Entirely within the Cokeville Meadows National Wildlife Refuge and is recommended for DEFERRAL)	No
WY-1105-034	No (Evanston Airport bisects the parcel, partially on split estate private surface)	No (Evanston Airport bisects the parcel)	No	No	No

¹“The word ‘roadless’ refers to the absence of roads which have been improved and maintained by mechanical means to ensure relatively regular and continuous use. A ‘way’ maintained solely by the passage of vehicles does not constitute a road.”

² Examples of manmade features that may be considered substantially unnoticeable in certain cases are: trails, trail signs, bridges, fire towers, fire breaks, fire presuppression facilities, pit toilets, fisheries enhancement facilities, fire rings, hitching posts, snow gauges, water quantity and quality measuring devices, research monitoring markers and devices, radio repeater sites, air quality monitoring devices, fencing, spring developments, overgrown and barely visible two-track ways, and small reservoirs.

APPENDIX D

Master Leasing Plan Checklist

Master Leasing Plan (MLP) Checklist for Oil and Gas Lease Parcels

Washington Office Instruction Memorandum 2010-117 introduces the Master Leasing Plan (MLP) concept as a mechanism for completing the additional planning, analysis, and decision-making that may be necessary for areas meeting the listed criteria. *The MLP process will be conducted through the NEPA process using an interdisciplinary team that will coordinate and/or consult with the public and other stakeholders that may be affected by the BLM's MLP decisions. The MLP will ordinarily be initiated as a land use plan amendment. However, if it is anticipated that the likely outcome of the MLP will not result in the creation of new lease stipulations or changes to existing RMP decisions warranting a plan amendment, it may not be necessary to initiate the MLP as a plan amendment. The MLP process may also be combined with a plan revision process if schedules permit. **The preparation of an MLP is required when all FOUR of the following criteria are met:***

- *A substantial portion of the area to be analyzed in the MLP is not currently leased.*
- *There is a majority Federal mineral interest.*
- *The oil and gas industry has expressed a specific interest in leasing, and there is a moderate or high potential for oil and gas confirmed by the discovery of oil and gas in the general area.*
- *Additional analysis or information is needed to address likely resource or cumulative impacts if oil and gas development were to occur where there are:*
 - *multiple-use or natural/cultural resource conflicts;*
 - *impacts to air quality;*
 - *impacts on the resources or values of any unit of the National Park System, national wildlife refuge, or National Forest wilderness area, as determined after consultation or coordination with the NPS, the FWS, or the FS; or*
 - *impacts on other specially designated areas.*

Parcel #	Parcel in an Area that is Substantially Unleased (Yes/No)	Parcel in an area with a Majority Federal Mineral Interest (Yes/No)	O&G Industry has expressed a Specific Interest in Leasing & there is a Confirmed Moderate to High Potential for O&G (Yes/No)	Additional Analysis Needed to Address Resource or Cumulative Impacts if O&G Development were to occur				MLP Need? (Yes/No)	Rationale
				Multiple-use or Resource Conflicts (Yes/No)	Impacts to Air Quality (Yes/No)	Impacts to NPS, FWS Refuge, or FS Wilderness Areas (Yes/No)	Impacts on Other Specially Designated Areas (Yes/No)		
WY-1105-001	Yes	No (Split-estate parcel surrounded by private surface and private minerals)	No (even though the parcel has been nominated for lease, no oil company has expressed specific interest to the Rawlins FO, there are no existing leases in the vicinity of the parcel , the	Yes	Yes	No	No	Few Federal Minerals in Area Very little Federal mineral estate in the area	

			parcel has a low development potential ¹⁾						
002	Yes	No (Split-estate parcel surrounded by private surface and private minerals)	No (even though the parcel has been nominated for lease, no oil company has expressed specific interest to the Rawlins FO, there are no existing leases in the vicinity of the parcel , the parcel has a low development potential ¹⁾	Yes	Yes	No	No	No	Very little Federal mineral estate in the area
003	Yes	No (Split-estate parcel surrounded by private surface and private minerals)	No (even though the parcel has been nominated for lease, no oil company has expressed specific interest to the Rawlins FO, the nearest existing lease is more than 1.5 miles from the parcel, the parcel has a low development potential ¹⁾	Yes	Yes	No	No	No	Very little Federal mineral estate in the area, checkerboard surface and mineral ownership pattern
004	Yes	No (The parcel is interspersed with checkerboard surface and mineral estates)	No (even though the parcel has nominated for lease, no oil company has expressed specific interest to the Rawlins FO Much of the federal mineral estate in the area is leased, the	Yes	Yes	No	No	No	Checkerboard surface and mineral ownership pattern

			parcel has a moderate development potential ¹⁾						
005	Yes	No (Split-estate parcel surrounded by private surface and private minerals)	No (even though the parcel has been nominated for lease, no oil company has expressed specific interest to the Rawlins FO, there are no existing leases in the vicinity of the parcel , the parcel has a low development potential ¹⁾	Yes	Yes	No	No	No	The parcel contains the only federal minerals in the vicinity
006	Yes	No (Split-estate parcel interspersed with private surface and private minerals, checkerboard minerals ownership)	No (even though the parcel has been nominated for lease, no oil company has expressed specific interest to the Rawlins FO, there are no existing leases in the vicinity of the parcel , the parcel has a moderate development potential ¹⁾	Yes	Yes	No	No	No	Checkerboard; Few federal minerals parcels in the area.
007	No	Yes, (Split_estate parcel; adjoining private lands are also split-estate.)	Yes, - All adjoining federal minerals areas are leased. The area has a high development potential ¹⁾	Yes	Yes	No	No, but within a mile of a National Historic Trail.	No	Majority of the area already leased
008	Parcel is in an area designated "Unavailable for Oil and Gas Leasing in the Rawlins RMP and is DELETED								

009	Parcel is in an area designated "Unavailable for Oil and Gas Leasing in the Rawlins RMP and is DELETED"								
010	No (The parcel is bounded on the north, east, and west by existing leases)	Yes, (the areas surrounding the parcel is 100% federal surface and minerals)	Yes, ((The parcel is bounded on the north, east, and west by existing leases. The parcel has moderate development potential ¹⁾)	Yes	Yes	No	Yes-DRUA	No	Majority of the area already leased

¹ Based on the Mineral Occurrence & Development Report (February 2003) for the Rawlins RMP

Leasing Plan (MLP) Checklist for Oil and Gas Lease Parcels – Kemmerer FO

Washington Office Instruction Memorandum 2010-117 introduces the Master Leasing Plan (MLP) concept as a mechanism for completing the additional planning, analysis, and decision-making that may be necessary for areas meeting the listed criteria. *The MLP process will be conducted through the NEPA process using an interdisciplinary team that will coordinate and/or consult with the public and other stakeholders that may be affected by the BLM’s MLP decisions. The MLP will ordinarily be initiated as a land use plan amendment. However, if it is anticipated that the likely outcome of the MLP will not result in the creation of new lease stipulations or changes to existing RMP decisions warranting a plan amendment, it may not be necessary to initiate the MLP as a plan amendment. The MLP process may also be combined with a plan revision process if schedules permit. **The preparation of an MLP is required when all FOUR of the following criteria are met:***

- *A substantial portion of the area to be analyzed in the MLP is not currently leased.*
- *There is a majority Federal mineral interest.*
- *The oil and gas industry has expressed a specific interest in leasing, and there is a moderate or high potential for oil and gas development confirmed by the discovery of oil and gas in the general area.*
- *Additional analysis or information is needed to address likely resource or cumulative impacts if oil and gas development were to occur where there are:*
 - *multiple-use or natural/cultural resource conflicts;*
 - *impacts to air quality;*
 - *impacts on the resources or values of any unit of the National Park System, national wildlife refuge, or National Forest wilderness area, as determined after consultation or coordination with the NPS, the FWS, or the FS; or*
 - *impacts on other specially designated areas.*

Parcel # #WY -11- 05-	Parcel in an Area that is Substantially Unleased (Yes/No)	Parcel in an area with a Majority Federal Mineral Interest (Yes/No)	O&G Industry has expressed a Specific Interest in Leasing & there is a Confirmed Moderate to High Potential for O&G Development (Yes/No)	Additional Analysis Needed to Address Resource or Cumulative Impacts if O&G Development were to occur				MLP Need? (Yes/No)	Rationale
				Multiple-use or Resource Conflicts (Yes/No)	Impacts to Air Quality (Yes/No)	Impacts to NPS, FWS Refuge, or FS Wilderness Areas (Yes/No)	Impacts on Other Specially Designated Areas (Yes/No)		
011	Yes	Yes	No (even though the parcel has been nominated for lease, no oil company has expressed specific interest to the Kemmerer FO, there are no existing leases within 5 miles of the	Yes	Yes	No	Yes - Rock Ck./Tunp Special Mgt. Area (SMA)	No	Nearest producing well more than 5 miles away. Adjacent to an area that is unavailable for leasing. The Kemmerer RMP/EIS was recently completed – May, 2010. Decisions on where to lease and not lease are current.

