January 13, 2014

Ms. Ruth Miller
North Dakota Greater Sage Grouse EIS
Bureau of Land Management
5001 Southgate Drive
Billings, MT 59101
blm_mt_nd_sage_grouse@blm.gov

RE: NORTH DAKOTA GREATER SAGE-GROUSE DRAFT RMP AMENDMENT AND EIS

Dear Ms. Miller:

On behalf of the following trade associations (trades), North Dakota Petroleum Council (NDPC), Public Lands Advocacy (PLA) and the Western Energy Alliance (WEA), following are comments on the North Dakota Greater Sage-Grouse Draft Resource Management Plan Amendment and Draft Environmental Impact Statement (RMPA/DEIS) for which a Notice of Availability was published in the *Federal Register* September 27, 2013. NDPC is a trade association that represents more than 500 companies involved in all aspects of the oil and gas industry including oil and gas production, refining, pipeline, transportation, mineral leasing, consulting, legal work, and oilfield service activities in North Dakota (ND), South Dakota (SD) and the Rocky Mountain Region. Our members produce 98% of the 243 million barrels of oil produced in ND in 2012. PLA is a non-profit trade group comprised of both operators and other non-profit trade association whose purpose is to promote the discovery, development, and production of oil and gas resources on public lands; furnishes opportunities for open discussion between land managers and industry; and accumulates and disseminates information to foster the best interests of the public and industry. WEA represents more than 430 companies engaged in all aspects of environmentally responsible exploration and production of oil and natural gas across the West. Our member companies hold valid existing leases and are active oil and gas producers. In addition, there is interest in future oil and gas leasing, exploration, and production activities in the areas that will be directly affected by the proposed land use decisions within Greater Sage-grouse (GRSG) habitat.

Through the RMPA/DEIS, the Bureau of Land Management (BLM) is proposing to adopt management procedures ostensibly designed to conserve and protect GRSG and its habitat on public lands throughout public lands in ND as a means of proving to the US Fish and Wildlife Service (USFWS) that listing the species under the Endangered Species Act of 1973 (ESA) is not necessary. However, the draconian leasing measures outlined in the RMPA/DEIS go far beyond what is necessary and reasonable and, instead, appear designed to prohibit virtually all new oil and gas activities within GRSG Priority Habitat on public lands by imposing No Surface Occupancy (NSO) stipulations as recommended by the National Technical Team (NTT) in its report.

NATIONAL TECHNICAL TEAM (NTT) REPORT

We object to BLM's reliance upon the NTT report as its principal guiding document, particularly for oil and gas leasing and operations, because it failed to utilize any type of systematic cataloging and quantitative evaluation to determine the type, extent and effectiveness of mitigation measures currently used by the oil and gas industry. Moreover, the NTT report is clearly biased as evidenced by its assertion that oil and gas "*impacts are universally negative and typically severe*," particularly since the NTT utilized little or no useful and site-specific data upon which to base its conclusions. In fact, this statement is predicated upon a select few studies while ignoring other data and studies that clearly demonstrate impacts from oil and gas are not universally negative and typically severe. While we acknowledge there may be temporary decreases in lek counts within close proximity to initial well construction and other activities, this cannot be construed to indicate general population declines. Rather, it has been scientifically demonstrated that the Sage-grouse are simply temporarily displaced to other areas with less activity until the initial area returns to a less active state.

Additionally, many of the Required Design Features (RDF) and Best Management Practices (BMP) recommended by the NTT fail to recognize valid existing rights and demonstrate a lack of understanding of oil and gas exploration and development as evidenced by their attempt to impose a one-size-fits-all management approach, regardless of topography, local conditions, and practicality. Given the fact that BLM opted not to follow all the recommendations of the NTT report in the RMPA, we question why BLM did not similarly review and revise certain recommended RDFs. We recommend that BLM revisit its design features and mitigation to ensure they are technically feasible and appropriate and that they maintain the level of flexibility required when their use is considered on a site-specific basis. Moreover, in accordance with current law and regulation, it is inappropriate for the RMPA to establish these overly site-specific requirements at a programmatic level as proposed.

The Department of Interior (DOI) has been criticized by the Western Association of Fish and Wildlife Agencies (WAFWA) for using the NTT report as BLM's only source of GRSG management direction. In a letter sent to the Interior Secretary on May 16, 2013, WAFWA member states made it clear they never endorsed the sole use of the NTT or any other scientific publication. Rather, they believe that a wide variety of peer-reviewed publications which collectively provide the best available science for GRSG should form BLM's basis for conserving the species. They went on to recommend that management and regulatory mechanisms be centered upon the best available science which would provide the best strategy for near- and long-term management of GRSG and provides the best opportunity for precluding the need to list the species under the ESA.

An overview of the Cooper Ornithological Society's Monograph: Studies in Avian Biology (the Monograph), the primary source of information relied upon by the NTT (and the USFWS in making its listing determination), was conducted by the Center for Environmental Science, Accuracy and Reliability (CESAR) in February 2012 entitled "Science or Advocacy?" which found:

- Significant mischaracterization of previous research;
- Substantial errors and omissions;

- Lack of independent authorship and peer review (3 of the authors of the NTT are also the authors, researchers, and editors on 3 of the most cited sources in the NTT.)
- Methodological bias;
- Invalid assumptions and analysis; and
- Inadequate data.

CESAR was not alone in finding significant fault with the Monograph. Reviews were also conducted separately by scientists commissioned by the State of Colorado which found the same exact defects. Not surprising, theirs and other comments on the Monograph were ignored by DOI and the NTT. Similar findings regarding the NTT report were made in a review[1] recently prepared for Western Energy Alliance in which it was discovered that "*the NTT report represents a partial presentation of scientific information to justify a narrow range of preferred conservation measures and policies that will be imposed as land use regulations by the BLM. In contrast, an objective scientific review would have led to a broadening of conservation alternatives for decision makers to choose from*." With respect to oil and gas, "*the NTT presents a biased view of oil and gas operations by conveying that 'impacts are universally negative and typically severe.' The NTT then selectively presented information in support of its conclusions, while ignoring contrary information. Key assertions in the NTT report are both biased and in error, especially the frequently repeated, but erroneous assumption, that a temporary decrease in lek counts immediately adjacent to active wells is equivalent to a population decline*."

Another major fundamental concern is that the NTT report failed to recognize that the level of disturbance associated with a well is not constant throughout its life. The highest level of surface disturbance associated with oil and gas development occurs during the construction, drilling and completion phases, which can last as little as one or two days up to a few months, depending upon the time it takes to complete the well. Once production ensues, these activities subside dramatically and only regular monitoring and maintenance of the well are required. Shortly after well completion, the operator normally begins interim reclamation to restore any impacted habitat that isn't being used. This interim reclamation remains in effect until the well has been depleted. Upon conclusion of production activities, the operator will then move forward with plugging and abandonment procedures, which also includes final reclamation that will ultimately result in full restoration of the site and its return to productive habitat. Interior's reliance upon the NTT report appears aimed at forcing new oil and gas leasing, exploration and development in the public lands states to be curtailed on millions of acres of Sage-grouse habitat.

We also point out that the NTT report relied heavily upon Holloran's 2005[2] dissertation despite the fact that it failed to acknowledge the countless stipulations and mitigation measures utilized by the oil and gas industry in Sage-grouse habitat. The focus of this study was limited to an unmitigated control area which was to be used as a basis for comparison to areas where

[1] Review of Data Quality Issues in A Report on National Greater Sage-Grouse Conservation Measures Produced by the BLM Sage-Grouse National Technical Team (NTT) Dated December 21, 2011. Dr. Rob Ramey, III, Wildlife International Inc.

[2] (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.)

mitigation was being employed. He predicted population declines between negative 8.7 percent to negative 24.4 percent annually in Pinedale. Despite Holloran's predictions of catastrophic population decline in the unmitigated area, this prediction has been clearly refuted by the data. Instead, Sage-grouse in the Pinedale area have thrived and are well above statewide averages.

