Public Lands Advocacy

January 29, 2014

BLM/FS Greater Sage-Grouse EIS
Attn: Quincy Bahr
440 West 200 South, Suite 500
Salt Lake City, UT 84101-1345

Via electronic mail: blm_UT_comments@blm.gov

Re: Comments on the Draft Greater Sage-Grouse Land Use Plan Amendment/Draft Environmental Impact Statement (Draft LUPA/Draft EIS) for the Utah Sub-Region

Dear Mr. Bahr,

I. INTRODUCTION

The American Petroleum Institute ("API"), Western Energy Alliance (the "Alliance"), Public Lands Advocacy ("PLA") and the Independent Petroleum Association of America ("IPAA") hereinafter collectively referred to as (the "Trades") appreciate this opportunity to comment on the Bureau of Land Management's ("BLM") and U.S. Forest Service's ("USFS" or "Forest Service") Utah Greater Sage-Grouse Draft Land Use Plan Amendment and Environmental Impact Statement ("DEIS").[1]

- API is a national trade association representing over 500 member companies involved in all aspects of the oil and natural gas industry. API's members include producers, refiners, suppliers, pipeline operators, and marine transporters, as well as service and supply companies that support all segments of the industry.

- The Alliance represents more than 430 companies engaged in all aspects of environmentally responsible exploration and production of oil and natural gas in Utah, Wyoming and across the West.

- IPAA represents thousands of independent crude oil and natural gas explorers and producers and is dedicated to ensuring a strong, viable domestic oil and natural gas industry, recognizing that an adequate and secure supply of energy is essential to the national economy.

[1] 78 Fed. Reg. 50088 (Aug. 16, 2013).

- PLA promotes 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.

The Trades and their members are dedicated to meeting environmental requirements, while economically developing and supplying energy resources for consumers. Many of our members have a direct interest in how BLM plans to manage lands in Utah, Wyoming and adjoining states with respect to the Greater Sage-Grouse ("GRSG"). Our comments identify several issues and concerns with respect to the DEIS.

On December 27, 2011, the Washington, D.C. BLM Office released IM 2012-044, which directed all BLM planning efforts across the GRSG range to consider conservation measures for GRSG when revising or amending its RMPs, including specifically the measures developed by the NTT that were presented in their December 2011 document, *A Report on National Greater Sage-Grouse Conservation Measures* (the "NTT Report").[2]

Here, the BLM and the USFS plan to amend up to 14 BLM RMPs and 6 Forest Plans for GRSG in the Utah subregion. BLM and the USFS intend to issue separate Records of Decision ("RODs") by September 30, 2014. Through the process, BLM and the USFS will designate preliminary priority management areas ("PPMAs") as well as actions within them to conserve GRSG. They will also identify preliminary general management areas ("PGMAs") and actions for major GRSG life history functions (such as breeding, migration or winter survival) to maintain genetic diversity allegedly needed for sustainable populations.[3]

We have discovered many serious flaws in the DEIS and the data relied upon therein. Implementation of the BLM preferred alternative in this process would impede the agencies' multiple use missions and adversely affect the ability to explore for, produce, and transport domestic energy on public lands. Users of public lands in Utah and Wyoming, including oil and natural gas companies, invest billions of dollars into the national, state and local economies and provide thousands of high-paying jobs. The management restrictions and proposed closures in the DEIS will have a direct impact on the economy and the future viability of oil and natural gas development in the planning area and beyond.

The states of Utah and Wyoming have undertaken significant efforts to conserve GRSG that should be recognized by the agencies. We support both the Wyoming and Utah state plans[4] as viable alternatives that are preferable to many management protocols in the DEIS' preferred alternative, particularly guidance recommended by the NTT report, and strongly encourage the agencies to more meaningfully incorporate them into the preferred alternative. As Utah Governor Herbert has pointed out, state plans better balance future economic activities with

[2] DEIS at 1-24.
[3] DEIS at 1-4.
[4] *Conservation Plan for Greater Sage-Grouse in Utah, February 2013*; State of Wyoming's Governor's Executive Orders 2011-05 and 2013-3.

robust protections for GRSG, and were developed using a bottom-up process with input from diverse stakeholders, rather than the top-down approach taken by the agencies.[5]

BLM must also recognize the states' primary authority over wildlife management and central role in managing GRSG populations and habitat within its borders. The states are better suited than the federal government to perform this function as it falls within its traditional jurisdiction and professional expertise. Active consultation between the states and federal agencies is a more effective approach than one-size-fits-all restrictions. More meaningful consultation would also provide the opportunity for local working groups, made up of state and federal agency personnel, stakeholders, and local government representatives, to provide input on future management decisions.

We urge the BLM to revise its preferred alternative to be consistent with its multiple use mandate and made significantly more flexible and adaptive. BLM proposes numerous restrictions and limitations on public land use that are not justified by current oil and gas practices and the "best" scientific data regarding GRSG. For example, the analysis in the DEIS relies on the assumption that development of federal crude oil and natural gas resources can ubiquitously occur directionally for great distances from adjoining private or state lands and unrestricted federal lands. Although drilling technology has not advanced, these capabilities are not universally applicable. Moreover, BLM has not recognized that the level of surface disturbance associated with a well is not constant throughout its life; disturbances are greatest during construction, drilling and completion, reducing dramatically for the remainder of the life of the well.

Further analysis under NEPA is a recurrent theme in the DEIS action alternatives. This will lead to "analysis paralysis" and further impede the ability to operate on federal lands. Another recurrent theme is the need to mitigate against "indirect impacts" or "indirect effects." Many of these restrictions will apply even to private lands.[6] BLM also proposes to take private land out of private ownership in all action alternatives in that it will, "[I]dentify areas where acquisitions (including federal mineral rights) or conservation easements, would benefit GRSG habitat."

We support BLM's efforts to refine management procedures to conserve and protect GRSG and its habitat on public lands in Utah in order to demonstrate to the U.S. Fish & Wildlife Service ("USFWS") that listing the species under the Endangered Species Act of 1973 ("ESA") is unnecessary. Unfortunately the proposed management procedures in the DEIS far exceed what is needed to demonstrate to USFWS that ample regulatory mechanisms for the management of GRSG populations and habitat on public lands will exist in the future. In addition, we have identified a number of serious flaws with the document that, if implemented, will have enormous social and economic consequences in Utah and Wyoming without commensurate benefits to local GRSG populations and habitat. BLM must rectify these issues before preparing the final Environmental Impact Statement ("EIS") and issuing a Record of Decision ("ROD"). BLM must also recognize that state and local conservation efforts are already underway and likely to be more effective than a top-down federal approach.

[5] *See* attached Exhibit A.
[6] MA-MIN-32.

II. PROCEDURAL BACKGROUND

In March 2010, the USFWS added GRSG as a candidate species under the ESA.[7] The USFWS cited an alleged inadequacy of existing regulatory mechanisms as a factor in its decision.[8] In response, and pursuant to the National Environmental Policy Act ("NEPA"), the BLM and the USFS drafted this DEIS "to identify and incorporate appropriate GRSG conservation measures into [Land Use Plans]."[9]

The DEIS is a part of BLM's "National Greater Sage-Grouse Planning Strategy" which the BLM plans to use to implement new GRSG conservation measures on approximately 47 million acres of BLM administered land in eleven states. Because the BLM and USFS manage 50 percent of GRSG habitat across the range, the agencies have begun amending their Land Use Plans ("LUP") to include the addition of GRSG conservation measures.

On December 9, 2011, BLM and the Forest Service initiated the GRSG Planning Strategy across eleven western states. The BLM is the lead agency and the Forest Service is a cooperating agency. This DEIS is one of 15 underway across the range of the GRSG.[10] Upon completion of the DEIS and issuance of RODs, oil shale and tar sands land use planning decisions may also be amended.[11] BLM and the Forest Service intend to make ~~a~~ final decisions on these plans by the end of 2014 so that regulatory mechanisms are included before the USFWS makes a listing decision in 2015. GRSG is ~~a~~ also a BLM and USFS sensitive species and a Utah species of concern.[12]

III. THE NEPA PROCESS

NEPA requires informed decisions – not environmentally "ideal" decisions.[13] Council on Environmental Quality ("CEQ") regulations require a purpose and need statement to describe the proposed action, the purpose of the proposed action, and the underlying need to which the agency is responding.[14] A fundamental tenet of NEPA is that it is only a procedural statute. NEPA does not mandate any particular outcome or require an agency to select an alternative that has the fewest environmental consequences or even the lowest GHG emissions. NEPA simply requires that an agency give a "hard look" to the environmental consequences of any major federal action it is undertaking.[15] Once the procedural elements of NEPA have been satisfied and the environmental consequences given the required hard look, an agency may issue its decision relying on the factors and considerations specified in the statute under which it is acting."

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[7] 75 Fed. Reg. 13910 (Mar. 23, 2010).
[8] Dept. of the Interior, Bureau of Land Management, *Northwest Colorado Greater Sage-Grouse Draft Land Use Plan Amendment and Environmental Impact Statement*, p. xxi (August 2013).
[9] *Id*. at xxvi.
[10] DEIS at 1-23.
[11] DEIS at 1-17.
[12] DEIS at 226.
[13] *See* Nicholas C. Yost, *NEPA Deskbook, 3rd Ed.*, at 6, Environmental Law Institute (2003).
[14] 40 CFR § 1502.13.
[15] *See Methow Valley*, 490 U.S. at 350-51; *Kleppe*, 427 U.S. at 410, n.21 (Agency is to take a "hard look" at the environmental consequences).

Under NEPA, BLM must analyze the impacts of a proposed federal action. The process requires agencies to address their differing missions, laws and policies early in the NEPA process. The process should not move forward until differences are addressed in an agreed-upon methodology.[16] The lead agency must use, to the maximum extent practicable, the environmental analysis and recommendations of cooperating agencies consistent with its own responsibilities as lead agency.[17] Otherwise, the EIS can be found to be inadequate.[18] We urge BLM to work closely with the states, local governments and other stakeholders to develop a more flexible and adaptive approach prior to issuing a ROD.

While NEPA requires federal agencies to consider the environmental consequences of federal actions, it does not mandate particular results. Agencies are not constrained by NEPA from deciding that other values outweigh environmental costs.[19] The purpose of NEPA "is not to create paperwork—even excellent paperwork—but to foster excellent action."[20]

Under NEPA, the agency's "environmental impact statement must study reasonable alternatives in detail."[21] An agency "may eliminate alternatives that are 'too remote, speculative, impractical, or ineffective,' or that do not meet the purposes and needs of the project."[22] For all of the reasons below, BLM's preferred alternative should be rejected as impractical, ineffective and contrary to the agencies' statutory multiple-use mandates, while other viable alternative plans (i.e., Utah and Wyoming's state plans) have been set aside without due consideration. We urge BLM to craft a more flexible and reasonable alternative that better incorporates the Utah and Wyoming plans and will promote GRSG conservation while truly considering economic impacts, and preserve the BLM's multiple use mission without imposing unjustified limitations and restrictions on public lands for decades.

A. Purpose and Need of DEIS

The purpose and need of the DEIS is to identify and incorporate measures to conserve, enhance and/or restore GRSG habitat by reducing, eliminating or minimizing threats. The BLM and the Forest Service will "consider" such measures in the context of their multiple-use mandates under Federal Land Policy and Management Act of 1976 ("FLPMA") and National Forest Management Act ("NFMA") respectively.[23]

BLM states that the approved RMP and forest plan amendments will recognize valid existing rights and comply with FLPMA, NFMA, NEPA, CEQ regulations, DOI regulations, BLM's Land Use Planning Handbook, BLM's NEPA Handbook and all other applicable BLM policies and guidance. The USFS Manual, Handbook, USFS NEPA regulations, and regulations of the

[16] THE NEPA TASK FORCE: Report to the Council on Environmental Quality. Modernizing NEPA Implementation. September, 2003.
[17] Section 1501.6(a)(2); see also CEQ FAQ 14(b)(A)
[18] CEQ FAQ 14(b)(A)
[19] *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989).
[20] 40 C.F.R. § 1500.1(c) (2005).
[21] *Biodiversity Conservation Alliance v. Bureau of Land Mgmt.*, 608 F.3d 709, 714 (10th Cir. 2010).
[22] *Id.* at 715 (quoting *New Mexico ex rel. Richardson*, 565 F.3d 638, 708-09 and n.30 (10th Cir. 2009)).
[23] DEIS at 1-4.

Secretary of Agriculture, will be used as applicable.[24] 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."[25] We object to the agencies' assertions and question their authority to lawfully impose such measures.

Neither NEPA nor the ESA amends or alters the agencies' statutory missions. Nor can the 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.) or the USFS duties and responsibilities under the National Forest Management Act ("NFMA") (16 U.S.C. § 1600 et seq.) and the Multiple-Use Sustained-Yield Act of1960 (16 U.S.C. §§ 528-531).

Further, BLM states that fluid mineral operations on existing leases, regardless of land ownership, would be subject to COAs at the time of APD approval. BLM states 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. 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.".[26]

B. The Planning Area

The planning area includes all lands in the State of Utah except Washington and San Juan counties (which are administered by BLM's St. George and Monticello field offices and have no GRSG habitat) and portions of the Sawtooth National Forest in Box Elder County (which will be part of the Idaho/Montana planning process).[27] The Utah subregion also includes portions of Ashley and Uinta-Wasatch Cache National Forests that extend into Wyoming. In total, there are nearly 50 million acres in the planning area.[28] In addition to BLM and USFS land, the DEIS will affect over 4 million acres of state, private or tribal lands with federal minerals.[29] As part of the scoping process, BLM also requested public nominations for potential Areas of Critical Environmental Concerns ("ACECs") for GRSG and GRSG habitat.[30]

The Utah planning area is nearly equally divided between the Rocky Mountain Region and the Great Basin Region. Threats in the Rocky Mountain Region are allegedly habitat loss and fragmentation caused by development such as oil and gas, energy transmission and wind energy development. Threats in the Great Basin Region are alleged to be wildfire, invasive species and habitat fragmentation.[31]

[24] DEIS at 1-18.
[25] DEIS at 3-191.
[26] DEIS at 4-230.
[27] DEIS at 1-4.
[28] DEIS at 1-4.
[29] DEIS at 1-5.
[30] DEIS at 1-13.
[31] DEIS at 1-5.

Nearly 12 million acres are considered GRSG habitat – this includes all occupied habitat known to the Utah Division of Wildlife Resources ("UDWR") plus areas within 5 miles of all known occupied leks.[32] BLM and the USFS broke GRSG habitat into 15 GRSG populations areas (13 in UT and two in WY) shown on Map 1.2.[33] These include Uintah, Carbon, Emery, Parker Mountain, Panguitch, Bald Hills, Hamlin Valley, Sheeprocks, Ibapah, Box Elder, Rich, Strawberry, Lucerne, Wyoming – Uinta, and Wyoming – Blacks Fork.[34] To date, the BLM, USFS, FWS and State of Utah have not agreed on which lands have the highest conservation value or are necessary to either maintain or increase GRSG in the planning area.[35] Given the states have the best and most recent information, we urge BLM to utilize this information.