			parcel - Low Development Potential ¹⁾						
012	Yes	Yes	No (even though the parcel has been nominated for lease, no oil company has expressed specific interest to the Kemmerer FO, there are no existing leases within 6 miles of the parcel - Low Development Potential ¹⁾	Yes	Yes	No	Yes - Rock Ck./Tunp and Bear River Divide SMAs	No	Nearest producing well more than 5 miles away. Adjacent to areas unavailable for leasing. The Kemmerer RMP/EIS was recently completed – May, 2010. Decisions on where to lease and not lease are current.
013	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED								
014	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED								
015	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED								
016	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED								
017	Yes	No	No (even though the parcel has been nominated for lease, no oil company has expressed specific interest to the Kemmerer FO, there are no existing leases within 7 miles of the parcel - Low Development Potential ¹⁾	Yes	Yes	Yes –The eastern half of the parcel is in the Cokeville Meadows National Wildlife Refuge (CMNWR)	Yes – The eastern half of the parcel is in the Rock Ck./Tunp SMA	No	Nearest producing well more than 5 miles away. Adjacent to areas unavailable for leasing. The Kemmerer RMP/EIS was recently completed – May, 2010. Decisions on where to lease and not lease are current.
018	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED								
019	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED								
020	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED								
021	No	Yes	No (even though the parcel has been	Yes	Yes	Yes – Majority of	No	No	Area is substantially leased. The Kemmerer RMP/EIS was

			nominated for lease, no oil company has expressed specific interest to the Kemmerer FO, the parcel does ajoin an existing lease - Low Development Potential ¹⁾			the parcel is in the CMNWR			recently completed – May, 2010. Decisions on where to lease and not lease are current. Nearest producing well more than 5 miles away.
022	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED								
023	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED								
024	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED								
025	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED								
026	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED								
027	Yes	No	No (even though the parcel has been nominated for lease, no oil company has expressed specific interest to the Kemmerer FO, there are no existing leases within 7 miles of the parcel - Low Development Potential ¹⁾	Yes	Yes	No	No	No	Not in an area with a majority Federal mineral interest. The Kemmerer RMP/EIS was recently completed – May, 2010. Decisions on where to lease and not lease are current. Nearest producing well more than 8 miles away.
028	Parcel is in an area designated “Unavailable for Oil and Gas Leasing in the Kemmerer RMP and is DELETED								
029	No	Yes	No (even though the parcel has been nominated for lease, no oil company has expressed specific interest to the Kemmerer, part of parcel adjoins an existing lease - Low Development Potential ¹⁾	Yes	Yes	Yes – Western portion of the parcel is in the CWNWR.	Yes – Largest part of parcel is within the Rock Ck./Tunp SMA.	No	Area is substantially leased. The Kemmerer RMP/EIS was recently completed – May, 2010. Decisions on where to lease and not lease are current.
030	Yes	Yes	No (even though the	Yes	Yes	No, but	Yes – The	No	Adjacent to area unavailable

			parcel has been nominated for lease, no oil company has expressed specific interest to the Kemmerer FO, there are no existing leases within 7 miles of the parcel - Low Development Potential ¹⁾			adjoins the CMNWR	parcel is in the Bear River Divide SMA.		for leasing. The Kemmerer RMP/EIS was recently completed – May, 2010. Decisions on where to lease and not lease are current. Nearest well is over 7 miles away
031	No	Yes	No (even though the parcel has been nominated for lease, no oil company has expressed specific interest to the Kemmerer, the nearest existing lease is a mile to the north - Low Development Potential ¹⁾	Yes	Yes	Yes – The eastern portion of the parcel is in the CWNWR	No	No	Area is substantially leased. The Kemmerer RMP/EIS was recently completed – May, 2010. Decisions on where to lease and not lease are current. The nearest well is 10 miles away.
032	No	Yes	No (even though the parcel has been nominated for lease, no oil company has expressed specific interest to the Kemmerer, part of parcel adjoins an existing lease - Low Development Potential ¹⁾	Yes	Yes	Yes – The eastern portion of the parcel is in the CWNWR	No	No	Area is substantially leased. The Kemmerer RMP/EIS was recently completed – May, 2010. Decisions on where to lease and not lease are current. The nearest well is 10 miles away
033	Entirely within the Cokeville Meadows National Wildlife Refuge and is recommended for DEFERRAL								
034	No	No	No (even though the parcel has been nominated for lease, no oil company has	Yes	Yes	No	No	No	Area is substantially leased. The Kemmerer RMP/EIS was recently completed – May, 2010. Decisions on where to

			expressed specific interest to the Kemmerer, the nearest existing lease is about ½ mile from the parcel - Low Development Potential ¹⁾						lease and not lease are current. The nearest well is 1 mile away
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¹ Based on the Oil & Gas RFD Scenario (August 2005) for the Kemmerer RMP

APPENDIX E

Public Comments and Agency Response

#	Comment	Response
1	<p>USFWS Comment: The proposed action is likely in conflict with FWS policy (612 FW 2). In addition, 43 CFR 3101.5-1 states that federal minerals underlying a national wildlife refuge are not leasable by the BLM, except in the event of actual drainage. As these lands have yet to be leased, no drainage can be occurring, therefore are exempt by regulation from leasing. Any mention of leasing or deferring the lands under the Cokeville Meadows National Wildlife Refuge should be removed from any consideration in the EA except to state they are not available for leasing.</p>	<p>Based on our subsequent review of 43 CFR 3101.5-1 we concur that the federal minerals underlying the Cokeville Meadows National Wildlife Refuge (CMNWR) are not available for leasing unless drainage were occurring.</p> <p>We take exception to the statement, “As these lands have yet to be leased, no drainage can be occurring, . . .” The drainage statement in the CFR refers to situations where oil and gas development on an adjoining or nearby private or state lease is draining federal mineral reserves from the lands within a National Wildlife Refuge. In the case of the proposed parcels within the CMNWR, there are no existing wells on any adjoining private or state leases; therefore no drainage is known to be occurring. Based on 43 CFR 3010.5-1 any parcels falling within the CMNWR, as well as any portions of other parcels that extend onto the Refuge are hereby considered unavailable for leasing and are moved to the deleted parcel section in the May 2011 Oil and Gas Lease Parcel EA.</p>
2	<p>USFWS Comment: the refuge (referencing the Cokeville Meadows National Wildlife Refuge) attracts large numbers of federal trust species . . . <i>(note the comment provided a description of the values provided by the Refuge that is referenced, but not actually repeat here in this comment table).</i></p>	<p>The text provided describing the value of the CMNWR has been added to the EA.</p>
3	<p>USFWS Comment: The FWS encourages that any future exploration and/or production consider appropriate buffers around the refuge. Please ensure planning includes necessary spill contingency, secondary containment strategies, and methods to ensure there is no risk of pollution and/or contaminants impacting FWS lands.</p>	<p>The establishment of leasing or exploration/development buffers on federal surface or minerals is a land use planning level decision and is beyond the scope of the May 2011 Lease Parcel EA. The Kemmerer Resource Management Plan (RMP) approved in May 2010 did not establish such a buffer for the federal lands and mineral estate adjoining the refuge. The RMP does, however, establish management prescriptions, restrictions, and stipulations to protect values such as Greater sage-grouse leks, raptor nests and nesting habitat, Greater sage-grouse nesting habitat, crucial big game winter range, streams, and riparian habitat to just mention a few. These prescriptions, restrictions, and stipulations are incorporated as lease stipulations that are applied to individual parcels</p>