USFWS GREATER SAGE-GROUSE CONSERVATION OBJECTIVES FINAL REPORT ("COT REPORT")

The COT report does not represent a comprehensive scientific review; rather, it is simply an incomplete examination of limited literature and unpublished reports that were used to "*identify conservation objectives to ensure the long-term viability of the GRSG.*" In fact, the COT report provides no original data or quantitative analyses and notably fails to review all of the available scientific literature on the GRSG. Consequently, this severely limited review perpetuates outdated information and assumptions in the COT report

An example of its inadequacy is the fact that the COT report's threats analysis, population definitions, current and projected numbers of males, and probability of population persistence are heavily based upon a paper by Edward O. Garton.[3] Notably, Garton et al. 2011 is the most frequently cited paper in the COT report. The same significant methodological biases and mathematical errors within the COT report[4] were also present in the final revisions of Garton et al. 2011. Moreover, the fact that the data and programs used in *Garton et al. 2011* are not available for public review and are not reproducible, seriously compromises the scientific integrity of the COT report.

While the COT report says that "*there is an urgent need to 'stop the bleeding' of continued population declines*" it fails to cite hunting, which is the most well-documented source of GRSG mortality with 207,433 GRSG harvested between 2001 and 2007.[5] Some estimate current total GRSG populations at or near 500,000 birds.[6] Clearly such mortality levels should be carefully considered and properly accounted for. Instead, the COT report chose to limit its recommendations to restrictions on activities that have never been demonstrated to cause a population decline. The COT report's recommendation to regulate nonthreatening activities combined with its disregard of a major, actual threat to GRSG demonstrates a clear lack of scientific integrity in the COT report.[7]

[3] Edward O. Garton, John W. Connelly, Jon S. Horne, Christian A. Hagen, Ann Moser, and Michael A. Shroeder, Greater Sage-Grouse Population Dynamics and Probability of Persistence, in Greater Sage-Grouse Ecology and Conservation of a Landscape Species and its Habitats. Studies in Avian Biology (vol. 38) 293-382 (Steven T. Knick and John W. Connelly eds., 2011) (hereafter "Garton et al. 2011)

[4] Rob Roy Ramey, Data Quality Issues in the Greater Sage-Grouse (Centrocercus urophasianus) Conservation Objectives: Final Report, p.1 (October 16, 2013)

[5] COT Report at 31; Kerry P. Reese and John W. Connelly, Harvest Management for Greater Sage-Grouse: A Changing Paradigm for Game Bird Management, in Greater Sage-Grouse Ecology and Conservation of a Landscape Species and its Habitats. Studies in Avian Biology (vol. 38) Table 7.3 p. 106 (Steven T. Knick and John W. Connelly eds., 2011).

[6] Broder, John M.. (2010-03-05) No Endangered Status for Plains Bird. Nytimes.com

[7] Id at 4

It is also important to recognize that there is no evidence of any reproducible, quantitative methodology used in assigning rankings to threats in each population and GRSG management zone. The ranking of threats in the COT report appears to be entirely subjective.[8]

Moreover, peer review of the COT report was inadequate. A number of the relevant peer review regulations and guidance stress the importance of independence[9] and the need to avoid conflicts of interest.[10] Of particular importance, a peer reviewer may not have been a contributor to the work product leading to the listing of a species and the peer reviewer has not been influenced by funding considerations. The National Academy of Sciences (NAS) considers financial interests, access to confidential information, reviewing one's own work, public statements and positions, and employees of sponsors as problems to be avoided in its conflicts policy.[11] The 2005 Office of Management and Budget (OMB) Bulletin directs agencies to use the NAS policy.

Peer review of the COT report clearly failed to meet the requirements of both the DOI Manual and the NAS policy, which stress the need for independence and an avoidance of conflict of interest. Nevertheless, COT report deficiencies include: authorship with three COT report team members; grant support from the USFWS and USGS; significant financial support for GRSG research (Drs. Holloran, Messmer and Reese listed over $10 million);[12] authorship with NTT members; and authorship with other influential GRSG authors including Doherty, Naugle, and Knick.[13] The reviews of the COT report present numerous examples of failures to meet NAS and OMB guidelines.

In addition to conflicts of interest and reliance upon questionable data to assess threats, more than one reviewer cited real uncertainties regarding management and potential impacts on GRSG populations. In fact, "*…the majority of the reviewers found that the report fell short of meeting its stated goals in several important areas, and they identified opportunities to better achieve those*

[8] Id at 4

[9] 104 Interagency Cooperative Policy for Peer Review in Endangered Species Act Activities 59 Fed. Reg. 34270 (Jul. 1, 1994); OMB Guidance; Final Information Quality Bulletin for Peer Review 70 Fed. Reg. 2664 (Jan. 14, 2005); Memorandum for the Heads of Executive Departments and Agencies. 74 Fed. Reg. 10671 (Mar. 11, 2009), available at: http://www.gpo.gov/fdsys/pkg/FR-2009-03-11/pdf/E9-5443.pdf (http://www.whitehouse.gov/sites/default/files/microsites/ostp/scientific-integrity-memo-12172010.pdf); Performance Work Statement for Scientific, Technical and Advisory Services (http://www.fws.gov/informationquality/peer_review/IDIQ_Performance_Work_Statement_17Nov2011.pdf) ; Information Quality Guidelines and Peer Review (http://www.fws.gov/informationquality/topics/InformationQualityGuidelinesrevised6_6_12.pdf).

[10] Policy on Committee Composition and Balance and Conflicts of Interest for Committees Used in the Development of Reports (http://nationalacademies.org/coi/); Final Information Quality Bulletin for PeerReview 70 Fed. Reg. 2664 (Jan. 14, 2005); Memorandum for the Heads of Executive Departments and Agencies (http://www.whitehouse.gov/sites/default/files/microsites/ostp/scientific-integrity-memo- 12172010.pdf); Department Manual, Part 305, Chapter 3 (http://www.fws.gov/science/pdf/DOIScientificIntegrityPolicyManual.pdf).

[11] Available at: http://www.nap.edu/openbook.php?isbn=0309059437&page=9

[12] Reese listed over $6.3 million in funding and in-kind contributions, but failed to account for precisely how much can be attributable to sage-grouse.

[13] Scientific Peer Review of the Sage-Grouse Conservation Objectives Draft Report, Appendix A

goals and improve its utility for decision making…."[14] Reviewers also identified an astonishing lack of reference to at least 15 relevant scientific papers.[15]

Given these significant flaws, BLM should carefully reconsider its reliance on the COT report in the RMPA/DEIS. To do otherwise would be inconsistent with the ESA, the Data Quality Act (DQA) and current Presidential and Interior Department memoranda and orders.

ENERGY AND MINERAL DEVELOPMENT ARE LEGITIMATE USES OF PUBLIC LANDS

Under the Federal Land Policy and Management Act (FLPMA), BLM is required to manage the public lands on the basis of multiple use and sustained yield. 43 USC § 1701(a)(7) (2006) *"'Multiple use management' is a concept that describes the complicated task of achieving a balance among the many competing uses on public lands, 'including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and [uses serving] natural scenic, scientific and historical values.' "* Norton *v. Southern Utah Wilderness Alliance*, 542 U.S. at 58 (quoting 43 U.S.C. § 1702(c)). "*Of course not all uses are compatible.*" *Id.* We recognize the difficult task the BLM faces to manage public lands in the planning areas for multiple use. However, oil and gas development is a crucial part of the BLM's multiple use mandate and the agency must ensure that oil and gas development is not unreasonably limited in the LUP.