Total mapped occupied habitat in the Utah planning area is said to equate to roughly 7.2 million acres across federal, state, tribal and private lands.[36] BLM surface of that area equates to nearly 2.5 million acres and the USFS surface equates to 814,400 acres.[37] Private land with federal minerals amounts to 507,220 acres, tribal land with federal minerals account for 43,330 acres and state lands with federal minerals amount to 144,070 acres.[38]

C. Summary of Alternatives

Here, the BLM and Forest Service are only considering action alternatives that are consistent with the conservation objectives and measures included in the Greater Sage-Grouse Conservation Objectives Team Final Report (COT Report) (USFWS 2013a).[39] As discussed herein, the COT Report is fatally flawed and should not be relied upon to implement sweeping land use changes that would adversely affect millions of acres of public land, multiple use management and the communities that depend upon it.

The alternatives analyzed apply at a minimum to 3.3 million acres of mapped, occupied habitat on BLM and USFS administered lands.[40] In addition to meeting the purpose and need, as well as consistency with the flawed COT Report, 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.[41] Table 2.1 includes a detailed description of each alternative and provides the basis for impact analysis.[42] Maps 2.1 through 2.5 in Appendix A show the areas where GRSG management will be emphasized in each alternative.[43]

- Alternative A – No Action

[32] DEIS at 1-5.
[33] DEIS at 1-5.
[34] DEIS at 1-5.
[35] DEIS at 1-3.
[36] Table 1.1, DEIS at 1-6.
[37] *Id.*
[38] *Id.*
[39] DEIS at 1-18.
[40] Table 2.1, DEIS at 2-13.
[41] DEIS at 2-1.
[42] DEIS at 2-1.
[43] DEIS at 2-1.

- Alternative B – NTT Alternative

  Under Alternative B, PPMAs would, among other things, be closed to new leasing and new ROWs. Discrete anthropogenic disturbances could cover less than 3 percent of total GRSG habitat regardless of ownership. In areas where the 3 percent threshold has been exceeded, no further disturbances would be permitted until enough GRSG habitat has been restored to maintain the area under the threshold. Fire (prescribed or natural) would not count towards the disturbance threshold.[44] PGMAs (mapped habitat that is not a PPMA) would be managed under current management direction.[45]

- Alternative C – Environmental Alternative

  Alternative C includes measures beyond those addressed in the NTT Report. For example, all mapped GRSG habitat would be managed as PPMAs; fire (prescribed and natural) would count towards a 3 percent disturbance threshold; many types of vegetation treatments would be considered disturbances; and "heavily grazed" areas would also be considered disturbances.[46]

- Alternative D – BLM's Preferred Alternative

  Alternative D, the Preferred Alternative, was developed by Utah BLM, the USFS and the local office of the FWS.[47] It includes modifications to the conservation measures in the NTT report with an eye towards addressing local site variability and balancing resource use among competing interests.[48] PPMAs in this plan would incorporate stipulations and land use restrictions that are generally more restrictive within 4 miles of occupied GRSG leks.[49] Some management decisions in the BLM Preferred Alternative would extend outside of mapped occupied sage-grouse habitat allegedly to protect GRSG from indirect and cumulative impacts.[50] This alternative represents a top-down approach dictated by federal agencies without meaningful input from the states and local governments.

- Alternative E – States' Alternatives

  Alternative E1: This alternative is nased on the State of Utah's Conservation Plan for Greater Sage-Grouse in Utah.[51] Given BLM and the USFS planning regulations and policies, the agencies have adopted and modified elements of Utah's state plan for consistency with this federal direction.[52] Moreover, Utah's plan includes some actions (such as incentive-based programs for private, local government and school trust

[44] DEIS at 2-2.
[45] *Id.*
[46] Grazing would be treated differently under sub-alternatives C1 and C2. DEIS at 2-3.
[47] DEIS at 2-3.
[48] *Id.*
[49] *Id.*
[50] *Id.*
[51] DEIS at 2-3.
[52] DEIS at 2-4.

(SITLA) lands.[53] Alternative E1 only includes elements of the Utah plan related to BLM and USFS decision-making authority.[54] Elements of Utah's plan outside of those areas are considered in the cumulative impact analysis.[55]

Alternative E1 was further based upon a plan developed by the State of Utah along with representatives from state and federal agencies, county commissions, energy companies, agriculture interests, private landowners, wildlife advocates and other entities.[56] Conservation measures in the Utah plan were developed with these interests in coordination with local GRSG working groups.[57] The Utah state plan identifies 11 sage grouse management areas (SGMAs) which correlate[58] with population areas identified by BLM and the USFS.[59]

Alternative E1 emphasizes expanding GRSG habitat by aggressively treating encroaching conifers or invasive species.[60] Alternative E1 also includes a general limit on new permanent disturbance of 5 percent of habitat on state or federally-managed lands within any particular SGMAs.[61] Fire would count toward the disturbance threshold, but vegetation treatments would not.[62] BLM states, "[O]ccupied habitat outside of state-identified SGMAs would not receive any management protection."[63] In so saying, BLM ignores the myriad existing conservation measures already in place for greater sage grouse.

Alternative E1 would enhance or improve GRSG habitat through restoration or rehabilitation.[64] It aims to eliminate threats while balancing economic and social needs and to sustain the "best-of-the-best" existing populations.[65]

Alternative E2: Based on the State of Wyoming's Governor's Executive Orders 2011-05 and 2013-3 with certain adjustments by the BLM interdisciplinary team (which includes members of the Wyoming Governor's Office).[66] Alternative E2 would only apply to National Forest lands in Wyoming. Much like Alternative E1, Alternative E2 is based upon Wyoming Executive Orders.[67] Among other things, in core areas, Wyoming provides for limits on oil and gas or mining to no more than an average of 1 location per

[53] DEIS at 2-4.
[54] *Id.*
[55] *Id.*
[56] *Id.*
[57] *Id.*
[58] Under Alternative E1, the Anthro Mountain and West Tavaputs portions of the BLM and Forest Service's Carbon Population Area would not be included in the SGMA, since the State's plan does not consider these areas essential for connectivity. *Id.*
[59] *Id.*
[60] DEIS at 2-4.
[61] *Id.*
[62] *Id.*
[63] *Id.*
[64] Table 2.2 DEIS at 2-11.
[65] *Id.*
[66] DEIS at 2-3.
[67] DEIS at 2-5.

640 acres.[68] In addition, no more than 5 percent disturbance is allowed in core areas.[69] Vegetation treatments that do not reduce canopy cover to less than 15 percent are not counted as disturbance but wildland fire generally is counted as disturbance.[70] Alternative E2 identifies and prioritizes conservation within core areas based on threats to the ability to manage GRSG habitat.[71]

Where current management is stricter than that proposed in the action alternatives, existing management would prevail.[72] NEPA requires the agencies to make informed decisions in such a way that the public can understand and meaningfully comment. Simply stating the "strictest" management will apply does little to inform the public and creates regulatory uncertainty. This is bad public policy. Either the action alternative should apply or it should not.

IV. GRSG POPULATIONS ARE STABLE AND INCREASING

GRSG populations have increased in Utah since the mid-1990s but not to some previous levels.[73] The number of leks counted has dramatically increased from a low of 125 to 361 currently.[74] Even more dramatically, from 1,555 males in 1996 to 5,973 in 2006 (280 percent).[75] While current numbers are not quite that high, differences in methodologies and inaccuracies inherent in lek counts must be considered. However, reliance on Connelly et al. (2004) and Garton et al. (2011) to "normalize[d] and analyze[d] the lek data to provide less biased population trend conclusions across the range of the species" is misplaced.[76]

The modeling and assumptions in the DEIS fail to meet the standards of the ESA, the Data Quality Act or Presidential or Interior Department memoranda and orders on scientific integrity. In addition, sagebrush is the most common intermountain lowland vegetation in the West. Within the planning area, there is no fewer than 10 million acres of sagebrush. To assert that habitat is a substantial limiting factor to GRSG is questionable at best. Rather than focus on gross quantity of habitat, BLM should focus on the quality of the habitat and the very real impact of predation, hunting and competition from other species on GRSG populations (such as elk feeding in GRSG winter habitat).

V. SPECIFIC ISSUES WITH THE DEIS

A. Monitoring

While we understand the importance of monitoring for implementation and effectiveness in the management of GRSG and its habitat, we have serious reservations about using the COT Report

[68] DEIS at 2-5.
[69] *Id.*
[70] *Id.*
[71] Table 2.1, DEIS at 2-11.
[72] DEIS at 2-9.
[73] DEIS 3.2.1 at 3-7.
[74] *Id.*
[75] *Id.*
[76] DEIS 3.2.1 at 3-8.

as part of such a standard.[77] As discussed herein, 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.

According to Appendix E, the agencies are in the process of finalizing a monitoring framework based upon the flawed COT Report.[78] We question how such a framework can be adopted without adequate disclosure (something at least close to a final product) and due consideration in the 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. BLM and USFS must develop a robust, science-based, range-wide monitoring framework and thoroughly explain the elements and procedures for implementation prior to finalizing the DEIS and issuing the ROD.

This poorly defined approach raises real issues with NEPA compliance, particularly when results from the monitoring framework will lead to management changes through adaptive management.[79] Again, we have serious procedural (and substantive) concerns with how BLM is handling this critical issue. It appears such monitoring tools are intended to be the measure of success regarding implementation of the DEIS.[80] As described below, these issues are incredibly complex and must be much more thoroughly vetted with participation from the Trades and the public. BLM must rectify this shortcoming by collaboration with state agencies and local groups, prior to issuing the ROD.

The effectiveness monitoring data that the DEIS will rely upon (male lek count data) is based upon antiquated and statistically invalid, non-random sampling techniques. The DEIS does not acknowledge that even a casual perusal of the figures in Garton et al (2011) reveal that the 90% confidence intervals surrounding virtually all of the population trend estimates in Utah are larger than the estimates themselves[81]. That means that use of more robust 95% confidence intervals would render virtually all of the trends estimated by Garton et al. (2011) to be meaningless. Applying the same methods used by Garton et al. (2011) to the monitoring program described in the DEIS would result in no oil and natural gas operators receiving any mitigation credit. That is because it is impossible to produce scientifically defensible trend estimates. This is simply not acceptable.

Furthermore, the Monitoring Framework Plan does not explain how trends would be adjusted to account for natural fluctuations in GRSG populations. This is a key issue because recent research has shown that these fluctuations are driven by abiotic factors and any long-term trend estimates must take this into account[82]. Finally, we are concerned that regardless of the method chosen, BLM could require a minimum of 10 years of data for an operator to receive any mitigation

[77] DEIS at 2-5.
[78] DEIS at 2-6.
[79] DEIS at 2-6.
[80] DEIS at 2-6.
[81] Ramey, R.R., J.D. Wehausen, and L.M. Brown (*in press*) Peer review and information quality breakdown in an Endangered Species Act decision: the case of the greater sage grouse.
[82] Fedy, B.C. and K.E. Doherty (2010), Population cycles are highly correlated over long time series and large spatial scales in two unrelated species: greater sage-grouse and cottontail rabbits. *Oecologia* DOI 10.1007/s00442-010-1768.

credit. BLM must recognize that intensive oil and gas activities are temporary in nature, with mitigation efforts beginning shortly after production begins. For these reasons, we encourage the BLM to award mitigation credit in a timely manner and based upon the type and extent of mitigation to address specific threats[83].

BLM intends to develop a monitoring system that will rely extensively on Geographic Information Systems ("GIS") to track the proposed disturbance cap. However, the DEIS provides few details to describe how this will be accomplished, including whether sufficient geospatial data exists to support such a system. Without a clear framework, the implementation of a complex monitoring system is certain to be fraught with problems. For example, there are no methods described for ensuring data quality, timeliness of updates, or a system for reporting errors. Because major decisions will be based on the DEIS tracking database, it is imperative that adequate data are available to support the proposed monitoring system and that it work efficiently and effectively and that it be both transparent and scientifically defensible.

Flaws in a monitoring framework, along with the proposed disturbance thresholds will create an administrative quagmire that hinders or stops oil and natural gas development and other public land uses, while failing to provide any scientifically defensible demographic benefits to GRSG populations. Further, the relationship between the proposed disturbance thresholds and the Appendix J monitoring framework is unclear. For example, there is no clear path by which reclamation information is incorporated into the BLM's monitoring framework. As a result, site-specific anthropogenic disturbances such as well pads and pipelines will be included in the DEIS monitoring, but reclamation and activities and mitigation projects may be ignored such that the disturbance area for energy development and other public land use will not be reduced during subsequent analyses. This would artificially inflate disturbance percentage estimates. Likewise, vegetation alteration or manipulation on private lands for which there is no vegetation monitoring or reclamation data will be captured as disturbance but will not only be reduced due to reclamation and/or mitigation in a meaningful timeframe. This will affect the evaluation of disturbance in state-or range-wide analyses.

The BLM does not clearly define criteria for calculating disturbance. For example, do adjacent ancillary facilities such as the secondary pads for liquid gathering systems count as one or two well pads? Without clear criteria, BLM's data will lack consistency between field offices, and operators will have no certainty regarding implementation.

Additionally, limited funding and staff at BLM will exacerbate the problems within the most essential elements of the BLM's GRSG conservation efforts. We have real concerns that a database managed by a federal agency with tight budgets and limited staff hours for database management may prove inadequate to the task. For example, the Jonah Infill Data Management System (JIDMS) maintained by the BLM and USGS to track disturbance and reclamation, suffers from incomplete data, and the Pinedale Anticline Data Management System (PADMS) database that has not gone online yet. Given funding constraints, it is uncertain that staff or critical technology updates will be available for a new tracking database in Utah. If BLM does

[83] Ramey, R.R., L.M. Brown, and F. Blackgoat (2011) Oil and gas development and greater sage grouse (*Centrocercus urophasianus*): a review of threats and mitigation measures. *The Journal of Energy and Development* 35(1):49-78

move forward with some sort of disturbance threshold, we urge the agency to take a collaborative approach with the states and local groups to assure adequate staff and professional expertise are available for the task at hand.

B. Adaptive Management

The adaptive management strategy described in the DEIS is as follows: 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.[84] 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.[85] Soft triggers indicate when the agencies will consider adjustments.[86] When available, the agencies will consider population trend data from WAFWA and/or state wildlife agencies.[87]

An AMWG will be comprised of BLM, the USFS, FWS, local governments and UDWR. It will provide recommendations to BLM regarding management responses.[88] BLM has made no indication that those that rely on the public lands to produce and provide energy, electricity, food and agricultural products industry will be represented on the AMWG nor has it identified funding for such a group. We question whether BLM may issue such a group with such enormous responsibility without clearly defined roles, adequate representation, specific statutory authorization and compliance with the Federal Advisory Committee Act.

Hard triggers are when agencies will take immediate action to stop "continued deviation" from conservation objectives.[89] 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 amendments.[90] All of these measures could require subsequent NEPA analysis. These glaring examples of regulatory overreach will have vast implications for industry, agriculture, local communities, jobs and the economy.

A mitigation hierarchy (avoid, minimize, restore, offset) is established in the DEIS alternatives.[91] Mitigation onsite is generally required through site-specific, implementation-level NEPA compliance.[92] We urge BLM to remove or decrease unneeded regulatory requirements such as NEPA documentation for mitigation and projects that clearly benefit the species. Regional mitigation strategies are addressed in Appendix F (Regional Mitigation Strategy).[93] An effective adaptive management that affords ample regulatory flexibility as well as adequate safeguards for

[84] DEIS at 2-8.
[85] DEIS at 2-8.
[86] DEIS at 2-6.
[87] *Id.*
[88] DEIS at 2-8.
[89] DEIS at 2-8.
[90] DEIS at 2-8.
[91] DEIS at 2-8.
[92] DEIS at 2-8.
[93] *Id.*

GRSG will be paramount in the future management of the species and its habitat in the planning area. Such a strategy should be clear, concise, and appropriately defined.