		offered for leasing as applicable, refer to Appendix A.
4	<u>USFWS Comment:</u> Based on the geography of the area... any pollution release near the boundary of the Cokeville Meadows National Wildlife Refuge would likely end up on or impact FWS lands.	Should any of the parcels adjoining the Refuge actually be leased and should any exploration or development be proposed an additional round of NEPA analysis would occur, typically an EA for an exploratory well and an EIS for field development proposals. At these stages, proponents would develop Spill Prevention Control and Countermeasure Plans (SPCCP). This would not only apply to any exploration or development on the May 2011 lease parcels, but would also apply to exploration and development on the existing federal oil and gas leases that are located on the west side of the Refuge. Refer to Section 4.9 of the EA
5	<u>USFWS Comment:</u> The FWS believes, but has not confirmed, a possible sage grouse lek in what you have described as Parcel #31.	<p>The BLM recognizes that a possible sage grouse lek does occur. However, after conferring with the Cokeville Meadows National Wildlife Refuge Manager, the possible lek is located in Section 12, Township 23 North, Range 120 West. Based on follow-up information from the Cokeville Meadows National Wildlife Refuge Manager, refuge personnel observed between 15 and 20 sage grouse displaying typical courtship behavior in the vicinity of a historic lek location during the spring of 2010. A review of BLM GIS (Geographic Information System) Database, confirmed that a lek once existed in the area described by the USFWS. The lek was previously known as the Christy Canyon 1 lek and was first observed in 1956. In 2003, the Wyoming Game and Fish Department (WGFD) classified the lek as unoccupied and abandoned and thereby removed this lek from the database due to inactivity (see WGFD SG definitions and lek monitoring techniques). Based on WGFD lek survey protocols a follow-up confirmation determination of lek activity is required for a lek to be designated ‘active’; therefore the USFWS siting is considered a ‘potential lek’ until such confirmation occurs.</p> <p>The BLM coordinates and shares sage grouse information with the WGFD. The WGFD is the proprietary agency charged with maintaining these data sets and wildlife populations. The BLM will work with the USFWS and WGFD to</p>

		<p>confirm this potential location during the next breeding season (spring 2011). The BLM cannot place a lek stipulation on a lease until a lek is confirmed. Therefore, the BLM will continue to add Lease Notice #3 to each lease parcel to protect Greater sage-grouse habitat. BLM also added a stipulation to this lease protecting BLM sensitive species. The CSU (Controlled Surface Use) Stipulation states, in part, "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."</p> <p>Additionally, under the lease terms, Section 6 - Conduct of operations states that, "Lessee must conduct operations in a manner that minimizes adverse impacts to the land, air and water, to cultural, biological, visual, and other resources, and to other land uses or users. Lessee must take reasonable measures deemed necessary by the lessor to accomplish the intent of this section. To the extent consistent with the lease rights granted, such measures may include, but are not limited to, modification to siting or design of facilities, timing of operations, and specification of interim and final reclamation measures."</p> <p>Text has been added to the parcel WY-1105-032 affected environment discussion</p>
6	<p><u>WOC Comment:</u> On page 1 of the EA it is stated that federal policy is to make mineral resources available for disposal and encourage development of mineral resources. While this may be true so far as it goes, this statement of policy is so constrained that it does not reflect accurately federal mineral policy. In addition to laws that promote development, there is a vast array of laws that promote environmental protection. We will not belabor these comments with a detailed review of all of these laws. But we include herewith as Exhibit 1 a detailed article that discusses these other sources of authority, and we ask the BLM to carefully</p>	<p>You are correct that certain federal laws and policy do promote mineral and other extractive/consumptive uses of public land; where as other laws and policy "co-equally" promote environmental protection. With that said however, the purpose of the references to law in the introduction section of the EA is to demonstrate that BLM's Oil and Gas Leasing Program and the "consideration" of the parcels addressed in this EA are in conformance with law, regulation, and policy. Section 8.34.3 of the BLM H-1790-1 National Environmental Policy Handbook states, ". . . <i>discuss whether or not the proposed action is in conformance with the land</i></p>

	<p>consider these other authorities cited in Exhibit 1 as it formulates the purpose and need for this project and presents statements of underlying policy. Quite simply, while federal policy may be to promote development of mineral resources, federal policy at least coequally promotes—and insists on—significant environmental protection when minerals development is proposed. BLM’s statements of policy on page 1 in the EA should reflect this.</p>	<p><i>use plan; identify directly relevant laws, regulations, policies, program guidance, and local permitting requirements that are germane to the proposed action. An exhaustive list or discussion of all applicable laws or regulations is not appropriate.”</i> Please note that one of the laws cited is FLPMA, which, in general terms, not only serves as a basis for leasing, it also requires protection of other resource values; therefore the statements in the introduction section are not exclusionary of environmental protection, but rather through the inclusion of FLPMA imply BLM’s obligation to comply with ALL applicable laws, regulations, and policies.</p>
7	<p><u>WOC Comment:</u> Also on page 1 of the EA it is stated that the decision as to what lands are open for leasing and what stipulations will be applied to lease parcels is made during the land use planning process. This too is a too foreshortened statement. Under BLM’s Instruction Memorandum (IM) 2010-117 it is clear that decisions of whether an area is available for leasing and what stipulations will be applied is not limited solely to the land use planning stage, but can also be made (updated) at the leasing stage.</p>	<p>The referenced statement along with Section 1.1 of the EA serve as the basis for evaluating whether or not offering, deferring, or deleting the parcel addressed in the May 2011 Leasing EA are in compliance with the applicable land use plan(s) or not. If they are not, a plan amendment, as indicated by IM 2010-117, may be necessary as needed. The following statement from the Introduction section of the EA is modified to add “offering”: <i>It serves to verify conformance with the approved Rawlins and Kemmerer land use plans and provides the rationale for offering, deferring or deleting parcels from a lease sale as well as providing rationale for attaching lease stipulations to specific parcels.</i> While the statement says it “serves to verify conformance with the approved Rawlins and Kemmerer land use plans, it also implies that if they are not in compliance a change to the applicable LUP may be warranted.</p>
8	<p><u>WOC Comment:</u> The purpose and need statement on page 2 of the EA is also too constrained and does not recognize the full array of laws and policies that BLM operates under. In addition to providing areas for exploration and development of oil and gas, helping to meet the nation’s energy needs, and meeting the requirements of the Mineral Leasing Act, Federal Land Policy and Management Act, and the minerals objectives in the Rawlins and Kemmerer Resource Management Plans (RMP), the BLM also operates under an array of environmental protection statues and planning decisions that are at least coequal to minerals</p>	<p>The purpose and need as stated in the draft May 2011 Lease Parcel EA is appropriate for the proposed action which is to offer oil and gas lease parcels nominated by public or industry entities for sale in May 2011.</p> <p>Section 6.2 of the BLM H-1790-1 National Environmental Policy Handbook states, “<i>The CEQ regulations direct that an EIS “...shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action” (40 CFR 1502.13). The CEQ regulations also direct that EAs “...shall include brief discussions of the</i></p>

	<p>development policies. Again we ask the BLM to fully consider the information presented in Exhibit 1, and after it reviews this information it should be incorporated into the purpose and need statement so that it accurately reflects the full legal and policy regime that is in operation. And then, accordingly, the BLM should ensure that the analysis in the EA fully reflects this broader purpose and need, and that the leasing decisions that result from the EA also reflect this broader purpose and need.</p>	<p><i>need for the proposal...</i>” (40 CFR 1508.9(b)).” The purpose and need in the EA does this.</p> <p>The following is being added to the final version of the EA: “Decisions to be made based on this analysis include which parcels will be recommended to be offered for lease, which parcels will be recommended to be deferred from the May 2011 lease sale, which parcels are not available for leasing, and what stipulations will be placed on the parcels that are recommended to be offered for lease.”</p>
9	<p>WOC Comment: BLM’s invocation of <i>Park County</i> for this principle is no longer valid. <i>Park County</i> was essentially overruled in <i>State of New Mexico v. Bureau of Land Mgmt.</i>, 565 F.3d 683, 716 (10th Cir. 2009), or at a minimum it was confined to its unique facts. Thus, BLM can no longer rely on <i>Park County</i> as representing judicial categorical approval for avoiding site-specific environmental analysis at the leasing stage.</p>	<p>The reference text is changed as follows in the final version of the EA: “According to the Tenth Circuit Court of Appeals, site-specific NEPA analysis at the leasing stage may not be possible absent concrete development proposals. Whether such site-specific analysis is required depends upon a fact-specific inquiry. Often, where environmental impacts remain unidentifiable until exploration can narrow the range of likely drilling sites, filing of an APD to drill may be the first useful point at which a site specific environmental appraisal can be undertaken (Park County Resource Council, Inc. v. U.S. Department of Agriculture, 10th Cir., April 17, 1987). In addition, the IBLA has decided that, “BLM is not required to undertake a site-specific environmental review prior to issuing an oil and gas lease when it previously analyzed the environmental consequences of leasing the land....” (Colorado Environmental Coalition, et al, IBLA 96-243, decided June 10, 1999). However, when site-specific impacts are reasonably foreseeable at the leasing stage, NEPA requires the analysis and disclosure of such reasonably foreseeable site specific impacts. (N.M ex rel. Richardson v. BLM, 565 F.3d 683, 718-19 (10th Cir. 2009). BLM has not received any development proposals concerning the proposed lease parcels addressed in this EA. While the EA does not provide site-specific development analysis, it does provide generic analysis of 3 plausible development scenarios for analysis purposes.”</p>
10	<p>WOC Comment: Moreover, the entire thrust of IM 2010-117 is to increase the level of site-specific analysis at the leasing stage. The IM</p>	<p>You are correct; IM 2010-117 does require site-specific analysis of the parcels being considered for leasing. The IM makes no mention of</p>