FLPMA clearly identified mineral exploration and development as a principal or major use of the public lands. (43 USC§ 1702(l)) To that end, FLPMA requires BLM to foster and develop mineral activities, not stifle and prohibit such development. It does not appear this was one of the agencies' goals when preparing the RMPA/DEIS. Rather it is clearly evident that the agencies are intent upon limiting what it considers to be a damaging presence on federal lands. The agencies must reconsider its view of oil and gas and mineral development when preparing the final RMPA/EIS

STATUTORY REQUIREMENTS

<u>Energy Policy Act of 2005</u>

Section 363 of the Energy Policy Act of 2005 (EPAct) requires federal land management agencies to ensure that lease stipulations are applied consistently and to ensure that the <u>least restrictive stipulations</u> are utilized to protect many of the resource values to be addressed. The RMPA/DEIS ignores established BLM policy that states "*the least restrictive stipulation that effectively accomplished the resource objectives or uses for a given alternative should be used*." Moreover, BLM has failed to demonstrate that less restrictive measures were considered but found insufficient to protect the resources identified. A statement that there are conflicting resource values or uses does not justify the application of restrictions. Discussion of the specific requirements of a resource to be safeguarded, along with a discussion of the perceived conflicts between it and oil and gas activities must be provided. Clearly, an examination of less restrictive

[14] Scientific Peer Review of the Sage-Grouse Conservation Objectives Draft Report at 3
[15] Id

measures must be a fundamental element of a balanced analysis and documented accordingly in the FEIS.

Energy Policy and Conservation Act of 2000(EPCA)

In April 2003, field offices were directed to comply with four EPCA planning integration principles:

1) *Environmental protection and energy production are both desirable and necessary objectives of sound land management and are not to be considered mutually exclusive priorities.*
2) *The BLM must ensure appropriate accessibility to energy resources necessary for the nation's security while recognizing that special and unique non-energy resources can be preserved.*
3) *Sound planning will weigh relative resource values, consistent with the FLPMA.*
4) *All resource impacts, including those associated with energy development and transmission will be mitigated to prevent unnecessary or undue degradation (BLM 2003a)."*

Under EPCA BLM is required to identify impediments to oil and gas development. It was the intent of Congress that access to energy resources be improved as indicated in EPCA and EPAct. BLM recognized the intent of both Phases I and II of the EPCA review when it issued Instruction Memorandum 2003-233, *Integration of the Energy Policy and Conservation Act (EPCA) Inventory Results, into the Land Use Planning Process*. Consequently, BLM Field Offices are now required to review all current oil and gas lease stipulations to make sure their intent is clearly stated and that stipulations utilized are the least restrictive necessary to accomplish the desired protection. Moreover, the IM directs that stipulations not necessary to accomplish the desired resource protection be modified or dropped using the planning process.

Since the purpose of integrating the EPCA results into planning is intended to determine whether existing resource protection measures are inadequate, adequate or excessive, we recommend that BLM reevaluate its management decisions accordingly and make requisite changes to the final planning documents

An examination of less restrictive measures must be a fundamental element of a balanced analysis and documented accordingly in the FEIS. Moreover, under EPCA BLM is required to identify impediments to oil and gas development. It was the intent of Congress that access to energy resources be improved.

VALID EXISTING RIGHTS

Page 1-13 – *The RMP Amendments will recognize valid existing rights*

COMMENT: We support BLM's commitment to honor valid existing rights. However, in Chapter 2, page 2-6, BLM indicates "*existing fluid mineral leases are managed through conditions of approval (COA).*" We urge BLM to clearly explain in the Final EIS that valid existing lease rights are inviolable and cannot be modified by the new RMPA/DEIS. We also urge BLM to clearly state in the FEIS that the new stipulations proposed in the Preferred Alternative will not apply to lands

already under oil and gas lease. Moreover, it must be made clear that BLM has no authority to impose these new restrictions through the use of Conditions of Approval (COA) on applications for permit to drill (APD) if they would abrogate the valid existing lease rights. These principles are particularly important given the fact that the proposed protections for GRSG could impose debilitating limitations that contravene the contractual rights granted in leases that were purchased in good faith from the federal government. Such qualifiers are consistent with current rules and policies of the BLM and must be clearly disclosed in the planning documents. An acceptable example of appropriate language is included in the Rawlins RMP adopted in 2008, page 20.

CHAPTER 1

Page 1-2, Introduction: *GRSG habitat falls into one of the two following categories: Preliminary Priority Habitat (PPH) and Preliminary General Habitat (PGH)*

COMMENT: The RMPA/DEIS indicates "*This plan amendment addresses GRSG habitat within the BLM North Dakota Field Office (NDFO). The BLM Montana State Office has mapped this habitat preliminarily, in coordination with the North Dakota Game and Fish Department*." [Emphasis added] The rationale for designating only preliminary habitat is unclear since both priority and general habitats have already been mapped. Moreover, BLM does not explain how and when the habitat designations will be finalized. Figure 3.1 and Figure 3.2 depict both PPH and PGH as simply wide swaths of contiguous land across 3 counties. BLM needs to justify in the RMPA/DEIS the manner and basis for refining (and finalizing) these PPH and PGH data moving forward.

Page 1-3, Purpose and Need - …*The decisions to be made are (1) to delineate PH and GH and (2) to identify the management actions, restrictions, and constraints that would be placed on allowable uses on BLM-administered lands to conserve, restore, and enhance GRSG habitat.*

COMMENT: The purpose and need of the RMPA/DEIS is to identify and incorporate measures to conserve, enhance and/or restore GRSG habitat by reducing, eliminating or minimizing threats. The BLM will "*consider*" such measures in the context of their multiple-use mandates under Federal Land Policy and Management Act of 1976 ("FLPMA").

BLM states that the approved RMP amendments will recognize valid existing rights and comply with FLPMA, NFMA, NEPA, Council on Environmental Quality ("CEQ") Regulations, DOI regulations, BLM's Land Use Planning Handbook, BLM's NEPA Handbook and all other applicable BLM policies and guidance. While BLM acknowledges the Mineral Leasing Act of 1920, the agencies "*reserve the right to require additional mitigation measures, in the form of COAs, after a lease is issued (e.g., at APD approval) if doing so is necessary for protection of other resources.*" We take issue with the agencies' assertions and question their authority to lawfully impose such measures.

Neither NEPA nor the ESA amends or alters the agency's statutory responsibilities under FLPMA. Nor can the RMPA/DEIS impact valid existing rights. Among others, this process must not conflict with BLM's duties and authorities under Federal Land Policy and Management Act of 1976 ("FLPMA") (43 U.S.C. § 1701 et seq.), the Mineral Leasing Act of 1920 (30 U.S.C. § 181 et seq.).

Further, BLM asserts that fluid mineral operations on existing leases, regardless of land ownership, would be subject to COAs at the time of APD approval. BLM apparently believes it can deny surface occupancy on portions of leases with COAs, to avoid or minimize resource conflicts, if it does not "eliminate" reasonable opportunities to develop the lease. As such, existing leases would be developed consistent with applicable laws and valid existing rights, "*using as many of the RDFs and conservation measures as possible while still allowing reasonable access*." While there may be an opportunity to solicit voluntary agreement to new mitigation measures from operators, BLM is legally obligated to manage all existing leases under the stipulations in effect when the leases were issued; new stipulations proposed under the RMPA/DEIS would only apply to new leases.

Page 1-5, Table I-I - *Land Ownership within the Planning Area*

COMMENT: Table I-I provides acreages by county of PPH and PGH for both BLM surface lands and mineral estate. However, in the discussion under the Table, BLM has chosen only to mention that 32,900 of PPH (a mere 7 percent) and 80 acres of PGH (less than 1 percent) of the habitat within the planning area are under BLM jurisdiction. This description is misleading since BLM also has jurisdiction over an additional 277,196 acres of federal mineral estate, which amounts to over 40 percent of the planning area, where BLM intends to impose highly restrictive stipulations, particularly NSO. It would appear that BLM is attempting to side-step the impact of its management proposal on all mineral activities.

CHAPTER 2

2.3.1 *Develop a Reasonable Range of Alternatives*. BLM analyzed four alternatives in the RMPA: Alternative A – No Action; Alternative B – NTT Recommendations; Alternative C – Conservation Group's Recommendations (NTT Plus); and Alternative D – BLM's Preferred Alternative.