C. Mapping

Mapped habitat is not intended to be used at the project level.[94] Field investigations will be required prior to proposed actions in mapped occupied habitat in collaboration with federal and state biologists.[95] This unreasonably shifts the burden to industry to demonstrate what habitat is actually occupied and will result in significant costs, delays and disincentives to operate on federal land or federal minerals. BLM acknowledges that mapped occupied habitat may include areas of non-habitat or areas that are not important to GRSG.[96]

Changes to maps would occur through BLM and USFS planning processes (e.g. plan maintenance and simple plan amendments).[97] We urge BLM to clarify its statement: "[T]he most current approved BLM and Forest Service corporate spatial data will be supported by current metadata and will be used to ascertain GRSG habitat extent and quality."?[98] We appreciate BLM's commitment that data will be consistent with the Data Quality Act.[99] However, we question compliance when BLM admits local data has been omitted and there are inconsistencies between WAFWA-level and local planning-level data.[100] We are aware of issues with the resolution of spatial data currently used by the BLM for habitat mapping. To fully comply with the Data Quality Act, the BLM needs to articulate the process by which it will incorporate higher resolution spatial data produced independently.

The proposed PPMA and PGMA areas identified in the preferred alternative differ from the Sage-Grouse Management Areas (SGMA) that were identified by the State of Utah. The agencies have not properly justified this divergence of PPMA and PGMA from habitat areas mapped by UDWR in the preferred alternative. BLM and Forest Service have failed to utilize UDWR GRSG distribution and habitat maps which are more consistent withUtah GRSG distribution than those in the preferred alternative of the DLUPA/EIS. Instead, it appears that BLM has utilized two-year old data regarding occupied habitat to expand the PPMA and PGMA habitat areas from those mapped by UDWR, rather than using more up-to-date information from the State that became available in 2012. We strongly encourage the agencies to replace the PPMA and PGMA maps in the preferred alternative with those included in Alternative E.

Since Utah BLM was a participant in the development of the state's GSG conservation plan, it is inexplicable that the agencies failed to incorporate the up-to-date mapping underpinning the Utah Plan. We strongly encourage the agencies to replace the PPMA and PGMA maps in the preferred alternative with those included in Alternative E1. These maps represent the best available science and are an integral part of the Utah Plan. Under Alternative E, 97.1% of the birds would be in managed Utah Sage Grouse Management Areas (SGMA) or Wyoming core

[94] DEIS at 2-8.
[95] *Id.*
[96] DEIS at 2-8.
[97] *Id.*
[98] DEIS at 1-19.
[99] *Id.*
[100] DEIS, 3.1 at 3-2.

areas, which would result in sufficient management and protection of both states' GSG populations.

We also request that the agencies abstain from incorporating PPMA and PGMA habitat areas identified in Alternatives B and C, which are considerably more expansive than those in Alternatives D and E and unsubstantiated and unjustified by the most current scientific documentation, into the final Amendments and EIS.

D. Management Objectives

Table 2.1 compares the alternatives.[101] The goals of the five primary alternatives are virtually identical.[102]

1. Identification of PPMA and PGMA Standards

The BLM Preferred Alternative would identify and protect PPMAs for anthropogenic and natural disturbances.[103] It would also restore PPMAs to at least 50% of land cover to provide sagebrush habitat.[104] However, the BLM does not accompany these desired goals with any analysis of their projected cost, feasibility, or impact on other species. We are also concerned that the BLM has not produced any data to demonstrate that the targets for 10-year rolling averages of male sage grouse and leks are achievable, and how the desired targets will enhance genetic connections, especially when the role of female grouse in the population monitoring is completely ignored. Without such scientifically defensible data and analyses, the BLM may be setting itself up for an unnecessary failure.

The NTT Alternative would restore PPMAs to at least 70% of land cover to provide sagebrush habitat to meet GRSG needs.[105]

Alternative E1 would enhance an average of 25,000 acres of GRSG habitat in SGMAs annually and increase the total amount of GRSG habitat within and adjacent to 50,000 acres per year in Opportunity Areas.[106] Alternative E1would also seek to sustain average male lek counts of 4,100 on a 10-year rolling average on a minimum of 200 leks in SGMAs and increase populations of males to 5,000 on a 10-year average.[107] It would also ensure migration paths in SGMAs and ensure long-term genetic connections.[108] Utah would coordinate with BLM, USFS, FWS, state agencies, local governments and others to achieve plan purposes.[109] The State would convene a Working Group including the Department of Natural Resources, the Department of Agriculture and Food, SITLA, NRCS, BLM, USFS and others as needed to coordinate implementation of the plan and assuring monitoring information is shared and efforts to achieve conservation goals are

[101] DEIS at 2-8.
[102] Table 2.1.
[103] Table 2.2, DEIS at 2-11.
[104] Table 2.1, DEIS at 2-11.
[105] Table 2.1, DEIS at 2-11.
[106] Table 2.1, DEIS at 2-11 to 2-12.
[107] Table 2.1, DEIS at 2-13.
[108] *Id.*
[109] *Id.*

progressing.[110] As among the principal users of lands administered by BLM, the oil and natural gas industry must be at the table in any such Working Group.

Alternative E2 would restore native plans and landscapes which most benefit GRSG.[111] It includes removal of invasive plants and trees and considers buffers around core areas and establishes more refined measurable objectives from baseline monitoring data or other evaluations.[112] For these reasons, this alternative provides flexibility that the Trades support for stakeholder inclusion, and feedback mechanisms for evaluating conservation effectiveness.

Alternative E2: Would enhance habitat, maintain connectivity and cooperate with working groups and stakeholders and continue to support the development of seasonal habitat models in Wyoming.[113] This would also use local working group plans, analysis and information to develop conservation objectives for local management of GRSG habitats.[114]

2. Seasonal Restrictions

a. BLM's Preferred Alternative

We question BLM's suggestion that the Preferred Alternative would work in conjunction with local conservation efforts..[115] It would classify some 2.7 million acres as PPMAs and 553,500 acres as PGMAs.[116] However, BLM acknowledges it has not used the most recent data from the State of Utah (see *Mapping* above).[117] The Trades urge BLM to incorporate and rely upon the most recent information. To do otherwise would be inconsistent with the best available science standard under the ESA, the information quality standards of the Data Quality Act and the standards of scientific integrity required by presidential and Interior Department memoranda and orders.

Under the BLM Preferred Alternative, BLM proposes to impose onerous restrictions even outside of GRSG habitat. Such areas, include but are not limited to towns, rock outcrops, alkali - flats or piñon-juniper stands, and would be identified by site-specific review by agency biologists in discussion with the State of Utah and other agencies as appropriate.[118] Local government, industry and agriculture are noticeably absent from such discussions. We urge BLM to provide for appropriate input from such stakeholders, refine its habitat mapping using higher resolution data, delete areas of non-habitat and marginal habitat from consideration, and refrain from imposing restrictions that are not scientifically defensible.

[110] *Id.* (emphasis added).
[111] Table 2.1, DEIS at 2-11 and 2-12.
[112] *Id.*
[113] Table 2.1, DEIS at 2-14.
[114] *Id.*
[115] Table 2.1, DEIS at 2-14.
[116] Table 2.1, DEIS at 2-15.
[117] *Id.*
[118] MA-GRSG-2, Table 2.1, DEIS at 2-16.

We have real concerns that no new roads, maintenance or improvements would be allowed under the BLM Preferred Alternative.[119] Further**,** no new activities would be allowed even on valid existing rights that require such road construction or improvements.[120] We question how such restrictions are compatible with the agencies' statutory missions.

Access for construction, maintenance, etc. would be hindered as operators would be required to avoid sensitive seasons (breeding, brood rearing and winter) and time periods (two hours before and two hours after sunrise near leks during breeding season).[121] BLM does not define what "near" leks means. Moreover, given how BLM defines breeding, brood-rearing and winter, activities could be precluded for nearly the entire year.

BLM would also condition any use on the proposition that activities outside of GRSG habitat would not provide important connectivity between habitats and that impacts from such uses to areas adjoining PPMAs, such as sound or tall structures, would be reduced or eliminated.[122] Even proposed projects within population areas will be subject to site-specific planning, environmental compliance and potential mitigation measures for GRSG.[123] BLM's Preferred Alternative is not scientifically defensible because the BLM has not produced any data to demonstrate that GRSG actually use hypothetical connectivity corridors, avoid tall structures to the detriment of population number, or that the population would decline in number if specific areas of non-habitat were utilized for some other purpose.

Outside of mapped occupied habitat, BLM or the USFS may require surveys to determine if the area provides GRSG habitat prior to authorizing disturbances within 4 miles of an occupied lek in a PPMA (but only in areas that ecologically provide GRSG habitat).[124] BLM cites as authority FLPMA, 43 USC 1701 Sec. 201(a), BLM Manual 6840.04(D)(3); BLM-M-6840.04(E)(2). If an area is determined to contribute to the GRSG life cycle, mitigation will be required as part of project level NEPA analysis per BLM Manual BLM Manual 6840.04(D)(5). Virtually any characteristics of an area could be said to "contribute" to the life cycle of GRSG. Accordingly, draconian measures like this will likely be imposed far beyond what could reasonably be construed as GRSG habitat or having an adverse effect on GRSG population numbers.

We further question the use of a 4-mile criterion as this recommendation is not based upon data but only opinion within the flawed NTT Report. Moreover, the BLM does not acknowledge that data and analyses from the State of Wyoming have shown that there has been no sage grouse population decline in the Pinedale area, as was predicted in the early studies cited in the NTT and DEIS. Rather, populations have been consistently above statewide averages since 1990 and include some of the highest densities of sage grouse in that state, despite intensive oil and natural gas development. Clearly, the projected negative effects of oil and gas on this population were greatly overestimated in those early studies. This can be attributed to the fact that those studies

[119] *Id.*
[120] *Id.* at 2-17.
[121] *Id.*
[122] *Id.*
[123] *Id.*
[124] Table 2.1, DEIS at 2-18.

were conducted before extensive restoration and mitigation efforts for sage grouse were undertaken, and before improved technology had reduced overall environmental impacts. It is imperative that the BLM acknowledge these facts as well as technical information compiled by the BLM on contemporary oil and natural gas well technology and best management practices for wildlife mitigation.

In contrast, Alternative E1 acknowledges some areas within SGMA do not contribute to the life cycle of GRSG.[125] Even then, noise and permanent structures stipulations may be imposed around a lek.[126] In regards to corridors, Alternative E1 provides that it may be appropriate to avoid removal of sagebrush and minimize developments that create physical barriers to GRSG movement.[127] SGMAs are to be reviewed annually.[128] Changes to SGMAs will be reviewed every 5 years unless large-scale events necessitate more frequent adjustments.[129]

Within PPMAs, BLM's Preferred Alternative would reportedly:

> • Maintain or increase sagebrush canopy cover and average patch size in perennial grasslands unless there is a conflict with other special status species;
> • Maintain or increase connectivity and corridors;
> • Reduce conifer encroachment;
> • Maintain or improve understory (grass, forb) and/or riparian areas within breeding and late brood-rearing habitats; and
> • Reduce the extent of annual grasslands adjacent to PPMAs where objectives are not being met.[130]

It should be noted, however, that "[C]onclusive data are not available regarding minimum patch size to support viable populations of GRSG…."[131] We underscore this point with the fact that scientific research has refuted the belief that there is a widely-accepted or "magic" number, in terms of habitat patch size or population number, that can defensibly be used to identify a "viable" population of any species, much less GRSG[132].

Alternative E1 would manage activities within SGMAs based on a hierarchy: (1) avoid; (2) minimize; and (3) mitigate.[133] It would manage to avoid disturbance to the greatest degree possible and coordinate with UDWR when activities may result in disturbance.[134] Existing uses

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[125] MA-GRSG-2, Table 2.1, DEIS at 2-16.
[126] *Id.*
[127] *Id.* at 2-17.
[128] *Id.*
[129] *Id.*
[130] MA-GRSG-3, Table 2.1, DEIS at 2-19.
[131] DEIS at 3-5.
[132] Flather, C.H., G.D. Hayward, S.R. Beissinger and P.A. Stephens (2011) Minimum viable populations: is there a 'magic number' for conservation practitioners? *Trends in Ecology and Evolution* 26(6):307-316;
He, F. and S.P. Hubbell (2011) Species–area relationships always overestimate extinction rates from habitat loss. *Nature* 473: 368-371; Ramey, R.R., J.D. Wehausen, and L.M. Brown (*in press*) Peer review and information quality breakdown in an Endangered Species Act decision: the case of the greater sage grouse.
[133] MA-GRSG-3, Table 2.1, DEIS at 2-19.
[134] *Id.*

and existing NEPA documents are explicitly recognized and shall not be affected.[135] We urge BLM and USFS to adopt and incorporate these important concepts from Alternative E1 as part of the BLM's Preferred Alternative and ultimately the ROD.

The BLM Preferred Alternative would "[M]anage PPMAs so that anthropogenic disturbances cover less than 5 percent of the area used by a population of GRSG regardless of ownership."[136] BLM would use a disturbance calculation identified during site-specific NEPA analysis. We question how BLM can distinguish between towns, airports and reservoirs (which are not considered disturbances) and cabins, access roads, community pits, etc. which are considered disturbances. We believe that the concept of restricting anthropogenic and total disturbances envisioned in the DEIS is fundamentally flawed, and BLM has not provided sufficient scientific data to support the disturbance cap concept or its effectiveness. Efforts to impose a disturbance cap calculation would likely result in an overly complex and unwieldy process. Existing analysis and planning efforts under NEPA require identification of potential risks and impacts, as well as subsequent mitigation measures to be used, which makes a disturbance cap unnecessary.

Further, when determining whether development is appropriate on federal lands, disturbances on private and state lands will count towards the 5% disturbance threshold. While the agencies do not have the authority to restrict development on private lands, they could preclude project authorizations on public lands in order to compensate for disturbances on private lands. This type of management would disadvantage federal leaseholders with no control over developments on private lands and could force them to abandon federal leases and forego significant capital investments. As a result, millions of dollars in annual federal royalty revenue and associated socioeconomic benefits to local communities would be in jeopardy.

The DEIS fails to adequately explain several crucial details about the design and application of the concept:

- What base year would be used to calculate the anthropogenic disturbance thresholds?
- What constitutes a "discrete" anthropogenic disturbance?
- How will the disturbance percentage reflect reclamation or habitat enhancements?
- How will the disturbance database be managed and updated?
- Will GSG population levels be monitored in each zone?
- How will surface use conflicts be resolved?

The agencies have also not explained the differences between temporary and permanent disturbances, and how each will be applied towards the threshold. The agencies define "temporary use" as an activity "considered to be one that is not fixed in place and is of short duration."[137] This definition lacks specificity and could be widely interpreted. Contrarily, Alternative E1 specifically defines "temporary" as "[a]ny ground disturbing activity where the effects would be expected to last less than five years."[138] Oil and natural gas development activities are by nature temporary disturbances. The highest level of surface disturbance

[135] *Id.*
[136] MA-GRSG-4, Table 2.1, DEIS at 2-21.
[137] DEIS at Glossary-26.
[138] *Utah's Conservation Plan for Greater Sage-Grouse.* Page 28. February 14, 2013.

associated with development occurs during the construction drilling and completion phases, which can last from a few weeks to a few months. Once production is achieved, the surface disturbance that results from these activities shrinks dramatically and long-term disturbances represent only a small fraction of the initial disturbance.