	<p>states, “The [Interdisciplinary Parcel Review Team] will complete site-specific NEPA compliance documentation for all BLM surface and split estate lease sale parcels.” IM 2010-117 at 11. The IM goes on to state, “Most parcels that the field office determines should be available for lease will require site-specific NEPA analysis.”</p>	<p>analyzing any assumed level of post-lease development. This EA does provide the requisite site-specific analysis. The affected environment section provides a lease parcel by lease parcel description of the resource values contained on that parcel. The environmental impacts section provides a description of anticipated impacts, as well as mitigation and/or stipulations.</p>
<p>11</p>	<p><u>WOC Comment:</u> BLM Has Not Demonstrated Compliance with IM-2010-117 and this should be Corrected.</p>	<p>IM 2010-117 directs that: “Each state office will develop an implementation plan and timeline to execute this IM, as explained in section IV of this IM, and will submit this implementation plan and timeline to the Director for review and approval by August 16, 2010. Lease parcels undergoing review in conformance with this IM and a Director-approved implementation plan will no longer be subject to the leasing briefing paper process set forth in the memorandum from the Acting Director, dated February 13, 2009(emphasis added).” Wyoming has submitted the required implementation plan. Director approval is pending. Implementation of the IM components is conditional on the Director’s approval of the State Implementation Plan.</p> <p>IM 2010-117 further states, “Upon issuance, this policy will guide land use planning and leasing procedures for future parcels not currently under review by the field offices as of the date of this IM. For parcels currently under review by the field offices, State Directors will determine whether it is appropriate to apply any part of this policy to those parcels (i.e., a Master Leasing Plan or the Interdisciplinary Review of Lease Sale Parcels process, including potential site visits and a closer look at program-specific guidance)”. The May 2011 lease parcels were sent to the District and Field Office on July 27, 2010 prior to the draft leasing reform implementation plan being submitted to the WO for review and Director approval. Based on the two excerpts provided above, along with the fact that as of Nov. 10, 2010 the Wyoming Implementation Plan had not been approved, it is reasonable to conclude the May 2011 lease parcel are not subject to the requirements of IM 2010-117.</p>

		The IM also states that parts of the IM can be implemented for the ‘under review’ parcels. The preparation of the EA including the MLP review for the May 2011 parcels falls within this guidance. Additional text has been added.
12	<u>WOC Comment:</u> For example, it is not clear that a sufficiently broad Interdisciplinary Parcel Review (IDPR) Team has reviewed these proposed lease parcels. IM 2010-117 at 7. On page 67, the EA shows that the consultation and coordination contacts associated with this EA only included BLM natural resource specialists, geologists and minerals personnel, and planners, with biologists at the Wyoming Game and Fish Department (WGFD) having also been contacted. This appears to be a very narrow review group.	The consultation section of the draft EA errantly contained an incomplete listing of the participants in the parcel review process. This has been corrected.
13	<u>WOC Comment:</u> It may be especially notable that many of the proposed lease parcels are on split estates, yet it is not apparent in the EA that BLM consulted with surface owners who could be affected by development on these lease parcels.	As required by BLM policy the private lands owners were sent letters notifying them that federal oil and gas minerals under portion of their private surface had been nominated for leasing and inviting their comment on the EA. The following statement has been added to the final EA: “Private surface owners of the split-estate parcels addressed in this EA were notified that the federal oil and gas mineral underlying their private surface within those parcels were notified by letter of the pending lease offering and were asked to submit comments.”
14	<u>WOC Comment:</u> The Master Leasing Plan Analysis in Appendix D is Faulty and should be Revised or Eliminated	The Master Leasing Plan (MLP) Checklist for Oil and Gas Lease Parcels in Appendix D provides the MLP criteria directly from IM 2010-117 and as is stated in several of the columns within the checklist the analysis applies to the ‘area’ the parcel falls within, not just to the parcel itself. The review meets the requirement of the IM.
15	<u>WOC Comment:</u> We ask the BLM to fully consider the information in these proposals and to revise Appendix D accordingly. We believe they present substantial information showing that the four IM criteria for MLP development are met in the Adobe Town Area in the Rawlins Field Office and the Rock Creek/Tunp/Bear River Divide/Raymond Mountain area in the Kemmerer Field Office. Most significantly, these proposals were developed from an “area” perspective—as required by the IM—not the	BLM’s determinations and recommendations in Appendix D are consistent with and meet the requirements of IM 2010-117 concerning MLP determinations. Additional review is not needed. Please note that the Rock Creek/Tunp and Bear Creek Divide Areas are unavailable for leasing by decision of the May 2010 Kemmerer RMP, which negates the need for an MLP.

	highly constrained perspective currently apparent in Appendix D.	
16	<p>WOC Comment: We are concerned about offering lease parcel WY-1105-010 for sale and object to its sale. As BLM recognizes in the EA, this parcel is located in an area proposed for wilderness designation by citizens. While BLM does not agree with the assessment of wilderness characteristics in this area, the area nevertheless remains proposed for wilderness designation by citizens, and of course only <i>Congress</i> can make the determination of whether an area will be designated as wilderness or not.</p> <p>This area is specifically recognized as the Adobe Town “heritage landscape” by the Wyoming Outdoor Council . . . In fact, this area qualifies as a heritage landscape under two categories recognized by the Council: as the Adobe Town area and additionally as a citizens’ proposed wilderness. In heritage landscape areas, it is the policy of the Wyoming Outdoor Council to oppose energy development occurring in the area. Consequently, if this parcel is offered for sale in May, 2011, the Wyoming Outdoor Council will be forced to protest the offering of this parcel. We urge the BLM to defer this parcel from leasing. A fundamental purpose and tenet of BLM’s new oil and gas policy is seeking to reduce lease protests. A fundamental purpose and tenet of BLM’s new oil and gas policy is seeking to reduce lease protests.</p>	<p>Whether a desire to reduce the number of protests on oil and gas lease parcel offerings is an underlying precept of IM 2010-117 or not, the threat of a protest is not sufficient to withdraw the parcel from leasing. Parcel 1105-110 was reviewed against the wilderness characteristics criteria and because of the preponderance of existing leased lands in the proximity to the subject parcel, it was determined to not meet the outstanding opportunity for solitude and primitive recreation (refer to 16 below). The parcel also contains a plugged and abandoned well pad (Yates Wrangler # 1) , as well as a section of the access road to the pad. Both the road and well pad have been recontoured and are in the process of being revegetated; however final reclamation has not been achieved. BLM is monitoring the site. The well pad has not been released from bond liability. A review of leasing records show that parcel 1105-010 is approximately 60 percent bounded by existing leases. Parcel 010 would be deferred from the May 2011 lease sale so a field inventory for Lands with Wilderness Characteristics can be conducted.</p>
17	<p>WOC Comment: We believe the analysis of wilderness values of this parcel presented in Appendix C of the EA is faulty and does not support a decision to offer this parcel for sale. In the Appendix, BLM agrees that the area is more than 5000 acres, that the imprint of man’s work is substantially unnoticeable, and that the area contains natural features of scientific, educational, scenic, or historical value. The only criterion for recognition as wilderness quality land that BLM does not agree exists in this area is whether there are outstanding opportunities for solitude or primitive recreation. In response to this query, BLM asserts, “No—Borders some state surface/bordered by existing leases.” This response is nonresponsive to the question. The</p>	<p>The 2008 Rawlins RMP-ROD states, “The BLM’s analysis of wilderness characteristics is consistent with the agency’s policy and guidance. BLM IM-2003-275 states that considering wilderness characteristics in the land use planning process may result in several outcomes, including, but not limited to: 1) emphasizing other multiple uses as a priority over protecting wilderness characteristics; 2) emphasizing other multiple uses while applying management restrictions (e.g., conditions of use, mitigation measures) to reduce impacts to some or all of the wilderness characteristics. As a result, the BLM is not required to manage for wilderness characteristics just because they may exist. The BLM chose not to carry the analysis of</p>