COMMENT: BLM's range of alternatives is inadequate because all alternatives follow the basic principles of (1) avoiding the impact of an activity; (2) minimizing impacts by limiting the degree of activity; and (3) mitigating for an impact by improving or enhancing GRSG habitat as recommended in the NTT and COT reports. As such, all the alternatives are weighted toward extreme protection measures, with minimal difference between Alternatives B and C, and even Alternative D which proposes NSO in PPH. With the exception of the current management alternative, all alternatives are designed to diminish rights of lessees as well as future leasing and development within the study area by relying upon sweeping land use changes that would adversely affect hundreds of thousands of acres of public lands and minerals, and the communities that depend upon them. We recommend that BLM add an alternative which analyzes the impacts, using the best available science, of management requirements that are less restrictive than the NSO stipulations in PPH and CSU in PGH as described in the Preferred Alternative or the imposition of no leasing as described in Alternatives B and C.

ALTERNATIVE D

PH and GH would be open to oil and gas leasing and development; however, surface occupancy and use would be prohibited within PH (NSO) and have specific constraints in GH (CSU).

COMMENT: We strongly object to this unfounded use of the NSO stipulation throughout GRSG Priority Habitat. We recognize that BLM is relying upon the direction of both the NTT and COT reports. However, as previously discussed in these comments, neither the NTT nor the COT reports contain adequate scientific data to justify this severe restriction on nearly a half million acres in ND.

TABLE 2-2, COMPARATIVE SUMMARY OF ALTERNATIVES

COMMENT: It is unclear how the acreages specified in Table 2-2 correspond with the planning area acreages specified in Table 1-1. Please clarify how the Federal Mineral Estate acreages listed as PPH and/or PGH in Table 1-1 correspond with the Fluid Mineral Leasing acreages outlined in Table 2-2.

TABLE 2-3 - DESCRIPTION OF ALTERNATIVES A, B, C, AND D

Unleased Fluid Mineral Estate –

Action Alternative D: Open to oil and gas leasing and development; however, surface occupancy and use would be prohibited within PH (NSO). Upon expiration or termination of existing leases, apply NSO.

COMMENT: We strongly object to this unfounded use of the NSO stipulation throughout priority GRSG Priority Habitat. We recognize that BLM is relying upon the direction of both the NTT and COT reports. However, as previously discussed in these comments, neither the NTT nor the COT reports contain adequate scientific data to justify this severe restriction on nearly a half million acres in ND.

- *Only allow geophysical operations by helicopter-portable drilling methods and in accordance with seasonal timing restrictions and/or other restrictions that may apply.*

COMMENT: It is clearly inappropriate for BLM to dictate a specific technique for conducting geophysical operations. While heliportable drilling for seismic operations can be a useful BMP in certain, limited situations, there are abundant and equally effective BMPs that allow for the same or similar impact mitigation in Sage-grouse habitats which the BLM fails to even mention, much less analyze. The following is an abbreviated BMP list that is recommended and applied by both BLM and the geophysical industry. These techniques have proven to be highly effective in minimizing or in many cases eliminating impacts to sage brush/Sage-grouse:

- Off-set tracking for all wheeled vehicles
- Smooth or non-aggressive tires (vibrators)
- Limited or no “back-tracking” on the same route(s)

- Elimination of ATVs/UHVs off-road
- Vibrating on existing roads
- On-snow or frozen ground buggy drilling/vibrating
- Hand raking of buggy/vibrator tracks visible from traveled roads

Application of a reasonable mix of the above techniques has been shown to successfully avoid impacts to sage brush. Extensive monitoring has shown that balloon tired four wheelers and foot traffic have diminutive impacts, indeed much less effect on the environment than wild horse traffic on public lands. Moreover, we question whether BLM has fully considered the safety, noise or economic ramifications of this proposal. We also question BLM's justification for requiring helicopter-portable seismic exploration when seasonal restrictions will be utilized.

Leased Federal Mineral Estate

Action: *During implementation level review and decisions, (e.g., approval of an APD, Sundry Notice, etc.) and upon completion of the environmental record of review (43 CFR 3162.5), including appropriate documentation of compliance with NEPA. In this process evaluate, among other things: (1) Whether the conservation measure is "reasonable" (43 CFR 3101.1-2) with the valid existing rights; and (2) Whether the action is in conformance with the approved RMP.*

Conservation Measure #1: *The following operating constraints would be applied to existing leases as COA in PH and GH* (subject to "reasonableness" and "valid existing rights"):

> *(a) Surface disturbing/disruptive activities would prevent or minimize disturbance to GRSG or their habitat. Except as identified above or during emergency situations, activities would not compromise the functionality of the habitat.*

COMMENT: What measures will BLM use to determine whether an activity "*prevents or minimizes disturbance to GRSG or their habitat*" or "*compromises the functionality of the habitat*"? The uncertainty regarding how BLM will determine such impacts upfront is unacceptable.

> *(b) Continuous noise (related to long-term operations and/or activities) would be no greater than 49 decibels at 0.25 mile from the perimeter of the lek.*
>
> *(c) Temporary noise (related to installation, maintenance, one-time use, emergency operations, etc.) exceeding 49 decibels at 1/4 mile from the perimeter of a lek or surface disturbing/disruptive activities may be allowed, but only from 10 a.m. to 4 p.m. between March 15 and May 15.*

COMMENT: We strongly support BLM's reasonable approach to noise management and applaud the decision not to move forward with the flawed recommendations contained in the NTT report. We support BLM's more reasonable approach noise management by discounting the NTT Report's recommendation. The studies cited in the NTT Report (Patricelli et al. 2010,200 Blickley et al. in preparation and Bickley and Patricelli in press), did not find population declines as a result of noise from oil and gas operations. Rather, they observed a transient period of disturbance to GRSG at leks where playbacks of high levels of noise were conducted utilizing deficient equipment

(substandard microphone, recorder, and playback speakers). Of equal importance is that the data from these studies is not publically available, which renders the results unreproducible.

(d) *Manage water developments to reduce the spread of West Nile virus within GRSG habitat areas.*

Appendix B.2.1 Required Design Features for how to make a pond that won't produce mosquitoes that transmit West Nile virus (from Doherty[2007]

COMMENT: According to data from the Centers for Disease Control (CDC) the risk to avian species from West Nile virus (WNv) has declined to virtually nothing since 2003. This is an example of where BLM presents only a portion of the available information and uses it to justify onerous and unfounded mitigation requirements. We recommend that rather than focusing on the minimal threat of WNv, BLM more appropriately focus its attention on rampant predation of GRSG.

(i) Remote monitoring of production facilities must be utilized and all permit applications must contain a plan to reduce the frequency of vehicle use.

COMMENT: While we understand why BLM believes this is a good practice; this technology may not be feasible for smaller operators due to the limited economic conditions associated with lower performing wells.

(m) *Consider use of off-site mitigation within the same PH area (e.g., creation of sagebrush habitat, improving brood rearing habitat, or purchase conservation easements) with proponent dollars to offset habitat losses (Washington Office -IM 2008-204).*

COMMENT: We categorically oppose the inclusion of compensatory mitigation or the creation of a Mitigation Trust Account in the Preferred Alternative D because it cannot be justified given the plethora of protective requirements that are in place to reduce or eliminate impacts associated with oil and gas activities on public lands. Specifically, industry is already forced to conduct multiple resource surveys on behalf of BLM as well as to comply with numerous BMPs; COAs; restrictive regulatory thresholds; NEPA analyses; along with a host of additional federal agency and state requirements. We find it unconscionable that BLM states its intention to dig even deeper while failing to disclose specific criteria, circumstances when and the purpose for compensatory mitigation. All references to compensatory mitigation should be deleted because such actions should be at the discretion of operators and on a voluntary basis.