Non-anthropogenic disturbances, such as wildfire, have the potential to consume all the available thresholds space under any disturbance thresholds proposal, and would do so in an unpredictable manner. In addition, BLM cannot legally preclude the execution of valid existing rights, including those for current oil and gas leases, approved rights-of-way, and approved construction projects. The policy is especially problematic in areas where a high percentage of federal acreage has already been leased for oil and natural gas development and there is limited or unavailable space under a disturbance threshold. Thresholds could place development on public land at risk of arbitrary preclusion. Further, the proposed inclusion of disturbances on private lands in a thresholds calculation further endangers future projects by a multitude of stakeholders on public lands, as projects undertaken on private lands are not subject to the same planning and permitting processes and could quickly and capriciously deplete available thresholds space.

For these reasons, we believe that the concept of restricting anthropogenic and total disturbances envisioned in the DEIS is fundamentally flawed, and should therefore be eliminated from consideration in future GSG management. The agencies have not provided sufficient scientific data to support the disturbance thresholds concept or its effectiveness, and the calculation methodology is fraught with challenges that will prevent consistent and clear implementation.

Alternative E1, under certain circumstances, would impose a general limit on new permanent disturbance of 5 percent of habitat on state or federal lands within any particular SGMA.[139] This alternative recognizes that difficulties may arise in calculating disturbance and provides for review efforts coordinated by Utah's Public Lands Policy Coordination Office.[140]

By comparison, Alternative E2 provides that, inside core areas, the USFS will consider and evaluate measures that limit or reduce the density of oil and gas or mining to no more than an average of 1 location per 640 acres, and limit all surface disturbance (any program area) to no more than 5 percent of the core area landscape using the Density Disturbance Calculation Tool.[141] We caution the BLM against adopting this restriction as it is based upon opinion rather than data, and no studies to date, including the primary cited study by Holloran (2005), have tested the effectiveness of this proposed restriction.

3. Reclamation versus Restoration

The BLM Preferred Alternative defines anthropogenic features as, among others: roads, transmission lines, substations, wind turbines, oil and gas wells, geothermal wells and associated facilities, pipelines, landfills, homes and mines. Where the 5 percent disturbance threshold is already exceeded, no further disturbances will be allowed until sufficient habitat has been

[139] MA-GRSG-4, Table 2.1, DEIS at 2-21.
[140] *Id.* at 2-22.
[141] *Id.* at 2-21.

restored or reclaimed to maintain the disturbance threshold.[142] In the BLM Preferred Alternative, reclamation bonds would be required in all instances for "full restoration" to the condition prior to disturbance.[143] However, BLM should recognize that long-term restoration can take years, if not decades, in arid ecosystems such as northeastern Utah and southwestern Wyoming. Depending on the climate and poor soil conditions, as well as the plant communities being established, this could potentially take many years to accomplish, particularly in areas with arid climatic conditions and sandy soils. If an initial "permitting rush" occurs whereby multiple project proponents submit projects as fast as possible in anticipation of declining threshold space, subsequent projects could be significantly delayed while operators wait for prior disturbances to be reclaimed and fully restored. Reclamation efforts that have been shown to be effective in similar climate and soil conditions should not be counted against the threshold. The preferred alternative and the ROD, then, should take a more flexible approach.

Reclamation goals can be more readily met by using performance-based standards and allowing companies flexibility to address unique conditions at each site. For example, seed mixes and soil amendments may need to be altered to account for differing soil conditions and topographies.

"Restoration" is not sufficiently and realistically defined in the DEIS.[144] Even the process for reclamation appears to be more onerous than necessary.[145] For example, monitoring teams include "at a minimum," a wildlife biologist, rangeland management specialist and another resource specialist, whom would have to evaluate and provide recommendations on whether standards were met.[146] The standards should be much more workable and should focus on reclamation rather than restoration. Otherwise, development will be restricted to the detriment of local communities, jobs and the economy.

4. Water

The BLM Preferred Alternative also requires restoration of hydrologic functions.[147] Water-consuming activities would be restricted by the DEIS.[148] While we question what this means, the DEIS does not, and cannot, grant BLM nor operators the authority to violate state water laws or impact existing water rights. Utah law provides that, "[A]ll the waters in this state…are hereby declared to be the property of the public, subject to all existing rights to the use thereof." Utah Code, § 73-1-1 (1), (3). Wyoming also explicitly protects priority of appropriation for beneficial uses and the right to appropriate waters. Wyo. Const. art. VIII, § 3. Here, the DEIS proposes to interfere with the ability to appropriate and use water in the West. This unwarranted federal intrusion into state water law could affect water secured from private, public or tribal lands. For over 150 years, Congress has deferred to the States in matters related to the appropriation and administration of water. BLM cannot undo this with the stroke of a pen. BLM has no statutory authority to impose this roadblock to water use for oil and gas on federal

[142] MA-GRSG-4, Table 2.1, DEIS at 2-24.
[143] *Id.* at 2-145.
[144] *Id.* at 2-26.
[145] *Id.* at 2-27.
[146] *Id.* at 2-28.
[147] MA-GRSG-4 and 4, Table 2.1, DEIS at 2-25.
[148] DEIS at 4-119.

lands and is mandated to protect water rights as "valid existing rights." Accordingly, these restrictions on water use should be deleted from the DEIS.
On a related note, we urge the BLM to ensure any measures required for the disposal of produced water and mitigation against potential for West Nile Virus are consistent with multiple-use and state water laws.

5. Timing Restrictions in PGMAs

The BLM Preferred Alternative would not allow anthropogenic disturbances or activities disruptive to GRSG (including even scheduled maintenance activities) within PPMAs in seasonal GRSG habitats, during seasonal use periods.[149] The BLM Preferred Alternative's definition of breeding and early brood rearing is much broader than Alternative E1. The BLM Preferred Alternative considers breeding and nesting periods (Feb. 15 to June 15), brood rearing (April 15 to July 15) and winter (Nov. 15 to March 15) such that companies would potentially have no more than three months per year for operations or scheduled maintenance.[150] This is unduly burdensome and unacceptable for those activities that may be necessary to assure safe continuity of operations or to protect the environment. Alternative E1 is slightly better and therefore preferable as it considers early nesting and brood rearing as March 15 to June 30.[151] Exceptions to seasonal restrictions in the BLM Preferred Alternative are available, but the standards it provides for granting such exceptions are so subjective that virtually any activity could be restricted.[152]

Draconian timing restrictions apply even to PGMAs. For example, discretionary activities would have to meet noise restrictions; permanent tall structure restrictions and even environmental compliance documents would have to consider how to limit habitat fragmentation, none of which the BLM can defend with data that show an effect on GRSG population numbers.[153] BLM has made it clear exceptions will be virtually impossible to achieve. For example, exceptions can be allowed if: surveys determine the lek is not active or is no longer occupied; if the proposed activity will not result in a permanent disturbance and will not take place beyond the season being excepted; if the project plan and NEPA document demonstrate the project would not impair the function of seasonal habitat, life-history, or behavioral needs of GRSG; and if the potential short-term impacts from vegetation treatment are off-set by long-term improvement to the quantity or quality of habitat (e.g., seedings, juniper reduction).[154]

Other exceptions can occur if portions of the area do not include habitat or are outside the defined area, as determined by the BLM/ Forest Service in discussion with the State of Utah – and if indirect impacts would be mitigated.[155] These restrictions in PGMAs are simply unacceptable and infeasible because they cannot be shown by the BLM to benefit GRSG population numbers. While these restrictions may be waived if off-site mitigation is successfully completed in PPMAs, the oil and natural gas industry's experience is that agencies would never

[149] MA-GRSG-5, Table 2.1, DEIS at 2-28.
[150] *Id.*
[151] DEIS at 2-28.
[152] *Id.* at 2-30.
[153] MA-GRSG-7, Table 2.1, DEIS at 2-35.
[154] MA-GRSG-7, Table 2.1, DEIS at 2-36.
[155] *Id.* at 2-37.

approve disturbances to habitat during the sensitive seasons, even if GRSG are not present.[156] Again, this is an unworkable restriction.

Alternative E1 has similar timing restrictions.[157] However, time and distance stipulations would be site-specific and established in coordination with the local UDWR biologist.[158] In SMGAs, the "avoid, minimize and mitigate" hierarchy would be used. Permanent disturbances should not be located within leks or within 1 mile of leks unless it is not visible to the lek.[159] Disturbances outside the leks should not produce more than 10 decibels above background levels at the edge of the lek during breeding season.[160] In winter habitat, avoidance should be employed when possible. If that is not possible, then minimization (e.g. taking advantage of topography) will be required. If that is not sufficient, then mitigation is required. Even outside of SGMAs, avoidance, minimization and mitigation is required.[161]

We appreciate that the BLM Preferred Alternative recognizes predation as a significant issue.[162] Unfortunately, the action alternatives are limited to land management actions, such as eliminating food sources and applying vegetation treatment and grazing management and do not address the need that may exist in some circumstances for predator controls. Rather than relying solely on these indirect measures, whose effectiveness is unsupported by scientific literature, we recommend that the BLM consult with and include recommendations by experts at the USDA-Animal and Plant Health Inspection Service (APHIS).

Alternative E1 seems to be internally inconsistent. On the one hand it says areas outside of SGMAs would not be managed for GRSG.[163] However, it provides that outside of SGMAs, avoidance, minimization and mitigation is required.[164] This inconsistency should be resolved in the final EIS and the ROD.

By comparison, Alternative E2 provides surface occupancy and surface disturbance will be prohibited or restricted within a .25 mile radius of occupied leks or within 2 miles of the lek perimeter during March 15-June 30 to protect nesting and early brood rearing.

6. Historical versus Current Habitat

We take issue with BLM's mandate to "restore historical habitat" to maintain or enhance connectivity. Historical habitat is inherently unquantifiable, speculative and an inappropriate management objective given current land use patterns and the agencies' multiple-use mandates.[165] Historical records are not based on quantitative surveys and cannot be compared to

[156] *Id.*
[157] *Id.* at 2-28 to 2-29.
[158] *Id.* at 2-29.
[159] *Id.* at 2-30.
[160] *Id.*
[161] *Id.* at 2-34.
[162] MA-GRSG-6, Table 2.1, DEIS at 2-34.
[163] MA-GRSG-7, Table 2.1, DEIS at 2-34.
[164] *Id.* at 2-33 to 2-34.
[165] MA-GRSG-8, Table 2.1, DESI at 2-37 to 2-38.

modern numbers.[166] Moreover, the science on GRSG movements between habitats is questionable and remains unsettled. For example, recent studies utilizing genetic and GPS tracking data have shown that GRSG disperse over far greater distances than previously thought (i.e. >250km). However, we support the goal of restoring and rehabilitating habitat from piñon-juniper invasion as described in "Opportunity Areas" to provide additional habitat in E1.[167]

Incredibly, the prescriptive and unworkable recommendations contained in the BLM Preferred Alternative apparently do not go far enough and future, yet undefined measures will be imposed. BLM states, "[T]he use restrictions, stipulations, seasonal constraints, etc. included for GRSG habitat are intended to be the initial and not the entirety of the protections."[168] Project proponents and BLM/Forest Service offices should develop additional mitigation measures at the project level to address the site-specific issues and impacts associated with local effects of specific projects. It is unclear how such an open-ended precautionary focus on GRSG protections is consistent with NEPA or multiple-use statutes.[169]

7. Mitigation

While some operators have real concerns about the appropriate use of off-site mitigation, we support appropriate use but only with operator consent. Contrary to BLM's assertion, research and monitoring should qualify as mitigation.[170] Otherwise, no mitigation effort could be rooted in credible science. BLM's preference is that mitigation for impacts within PPMAs will occur within the same population area of the impact.[171] For off-site mitigation associated with PGMAs, project proponents will work closely with the BLM and the State of Utah to identify PPMAs where off-site mitigation could occur.[172] The ratio for mitigation, either onsite or off-site, will be set at the project level and will depend on the type and quality of the habitat being affected as well as the nature of the action affecting the habitat.[173]

8. Vegetation

We are troubled that, in some cases, action alternatives elevate vegetation treatments for GRSG above measures for other species and/or the agencies' multiple use mandates.[174] Moreover, the BLM's Preferred Alternative has unrealistic standards for vegetation with exceptions based only upon rigid and subjective criteria.[175] We urge BLM to revise the vegetation section to be more consistent with current RMPs.

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[166] *See* Zink 2013.
[167] MA-GRSG-8, Table 2.1, DESI at 2-37 to 2-38.
[168] MA-GRSG-8, Table 2.1, DESI at 2-39 (emphasis added).
[169] *Id.*
[170] MA-GRSG-9, Table 2.1, DESI at 2-40.
[171] *Id.*
[172] *Id.*
[173] *Id.*
[174] See generally MA-VEG-2.
[175] MA-VEG-9, Table 2.1, DEIS at 2-50.

9. Travel Management

Access to public land is critical for industry, local communities and for recreation and other permitted uses. BLM's Preferred Alternative is far too restrictive here. We oppose the proposed travel management plan in the BLM Preferred Alternative and encourage BLM to incorporate the approach in Alternative E1 where travel management plans are developed and enforced by the counties.[176]

For PPMAs, the BLM Preferred Alternative would, require the use of existing roads to access valid existing rights that are not yet developed.[177] Any new roads would be constructed "to the absolute minimum standard necessary."[178] Such roads would be included in disturbance totals and mitigation requirements would be applied.[179]

The BLM Preferred Alternative would also eliminate roads and trails.[180] Access to public lands is critical and we urge BLM to keep the public lands open, consistent with its multiple-use mandates. This approach is questionable, given that studies have only shown limited avoidance of heavily used roads but have not reported negative impacts of secondary and access roads to GRSG population numbers.

Under the No Action Plan, BLM ROWs and USFS special use authorizations (SUAs) in GRSG habitat include:

- Open: 3,219,000 acres
- Avoided: 67,200 acres
- Excluded: 27,600 acres

Outside of GRSG habitat, but in population areas, include:

- Open: 2,344,400 acres
- Avoided: 50,800 acres
- Excluded: 74,900 acres[181]

The BLM Preferred Alternative drastically reduces acreage available for ROWs and SUAs. For example, in above-ground linear ROWs, BLM and the USFS would only allow:

- Open – 522,600 acres
- Avoided – 1,368,900 acres
- Excluded – 1,422,300 acres[182]

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[176] *Id.* at 2-90.
[177] MA-TTM-7, Table 2.1, DEIS at 2-91 to 2-92.
[178] *Id.*
[179] *Id.*
[180] *Id.* at 2-92 (MA-TTM-8); see also MA-LAR-26 Table 2.1, DEIS at 2-102.
[181] MA-LAR-1, Table 2.1, DEIS at 2-93.
[182] *Id.*

Lands open to ROWs and SUAs would decrease by an astonishing 2.7 million acres, while lands to be avoided would increase by 1.3 million acres.[183]

Areas outside PPMAs and between 1 and 4 miles of occupied leks within a PPMA would require surveys for GRSG habitat.[184] If such habitat contributes to GRSG life-cycle, it would be designated as an exclusion area.[185] If inventories do not identify GRSG habitat, the area would be designated as an avoidance area (to address indirect impacts) and development could only occur if it meets both noise and tall structure restrictions.[186]

During renewal, amendment, or reauthorization of existing permits, BLM also proposes modifying existing power lines to mitigate impacts within PPMAs.[187] For ROWs within PGMAs, avoidance areas could be waived but not during periods of seasonal operating restrictions, which could occupy as many as nine months of a given year. Given these restrictions, avoidance areas and exclusion areas are virtually synonymous.