	<p>mere fact that state land borders this area or that there are existing leases in the area does not per se indicate that the area is not isolated and largely free of human occupation and disturbance—i.e., that solitude and primitive recreation opportunities are found there</p>	<p>wilderness characteristics into the Proposed RMP/Final EIS because valid existing lease rights prohibit implementation of management actions to protect the wilderness characteristics identified. The BLM Approved RMP was selected from an alternative in the Proposed RMP/Final EIS that did not include management for wilderness characteristics.</p> <p>Text on page 2-11 of the Proposed RMP/Final EIS is clarified to read as follows: “Because the BLM found the lands to be unmanageable for wilderness character because of preexisting oil and gas leases, the BLM elected to manage lands with wilderness character for multiple use and not for protection of wilderness character. Accordingly, measures to provide protection for any wilderness characteristics of lands (outside of previously established WSAs) will not be considered in the alternatives in this RMP. This is consistent with BLM policy as presented in BLM IM 2003-275.” BLM’s statement of “No—Borders some state surface/bordered by existing leases” on Appendix C demonstrates review of and concurrence with the RMP decision.</p>
18	<p><u>WOC Comment:</u> We object to the sale of lease parcels WY-1105-021, -029, -031, -032, and -033 because at least portions of these parcels “fall within” the Cokeville Meadows National Wildlife Refuge.</p>	<p>Refer to the Agency Response at #1 above.</p>
19	<p><u>TU Comment:</u> <i>Criteria 1.</i> The impacts associated with leasing in and surrounding a National Wildlife Refuge (NWR) should be considered significant, especially as they apply to wetlands, surface water and groundwater issues.</p>	<p>Refer to the Agency Response at #1 and 3 above.</p>
20	<p><u>TU Comment:</u> <i>Criteria 3.</i> There are numerous unique characteristics of the geographic area in the Cokeville area and the NWR itself that make the FONSI assumption for this criterion incorrect.</p>	<p>Refer to the Agency Response at #1 above. The text in the FONSI has been changed to reflect that the lands within the NWR are being deleted from the May 2011 lease sale.</p>
21	<p><u>TU Comment:</u> <i>Criteria 4.</i> TU feels that the controversy over drilling in these complex wetland and farming areas would be highly controversial. The development of the Cokeville</p>	<p>Refer to the Agency Response at #1 above.</p>

	<p>NWR has been a collaborative effort with local farmers and ranchers investing their time and land to maintain and protect this unique area. TU suggests that there will be significant controversy should drilling occur within the perimeters of the NWR. It is also potentially controversial as the Refuge is beginning the first planning stages of opening the area for public uses such as wildlife viewing, hunting, fishing and environmental education.</p>	
22	<p><u>TU Comment:</u> <i>Criteria 6.</i> We respectfully disagree with the degree to which the action may establish a precedent. Once a lease has been sold, the precedent begins. And cumulatively, this EA analysis should consider the ecological landscape effects on the fish and wildlife resources dependent on this landscape. In particular, we are referring to the Cokeville NWR area but the EA should consider all lease parcels from a cumulative impact perspective.</p>	<p>The precedent for issuing oil and gas leases was established by the Mineral Leasing Act of 1920 (Section 13) which authorized the Secretary of Interior to issue oil and gas leases. The parcels on the May 2011 have been offered and leased in the past. Again, the offering on the May 2011 sale is not precedent setting. Even post lease exploration and development is not precedent setting. Federal leases across the nation have had post lease exploration and development activity. This activity has ranged for an individual dry hole to full field development, such as is occurring in the Jonah and Pinedale Anticline Fields.</p> <p>Concerning the comment on the Cokeville NWR, again refer to the Agency responses #1 and 3. The EA does provide cumulative impacts analysis to the extent possible; however absent a development proposal that provides a reasonably foreseeable development scenario it is not possible to develop a definitive site-specific cumulative impact analysis.</p>
23	<p><u>TU Comment:</u> <i>Criteria 9.</i> The action of leasing, which has the potential to result in the action of oil and gas development, can adversely affect endangered or threatened species or their habitat for this lease sale. As stated earlier, there are many species that occur within and adjacent to lands these parcels are located in, including Trumpeter swans, sandhill cranes, white-faced ibis, and many more species that have been identified as species of greatest conservation need. The WGFD is in the process of updating their State Wildlife Action Plans that include new research and survey information for many of these species and should be referenced in the</p>	<p>The parcels and portions of parcels that fall within the Cokeville Meadows NWR are being deleted from the May 2011 per 43 CFR 3101.5-1. Again refer to Agency response 1 and 3.</p> <p>As stated in Agency response #22, absent a definitive development proposal it is not possible a more specific cumulative impact analysis and as stated in Section 1.3 of the draft EA, BLM cannot determine at the leasing stage whether or not a nominated parcel will actually be leased, or if it is leased, whether or not the lease would be explored or developed. The EA provides the level of analysis that is feasible without a</p>

	<p>final EA. The BLM is also actively involved in the expansion of the NWR that would include greater protection for some of these sensitive, threatened, and endangered species. We ask that a more thorough review and analysis be conducted on the lease parcels in the Kemmerer resource area.</p>	<p>definitive development proposal.</p>
24	<p><u>TU Comment:</u> During our research for review, it came to our attention that certain agencies and their staff had not had the benefit of consultation. This was of high concern to us since two of the more important agencies having to do with wildlife protection and management were not consulted.</p>	<p>Albeit late in the 30-day public review period consultation did occur between the US Fish and Wildlife Service (David Lucas, Chief of Refuge Planning, Region 6, Denver, CO) and BLM, which resulted in the parcels and portions of parcels falling within the Cokeville Meadows NWR being deleted from the May 2011 parcel list. USFWS did provide BLM comments on the EA; refer to Agency responses #1 through 5 above. Additionally, consistent with the requirements of the MOU between the Wyoming Game and Fish Department and BLM the Kemmerer Field Office did contact WGFD concerning the May 2011. Mark Zornes has been the primary WGFD contact for the Kemmerer Field Office for oil and gas lease parcel review and comment. An email was sent to Mr. Zornes concerning the May 2011 parcels and requesting input from WGFD. No response was provided to BLM.</p>
25	<p><u>TU Comment:</u> In addition, TU has several habitat improvement projects located in the vicinity of the parcel sales in the Cokeville area near the Cokeville National Wildlife Refuge and would also have concerns about the potential impact from oil and gas development to these projects. These projects were coordinated and implemented with the partnership of the USFWS, Wyoming Game and Fish Department, private landowners, and the Wyoming Natural Resource and Wildlife Trust. Considerable federal, state and private funds are being spent or are being allocated for all of these projects and we ask that BLM take into consideration and analysis the implications of these projects and actions in the final EA.</p>	<p>The BQ Diversion Improvement and Fish Screen Project is located on a portion of parcel 1105-012 and adjacent to a portion of parcel 030; however all of parcel 012, excluding the E2SE of Section 18, T21N, R119W either falls within the Rock Creek/Tunp or Bear River Divide Special Management Areas (SMA) and is unavailable for leasing and are being deleted from the May 2011 lease sale. The portions of parcel 030 south and east of State Highway 89 and in SENE, E2SE of Section 1, T21N, R120W falls also within the Rock Creek/Tunp and Bear River Divide SMAs and will be deleted from the May 2011 lease sale. The closest point from the BQ Diversion Improvement and Fish Screen Project to any portion of a lease parcel recommended for offer at the May 2011 sale is approximately 1½ miles.</p> <p>The White Water Ditch Fish Passage and Screening Project is located over eight tenths of a</p>