It is likely that absent specific guidance, resource specialists will be predisposed to requiring compensatory mitigation whenever it suits them, without regard for need or implementation of operator committed mitigation measures. The fact that a lease has been issued by BLM is clear evidence that certain levels of impacts are acceptable. When a lease is sold and issued by BLM, it contains specific stipulations designed to protect resource values during oil and gas operations. When the operator proposes an activity, it must comply with these stipulations. The Mineral Leasing Act, the regulations at 43 CFR 3101.1-2, as well as BLM's 1624 Manual, specifies that new stipulations cannot be applied to existing leases; this includes COAs or other measures that exceed the terms of a lease. Specifically, once a lease has been issued, BLM does not have the authority

to prevent development unless the lease terms prohibit surface occupancy or development would result in "*unnecessary or undue degradation*," which could not be mitigated. Under 43 CFR 3101.2, guidance is provided detailing what authority the agency has to modify the parameters of the stipulations in order not to compromise valid existing lease rights granted by the lease.

BLM has previously cited as its authority to address the mitigation of impacts from FLPMA §102(a)(8), *"…the public lands [will] be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource and archeological values…."* However, we remind BLM that FLPMA §102(a)(12) also directs that "the public lands [will] be managed in a manner which recognizes the Nation's need for domestic sources of minerals, food, timber, and fiber from the public lands including implementation of the Mining and Minerals Policy Act of 1970 (84 Stat. 1876, 30 U.S.C. 21a) as it pertains to the public lands." Moreover, while FLPMA §302(b) specifies "*the use, occupancy and development of public lands must be regulated by the Secretary through easements, permits, leases, licenses, or other instruments," the agency must also fully acknowledge the rest of this section which clearly directs that "these instruments include, but are not limited to, long-term leases to permit individuals to utilize public lands for habitation, cultivation, and the development of small trade or manufacturing concerns*." [Emphasis added]

Compensatory mitigation directly conflicts with EPCA language which requires BLM to evaluate the extent and nature of any restrictions or impediments to the development of resources including: (B) post-lease restrictions, or delays on development for conditions of approval, applications for permits to drill, or processing of environmental permits. [See EPCA phase II, page xxi]. We view this new requirement as a ploy for BLM to capitalize on industry's demonstrated willingness to work with the agency to ensure mutually beneficial energy projects can move forward.

BLM evidently fails to acknowledge the $6.5K fee required for each APD, as well as the extent of industry participation in and funding for partnership programs such as habitat improvement projects, public land restoration programs, which, in nearly all cases, were all entered into on a voluntary basis. Additionally, industry routinely pays for wildlife studies and inventories, such as wetlands, cultural, wildlife, threatened and endangered species resources, and NEPA documents, in association with project permits. BLM appears intent upon ignoring industry support and participation in partnership programs and direct support for resource surveys and NEPA documents that are properly BLM's responsibility.

Because BLM is essentially establishing a new rule to require compensatory mitigation, in ways it sees fit without consideration of need or lease rights, it is evident that BLM believes it has authority to unilaterally modify its current commitments to operators with respect to APDs, leases, rights-of-way or approved projects to require compensatory mitigation. This is clearly contrary to FLPMA, further, it signals BLM is willing to place greater importance on aesthetic resource values over other uses, such as minerals and other commodity development. BLM must recognize that it is required to fully consider the need for mineral development along with protection of other resource values and that in some cases the need for mineral development may actually outweigh the need for the protection of other resource values. As such, BLM must comport with EPCA which states "*public land managers [have a responsibility] to identify areas of high oil and gas*

potential and to evaluate the effectiveness of mitigation stipulations and conditions of approval in balancing responsible development of resources with the protection of other valuable resources in the area." [See Pg. xxiii]

ALTERNATIVE D

COMMENT: We strongly object to this unfounded use of the NSO stipulation throughout priority GRSG Priority Habitat. We recognize that BLM is relying upon the direction of both the NTT and COT reports. However, as previously discussed in these comments, neither the NTT nor the COT reports contain adequate scientific data to justify this severe restriction on nearly a half million acres in North Dakota.

Page 2-14 - Section 2.6 Monitoring for the Greater Sage-Grouse Planning Strategy

According to the RMPA/DEIS, BLM would monitor the effectiveness of RMP decisions in meeting management and conservation objectives. Effectiveness monitoring would include monitoring disturbance in habitats as well as landscape habitat attributes. To monitor habitats the BLM would measure and track attributes of occupied habitat, PH, and GH at the broad scale, and attributes of habitat availability, patch size, connectivity, linkage areas, edge effect, and anthropogenic disturbances at the mid-scale. Disturbance monitoring would measure and track changes in the amount of sagebrush in the landscape and changes in the anthropogenic footprint including the change in the density of energy development. The framework will also include methodology for analysis and reporting for Field Offices/States/BLM Districts including geospatial and tabular data for disturbance mapping (e.g., geospatial footprint of new permitted disturbances) and effectiveness of management actions.
COMMENT: For each project, baseline conditions will need to be compared with post-project conditions to determine impacts to sage-grouse. What mitigation measures have been shown to influence population levels based on lek counts (assuming leks reflect population levels)?

While we understand monitoring for implementation and effectiveness, we have serious reservations about using the COT report as part of such a standard. As previously discussed, the COT report fails to meet the best available science standard of the ESA and the standards of objectivity, utility and transparency required by the Data Quality Act.

We are concerned that the agencies are in the process of finalizing a monitoring framework (Appendix E) based upon the flawed COT report. We question how such a framework can be adopted without adequate disclosure and justification in the RMPA/DEIS. The Trades and the public need to be able to understand and comment on such a policy rather than broad statements and suppositions that may, or may not, be included in a final policy. This raises real issues with NEPA compliance--particularly when results from the monitoring framework will lead to management changes through adaptive management. Again, we have serious procedural (and substantive) concerns with how BLM is handling this critical issue. Does BLM intend such monitoring to be the measure of success in implementation of the RMPA?

Page 2-16 - Adaptive Management

An adaptive management working group would help identify the causal factors as to what prompted the soft adaptive management trigger. The group would also provide recommendations to the appropriate BLM authorizing official (decision maker) regarding the applicable management response to address this trigger (e.g., effective mitigation, restoration, reclamation, and in some instances, a RMP amendment or revision). When organizing the adaptive management working group, the BLM would invite participation from BLM, USFWS, local governments, and applicable state fish and game agencies.

COMMENT: An adaptive management strategy is described in the RMPA/DEIS which would identify science-based soft and hard adaptive management triggers; address how data from the Monitoring Framework will be used to gauge when triggers are met; and charter an adaptive management working group ("AMWG") to assist with responding to soft triggers. Triggers are to be based upon the best available science, tied to population and demographics; take into account the importance of seasonal habitats; and not be limited to a single time window. Soft triggers indicate when the agencies will consider adjustments. When available, the agencies will consider population trend data from WAFWA and/or state wildlife agencies. More detail is needed to fully explain this proposed AM process and where it has been successfully accomplished.

An AMWG will be comprised of BLM, the USFS, FWS, local governments and applicable State Game and Fish agencies. We are concerned that there is no indication whether industry will be represented on the AMWG, which is vitally important. Nor has BLM identified funding for the group. We question whether BLM may issue such a group with such enormous responsibility without clearly defined roles, adequate representation and specific statutory authorization.

"Hard triggers" are when agencies will take "immediate action" to stop "continued deviation" from conservation objectives. These could include one or more of: temporary closures (in accordance with 43 CFR 8364.1 and as directed under IM No. 2013-035); immediate implementation of interim management policies and procedures through BLM directives; initiation of a new RMP amendment. All of these measures would likely require subsequent NEPA analysis. These glaring examples of regulatory over-reach will have vast implications for industry, agriculture, local communities, jobs and the economy.