The designations in Alternative E1 are preferable:

ROWs and SUAs in GRSG habitat:
- Open: 632,200 acres
- Avoided: 2,654,000 acres
- Excluded: 27,600 acres

ROWs and SUAs outside of GRSG habitat:
- Open: 2,292,000 acres
- Avoided: 103,200 acres
- Excluded: 74,900 acres[188]

Moreover, unlike the BLM Preferred Alternative, GRSG habitat outside of SGMAs requires no additional specific management direction.[189] We support this concept and urge BLM to adopt it in the Preferred Alternative and the ROD.

Land tenure adjustments may be an effective way to consolidate and better manage BLM lands. Accordingly, we urge BLM to improve the ability to pursue such measures rather than imposing restrictions in the DEIS.[190] BLM does, however, propose to acquire state and private lands with mineral rights by purchase or exchange.[191] Placing more private and state lands into federal ownership is counterproductive, imposes financial burdens on communities, and presumes that BLM land management is superior to state and private land management. BLM should also

[183] *Id.*
[184] MA-LAR-2, Table 2.1, DEIS at 2-96.
[185] *Id.*
[186] *Id.*
[187] MA-LAR-5, Table 2.1, DEIS at 2-101 to 2-102.
[188] MA-LAR-1, Table 2.1, DEIS at 2-93.
[189] MA-LAR-8, Table 2.1, DEIS at 2-103.
[190] *See* MA-LAR-9, Table 2.1, DEIS at 2-104.
[191] *See* MA-LAR-10, Table 2.1, DEIS at 2-104.

recognize the contributions of numerous scholars[192] whom have reported on the value of private land stewardship to the conservation of threatened and endangered species, including Deputy Assistant Secretary of Fish and Wildlife and Parks, Michael Bean. We encourage BLM to implement those management approaches that can be accomplished without removing lands in the planning area from private ownership and control.

10. Unleased Federal Fluid Mineral Estate: BLM Preferred Alternative

The BLM Preferred Alternative is far too restrictive with respect to unleased federal fluid mineral estate. For example, areas outside PPMAs but within 1 mile of occupied leks which are within PPMAs, would be open to leasing fluid minerals but subject to no surface occupancy ("NSO") stipulations.[193] PPMAs within 4 miles of such occupied leks would be subject to NSO stipulations. We encourage BLM to rely on less restrictive controlled surface use ("CSU") and timing limitations ("TLs") rather than NSO stipulations.

In PPMAs and beyond 4 miles from an occupied lek, areas would be subject to CSU stipulations and timing stipulations where CSU stipulations include noise and tall structures.[194] However, operators must also submit a site-specific plan of development for roads, wells, pipelines and other infrastructure to "limit habitat fragmentation" prior to any development being authorized, and demonstrate the development does not exceed the 5 percent disturbance limit.[195]

Areas outside PPMAs and within 4 miles of occupied leks within a PPMA, would be subject to CSU stipulations. Development could occur if it adhered CSUs on noise and tall structures.[196] Moreover, required design features (RDFs) identified in Appendix J would be attached as lease notices to all new leases in PPMAs and applied during permitting as conditions of approval ("COAs") unless one of the following is identified in the NEPA analysis:

- A specific design feature is determined not to be applicable to the site-specific conditions of the project/activity;

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[192] Adler, J.H. 2008. Money or nothing: the adverse environmental consequences of uncompensated land use controls. *Boston College Law Review* 49:301-366; Adler, J.H. 2011. The Leaky Ark. The American. October 5, 2011. Available at http://www.american.com/archive/2011/october/the-leaky-ark/;
Baur, D.C., M.J. Bean, and W. R Irvin. 2009. A Recovery Plan for the Endangered Species Act. *Environmental Law Reporter* 39:10006-10011; Bean, M.J. 2002. *Overcoming Unintended Consequences of Endangered Species Regulation.* Idaho L. Rev. 38:409-414; Bean, M.J. 1999. Testimony before the House Resources Committee on Implementation of the Endangered Species Act. May 26, 1999;
Bean, M.J. *The Endangered Species Act and Private Land: Four Lessons Learned From the Past Quarter Century*, 28 Envtl. L. Rep. (Envtl. Law Inst.) 10,701, 10,706 (1998);
Keystone Center. 2006. The Keystone Working Group on Endangered Species Act Habitat Issues, Final Report. Available at http://www.keystone.org/spp/documents/ESA Report FINAL 4 25 06 (2).pdf.; Paulich, N. 2010. Increasing private conservation through incentive mechanisms. *Stanford Journal of Animal Law & Policy* 3:106-158; Ruhl, J.B. 2012. The Endangered Species act's fall from grace in the Supreme Court. *Harvard Environmental Law Review*. 36:487-532.
[193] MA-MIN-19, Table 2.1, DEIS at 2-133.
[194] MA-MIN-19, Table 2.1, DEIS at 2-133 to 2-134.
[195] MA-MIN-19, Table 2.1, DEIS at 2-134.
[196] MA-MIN-19, Table 2.1, DEIS at 2-134 to 2-135.

- A proposed design feature or BMP is determined to provide equal or better protection for GRSG or its habitat;
- Analyses conclude that following a specific feature will provide no more protection to GRSG or its habitat than not following it, for the specific project being proposed.[197]

The 4-mile NSO requirement, however, is without a sound scientific basis. This proposed requirement is based solely on the opinions of selected authors involved in the production of the NTT Report, and remains untested in the field. We urge the BLM not to rely on such speculative restrictions.

In addition, BLM would impose a minimum lease size of 640 contiguous acres of federal mineral estate within PPMAs.[198] Smaller parcels could be leased only in certain circumstances, e.g. when leasing is necessary to protect the federal mineral estate from drainage or for unit or communitization agreements.[199] This restriction is unprecedented and unnecessary; in many cases, current leases preclude BLM's ability to "configure" 640 acre tracts. In addition, operators may need to lease parcels smaller than 640 contiguous acres in order to ensure that economic oil and natural gas development from adjacent federal, state, or private leases can be realized.

Again, imposing such burdens on industry is contrary to BLM's statutory multiple-use mandate. Moreover, the science upon which these measures are based falls short of the standards of the ESA, the Data Quality Act, presidential and Interior Department memoranda and orders.

11. Unleased Areas within PGMAs:[200] BLM Preferred Alternative

Again, we find BLM's Preferred Alternative to be onerous and unnecessarily restrictive and request that it be reconsidered. Where leasing or development is allowed within PGMAs, development could occur with CSU stipulations for noise and tall structure restrictions. Stipulations within PGMAs (closure or restrictions) could be waived, except for the seasonal stipulations, if off-site mitigation coordinated with BLM/Forest Service and the State of Utah is successfully completed in PPMAs.

12. Unleased Federal Fluid Mineral Estate:[201] Alternative E1

The Trades believe Alternative E1 provides a more balanced approach that properly considers statutory multiple use mandates. Unleased Areas within SGMAs would be subject to NSO and CSU stipulations and timing stipulations. Habitat within SGMAs would have NSO stipulations within 1 mile of an occupied lek unless it is not visible to the lek. Avoid disturbance in the following seasons and habitats (specific limits for seasonal stipulations would be based on site-specific conditions, in coordination with the local UDWR biologist):

[197] MA-MIN-19, Table 2.1, DEIS at 2-135.
[198] *Id.* at 2-135 to 2-136.
[199] *Id.*
[200] MA-MIN-20, Table 2.1, DEIS at 2-136 to 2-139.
[201] MA-MIN-19, Table 2.1, DEIS at 2-133 to 2-136.

• Winter habitat from Nov 15 – Mar 15.
• Nesting and brood-rearing areas from Apr 1 – Aug 15.
• On leks from Feb 15 – May 15

Where leasing/development is allowed within SGMAs, the following CSU stipulations would apply: no new permanent disturbances within the lek; no new permanent tall structures within 1 mile of the lek if visible from the lek; no noise more than 10 decibels above ambient (although what constitutes an ambient or background level remains undefined) level at the edge of the lek during breeding season; no activity from 2-hours before sunrise to 2-hours after sunrise when the lek is active; avoid disturbances:

o On leks from Feb 15 – May 15 (lek attendance or breeding).
o from Apr 1 – Aug 15 (nesting or brood rearing).
o Nov 15 – Mar 15. (winter habitat)
o Specific time and distance determinations for seasonal stipulations would be based on site-specific conditions, in coordination with the local UDWR biologist.
• Avoid disturbance within SGMAs during seasonally important times if possible. Project proponents must demonstrate why avoidance is not possible.
• If avoidance in SGMAs is not possible, minimize as appropriate to the area (e.g., try to minimize effects by locating development in habitat of the least importance, take advantage of topography to screen disturbances, or maintaining and enhancing wet meadow and riparian vegetation).
• After minimization, mitigation is required (see mitigation section).
• Cumulative new permanent disturbance should not exceed 5 percent of surface area of nesting, winter, or other habitat, within SGMAs.
• Manage SGMAs to avoid barriers to migration, if applicable.

While we can appreciate the intent behind these lek protection measures, we wish to point out that the BLM has not provided any data to indicate that GRSG females are not breeding with males on leks that exceed the recommended noise thresholds or disturbance restrictions.

13. Unleased Areas outside SGMAs:[202] Alternative E1

Again, Alternative E1 takes a more balanced approach. Areas outside of SGMAs would not be managed for GRSG conservation under Alternative E1.

14. Leased Federal Fluid Mineral Estate:[203] BLM Preferred Alternative

In PPMAs, restrictions would be applied through and upon completion of the environmental record of review (43 CFR 3162.5), including NEPA compliance (e.g., approval of an APD, Sundry Notice, Master Development Plans, etc.). In doing so, the agencies would evaluate, among other things: whether the conservation measure is "reasonable" (43 CFR 3101.1-2) with the valid existing rights; and whether the action is in conformance with the approved LUP.

[202] MA-MIN-20, Table 2.1, DEIS at 2-136 to 2-139.
[203] MA-MIN-21, Table 2.1, DEIS at 2-139-2-146.

In addition to the 5 percent disturbance limitation within PPMAs, BLM would require additional "reasonable protective measures" via Written Orders of the Authorized Officer (43 CFR 3161.2) consistent with the lease terms. Given the exhaustive regulatory measures already included herein, it is inconceivable that even additional measures could be consistent with valid existing rights and the agencies' statutory multiple-use mandates. Where there are few GRSG populations, even more action would be required, (e.g., siting/designing infrastructure, hastened habitat restoration).

Even geophysical exploration would be subject to seasonal timing limitations and RDFs as permit COAs within nesting and brood-rearing habitat and winter concentration areas. These restrictions outright exclude such activity for roughly half of each year and should be reconsidered.

15. Leased Federal Fluid Mineral Estate:[204] Alternative E1

Under E1, all existing uses are explicitly recognized and shall not be affected by the implementation of this alternative. BLM hardly makes the same assurances in its BLM Preferred Alternative. In addition, Alternative E1 provides that GRSG conservation measures identified in the associated NEPA documents for each of these projects would continue to be implemented and that provisions of this plan would not be added to the measures identified in each specific project. Accordingly, Alternative E1 affords a much more preferable approach than BLM's Preferred Alternative.

16. Appendix J – Required Design Features For Fluid Minerals

Appendix J contains design features found in the NTT Report that require a myriad of measures aimed at protecting GRSG. However, no documentation is provided showing that any of these RDFs have been proven effective over time. Where is the scientific evidence available that demonstrates these RDFs would result in a reduction of impact to GRSG and its habitat? The NTT is relying upon a one-size-fits-all approach that fails to take into account local conditions, including unique habitat and threats, and socio-economic factors. As such, the NTT RDFs are needlessly restrictive, scientifically unfounded, and ignore specific cause and effect mechanisms. Most egregiously, the majority were designed without any benefit of tracking and testing of the effectiveness of currently required BMPs and mitigation measures. Moreover, many of the NTT BMPs fail to acknowledge 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, and that the agency may not have the legal authority to require implementation of these measures unilaterally.

We recommend that BLM revisit its design features and mitigation to ensure they are consistent with valid existing rights, technically feasible and appropriate and that they maintain the level of flexibility required when their use is considered on a site-specific basis. In accordance with current law and regulation, it is inappropriate for the RMP to establish site-specific requirements at a project level as is proposed in the DEIS. Moreover, many of the design features (addressed

[204] MA-MIN-21, Table 2.1, DEIS at 2-139.

later in these comments) outlined in the NTT Report reflect a distinct lack of understanding of the activity requirements during the oil and gas exploration and development process.

While some of these design features may prove effective in many instances, they should rather be incorporated as "preferred" or "suggested", and not "required." Site-specific circumstances may dictate that certain design features are not technically feasible, economic, or appropriate, and should not be assumed to be universally effective or applicable. Exceptions are allowed for in the DEIS but the burden is on the operator to prove that the RDF is unnecessary, rather than the agency demonstrating that the design feature is necessary. The agencies should retain a list of practical best management practices (BMP) that are effective and can be applied based on site-specific circumstances, rather than required design features that may not be universally applicable.

Evaluation of RDFs on a "site-specific basis" and applying them only when "reasonable" makes sense and is appropriate. In addition to eliminating or modifying RDFs to establish consistency with Executive Order 2011-5, we recommend that BLM adopt limitations to the application of RDFs similar to the Lander Proposed RMP/EIS to institute consistency across BLM Field Offices.

With respect to split estate lands, BLM needs to specify how the rights of private landowners will be protected. As such, BLM needs to incorporate proper mechanisms for working with landowners and lessee's so as not to unnecessarily delay development activities. In addition, specific parameters need to be clearly articulated for any monitoring and mitigation plan, i.e., scope, requirements, costs and timing. We recommend that BLM work with operators, other land users, and UDWR 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.

Following are comments addressing a sampling of especially problematic RDFs:

a. Water Impoundments

***COMMENT**: Such a program can only be viewed as a needless waste of federal taxpayer dollars because the State of Utah already has the legal jurisdiction to review and approve construction plans associated with State waters. Additionally, the NTT recommends management of produced waters through re-injection at facilities through Underground Injection Control ("UIC") Permitting which would also constitute a needless duplication of the UIC Permitting Program already under state jurisdiction. Establishing these new federal programs would be a waste of manpower and tax dollars because they would merely attempt to duplicate State programs.*

b. Pest Management

The NTT Report also recommends pest management through a number of pesticide applications. However, mosquitoes are already sufficiently managed and there are new technologies other than larvicides that have been proven effective to controlling mosquito populations.

RDF Overbuild size of ponds for muddy and non-vegetated shorelines.[205]

Restrict pit and impoundment construction to reduce or eliminate threats from WNV.[206]

Remove or re-inject produced water to reduce habitat for mosquitoes that vector WNV.[207]

COMMENT: According to data from the Centers for Disease Control ("CDC") the risk to avian species from WNV has declined to virtually nothing since 2003. This is an example of where only a portion of the available information is used to address the impacts, in this case of WNV on GRSG, resulting in onerous and unfounded mitigation requirements. We recommend that rather than focusing on the minimal threat of WNV, BLM more appropriately focus its attention on the highly significant issue of rampant predation of GRSG.