		<p>mile north of parcel 1105-027 and is separated from the project by State Highway 232, irrigated croplands in the Pine Creek drainage, and approximately ¼ mile of uplands.</p> <p>With the exception of the very northern portions of the Oleson Tract and Forgen Slough Projects the remaining projects listed in the TU Comment Attachment 1 all fall within the boundary of the Cokeville Meadows NWR. As previously stated all parcels and portions of parcel on the May 2011 lease list that fall with the NWR are being deleted from the May 2011 lease sale. The portions of the Oleson Tract and Forgen Slough Projects extending out of the north end NWR are more than ¾ miles and are separated by US Highway 30 and irrigated croplands from the nearest May 2011 parcel.</p> <p>Text has been added to the final EA concerning streams with Bonneville Cutthroat trout conservation populations and potential for BCT population expansion.</p>
26	<p><u>TU Comment:</u> The EA does not provide adequate science-based environmental analysis or resource analysis review, including the discussion of on-the-ground site visits as required under the new oil and gas leasing reform. Instead, much of the discussion is lumped into a broad and more general discussion that does not specifically address many site specific issues that truly are significant and may be impacted by the sale of some of these parcels.</p>	<p>Text has been added to the final EA referencing the mule deer and sage grouse study results on the Pinedale Anticline. Please be reminded it is not possible at the lease offering stage to accurately predict whether a parcel will actually be leased; if it is leased, whether or not a given parcel may have exploration or development activities; and if it does receive exploration or development activity what that level (down-hole and surface well pad spacing) will be.</p>
27	<p><u>TU Comment:</u> The EA neglects to include Lincoln County in its Socioeconomic Resource analysis discussion</p>	<p>Table 3.1.1 has been changed to include Lincoln and Uinta Counties. The draft EA text did provide discussion on the socio-economic status of Lincoln County</p>
28	<p><u>TU Comment:</u> We do request that a more updated reference review be included for the information presented under 3.1.2.2 Wildlife. The discussion for sage grouse is comprehensive; however, it is the only special status species identified and fully discussed. The BLM should review other special status species that occur within these parcel locations and include a similar discussion. This includes a discussion of Bonneville cutthroat trout, Trumpeter Swans, and any other species</p>	<p>BLM has incorporated text submitted by USFWS concerning the value of the Cokeville Meadows NWR, as well as the listing they provided of the species using the refuge. Text has been added to the final EA concerning Bonneville cutthroat trout.</p>

	identified by USFWS and WGFD, including their updated list of special status species.	
29	<p><u>TU Comment:</u> There are numerous big game wildlife studies and associated impacts from oil and gas development on habitat these species occupy that should be referenced, including the most recent studies and monitoring data from the Pinedale Anticline oil and gas field. These include Hall Sawyer’s “Mule Deer Monitoring in the Pinedale Anticline Project Area: 2010 Annual Report” (presented to BLM’s Pinedale Anticline Project Office, September 2010); the sage grouse studies conducted by Matt Holloran, the antelope studies conducted by Joel Berger, and numerous other studies that document habitat impacts from oil and gas development. A review of these studies may help direct the development plans for these leases in a more responsible manner, including potential efforts to initiate phased and tiered development and a more comprehensive reclamation program designed to account for limiting habitat or functional habitat.</p>	<p>Text has been added to the final EA referencing the Holloran sage-grouse, the Sawyer mule deer, and the Berger pronghorn studies.</p> <p>Again we reiterate that at the pre lease parcel offering stage it is not possible to know if a parcel will be leased, if it is leased whether or not development will occur.</p>
30	<p><u>TU Comment:</u> We would like to see a more thorough discussion and review of water quality and surface to ground water issues and potential problems. A statement made in the Water Quality section (3.1.2.8) is incorrect (“<i>No perennial surface water is found on public land in the proposed lease areas.</i>”) Indeed, Parcels 21, 27, 29, 30, 31, and 32 in the Kemmerer resource area are located near the tributaries of the Bear River including the Smith’s Fork, Twin Creek, Spring Creek, Bridger Creek (all which contain portions of public land), and the numerous wetland components associated with the Bear River watershed. Access to these parcels would involve the additional development of roads, one of the leading contributors to sediment and surface water runoff. Additional analysis should be reviewed concerning impacts from the direct acts of exploration and drilling (sedimentation, groundwater communication from hydraulic fracturing, etc) to this river system. Hydraulic fracturing is becoming more and more an issue of concern and a more thorough discussion is needed that includes the latest science on</p>	<p>BLM has reviewed the analysis provided in Sections 4.10 and 4.11 and feels that they adequately described the anticipated impacts; thus additional discussion was not deemed necessary.</p> <p>The statement at 3.1.2.8 is correct. There is no perennial streams on public lands within the parcels; however text has been added to the final EA stating that parcel 003 contains a 0.3 mile segment of Wagonhound Creek and parcel 006 has 0.4 miles of Bear Creek and that all of the parcels have ephemeral drainages that ultimately discharge to perennial streams.</p> <p>As previously stated, at the pre-lease offer stage BLM cannot predict whether or not a parcel will be leased or not and if it is leased whether it will be explored or developed or not. It is equally not possible to determine at the pre-lease offer stage whether or not a well would or would not require hydraulic fracturing. Some geologic formations need hydraulic or means of stimulus to release the trapped hydrocarbon resource. Other formations flow without fracturing. Consequently, it is not possible for a pre-leasing EA to accurately predict</p>

	contamination. The discussion of the watershed under 4.11 Watershed-Hydrology alludes to the fact that long-term direct and indirect impacts would occur but should define the life of the wells (which in many case have been estimated to be 40-60 years). Such lengthy impacts to watersheds are unacceptable and a more thorough discussion and analysis should be included. This is particularly true for the Bear River watershed due to its high level of significance.	what impacts may or may not occur. It is also important to note that once BLM has a concrete proposal (an exploration APD, an APD for a discovery confirmation well or wells, and/or a field development proposal) additional site-specific environmental analysis will be conducted.
31	<u>TU Comment:</u> We disagree with the statement made under 4.2 <i>Impact of Alternative B (Proposed Action)</i> that “these scenarios are purely speculative...” referring to impacts associated with oil and gas development. Wyoming and the West has experienced significant oil and gas drilling in these last 10 years or more and there is an abundance of available information that would help the BLM reach beyond speculation when it comes to impacts of oil and gas drilling. This statement is no longer an acceptable reason for not considering the landscape impacts to our state’s natural resources. We respectfully ask that the BLM delve deeper into these scientifically documented impacts in order to present a genuine and more realistic picture of the expected outcome to wildlife, fisheries, air, water, and habitat. By engaging in a more thorough analysis, the BLM will thus adhere to the new guidelines outlined in the BLM IM 2010-117.	As we have stated, BLM cannot predict whether or not a parcel will be leased or not and if it is leased whether it will be explored or developed or not. Not all parcels get leased and many parcels expire without having any exploration or development activity. The three scenarios provided in the EA for analysis purposely only are “purely speculative”. Just like with hydraulic fracturing, some formations can be “drained” by relatively few well bores, whereas others such as the Pinedale Anticline and Jonah Fields require numerous well bores. Some formations can be developed through horizontal drilling, whereas others can be developed through directional drilling, and still others require vertical drilling. Under each of these scenarios the number of well bores can vary. We agree there are numerous field development EAs and EISs that more specifically predict environmental impacts. The difference between those documents and this lease parcel EA is that they have a concrete development proposal to analyze. It is also important to note that while there is some commonality between field development EAs and EISs there is also substantial divergence in resource values and subsequent impacts. Field development on the North Slope of Alaska has different resource values, concerns, and impacts than a field development in southern New Mexico. Resource values and impacts vary between the Powder River Basin and the Pinedale Anticline.
32	<u>TU Comment:</u> The discussion on Mitigation (4.3.4) should be more expansive. Mitigation actions in the Rawlins resource area for several projects are not working, despite reference to the	Section 4.3.4 references Tables 4.2a and 4.2b which provide the more expansive look. These tables provide all of the stipulations that are proposed to be applied to each lease parcel