CHAPTER 3 – AFFECTED ENVIRONMENT

Page 3-6 - Conditions of Planning Area - *GRSG numbers are small and the population is considered to be at high risk in North Dakota. The population is characterized by low recruitment during brood rearing, due to predation and disease (Kazcor 2008; Swanson 2009). Declines in the planning area are most likely due to cumulative effects of influences including, but not limited to, oil and gas development, conversion of native rangeland to cropland, and over-grazing in localized areas (USFWS 2013, pg. 63).*

COMMENT: The assumption that cumulative effects from oil and gas development are responsible for GRSG population declines, in North Dakota or anywhere else, is incorrect and must

be acknowledged as such by BLM. Moreover, while we recognize that the ND Game and Fish Department is responsible for addressing the issue of predation, predation remains a serious concern with respect to the GRSG and must not be completely ignored by BLM's RMPA. We question why BLM has chosen to ignore this specific threat in its analysis. Obviously, predation is a critical issue that must be fully considered directly in the Environmental Consequences and associated management actions of the RMPA/DEIS.

Page 3-6 - *Privately owned lands make up 66 percent of sagebrush, with BLM-administered land making up 17 percent (Knick 2011)*

COMMENT: This statistic (i.e., 17 percent) referred to by *Knick 2011* represents the percent of sagebrush habitat managed by BLM throughout the entire Great Plains region. To be relevant, the percentage of sagebrush habitat managed by BLM in the planning area needs to be addressed. Table 3-2 indicates that there are only 33,030 acres of BLM-administered land in the planning area (3.4 percent).

Page 3-8 - *The minimum male count for this population (North Dakota) was reported at 587 and the study estimated that the population would dip below 200 males in the next 100 years (Garton et al 2011). Population counts in 2012 for North and South Dakota were approximately 300 males.*

COMMENT: The population estimates for sage-grouse in ND are inconsistently reported throughout the document. There appears to be a 51 percent reduction in male sage-grouse between the data cited by *Garton et al (2011)* and a study done in 2012. The RMPA/DEIS needs to disclose how many males existed in ND in 2012. Additionally, the 2012 source for the population estimate needs to be cited and the suspected cause of this population reduction.

The above statement conflicts with information on page 3-10, which states that "*The lek data for 2012 show that there are 12 active leks with 72 males present in the planning areas. Eight of these leks showed a decline in number of males from the previous year, while four showed and increase or no change. The 72 males reported is a substantial variance from the 587 males reported by Garton et al (2011).*" What was the total number of males for all leks in 2011?

Page 3-10 states "*Lek data collected by the ND Game and Fish Department show overall declines in GRSG numbers from 299 in 1982 to 72 in 2012*." Presumably, these numbers are males attending leks, which should be stated. The NDGFD's *Management Plan and Conservation Strategies for Greater Sage-Grouse in North Dakota* provided annual lek count data from 1951 through 2012. Although populations fluctuate, there is a downward population trend over the period of record. It is important to establish the known factors that could have influenced the population decline since 1951. For example, in the planning areas, how much sagebrush habitat was converted to cropland over that period and how much habitat was directly affected by oil and gas development over that period? Factors that have contributed to declines in populations of sage-grouse over Management Zone 1 are qualitatively addressed; however, quantitative data for threats to sage-grouse in the planning area over the period of record (1951-2012) for estimated sage-grouse population numbers is missing and need to be documented in the RMPA.

Page 3-8 /3-9 - *The Dakota's population occurs on the far eastern edge of GRSG range and is considered small and at high risk (USFWS 2013 pg. 46)*

COMMENT: Historically, it is unlikely that the population ever been large and not at risk. The RMPA needs to distinguish how the current sage-grouse population compares to historic estimates. Being at the edge of range and with relatively little suitable habitat, it seems highly improbable that ND has ever had the capacity to support large numbers of sage-grouse.

Herman-Brunson (2007) shows that sage-grouse habitat in ND is contiguous with sage-grouse habitat in Montana (MT). The 12 leks shown in this thesis are near the border of ND and MT. It appears that the ND and MT sage-grouse belong to the same population and analyses of population trends and factors affecting population trends and management direction needs to be considered for both states. The boundary of ND and MT does not appear to be relevant to sage-grouse ecology and habitat. Developing management prescriptions for ND without considering sage-grouse habitat and populations in MT is arbitrary and without a sound ecological basis.

Page3-9 - *Edge effects are significant elements of the threat posed by infrastructure and energy development to GRSG populations.*

COMMENT: BLM must clarify how edge effects adversely affect sage-grouse by citing sustainable scientific data. Previous discussions in the RMPA/DEIS indicate the sage-grouse rely on a variety of other habitats. Presumably, there are edge effects at the interface of each different habitat, which must be identified and discussed.

Page 3-9 - *Lek abandonment is most likely to occur in areas with over 25 percent cultivated cropland within 18 miles of the lek (Aldridge et al 2008).*

COMMENT: BLM needs to disclose how many leks in the ND planning area have over 25 percent cultivated cropland within 18 miles of leks.

CHAPTER 4 – ENVIRONMENTAL CONSEQUENCES

Page 4-9 - Section 4.2.2 (Nature and Types of Effects) - *Factors related to the decline in GRSG distribution and abundance include habitat loss and degradation, disease and predation, chemicals and changes in land use (USFWS 2010, pg. 14).*

COMMENT: In Chapter 1, the RMPA/DEIS specifically identifies the COT and the NTT reports as two main references in its review of alternatives and potential management actions. Accordingly, Chapter 4, Section 4.2.2 (Nature and Type of Effects) focuses on the threats to sage-grouse identified in the COT report.

Although Section 4.2.2 reports that the USFWS (2010) previously recognized predation as a factor related to the decline in sage-grouse distribution and abundance, neither the COT report, the NTT report, nor this RMPA/DEIS address the potential of predation to affect populations of sage-grouse

in ND. Of particular note, neither report nor this RMPA/DEIS suggest mitigations that could reduce predation.

A number of researchers have reported findings related to sage-grouse predation that need to be considered. *Dinkins et al (2012)* reported "*Depredation of nests and predation of chicks can be two of the most influential factors limiting sage-grouse productivity*." *Dinkins (2013)* reported that sage-grouse hen survival was negatively correlated with golden eagle density. *Coates et al (2008)* report that nest predation is the primary cause of nest failure in sage-grouse. *Webb et al (2012*) stated that predation of sage-grouse nests was the most common cause of nest failure (84.7 percent) followed by direct predation on the female (13.6 percent). *Bui et al (2010)* reported that nesting ravens are responsible for most sage-grouse predation.

Dzialak et al (2011) found that the spatial patterns of risk during sage-grouse nesting and brood rearing suggested a human-mediated increase in predator abundance or effectiveness as a potential cause of increased risk (i.e., predator subsidization). *Watters et al (2002)* found that Richardson's ground squirrels were the primary predators of sage-grouse nests with some predation by corvids (e.g., ravens) and badgers. *Baxter et al (2007)* found that non-native red fox is an effective predator on sage-grouse in Utah and threaten to extirpate the sage-grouse from the study area if not controlled. *Bedrosian and Craighead (2010)* suggest that limiting the population growth of non-native red fox in the Jackson Hole study area would benefit sage-grouse. *Kirol (2012)* reported that predation is a major factor contributing to sage-grouse chick survival. *Coates (2007)* reported that ravens and badgers were the primary predators on sage-grouse nests and at high population densities; ravens can substantially reduce sage-grouse reproduction. Coates and *Delechanty (2004)* found that raven population reductions through poisoning resulted in sage-grouse nesting success of 73.6 percent compared to expected nest success of 42.6 percent. *Coates and Delechanty (2010)* report that raven abundance has increased an estimated 300 percent in the United States and as much as 1,500 percent in some parts of the western United States. *Cote and Sutherland (1997)* reported that removing predation often has a large positive effect on hatching success and post-breeding populations of target birds. *Dinkins et al (2012)* found that sage-grouse select nesting and brood-rearing areas with fewer avian predators.