In an effort to avoid Cx. Tarsalis breeding, this RDF would increase larval habitat for Culicoides sonorensis, a vector of blue tongue disease (Schmidtmann et al. 2000). The proposal to trade one viral vector habitat for another can hardly be construed as beneficial. Without question, the mortality impact of Culicoides sonorensis on wild ruminants' populations would be far more devastating than WNV in this semi-arid region. In fact, not only are food sources such as white-tail and mule deer populations currently under attack in Montana by epizootic hemorrhagic disease virus ("EHDV"), cattle infections have also been reported resulting in economic loss due to EHDV elsewhere.[208] Therefore, these management approaches on produced waters clearly are not in the best interests of Utah's mammalian food sources or mammalian related economics.

c. Fluid Mineral Operations – Priority or General Habitat

Cluster disturbances, operations (fracture stimulation, liquids gathering, and other disturbances), and facilities".

COMMENT: Clustering disturbances may not be possible due to surface disturbance 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.

Based on the recent release of IM 2013-152 "Commingling" and existing rules governing "Off Lease Measurement", does the BLM have a plan in place to approve these requests for commingling and off lease measurement of oil and gas for areas where wells may be located within priority areas and the pipelines and treating facilities are located outside priority areas? Due to the limited disturbance and parameters

[205] Appendix J at 3.
[206] Appendix J at 3-4.
[207] Appendix J at 3.
[208] Ruder, M.G., Parasites and Vectors 201, 5:236

outlined throughout this document, this will likely become an issue for future development within GRSG habitat and BLM needs to have a plan in place to address these issues.

Use directional and horizontal drilling to reduce surface disturbance.

COMMENT: We recognize the benefits of pad drilling and the use of existing pads to reduce the surface footprint of oil and gas activities. However, shallower formations may not be conducive to directional or pad drilling. There could be downhole geologic constraints that do not allow an existing pad to be used or even pad drilling. Therefore, we recommend that the following phrase be added to this statement, "to the extent technically and economically feasible." As previously explained, directional and horizontal drilling is not technically feasible in all cases. This requirement must be revised to take such limitations into account.

Establish trip restrictions or minimization through use of telemetry and remote well control.

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. We recommend that the following phrase be added to the end of this sentence, "….unless the operator can demonstrate it is not economically feasible."

Apply a phased development approach with concurrent reclamation.

COMMENT: If the term "phased development" means limiting well development and the life of wells through production before moving into new areas, this is not feasible due to federal lease terms along with other legal requirements. We strongly recommend that BLM delete any references to "phased development" in the final EIS and RMP.

Place liquid gathering facilities outside of priority areas…

COMMENT: Based on the recent release of IM 2013-152 "Commingling" and existing rules governing "Off Lease Measurement," does the BLM have a plan in place to approve these requests for commingling and off lease measurement of oil and gas for areas where wells may be located within priority areas and the pipelines and treating facilities are located outside priority areas? Due to the limited disturbance and parameters outlined throughout this document, this will likely become an issue for future development within GRSG habitat and BLM needs to have a plan in place to address these issues.

Place new utility development (power lines, pipelines, etc.) and transportation routes in existing utility or transportation corridors.

Bury distribution power lines.

COMMENT: Industry has offered to bury pipelines for years. However, BLM is proposing that multiple operators use the same ROW. It is unclear whether BLM has

considered the legal implications of this requirement. First, how will it be determined which party will be responsible for a joint ROW? Has BLM considered how the liability with multiple facilities will be addressed, such as cost, safety and potential environmental risks? Only until these factors are clearly addressed would BLM's proposal be ripe for consideration.

BLM must recognize that some designated ROW corridors are already in use and that valid existing rights must be honored. Under what authority can BLM require modification of an existing ROW? In addition, given the recent release of IM 2013-152 "Commingling" and existing rules governing "Off Lease Measurement", what plan does BLM have in place to approve requests for commingling and off lease measurement of oil and gas where wells may be located within priority GRSG habitat and the pipelines and treating facilities are to be located outside priority GRSG habitat? Due to the limited disturbance and parameters outlined throughout the DEIS, this will likely become an issue for future development within priority GRSG habitat and BLM needs to have a plan in place to adequately address these concerns.

Cover all drilling and production pits and tanks regardless of size with netting or some other BLM-approved cover method.

COMMENT: It is virtually impossible to install fine mesh netting over larger pits. BLM must acknowledge that wind and snow considerably compromise the netting and that maintaining this type of netting in such situations is characteristically impossible and should be eliminated.

Clean vehicles in a manner that prevents transport of weeds.

COMMENT: This RDF fails to describe how the wash areas and runoff associated with wash stations will be handled. Can the fluid and associated substances be hauled off, injected or disposed of at a facility onsite and are special permits required? This RDF attempts to address concerns regarding a perceived problem but fails to fully consider the ramifications of such a requirement. What solution does BLM intend to utilize for the general public or recreationalist crossing Public Lands on motorized and non-motorized forms of transportation and how this issue will enforced?

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

COMMENT: While many companies use pitless/closed-loop drilling technology, BLM must realize that some rigs are not equipped for this practice. This would be particularly true of smaller rigs used for shallow formation development. Therefore, mandating closed systems is unacceptable for all projects. Further, we recommend that any requirement that fluids, drilling mud and cuttings must be disposed of in landfills be carefully reassessed. If the content of fluids, muds and cuttings are not an environmental concern, why shouldn't those constituents be managed onsite? There still exists in the Resource Conservation and Recovery Act ("RCRA") an exemption for drilling wastes as defined in the law and in EPA guidance. We see no need to haul benign material to landfills which will increase traffic on the road and present a safety risk and a hazard to

wildlife. It is recommended that only under certain circumstances would cuttings, fluids and mud be hauled offsite for disposal, such as when there is a question of applicability of the RCRA exemption.

Remove or re-inject produced water.

COMMENT: 40 CFR 435.50 (Subpart E) provides that produced water from onshore facilities west of the 98th meridian may be used in agriculture or wildlife propagation. There is often a considerable lack of surface water in Northwest Colorado and beneficial use of surface discharge water by ranchers and wildlife is essential. The suggested management of removing produced waters as suggested by the NTT would result in huge habitat and water resource losses to GRSG. Moreover, the state already has jurisdictional oversight of the surface discharge monitoring program on non-tribal lands. Therefore, it would be wholly inappropriate for BLM to attempt to implement this poorly conceived NTT BMP in the planning area.

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.

COMMENT: This requirement is completely inconsistent with the previous background of 39 dBA background plus the 10 decibel threshold. This overly restrictive threshold is based on a questionable study referenced directly in the NTT Report and will be difficult, if not impossible to achieve. Specifically, noise studies cited in the NTT provided no evidence that noise associated with oil and natural gas development resulted in a GSG decline. Specifically, there is no peer reviewed data that supports a background at dawn for a 20-24 background level. BLM needs to remove this item from the final EIS/RMP and replace it with the 39 dBA which is currently in use when assessing noise considerations in GRSG habitat.

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

COMMENT: BLM is ambiguous with respect to what it believes constitutes a "noise shield". If this refers to a "noise wall," there are any number of safety and engineering design features which could limit industry's ability to install this type of wall, particularly during drilling. Further, there are no criteria regarding the distance to a lek when this would be required. This item should be removed from the final EIS/RMP.

17. Lack of Site-Specific Considerations

BLM has proposed management goals and restrictions that will be applied across the entire planning area, rather than for each individual area covered by the various field offices. Besides the no action alternative (Alternative A), the management restrictions in the action alternatives are proposed as blanket restrictions that are not specific to each field office, despite differing levels of quality and quantity of habitat, conditions of populations, and threats in each planning area.

BLM has not clarified whether the proposed management objectives and restrictions in the DEIS will completely replace all existing GRSG management in each planning area. However, the preferred alternative stipulates that existing leases within four miles of an active lek will be subject to seasonal restrictions and no waivers will be granted without data verifying the GRSG population is healthy and strong. These management policies are inconsistent and will lead to confusion.

VI. SCIENTIFIC INTEGRITY

BLM concedes there is no published research conducted in Utah that addresses disturbance or oil and gas development impacts on GRSG and that there is very little peer-reviewed published research regarding impacts of various land uses on GRSG habitat or populations in Utah.[209] Nevertheless, BLM describes energy development as one of the greatest threats to GRSG~~T~~.[210] As one example, Garton et al. 2011 and Knick and Hanser 2011 claim populations in the Colorado Plateau have a 96% chance of declining below 200 males by 2037 due primarily to threats from oil and gas. Such assertions are without basis given the status of GRSG populations in Utah today. For example, the UDWR 2009 Greater Sage-Grouse Management Plan states that Utah has 429 known leks, 304 of which have been active in the past 5 years. Some 328 leks are occupied. Moreover, the cited studies are no longer the best available science. Specifically, Zink 2013 performed a more recent analysis and found no genetic evidence of population declines in GRSG.

BLM also relies upon flawed reports developed in other states, as well as projected modeling where hard data does not exist or outright speculations are made (e.g. more than one page was used to explain the deficiencies and shortcomings of the Great Basin Vegetation Modeling using the Vegetation Dynamics Development Tool.). BLM should rely upon data of the highest integrity and accuracy in the DEIS. Unfortunately, the most frequently cited sources in the DEIS contain fundamental flaws including gaps in crucial data, recurrent uncertainties, methodological bias, and suspect peer reviews.

Often, the information disseminated in the DEIS lacks reference to any source. Opinions must not be represented as fact, or dictate decisions that are required to be based on scientific data. A thorough review found that a good portion of the literature cited has not undergone any form of technical or scientific evaluation. This does not represent the best available science as required by the ESA or the standards of quality, objectivity and integrity required by the Data Quality Act.

BLM recognizes that "some impacts cannot be quantified, given the proposed management actions. Where this gap occurs, impacts are projected in qualitative terms or, in some instances, are described as unknown."[211] To account for these deficiencies, BLM would shift the burden to industry to collect data through site-specific project-level analysis.[212]

[209] DEIS at 4-5.
[210] DEIS at 4-349.
[211] DEIS at 4-5.
[212] DEIS at 4-5.

BLM also concedes, "the analysis tends to be broad and generalized" and that "this assessment is primarily qualitative for most resources because of lack of detailed information that would result from project-level decisions and other activities or projects."[213] In other cases, scientific findings are contradictory to BLM assertions. The DEIS says vegetation treatments that have reduced juniper encroachment in the Panguitch SGMA have resulted in documented use by GRSG within 2 years of treatment.[214] Given these results, how can BLM then allege, "[B]ased on current knowledge, there has been limited success in restoring lost GRSG habitat (USFWS 2013)"? As shown above and still to be seen below, the DEIS is comprised of assumptions built upon assumptions. At the root of these assumptions, unfortunately, is faulty science and suspect, biased data.

Notably, citations in the DEIS attributed to Braun must be discarded due to conflicts of interest pursuant to the laws and policies referenced herein. Dr. Braun was a paid consultant to the activist groups that petitioned to list GRSG and an active proponent for listing. Braun is quoted in a press release threatening a federal listing of the species if the BLM did not undertake management changes in line with his views.[215]

Throughout the DEIS, frequently cited sources fail to meet: (1) the best available science standard under the Endangered Species Act ("ESA"); (2) standards of integrity, objectivity, and transparency under the Data Quality Act ("DQA"); and (3) standards for scientific integrity and peer review as described below.

A. Best Available Science

The ESA requires the FWS to utilize the "best scientific and commercial data available."[216] Here, the most recent science indicates GRSG use greater variances in habitat (Reinhart et al. 2013) and that noise tolerances and habitat selection in areas of high road density are greater than previously documented.[217] Moreover, topographic roughness appeared to be a much stronger indicator of habitat avoidance than anthropogenic disturbances.[218]

For all of the reasons referenced herein, the information BLM relies upon in the DEIS fails to meet the best available scientific and commercial data available under the ESA.

B. The Data Quality Act

The policies above align with the agency's duties under the DQA.[219] Both the DQA and the Office of Management and Budget Guidelines ("OMB Guidelines") implementing it require agencies to "ensure and maximize" the quality, objectivity, utility, and integrity of information disseminated by federal agencies.[220] "Utility" refers to the usefulness of the information to its

[213] DEIS at 4-316.
[214] DEIS at 4-88.
[215] Press Release, Biodiversity Conservation Alliance, *Sage Grouse Takes Center Stage in Oil and Gas Controversy*, (Feb. 26, 2003).
[216] 16 U.S.C. §1533(b)(1)(A).
[217] Patricelli et al. (2012).
[218] *See Id.*
[219] 44 U.S.C. §§3504(d)(1), 3516.
[220] DQA §515(a), OMB Guidelines, § 11(2), 67 Fed. Reg. at 8458.

intended users and the public.[221] The DQA and the OMB Guidelines require agencies to issue guidelines ensuring and maximizing the "objectivity" of all information they disseminate. The OMB Guidelines implementing the legislation define "objectivity," which includes a requirement that information be "unbiased" in presentation and substance. "Objectivity" is considered an overall standard of quality.[222] The U.S. Department of the Interior ("DOI") has also adopted DQA Guidelines ("DOI Guidelines").[223] Among other things, the applicable guidelines favor peer-reviewed information.[224]

The DOI Guidelines provide "where the public will not be provided full access to the data or methodology, the Department shall apply and document especially rigorous robustness checks" and that "[I]n all cases, Departmental guidelines require a disclosure of the specific data sources used and the specific quantitative methods and assumptions employed."[225]

Here, the BLM has failed to meet the requirements of the DQA and applicable DOI Guidelines in the sufficiency of disclosure of data sources and methodology used in the information disseminated. Moreover, the DEIS and documents relied upon therein, do not rise to the standards of objectivity, utility and integrity required under the DQA.

C. Obama Administration Memoranda and Orders

On March 9, 2009, President Obama issued a Memorandum ("Presidential Memorandum") setting forth principles "for ensuring the highest level of integrity in all aspects of the executive branch's involvement with scientific and technological processes."[226] When scientific or technological information is considered in policy decisions, the information should be subject to well-established scientific processes, including peer review where appropriate. Further, agencies should appropriately and accurately reflect that information in complying with relevant statutory standards.[227]

The DOI's Departmental Manual ("DOI Manual")[228] implemented a secretarial order: Integrity of Scientific and Scholarly Activities (effective Jan. 28, 2011). The Manual defines "scientific and scholarly integrity" to mean, "[t]he condition resulting from adherence to professional values and practices, when conducting and applying the results of science and scholarship, that ensures objectively, clarity, reproducibility, and utility that provides insulation from bias, fabrication, falsification, plagiarism, outside interference, censorship, and inadequate procedural and information security."[229]

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[221] OMB Guidelines, § V(2). 67 Fed. Reg. at 8459 (emphasis added).
[222] 67 Fed. Reg. 8452, 8458 (Feb. 22, 2002).
[223] Available at: http://www.fws.gov/informationquality/
[224] *See* OMB 2002 available at: http://www.whitehouse.gov/omb/fedreg_reproducible; OMB, Final Information Quality Bulletin for Peer Review (2004).
[225] Available at: http://www.doi.gov/ocio/guidelines/515Guides.pdf (DOI Guidelines).
[226] 74 Fed. Reg. 10671, 10671 (March 11, 2009).
[227] *Id.*
[228] *Available at:* http://elips.doi.gov/elips/browse.aspx.
[229] *Id.* at 3.5(L).