	<p>Resource Management Plans (RMPs). The Atlantic Rim project is one that comes to mind. Additionally, despite a sincere effort in developing broad based mitigation plans, more specific actions should be described that extend beyond mitigation and include steps to take should mitigation fail. This situation is being reviewed at this time in the Pinedale Anticline field because mitigation efforts have not worked. Timing restrictions should be adhered to with science-based references that uphold the importance of seasonal restrictions for wildlife survival.</p>	<p>recommended to be offered at the May 2011 lease sale. They provide the foundation for more extensive mitigation should a post lease exploration or development proposal occur. They are not the “end-all” level of mitigation that could be applied at post-lease exploration or development, but rather are the minimum level of mitigation that would be applied. More extensive/expansive/restrictive mitigation, including adaptive management, could and typically would be developed during the site-specific NEPA analysis that would be required to address the specific post-lease exploration or development actions that are proposed.</p>
33	<p><u>TU Comment:</u> A more thorough soils analysis should be developed under the 4.6 Soils discussion. It is entirely too general and cannot possibly mean anything with respect to specific parcel discussion. Further, references that discuss the impacts of soil and wind erosion should be included in this discussion. The discussion under Soils does include a reference to direct impacts being reduced or avoided with proper design and TU would like examples of such successes to be referenced. Such examples would help bolster the acceptance that responsible management results in habitat protection.</p>	<p>BLM has reviewed the analysis provided in Sections 4.6 and feels that they adequately described the anticipated impacts; thus additional discussion was not deemed necessary.</p>
34	<p><u>TU Comment:</u> In the Affected Environment discussion (3.1.1. and most likely mislabeled) there needs to be a more comprehensive analysis and discussion of the impacts to those aquatic species that occur within the Platte River watershed and how specifically they might be affected (for parcels WY-1105-001-007 and parcel WY-1105-010). In addition, specific setback or buffer criteria should be identified in the stipulations rather than the general acknowledgement that these species might be affected.</p>	<p>The Section labeling has been corrected. See the Agency response at #25. Addition text has been added to the Special Status Species discussion in the Affected Environment and also to the Environmental Impacts discussion.</p>
35	<p><u>TU Comment:</u> Under this same heading discussion for those parcels in the Kemmerer resource area, we would also suggest that a more detailed analysis of impacts to the Bear River watershed be discussed. This is particularly important with respect to the numerous tributaries to the Bear River that contain conservation populations of Bonneville cutthroat</p>	<p>See Agency Responses at #1 and #25</p>

	<p>trout. There was no mention of the Bonneville Cutthroat Trout Conservation Agreement, of which BLM is a signatory and which directs the conservation and management of this species. We have attached a map that illustrates the significance of our concerns (Attachment 2) for this trout species. Parcels WY-1105- 21, 027, 29, 30, 31, 32, and 33 (although we understand that Parcel 33 is not be made available for lease offer under Alternative B, which we support) all contain waters that fall within the Bear River watershed complex.</p>	
36	<p><u>TU Comment:</u> We would also request that a buffer increase be implemented along these sensitive watershed areas to reflect the science-based research illustrating the importance of a strong buffer. BLM agency offices across the West have increased buffer or setbacks to streams and riparian areas that contain sensitive aquatic species (such as cutthroat trout) that include a half-mile buffer (BLM Field Offices in Dillon and Billings, Montana in their updated RMP's; Beaverhead-Deerlodge National Forest LUP in Montana, as well as in Colorado and Utah). The Wyoming BLM should take a hard look at the possibility of increasing the buffer or setback criteria to protect our waters and watersheds.</p>	<p>We acknowledge that any potential affects to the Bear River, its tributaries, and the Bonneville cutthroat trout would be further reduced by increasing the riparian buffer to ½ mile. While the Dillon RMP does impose a ½ CSU buffer for Westside cutthroat trout and the Beaverhead-Deer Lodge National Forest LUP sets buffers of ½ to 1 mile for arctic grayling, they do not provide supporting rationale as why these expanded buffers are needed or why lesser buffers are not adequate. Additionally, we could not find documentation that the 500-foot riparian buffer used in BLM-Wyoming's RMPs does not provide adequate protection for riparian, wetlands, and streams. Your suggestion that Wyoming BLM look at increasing the buffer is being forward to the Wyoming State Office.</p> <p>Additionally, we note that all of the parcels recommended for offer on the May 2011 lease sale are ½ mile or farther from the streams containing conservation populations of Bonneville cutthroat trout and streams with population expansion potential.</p>
37	<p><u>TU Comment:</u> The set of maps made available for this lease sale are not user-friendly and with the existence of state-of- the art opportunities using GIS and Google Earth to produce user-friendly maps, we feel the BLM should implement this technology.</p>	<p>Thank you for your suggestions on map improvements. BLM will provide more user friendly maps in future leasing EAs.</p>
38	<p><u>WWF Comment:</u> The eleven parcels mentioned above are within big game crucial winter range or spring, summer, and fall habitat. The wildlife impacted will be moose, elk, mule deer and antelope. Several of these parcels are within the Cokeville National Wildlife Refuge and should</p>	<p>The parcels and portions of parcels that lie within the boundary of the Cokeville Meadows NWR are being deleted from the May 2011 lease sale. Refer to Agency Responses #1.</p>

	be removed from leasing or at the very least have a no surface occupancy (NSO) stipulation.	
39	<u>WWF Comment</u> : “Surface disturbing and/or disruptive activities on the parcels during the crucial big game wintering period could cause unnecessary impacts to wintering moose, mule deer, antelope, and elk, such as causing animals to move to less suitable winter habitat and conceivably causing fetal abortion by pregnant females.” (BLM, Draft EA, page 52) This is unacceptable to WWF and we believe other areas of the state are more suitable for leasing and development.	One of the purposes of NEPA analysis is to determine and disclose what impacts are anticipated from a proposed action (refer to Section 1.1 of BLM Handbook H-1790-1). Per your citation of the potential affects to winter big game species shows that the EA accomplishes that purpose. The “unnecessary” in the referenced statement refers to an unmitigated impact. Tables 4.1a and 4.1b, as well as Appendix A provide listings of the mitigation measures that would be employed reduce or eliminate the impact.
40	<u>WWF Comment</u> : Lease parcels of overlapping crucial winter ranges should be withdrawn. If BLM will not withdraw the parcels they should have a “no surface occupancy” (NSO) stipulation. Timing stipulations have proven to not be sufficient enough to sustain big game populations. BLM has specified for these parcels a timing limitation stipulation, but allows operation and maintenance of production facilities during the winter once initial drilling has been completed. These standard timing stipulations, while they may help to alleviate disruption of winter big game activity during the year of initial drilling, do not address loss and degradation of habitat caused by development, and recent research, discussed below, suggests they are ineffective at protecting mule deer populations impacted by development.	<p>The EISs for the Kemmerer and Rawlins RMPs evaluated affects to crucial big game winter range, including overlapping winter ranges of multiple species and concluded that areas containing the parcels addressed in this EA and are recommended for offer at the May 2011 lease sale would be satisfactorily mitigated through the timing limitation stipulation. The RMPs also set winter ranges, such as the Rock Creek/Tunp and Bear River Divide areas in the Kemmerer Field Office and the Cow Butte /Wild Cow and Upper Muddy Creek/Grizzly areas in the Rawlins Field Office that warranted a greater degree of protection aside from leasing. The RMPs also established areas that would be subject to NSO restrictions. This EA did not come to any findings that would dispute the RMP decisions.</p> <p>Additionally, as stated in the Agency Response at # 32, “Tables 4.1a and 4.1b provide the all of the stipulations that are proposed to be applied to each lease parcel recommended for offered at the May 2011 lease sale. These stipulations provide the foundation for more extensive mitigation should a post lease exploration or development proposal occur. They are not the “end-all” level of mitigation that could be applied at post-lease exploration or development, but rather are the minimum level of mitigation that would be applied. More extensive/expansive/restrictive mitigation, including adaptive management, could and typically would be developed during the site-specific NEPA analysis that would be required to address any specific post-lease</p>

		exploration or development actions that are proposed.”
41	<u>WWF Comment:</u> WWF suggests that timing limitations alone are insufficient to conserve big game populations once energy development exceeds a certain level. Likewise, we assert that their effectiveness further decreases when exceptions are granted to industry, allowing them to enter and conduct activities on these crucial lands during restricted seasons. Because BLM regularly grants exceptions to winter stipulations, the effectiveness of timing limitations to mitigate impacts from surface disturbing activities is unknown.	See the preceding response. Exceptions are not granted at BLM’s whim. They are evaluated through a specific process (see Appendix 9 of the Rawlins RMP). If the request meets the evaluation criteria the exception is usually granted. If the request doesn’t comport to the evaluation criteria it is denied.
42	<u>WWF Comment:</u> The BLM has a duty to protect the diversity of all native wildlife on public lands. Habitat fragmentation, connectivity and other factors affecting biological diversity are inherently landscape-level considerations. Protecting biological diversity can only be dealt with appropriately at the programmatic or planning level. This is the only way to ensure biological diversity is preserved and that ecosystem attributes are not steadily diminished by individually small but cumulatively significant site-specific projects. The project level is simply too small a scale for adequate exploration of impacts to the health of large ecosystems.	The Rawlins and Kemmerer RMPs provide this landscape scale approach, through which both plans identified areas/habitats that would be available for oil and gas leasing through stipulations and area/habitats that would not be available for leasing.
43	<u>WWF Comment:</u> The eleven lease parcels mentioned above are located within the Bear River and Platte River watersheds. Some have slopes greater than 25 percent. The Bear River parcels are within the Cokeville National Wildlife Refuge and contain habitat for the sensitive Bonneville cutthroat trout. “Water depletions for well pad and road construction, well drilling, well completion operations, pipeline hydrostatic testing, and dust abatement would potentially reduced stream flows in the Bear, Colorado, and Platte River systems and could affect threatened and endangered fish species in those respective river systems.” (BLM, Draft EA, page 52)	The parcels and portions of parcels falling within the Cokeville Meadows NWR are being deleted. Refer to Agency Response at 25 and 28 for additional discussion pertaining to the Bonneville cutthroat trout. The impacts cited in the WWF comment are the impact level before application of the mitigation measures identified in Table 4.1a and 4.1b. The EA concludes that the stipulations are sufficient to mitigate the anticipated impacts.