The impact assessments for all alternatives compares the proposed actions under each alternative with recommendations in the COT report; however, the COT report provides no original data or quantitative analyses nor a comprehensive unbiased review of scientific literature on sage-grouse ecology, behavior, and management. Major points of criticism of the COT report include[16]:

- The COT report elevates hypothetical threats that have never been shown to cause sage-grouse populations to decline, while selectively ignoring well-documented sources of sage-grouse mortality such as predation and hunting.
- Population predictions used in the threats analysis are based on methodological errors and bias.
- Population trends are to be determined based on substandard data and methods.
- The rankings of threats to populations and Sage Grouse Management Zones are subjective.

[16] Id

- Connectivity corridors are hypothetical and have not been documented in sage-grouse habitat.
- "Enforceable temporary measures" are proposed but provides no regulatory process, agency responsibility, or application to private land.
- Subjective, undefined terms are coined to describe the status of sage-grouse populations, without consideration of criteria identified in the Policy for Evaluation of Conservation Efforts (PECE).
- A single category for all forms of energy production is erroneously analyzed without consideration for temporary and permanent impacts and best available data.
- Peer reviewer comments that identify methodological errors in key papers cited in the COT report (e.g., Garton 2009 and 2011) are ignored.

Managing sage-grouse PH with an NSO stipulation is a major change from previous management of sage-grouse habitat in the ND planning area, which will inhibit energy development and other natural resources projects. This measure does not appear to be based on studies in ND. Data presented by NDGFD (2013) indicates that sage-grouse populations in ND have declined since 1951. Have BLM or the State quantitatively analyzed the relationship between energy development and associated losses of sage-brush habitat lost over the period of record (1951-2012)? Without such data, BLM cannot justify the restrictive management proposed in the RMPA/DEIS in Alternatives B, C and D.

Studies cited from the Pinedale Anticline and Powder River Basin typically have been conducted under different regimes of development than in the ND planning area. For instance, *Ramey et al, (2011)* reported that current stipulations and regulations for oil and gas development in sage-grouse habitat are largely based on studies from the Jonah Gas Field and Pinedale Anticline. These and other intensive developments were permitted decades ago, using older, more invasive technologies and methods. The density of wells is high, due to the previous practice of drilling many vertical wells to tap the resource (before the use of directional and horizontal drilling of multiple wells from a single surface location became widespread), and prior to concerns over GRSG conservation. These fields and their effect on sage-grouse are not necessarily representative of GRSG responses to less-intensive energy development. Recent environmental regulations and newer technologies have lessened effects to GRSG. Moreover, as pointed out earlier in these comments, even without highly specialized mitigation requirements, the GRSG populations in these areas exceed Wyoming State averages.

Taylor et al (2007) analyzed six oil and gas development areas in Wyoming with various degrees and ages of activity to determine sage-grouse population trends relative to intensity and timing of oil and gas development. They report that:

- GRSG population trends are consistent among populations regardless of the scope or age of energy development fields, and that population trends in the six development areas mirror trends state-wide;
- Application of the BLM standard GRSG stipulations appear to be effective in reducing the impact of oil and gas development on male-lek attendance;

- Male lek attendance in areas that are not impacted by oil and gas development is generally better than areas that are impacted;
- Displacement from impacted leks to non-impacted leks may be occurring; research is needed to assess displacement and its implications for developing GRSG conservation strategies;
- Lek abandonment was most often associated with two conditions, including high density well development at forty-acre spacing (sixteen wells per square mile), and regardless of well spacing when development activity occurred within a quarter-mile lek buffer;
- Extirpation of GRSG has not occurred in any of the study areas;
- Long-term fluctuations in GRSG population trends in Wyoming reflect processes such as precipitation regimes rather than energy development activity; however, energy development can exacerbate fluctuations in GRSG population trends over the short-term.

Clearly, scientists studying GRSG have widely varying interpretations concerning effects of oil and gas development on population trends. The BLM needs to consider results of studies conducted by Ramey et al (2011) and Taylor et al (2007) in addressing the effects of oil and gas development on GRSG and GRSG habitat in ND.

APPENDIX B

B.2.3 Required Design Features for Fluid Mineral Development

Required Design Features (RDFs) are a suite of features that would establish the minimum specifications for certain activities (i.e., water developments, fluid mineral development, and fire and fuels management) to help mitigate adverse impacts. In general, the design features are accepted practices that are known to be effective when implemented properly at the project level. However, their applicability and overall effectiveness cannot be fully assessed until the project-level when the project location and design are known. Because of site-specific circumstances, some features may not apply to some projects (e.g., a resource is not present on a given site) and/or may require slight variations (e.g., a larger or smaller protective area). All variations in design features would require appropriate analysis and disclosure as part of future project authorizations. Additional mitigation measures may be identified and required during individual project development and environmental review, and it is not possible to list them all at the planning level.

COMMENT: Appendix B consists of design features enumerated in the NTT report ostensibly needed to protect GRSG in both PPH and PGH. However, no scientific data or documentation has been provided or even cited that show these RDFs have ever been proven effective. Absent any scientific evidence which observably confirms these RDFs would result in a reduction of impact to GRSG and its habitat, these measures simply represent a matter of opinion rather than scientific fact. As previously stated in these comments, the NTT relies upon an unproven one-size-fits-all approach that fails to take into account local conditions, including unique habitat and threats, and socio-economic factors. Consequently, the NTT RDFs are often needlessly restrictive, scientifically unfounded, and ignore specific cause and effect mechanisms. Of greatest concern is that they were designed without any benefit of tracking and testing of the effectiveness of currently required BMPs and mitigation measures. Moreover, many the NTT BMPs plainly ignore that a

variety of valid existing rights are held throughout the planning area. It is crucial for BLM to acknowledge these rights and honor them, regardless of the BMPs selected for implementation. BLM must also acknowledge that it does not have the legal authority to require unilateral implementation of these measures on existing lease holdings.

We appreciate BLM's recognition that many of the RFDs would not be appropriate across the board – "B*ecause of site-specific circumstances, some features may not apply to some projects (e.g., a resource is not present on a given site) and/or may require slight variations (e.g., a larger or smaller protective area). All variations in design features would require appropriate analysis and disclosure as part of future project authorizations*." Prior assessment of RDFs on a "site-specific basis" is crucial and applying them only when "reasonable" makes sense and is appropriate.

With respect to split estate lands, BLM needs to specify how the rights of private landowners will be protected. Intrinsically, BLM needs to incorporate proper mechanisms for working with landowners and lessee's in order to avoid unnecessary delays in development activities. Moreover, clearly defined parameters are necessary for any monitoring and mitigation plan, i.e., scope, requirements, costs and timing. We recommend that BLM work with operators, other land users as well as the NDGFD in order to establish a reasonable and workable monitoring program. Moreover, in order to avoid conflict and confusion, the monitoring program must be well-defined before it is required for project activities.

The following comments apply to both PPH and PGH RDFs and BMPs.

B.2.1 *Required Design Features for how to make a pond that won't produce mosquitoes that transmit West Nile virus (from Doherty [2007])*

COMMENT: See previous comments on WNv on Page 13.

B.2.3 Required Design Features for Fluid Mineral Development

- *Coordinate road construction and use among right-of-way (ROW) holders.*

COMMENT: While coordination may be useful, not all ROW holders have entered into ROW cooperative agreements. Consequently, BLM will need to take an active role in any such coordination efforts.

- *Establish trip restrictions or minimization through use of telemetry and remote well control (e.g., Supervisory Control and Data Acquisition).*

COMMENT: We understand why BLM believes this is a good practice; however, this technology may not be feasible due to the limited economic conditions associated with lower performing wells. Moreover, BLM must recognize that remotely monitoring a site may not always adequately identify all operational considerations. In order to conduct safe and effective oil and gas operations, certain on-site inspection and maintenance activities must be regularly conducted. We recognize that it may be warranted to place limitations on access to well locations during

critical seasons for certain activities, such as construction activities (e.g. well pads, roads, pits) or limiting the number of trips allowed. However, basic maintenance and operation activities are crucial to maintaining safe, effective, and environmentally sound operations. Further, the economics associated with some leases may not allow telemetry to be installed. This requirement must be subject to operational considerations and economic viability.