D. The DEIS Relies on Fundamentally Flawed Reports

As described below, the DEIS, and the data upon which it is based, fail to meet the standards within the Presidential Memorandum and DOI Manual.

1. The NTT Report

The conservation measures in the DEIS were developed by the Sage-Grouse National Technical Team which included staff and scientists from BLM, USFWS, U.S. Geological Survey ("USGS"), Natural Resources Conservation Service, and state fish and game agencies. Their work culminated in the NTT Report. Many of the action alternatives in the DEIS were largely derived from the NTT Report.[230]

As discussed herein, there are significant and fundamental flaws with the NTT Report that should preclude its use and inclusion in this DEIS. The NTT Report was frequently in the DEIS. Further, while not all the recommendations in the NTT report are directly included in the preferred alternative, some are, including the proposed restrictions for sound.

Among other issues, the NTT Report failed to make use of the latest scientific and biological information available. Instead, the NTT Report is a selective incorporation of data and studies from a small number of GRSG advocates. The NTT Report also failed to acknowledge lower impact technologies and mitigation currently in use by the oil and gas industry, including specifically those detailed in Ramey, Brown, and Blackgoat 2011 and in a presentation to the NTT by BLM staff. In addition, the NTT report asserts that impacts from oil and natural gas development are "universally negative and typically severe"[231] but provides no scientific data to support that assertion. This evidences bias against oil and gas in the NTT Report, which is contrary to the ESA and the DQA. It also directly contradicts DOI Order No. 3305 on scientific integrity. Specifically, DOI employees and contractors "must never suppress or alter, without new scientific or technological evidence, scientific or technological findings or conclusions."[232]

a. Technical Errors in the NTT Report

There are substantial technical errors in the NTT Report including misleading use of citations and use of citations that are not provided in the "Literature Cited" section.[233] This makes it difficult to provide scientific verification of the NTT Report's claims.[234]

Two of the researchers, J.W. Connelly and B.L. Walker, are referenced frequently in the NTT Report, but 34% of the citations had no corresponding source available to review.[235] This limits the ability of outside reviewers or the public to verify claims in the NTT Report and reduces the

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[230] *Id*. at xxxii.
[231] NTT Report at 19.
[232] Sec. of the Interior Order No. 3305 (Sept. 29, 2010), *available at*: http://www.doi.gov/news/pressreleases/upload/Sec-Order-No-3305.pdf.
[233] Megan Maxwell, *BLM's NTT Report: Is It the Best Available Science or a Tool to Support a Pre-determined Outcome?*, p. 13-14 (May 20, 2013) http://www.nwma.org/pdf/NWMA-NTTReview-Final-revised.pdf ("NWMA Review").
[234] *Id*. at 14.
[235] *Id*.

report's scientific credibility.[236] Additionally there are articles listed in "Literature Cited" that are not used within the NTT Report itself.[237]

The NTT Report is also guilty of misleading use of authority.[238] For example, the NTT Report stipulates that with regard to fuel management, sagebrush cover should not be reduced to less than 15%.[239] However, Connelly et al. 2000, the source cited, does not support this proposition.[240] Connelly et al. 2000 states that land treatments should not be based on schedules, targets, and quotas.[241] Connelly et al. 2000 distinguished between types of habitat and provides that corresponding sagebrush canopy percentages which vary from 10 percent to 30 percent depending on habitat function and quality.[242] These issues evidence bias and a lack of transparency and reproducibility in contravention to the DQA. They also violate Executive Order 13563, which calls for "objectivity of any scientific and technical information and processes used to support [an] agency's regulatory actions."[243]

b. Errors of Omission in the NTT Report

Errors of omission in the NTT Report include numerous scientific papers and reports on oil and gas and mitigation measures. For example, work by Renee Taylor, and others, demonstrates that temporary GRSG population variations can occur in historic oil and gas areas in Wyoming. The NTT Report also fails to address papers and reports on mitigation of raven predation on GRSG, the fact that GRSG disperse over greater distances than previously thought, and that, while temporary disturbance may occur in response to human activities, GRSG traverse over or around roads, agricultural areas, and oil and gas development.[244]

c. Conflicts of Interest in the NTT Report

Three of the authors of the NTT Report are also authors, researchers, and editors on three of the most cited sources in the NTT Report.[245] This creates a serious conflict of interest.[246] The DOI

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[236] *Id.*
[237] *Id.*
[238] *Id.*
[239] Available at: http://www.blm.gov/pgdata/etc/medialib/blm/co/programs/wildlife.Par.73607.File.dat/GrSG%20Tech%20Team%20Report.pdf.
[240] NWMA Review at 14.
[241] John W. Connelly, Michael Schroeder, Alan Sands, & Clait Braun, *Guidelines to Manage Sage-Grouse Populations and Their Habitats*, 28 Wildlife Society Bulletin 967-985 (2000).
[242] NWMA Review at 14.
[243] *Available at: http://www.gpo.gov/fdsys/pkg/FR-2011-01-21/pdf/2011-1385.pdf.*
[244] Rob Roy Ramey, *Data Quality Issues in A Report on National Greater Sage-Grouse Conservation Measures, Produced by the Sage-Grouse National Technical Team (NTT),Dated December 21, 2011* attached hereto as Exhibit B.
NTT Review at p. 2 attached hereto as Exhibit B.
[245] NWMA Review at 4.
[246] 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 Peer Review 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).

Manual defines a conflict of interest as "any personal, professional, financial, or other interests that conflict with the actions or judgments of those covered by this policy when conducting scientific and scholarly activities or using scientific and scholarly data and information because those interests may: (1) significantly impair objectivity; (2) create an unfair competitive advantage for any person or organization; or (3) create the appearance of either."[247]

The DOI Manual prohibits department employees, volunteers, contractors, etc. from "engaging in activities that put [them] or others in an actual or apparent conflict of interest."[248] The same employees, volunteers, contractors, etc. are required to "clearly differentiate among facts, personal opinions, assumptions, hypotheses, and professional judgment in reporting results…" and "not withhold information that might not support the conclusions, interpretations, and applications [he or she] make[s]."[249]

In addition, scientists and scholars are required to "place quality and objectivity or scientific and scholarly activities and reports ahead of results or personal gain or allegiance to individuals or organizations."[250] Scientists and scholars are further required to "welcome constructive criticism of [their] scientific and scholarly activities and … be responsive to their peer review" and "provide constructive, objective, and professionally valid peer review of the work of others, free from any personal or professional jealously, competition, non-scientific disagreement, or conflict of interest."[251] The involvement of three NTT authors on three of the most frequently cited sources in the report bespeaks of conflicts and personal and professional interests that impair objectivity and create the appearance of impropriety.

d. Inadequate Peer Review of the NTT Report

The NTT Report failed to undergo an adequate peer review. The peer review of the NTT Report was conducted by Nevada Department of Wildlife Director, Ken Mayer.[252] There is no evidence that Mr. Mayer has: (1) ever served as an editor or associate editor of a scientific journal; (2) organized a previous scientific peer review using accepted standards; (3) served as a peer reviewer at a scientific journal; or (4) ever published a peer-reviewed scientific paper in a reputable scientific journal.[253]

In this case, the NTT Report also failed to address several comments and issues raised by peer reviewers.[254] Some of the issues the NTT Report failed to include support for the flawed reasoning behind consolidating all GRSG seasonal habitat and the use of one-size-fits-all regulatory prescriptions such as disturbance caps and four-mile buffers.[255]

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[247] Dept. of the Interior, Department Manual, Part 305, Chapter 3, p.3 (http://www.fws.gov/science/pdf/DOIScientificIntegrityPolicyManual.pdf).
[248] *Id*. at 3.7(A)(5).
[249] *Id*. at 3.7(A)(7) – (9).
[250] *Id*. at 3.7(B)(1).
[251] *Id*. at 3.7(B)(5) – (6).
[252] Ramey NTT Review at ¶ 7.1, p.41.
[253] *Id*. ¶ 7.1, p.42.
[254] Ramey NTT Review at ¶ 7.2, p. 42.
[255] NWMA Review at 2.

We have real concerns with how peer review was accomplished for the NTT Report. Among other things, we note the reviewers were not asked to provide a scientific review: "[W]e are not asking for a strict scientific review, but rather an assessment of the CM and the appropriateness of circumstances that a manager would apply the CM and will these CMs meet the objectives of preventing losses or degradation of habitat and prevent decreases in the distribution of sage-grouse."[256] Reviewers were given only ten days to review the NTT Report. *Id.*

Some of the reviewers expressed real concern with the NTT Report. "In summary, the approach taken in the document is rather short-term and narrow, and it seems to miss the opportunity to take a more holistic and long-term view of sage-grouse management." Reviewer 3 at 2. Another reviewer noted:

> The document is an odd mix of scientific citations and policy decisions, with no real tie between the two. This seems a strange blend of policy loosely backed by citations, with no analysis of science. Because there is no iteration of the rational scientific basis for the very prescriptive strategies, I would anticipate strong blowback by Industry and by Environmental Groups….

Reviewer 2 at 2. Yet another remarked, "[T]he document suffers from a 1-size fits all approach that lacks context." Lumping all seasonal habitats into either "priority" or "general" is "tremendously simplistic."[257] Additional criticism included a lack of definition of priority and general habitat, a lack of performance or realistic adaptive management; and a lack of flexibility with regard to NSOs.[258]

The NTT authors recognized significant scientific shortcomings with the draft report. As a result, a "Science Support Team" was convened in Phoenix, Arizona shortly before the report was finalized to develop more robust supporting science. Former Colorado Division of Wildlife Director Tom Remington lead the effort. This team was to be comprised, "strictly [of] agency biologists and scientists."[259]

In information released to Western Energy Alliance via FOIA litigation, the identities of as many as six persons involved in this review were redacted. We question why BLM has failed to disclose the identities of these team members particularly when they were to be strictly public employees.

Two of the "Science Support Team" members that were disclosed, Naugle and Knick, were frequently cited in the NTT Report. One notable addition that Dr. Knick added was a citation to himself for the flawed proposition, "[S]mall increases in the human footprint (a collective measure of anthropogenic disturbance) within 3.1 miles resulted in large increases in probability of lek extirpation."

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[256] Ken Mayer letter to NTT Report reviewers (Oct. 11, 2011).
[257] Reviewer 2 at 5.
[258] *Id.* at 6 and 15.
[259] Raul Morales e-mails (Nov. 12 and Nov. 18, 2011).

These issues run counter to DOI and BLM guidelines on the DQA.[260] It also contradicts BLM's own DQA memorandum specifically addressing peer review.[261] Accordingly, BLM's reliance on the NTT Report should be carefully reconsidered.

B. The COT Report

The DEIS stated that the alternatives were developed in response to the specific threats and conservation objectives identified in the USFWS *Greater Sage-Grouse Conservation Objectives Final Report* ("COT Report").[262] With regard to addressing perceived impacts from oil and natural gas, the preferred alternative expressly relies upon the COT Report.[263] Much like reliance on the NTT Report, BLM applies measures from the COT Report to all action alternatives.[264] The COT Report was cited or mentioned at least 15 times in the DEIS. However, the COT Report is a limited and selective review of scientific literature and unpublished reports on GRSG that were used to "identify conservation objectives to ensure the long-term viability of the GRSG."[265]

1. Questionable Status as a Scientific Document

The COT Report provides no original data or quantitative analyses.[266] The COT Report even fails to provide a comprehensive and unbiased review of all of the available scientific literature on the GRSG.[267] As a result, outdated information and assumptions are perpetuated in the COT Report.[268] Moreover, the COT Report places undue reliance on the database *NatureServe* for threats rankings. *NatureServe* comes with a noteworthy disclaimer:

> Information Warranty Disclaimer: All documents and related graphics provided by this server and any other documents which are referenced by or linked to this server are provided "as is" without warranty as to the currentness, completeness, or accuracy of any specific data. NatureServe hereby disclaims all warranties and conditions with regard to any documents provided by this server or any other documents which are referenced by or linked to this server, including but not limited to all implied warranties and conditions of merchantibility [sic], fitness for a particular purpose, and non-infringement. NatureServe makes no representations

[260] Dept. of Interior, Information Quality Guidelines Pursuant to Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, 67 Fed. Reg. 36642 (May 24, 2002); BLM, Information Quality Guidelines (February 9, 2012) Available at: http://www.blm.gov/pgdata/etc/medialib/blm/national/national_page.Par.7549.File.dat/guidelines.pdf.
[261] BLM, Peer Review of Influential Scientific Information (June 6, 2013). Available at http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2013/im_2013-137__peer.html.
[262] DEIS at 5.
[263] *See* Table 4.2, Ch. 2 DEIS at 530.
[264] *Id.*
[265] *Id*.
[266] Rob Roy Ramey, *Data Quality Issues in the Greater Sage-Grouse (Centrocercus urophasianus) Conservation Objectives: Final Report*, p.1 (October 16, 2013) ("Ramey COT Review") attached hereto as Exhibit C.
[267] *Id*.
[268] *Id*.

> about the suitability of the information delivered from this server or any other documents that are referenced to or linked to this server....[269]

This hardly qualifies as the "best available" science under the ESA. It also runs afoul of the DQA and the Presidential and DOI memoranda on scientific integrity referenced above.

2. Flawed Methodology of the COT Report

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.[270] Garton et al. 2011 is the most frequently cited paper in the COT Report.[271] There are serious methodological biases and mathematical errors with the COT Report.[272] These issues were also present in the final revisions of Garton et al. 2011.[273] Furthermore, the data and programs used in Garton et al. 2011 are not public and therefore the results are not reproducible.[274] This seriously harms 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 mention hunting, which is the most well-documented source of GRSG mortality with 207,433 GRSG harvested between 2001 and 2007.[275] Some estimate total GRSG populations at or near 500,000 birds.[276] Clearly such mortality levels should be carefully considered and properly accounted for. The COT Report, however, proposes that activities that have never been shown to cause a population decline should be regulated.[277] 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.

Moreover, there is no evidence of any reproducible, quantitative methodology used in assigning rankings to threats in each population and GRSG management zone.[278] The ranking of threats in the COT Report appears to be entirely subjective.[279]

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[269] *See* http://www.natureserve.org/explorer/servlet/NatureServe?searchSciOrCommonName=greater+sage+grouse
[270] 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).
[271] Ramey COT Review at 1.
[272] *Id*. at 2.
[273] *Id*.
[274] *Id*.
[275] 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).
[276] Broder, John M.. (2010-03-05) No Endangered Status for Plains Bird. Nytimes.com.
[277] Ramey COT Review at 1.
[278] *Id*. at 2.
[279] *Id*.

3. Peer Review on the COT Report

The FWS disclosed some of the data and information related to peer review of the COT Report.[280] Specifically, FWS released a document titled, "Scientific Peer Review of the Sage-Grouse Conservation Objectives Draft Report." We understand the FWS retained Atkins, North America ("Atkins") to perform the review.