	WWF would like to see these parcels removed from the sale block. If the BLM decides to move forward with the sale of these parcels then we request an NSO stipulation.	
44	<p><u>WWF Comment:</u> <u>Recreation</u></p> <p>As mentioned above, WWF members visit, hunt, or fish within or near these parcels. The draft EA mentions the recreation value of the parcels is for “hunting, fishing, camping, sightseeing, driving for pleasure, off-highway vehicle use, and other recreational activities.” (BLM, Draft EA, page 58) And no mitigation measures are given to rectify the situation if a lease is sold and developed. “The quality of the recreational experience would likely be diminished by oil and gas development operations.” (BLM, Draft EA, page 58)</p>	<p>There are a number of the stipulations listed in Appendix A and Tables 4.1a and 4.1b that help mitigate impacts to recreational users. The restriction or prohibition of surface disturbance within 500 feet of surface water or riparian habitat; the controlled surface use (CSU) stipulations for historic trails restricts or prohibits surface use within the visual setting of the trail to reduce the impact to recreational users of the trail; the controlled surface use (CSU) stipulations for the Adobe Town Dispersed Recreation Use Area (DRUA) restricts or prohibits surface occupancy or use within the DRUA to reduce impacts to the recreational user; the wildlife seasonal restrictions are intended to maintain wildlife use of the parcels to provide continued wildlife populations for the recreational user.</p>
45	<p><u>WWF Comment:</u> Significant new information exists regarding the economic benefits of hunting and fishing. In the national survey of fishing, hunting and wildlife-associated recreation for activities in 2006, expenditures from fishing and hunting significantly increased. In Wyoming, more than 320,000 people participated in fishing and hunting activities in 2006. Additionally, 716,000 people participated in some form of wildlife watching activity (USFWS 2006 National Survey of Fishing, Hunting, and Wildlife Associated Recreation). The total of hunting and fishing recreation days in Wyoming in 2008 was 3,683,371. Based on the number of recreation days and average expenditure per day, hunters, anglers and trappers expended approximately \$685 million in pursuit of their sport (WGFD Annual Report 2008). Non-consumptive users provided about \$420 million through wildlife watching, wildlife photography, etc. In total, wildlife associated recreation accounts for over \$1 billion dollars in income to the state for the year 2008 (WGFD Annual Report 2008).</p>	<p>The national survey and WGFD findings have been added to Section 3.2.2.9 in the final EA.</p>

46	<p><u>WWF Comment:</u> On August 16, 2007, President Bush signed Executive Order 13443, which directs federal agencies to “[m]anage wildlife habitats on public lands in a manner that expands and enhances hunting opportunities, including through the use of hunting in wildlife management planning.” Executive Order 13443, <i>Facilitation of Hunting Heritage and Wildlife Conservation</i>, § 2(c) (Aug. 16, 2007). The Executive Order further requires that agencies “[e]valuate the effect of agency actions on trends in hunting participation and, where appropriate to address declining trends, implement actions that expand and enhance hunting opportunities for the public.” <i>Id.</i> § 2(a). <i>See also</i> Bureau of Land Management, Memorandum from Ron Wenker, Acting Director, to State Directors Re: Review of Parcels Prior to Lease Sale (Feb. 13, 2009).</p> <p>If the parcels being offered are ultimately explored or developed for fluid mineral production, wildlife (both terrestrial and aquatic), wildlife habitats, fishing and hunting participation will be affected. Impacts associated with oil and gas development on big game habitat (including crucial winter range), migration, coldwater fisheries, and Greater sage grouse populations are well documented in scientific literature. The Executive Order directs federal agencies not only to evaluate and consider impacts to wildlife and habitat, but also to “facilitate the expansion and enhancement of hunting opportunities and the management of game species and their habitat.” <i>Id.</i> § 1. The record is absent of any evidence that the BLM considered the mandates of Executive Order 13443. The BLM should nonetheless consider the requirements of the order and perform all review necessary to comply with its mandates prior to offering the parcels at the Lease Sale.</p>	<p>The directives in Executive Order (EO) 13443 and Washington Office Instruction Memorandum (IM) 2008-006 are carried out through the Rawlins and Kemmerer RMP processes. Both RMPs evaluated trends in hunting participation and implement actions that expand and enhance hunting opportunities for the public; established short and long term goals to conserve wildlife and manage wildlife habitats to ensure healthy and productive populations of game animals in a manner that respects state management authority over wildlife resources and private property rights; and sought the advice of state fish and wildlife agencies, in accordance with the EO and IM.</p>
47	<p><u>WWF Comment:</u> Instead of expanding and enhancing hunting opportunities, the sale and inevitable development of these leases will substantially reduce the hunting opportunities in specific parts of Wyoming. This reality is happening across the west even while over 50</p>	<p>As repeatedly stated, at the pre-lease stage, we cannot accurately predict whether or not a lease will be purchased and if it is whether or not it will be explored or developed. Not to diminish the importance of the 50 million hunters/fishers or the 87 million who participated in outdoor</p>

	<p>million U.S. citizens are known to hunt and fish, according to data from state game and fish agencies. In 2006, 87 million Americans enjoyed some variety of recreational outdoor activity relating to fish and wildlife.</p>	<p>recreation in 2006, but we also must recognizes that virtually every man, woman, and child in the United States use and rely on hydrocarbon based materials in their daily lives. This ranges from the plastic in the bottle and liner used to feed an infant, to the synthetic material in many of our cloths, to the natural gas used to heat houses, to the fuel in our vehicles. While offering the proposed parcels for lease may not expand and enhance hunting opportunities, decisions in the Kemmerer and Rawlins RMPs, such as establishing the Rock Creek/Tunp, Bear Creek Divide, Cow Butte/Wild Cow, and Upper Muddy Creek/Grizzly Special Management areas and setting them aside from oil and gas leasing does very much provide for the expansion and enhancement of hunting opportunities.</p>
48	<p><u>WWF Comment:</u> The maps provided for this Draft Environmental Assessment are not clear and are difficult to read. Please provide better maps in the upcoming draft EAs.</p>	<p>See Agency Response at # 37</p>
49	<p><u>WWF Comment:</u> <u>Conclusion</u> For the foregoing reasons, we request that you withdraw all eleven parcels from the May 2011 BLM Oil and Gas Lease Sale and/or accept Alternative A for these eleven parcels (WY-1105-003, WY-1105-004, WY-1105-005, WY-1105-006, WY-1105-021, WY-1105-027, WY-1105-029, WY-1105-030, WY-1105-031, WY-1105-032, and WY-1105-033). Wyoming Wildlife Federation is comfortable with all other lease parcels within Alternative B to be sold. Now, if the BLM cannot or will not withdraw these eleven parcels from the May 2011 sale, WWF asks for them to have a NSO stipulation.</p>	<p>The parcel 1105-033 and the portions of parcels 021, 029, 031, and 032 that fall with the Cokeville Meadows NWR are being delete (see Agency Response at # 1). Parcels 1105-003, 004, 005, 006, 027, 030, and the portions parcels 021, 029, 031, and 032 that fall outside the Cokeville Meadows NWR have been mitigated through the stipulations listed in Tables 4.1a and 4.1b, as well as in Appendix A. Based on this EA and the Kemmerer and Rawlins RMP, BLM does not believe withdrawing these parcels or constraining them with an NSO stipulation is warranted</p>