Operations

- *Cluster disturbances, operations (fracture stimulation, liquids gathering, etc.), and facilities.*

COMMENT: Clustering disturbances may not be possible due to surface limitations, landowner preferences and safety considerations. While clustering may make sense in certain situations, it is simply not achievable in every case. We recommend inserting "to the extent possible" to the beginning of this item.

- *Use directional and horizontal drilling to reduce surface disturbance.*

COMMENT: While producers often choose to employ directional or horizontal drilling methods to recover their targeted resource, such decisions are based upon a host of factors that include geology, technological feasibility and economic viability. Even though this technology could be viewed as a panacea to those who do not have a firm grasp on the complexities of oil and natural gas development, it must be acknowledged that the utility of directional or horizontal drilling methods is limited in a number of ways. Moreover, it must also be recognized that pad sizes associated with directional drilling of several wells from a single pad will increase to accommodate additional well bores. While surface issues may give rise to considering directional or horizontal techniques, the federal land management agencies must recognize that these decisions can only be made with careful consideration of many other factors that influence a project's viability. Therefore, it is unreasonable to impose a requirement across the study area that could render a well uneconomic or infeasible, particularly in cases where existing leases do not require the use of alternative drilling techniques.

- *Apply a phased development approach with concurrent reclamation.*

COMMENT: The term "phased development" is vague and requires clarification because it is subject to a variety of interpretations. The trades oppose phased development which only allows certain portions of a leasehold or unit to be developed over time until that portion is plugged or abandoned before proceeding to another portion of the leasehold or unit. This approach would constitute a clear violation of existing lease terms, particularly since this type of terminology has not been used in lease language before.

The BLM is required to ensure that leased federal minerals are fully developed and that production on non-federal leases does not drain federal minerals. Given the extent of non-federal mineral ownership within the planning area, a phased development constraint would not allow compliance with any of the above requirements. With this is mind, we are confused as to why the

RDF to "Apply a phased development approach" is included in this Appendix and urge BLM to remove it.

- *Place liquid gathering facilities outside of priority areas. Have no tanks at well locations within priority areas (minimizes perching and nesting opportunities for ravens and raptors and truck traffic). Pipelines must be under or immediately adjacent to the road (Bui et al. 2010).*

COMMENT: This requirement is confusing. Placing liquid gathering facilities inside priority areas would reduce truck traffic, which would be more advantageous. Further, if liquid gathering or trucking is not allowed inside priority areas, there would be no way to remove liquid production from the lease. This requirement conflicts with standard operational practices and is not feasible and needs to be removed.

- *Design or site permanent structures which create movement (e.g., a pump jack) to minimize impacts to Greater Sage-Grouse.*

COMMENT: This requirement lacks scientific justification. Since neither the MSO nor the NTT or COT reports have identified any scientific data that correlate movement and distances relative to GRSG response, we recommend this requirement be removed.

- *Cover (e.g., fine mesh netting or use other effective techniques) all drilling and production pits and tanks regardless of size to reduce sage-grouse mortality.*

COMMENT: This requirement is not practical and needs to be eliminated for the following reasons: fine mesh netting is not only extremely difficult to deploy, but difficult to maintain, especially during winter with snow accumulation. We suggest BLM opt for a more flexible approach in mitigation requirements. It is unclear why tanks are included.

- *Use only closed-loop systems for drilling operations and no reserve pits.*

COMMENT: While it may not be unreasonable to require closed loop mud systems for drilling in certain circumstances, many drilling rigs are not equipped for closed loop drilling. Further, even if a closed system were available on a drilling rig, some type of pit will be needed for drilling cuttings. This requirement must be revised to provide the flexibility to allow this as an option. This requirement conflicts with the previous RDF which calls for netting pits.

- *Remove or re-inject produced water to reduce habitat for mosquitoes that vector West Nile virus. If surface disposal of produced water continues, use the following steps for reservoir design to limit favorable mosquito habitat*

COMMENT: See previous comment on WNv on Page 13.

- *Limit noise to less than 10 decibels above ambient measures (20-24 dBA) at sunrise at the perimeter of a lek during active lek season (Patricelli et al. 2010, Blickley et al. In preparation).*

COMMENT: This requirement is inconsistent with the action item contained under Alternative D in Table 2-3 and needs to be eliminated.

- *Require noise shields when drilling during the lek, nesting, broodrearing, or wintering season.*

COMMENT: This requirement is too broad and vague. First, what types of noise shields are being referenced? These can take any number of shapes and forms. It is important to realize that noise shields cannot be used at a site without being engineered for safety factors, such as wind load. They must be carefully anchored, potentially with a foundation, to meet wind load requirements depending upon the material used to build a "shield". Additionally, larger well pads may be needed to accommodate the configuration of a "shield." It is also important to consider the attenuation of noise from a site to receptors such as leks, nesting, and brood rearing. Moreover, simply stating that noise shields are required during "wintering seasons" is excessive and unjustifiable if drilling is occurring in areas where noise attenuation is not an issue. This requirement needs to be completely reworded revised to provide more direction and flexibility.

- *Locate new compressor stations outside PH and design them to reduce noise that may be directed towards PH.*

COMMENT: This requirement is unacceptably broad. There are many considerations when siting compressor stations, such as the engineering and design constraints inherent to gas gathering systems. With regard to directing compressor station noise away from priority habitat, proximity to other receptors, such as homes, also needs to be considered. This requirement must be revised to account for technical feasibility, as well as landowner preferences if private land is involved.

- *Restore disturbed areas at final reclamation to the pre-disturbance landforms and desired plant community.*

COMMENT: If the disturbance is on private land, this requirement must be subject to the preferences of landowners.

- *Implement irrigation during interim or final reclamation for sites where establishment of seedlings has been shown or is expected to be difficult due to dry conditions.*

COMMENT: We recommend BLM revise this RDF to reflect that irrigation needs to be done in a way that will prevent vegetation from being unable to withstand drought conditions after the irrigation has been removed. Additionally, has BLM considered the impact irrigation activities could have on GRSG and its habitat?

- In PGH, *make applicable BMPs mandatory as Conditions of Approval (COA) within GH. BMPs are continuously improving as new science and technology become available and therefore are subject to change.*

COMMENT: See comment on valid existing rights above.

APPENDIX C – OIL AND GAS STIPULATIONS, ALTERNATIVE D

COMMENT: The RMPA/DEIS needs to specifically clarify the exact measures BLM intends to use to gauge/determine whether permanent structures are "*adequately designed or sited in a manner that which does not impact GRSG*." For example, as discussed above, the CSU stipulation "*Surface disturbing/disruptive activities will prevent or minimize disturbance to GRSG or their habitat. Except as identified above or during emergency situations, activities will not compromise the functionality of the habitat*" is problematic.

BLM needs to explain how such determinations would be made; and, in particular, what measures would be used to gauge whether an activity "*prevents or minimizes disturbance to GRSG or their habitat.*" What parameter will be set to judge whether an activity "*compromises the functionality of the habitat*"? The uncertainty regarding how BLM will determine and define such impacts makes it difficult, if not impossible, for a project proponent to determine the feasibility and viability of a potential project located in GH.

APPENDIX F – GREATER SAGE-GROUSE DRAFT MONITORING FRAMEWORK

COMMENT: The RMPA/DEIS needs to explicitly identify the entity that will be charged with collecting the monitoring data on oil/gas leases, and explain how this data could be used to adaptively feed back into the monitoring process and refine adaptive management needs on a planning area basis. This discussion must also explain what types of findings, or more specifically, what type of numeric thresholds, might trigger adaptive management.

CONCLUSION

We appreciate this opportunity to provide you with our issues and concerns. We look forward to working closely with BLM to identify reasonable changes to the RMPA/DEIS that allow existing and future oil and gas leasing and development to proceed.

Sincerely,



Ron Ness
President
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Claire Moseley
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Kathleen Sgamma
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CC:

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