Atkins solicited five reviewers: Dr. Jeffrey L. Beck, University of Wyoming; Dr. Matthew J. Holloran, Wyoming Wildlife Consultants, LLC; Dr. Terry A. Messmer, Utah State University; Dr. Kerry P. Reese, University of Idaho, and Dr. James S. Sedinger, University of Nevada, Reno.[281] Atkins was asked to solicit well-qualified and independent reviewers with certain expertise and to ensure they had no financial or other conflicts with the outcome or implications of the COT Report.[282]

The COT Report was prepared at the request of the USFWS Director "to provide additional information for use and consideration pertinent to future decision-making relative to [GRSG]."[283] Contributing team members included five representatives of the USFWS and ten representatives of state agencies in the GRSG range.[284] The inclusion of USFWS representatives, pending a listing decision on GRSG, makes the independence of the COT Report questionable.

A number of the relevant regulations and guidance stress the importance of independence[285] and the need to avoid conflicts of interest.[286] Among other things, independence means that 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

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[280] Western Energy Alliance submitted a FOIA request to the FWS on May 2, 2013. When the FWS failed to respond, Western Energy Alliance filed a FOIA suit against the FWS on October 15, 2013. On October 24, 2013, the FWS provided some of the documents requested.

[281] Scientific Peer Review of the Sage-Grouse Conservation Objectives Draft Report at 3.

[282] *Id.* at 2.

[283] Dept. of the Interior, U.S. Fish and Wildlife Service, *Greater Sage-grouse (Centrocercus uropphasianus) Conservation Objectives: Final Report*, p. ii (February 2013) http://www.fws.gov/mountain-prairie/species/birds/sagegrouse/COT/COT-Report-with-Dear-Interested-Reader-Letter.pdf ("COT Report").

[284] *Id*.

[285] 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).

[286] 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 Peer Review 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).

problems to be avoided in its conflicts policy.[287] The 2005 OMB Bulletin directs agencies to use the NAS policy. Peer review of the COT Report was inadequate under both the DOI Manual and the NAS policy.

Among the deficiencies were: 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);[288] authorship with NTT members; and authorship with other influential GRSG authors including Doherty, Naugle, and Knick.[289] The reviews of the COT Report present numerous examples of failures to meet NAS and OMB guidelines:

> **Reese** and Connelly (an author of the COT Report and author of many cited papers in the COT Report) published eight papers together, including two papers in 2012 and four papers in 2011. All of these were included in *Greater Sage-Grouse Ecology and Conservation of a Landscape Species and its Habitats* (the "GRSG Monograph") which Connelly edited (similar conflicts exist with Connelly and Garton on the population persistence chapter). Dr. Reese participated in no fewer than eleven presentations with Connelly, four with Gardner (another COT Report author) and four with Garton. Garton et al. 2011 forms the very basis of the COT Report and is the most frequently cited paper therein. Dr. Reese also discloses a $255,203 grant with Garton in 2011 and over $1.3 million in sage-grouse funding including $178,442 from the USGS (the funding agency on the GUSG Monograph).
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> **Beck** has two papers with Connelly. Dr. Beck authored numerous papers with other sage-grouse biologists including Naugle (an author of the NTT Report). No financial support is listed, but given that Beck has published 12 papers on sage-grouse, such support could be expected to be significant.
>
> **Holloran** is one of the most cited papers in the COT Report. He authored a 2011 monograph paper with Connelly, and another with Connelly and Knick (NTT Report authors and editors of the GRSG Monograph). Dr. Holloran also authored three papers with Connelly in 2006, 2009, and 2012. Dr. Holloran's Ph.D. dissertation concluded "currently imposed [natural gas] developmental stipulations are inadequate to protect the greater sage-grouse, and that stipulations need to be modified to maintain populations within natural gas fields."[290] Note the amount of financial support on six recent grants and contracts on sage-grouse totaled more than $3.1 million. Funding sources were not listed. This indicates a bias by Dr. Holloran that calls into question his ability to perform an independent peer review.

[287] *Available at:* http://www.nap.edu/openbook.php?isbn=0309059437&page=9
[288] 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.
[289] Scientific Peer Review of the Sage-Grouse Conservation Objectives Draft Report, Appendix A
[290] Matthew J. Holloran, Greater Sage-Grouse (Centrocercus urophasianus) Population Response to Natural Gas Field Development in Western Wyoming (Dec. 2005) http://eqc.state.wy.us/orders/Land%20Closed%20Cases/11-4803%20Lost%20Creek%20ISR,%20LLC/Exhibit%2012.pdf.

Messmer reported no authorship conflicts with COT Report team members; however, he listed financial support for some 18 recent grants and contracts on sage-grouse totaling more than $2.3 million.

Sedinger was an author with COT Report team member Espinosa (on a 2011 monograph chapter and a 2010 paper). Grant and contract support includes $40,000 on sage-grouse from BLM, and five grants and contracts totaling $252,939 from the USFWS.

4. Other Concerns Identified in the COT Report

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 goals and improve its utility for decision making…."[291] Reviewers identified an astonishing lack of reference to at least 15 relevant scientific papers.[292]

Fundamentally, the COT Report did not meet its stated objectives with regard to the degree to which threats need to be ameliorated.[293] Risk levels may need to be reconsidered and there was doubt expressed that threat ratings were credible.[294] One reviewer noted that it was questionable how scientific sources were used to establish risks and that there were limited (if any) direct relationships between habitat characteristics and population change.[295]

Reviewer 2's comments indicate a bias in favor of listing and his belief that existing regulatory mechanisms are inadequate for sage-grouse. Reviewer 2 complained that they were not required to review how conservation objectives would be met, "I assume that another group at another time in another forum will do this, otherwise the species will remain in peril."[296] He further stated, "COT should be urging for enhanced, improved and additional management actions because the "continued" is not adequate as is across most of the species range."[297] Reviewer 2 praised Garton, along with "limited" scientific references and expert opinion as the "strongest part" of the COT Report.[298] This raises the question of whether Reviewer 2 was one of the reviewers that has worked very closely with Garton.

Some terms, like fragmentation, were not well defined.[299] Resistance and resilience were never quantified causing some to label them redundant, of little use, and little substance.[300] Reviewers also cited generalities, uncertainties, and questions regarding whether some recommendations were feasible or practicable.

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[291] Scientific Peer Review of the Sage-Grouse Conservation Objectives Draft Report at 3.
[292] *Id*. at 7.
[293] *Id.* at 5.
[294] *Id*. at B-16.
[295] *Id*. at 7.
[296] *Id*. at B-16.
[297] *Id*. at B-17.
[298] *Id*. at B-19.
[299] *Id*. at 5.
[300] *Id*. at 4.

Reviewer 1 admonished the COT Report to acknowledge that we truly do not know the magnitude of population declines of GRSG.[301] Some concepts were ambiguously defined and not enough information was provided to assess threat ranking.[302] A lack of transparency in the threats analysis was a common theme. Reviewer 3 could not even replicate the results of the analysis (Table 2) with the information provided.[303]

The COT Report ignored evidence that GRSG may adapt to a disturbed environment. For example, highly naturally fragmented habitats have GRSG persistence. Some reviewers commented that genetics-based connectivity was over-emphasized and should be considered a much lower priority.[304] One reviewer commented that the COT Report failed to take into account that effects of infrastructure may be more related to the level of disturbance relative to habitat quality rather than mere presence.[305] The COT Report did not analyze how, if threats are addressed, population persistence may be altered.[306] Incredibly, Reviewer 3 recognized the COT Report could not acknowledge what effective habitat management was. He also noted the COT Report failed to address the effectiveness of existing regulatory measures. Reviewer 3 remarked, "[I]n my opinion it is a mistake to focus on managing anthropogenic activities at the expense of researching and implementing actions to improve the quality of sagebrush ecosystems."[307]

The COT Report discounts established strategies to protect the "best of the best" habitat along with many of the significant conservation efforts currently utilized by the states. Reviewer 1 stated the COT Report should be seen as a tool rather than an absolute.[308] He also noted that management actions were largely at the purview of the states.[309]

The COT Report does not recognize the latest state and local habitat mapping efforts. For example, some areas defined as habitat in the COT Report do not exist. Reviewer 1 explained the COT Report also ignored that tribal lands provide and protect significant habitat for GRSG in Utah.[310] Reviewer 2 noted several priority areas seem to have been labeled in an inconsistent manner.[311] Descriptions of seasonable habitat were also lacking.

Reviewer 4 questioned how the footprint of renewable energy development might differ from nonrenewable energy development[312] and that statements in the COT Report about predation were speculative with no empirical basis.[313] Reviewer 4 pointed out that direct relationships between specific habitat characteristics and population change are limited, if not lacking

[301] *Id*. at B-4.
[302] *Id*. at B-23.
[303] *Id*. at B-23.
[304] *Id*. at B-27.
[305] *Id*. at B-7.
[306] *Id*. at B-9.
[307] *Id*. at B-21.
[308] *Id*. at B-3.
[309] *Id*. at B-3.
[310] *Id*. at B-7.
[311] *Id*. at B-15.
[312] *Id.* at B-28.
[313] The COT Report suggests the best way to mitigate predation is to maintain quality habitat with good connectivity.

entirely.[314] The COT Report fails to capture an understanding of effects on GRSG from most of the potential risks referenced. "We have a poor empirical basis for understanding most potential impacts on sage-grouse," said Reviewer 4.[315] He continued, "[T]his severely limits our ability to predict the response of sage-grouse populations to changes in their habitats."[316] Similarly, Reviewer 5 remarked that conclusions in the threats analysis were based upon findings stemming from professional opinion.[317]

Given these issues, BLM should carefully reconsider its reliance on the COT Report in the DEIS. To do otherwise would be inconsistent with the ESA, the DQA and the Presidential and Interior Department memoranda and orders referenced above.

C. The GRSG Monograph

Six chapters in *Greater Sage-Grouse Ecology and Conservation of a Landscape Species and its Habitats* ("GRSG Monograph") are cited or mentioned at least 22 times in the DEIS. Some of the chapters in the GRSG Monograph, such as Miller et al. 2011, are well-written scientific papers, but the majority of the chapters have serious shortcomings. For example, the Center for Environmental Science, Accuracy, and Reliability ("CESAR") analyzed four of the most frequently cited sources and found: "(1) significant mischaracterization of previous research; (2) substantial errors and omissions; (3) lack of independent authorship and peer review; (4) methodological bias; (5) a lack of reproducibility; invalid assumptions and analysis; and (6) inadequate data."[318]

1. Wisdom et al. 2011

Wisdom et al. 2011 was cited or mentioned at least three times in the DEIS for the proposition that ROW projects involving tall structures, such as power lines, communication towers, and meteorological towers, may lead to GRSG avoidance of suitable habitat. The strength of inference used in this correlative analysis is extremely weak and the study advanced several far-fetched and speculative explanations of potential effects of transmission lines and cell towers on GRSG, rather than plausible cause and effect mechanisms supported by data.[319]

The authors discussed 22 environmental variables to best predict extirpated versus extant GRSG populations, but failed to acknowledge that several of these variables were not independent of other variables. The authors also failed to distinguish between different electrical transmission lines. This is important because the different heights of the transmission lines will have different effects on low-flying GRSG.

The authors only briefly discussed the hypothesis that human structures serve as perches that facilitate raptor predation on GRSG. This chapter failed to analyze: (1) whether habitat near

[314] Scientific Peer Review of the Sage-Grouse Conservation Objectives Draft Report at B-26.
[315] *Id.* at B-27.
[316] *Id.* at B-29.
[317] *Id.* at B-33.
[318] NWMA Review at 4.
[319] DEIS at 509.

power lines represents an increased risk of predation compared to similar habitat farther removed, and (2) whether GRSG avoidance of tall objects is an innate or learned behavior.

2. Knick and Hanser et al. 2011

Knick and Hanser et al. 2011 was cited or mentioned three times in the DEIS for the proposition that "GRSG are abundant and leks in northern portions of Management Zones II and VII are the most highly connected in the range, populations in southern portions of Management Zones II and VII (the Colorado Plateau) are less robust, with low lek connectivity and a 96 percent chance of populations declining below 200 males by 2037."[320] However, Knick and Hanser et al. 2011 uses lek persistence data instead of actual population data and erroneously assumes that they are strongly correlated. This leads to leks which have moved due to disturbance being treated as extirpated when the GRSG comprising the lek have simply moved. Additionally, the data was originally at a 30m resolution, but the authors re-sampled it at a 540m resolution. However, the authors failed to acknowledge that this rescaling could be expected to inflate the effects of disturbance. For these reasons, and other substantive issues, it falls far short of the best scientific and commercial data available.

3. Johnson et al. 2011

Johnson et al. 2011 was cited or mentioned at least twice in the DEIS for the proposition that "lek count trends have been found to be lower near interstate, federal, or state highways compared to secondary roads."[321] However, the authors do not have enough years of data to support inferences with single or multiple variables. The authors examined different variables using 11 years of lek count data for the response variable in seven different management zones to determine whether specific activities correlated with population level declines in GRSG. Moreover, many of the lek counts only had four years of data associated with them resulting in no significant correlations between predictor and response variables.[322] This lack of data infers Johnson et al. 2011 is not an example of the best scientific data available.

4. Connelly et al. 2011

Connelly et al. 2011 was cited or mentioned at least five times in the DEIS including for support of the proposition that programs for conservation on private lands would need to be implemented in combination with programs affecting effective rehabilitation and restoration on public lands.[323] Connelly et al. 2011 does not adequately address how individual states or the private sector have contributed to GRSG conservation. For example, the paper only referenced the study of GRSG response to the Conservation Reserve Program in Washington State when discussing the efforts of individual states and private sector's conservation efforts. A paper that is cited for a proposition involving private land should have a more detailed analysis of individual state and private sector efforts to be considered the best scientific and commercial data available. Finally, Connelly at al. 2011 lacked critical hypothesis testing.

[320] DEIS at 946.
[321] DEIS at 950.
[322] *Id*. at section 17.3.
[323] DEIS at 945.

5. Garton et al. 2011

Garton et al. 2011 was cited or mentioned at least four times in the DEIS for several propositions including one where GRSG populations in southern portions of Management Zones II and VII have a 96% chance of declines below 200 males by 2037.[324] The use of questionable data leads to uncertain results, Garton et al. 2011 relied on non-standardized, and non-randomly sampled male lek count data collected by different state agencies using variable amounts of effort over a period of approximately forty years. This alone makes the paper's conclusions suspect and the data unreliable. The authors acknowledge that in some cases they had to assume that data was collected properly and assume that it met their (undisclosed) standards of quality. It is undocumented why the authors did not simply exclude questionable data from their analysis.

Garton et al. 2011 attempted to predict GRSG population extinction using 30- and 100- year population forecasts. However, long-term predictions are notoriously inaccurate—particularly where, as here, the authors used questionable data and assumed that ecological conditions would change over the next 30 and 100 years. Additionally, Garton et al. 2011's extinction predictions are based on application of the discredited 50/500 effective population size "rule of thumb," which the authors mischaracterize as a rule instead of a rule of thumb. The 50/500 rule of thumb and the absence of empirical data to support it has been criticized by Boyce 1997 and Frankham 2005 respectively. Garton et al. 2011 and the COT Report that relies on it fail to acknowledge these issues and critiques.

Garton et al. 2011, like the DEIS, fails to address the threat of hunting despite the fact that over 207,000 GRSG were harvested between 2001 and 2007.[325] The authors' failure to account for such a major threat to GRSG population further harms the legitimacy of the population forecasts. Moreover, the data used in Garton et al. 2011 has not been made publicly available. Additionally, the methods of Garton et al. 2011 were not adequately described. As a result, it is impossible to replicate the results. This fails the transparency and reproducibility requirements under the DQA. Finally, there is no mention of hypothesis testing in Garton et al. 2011. This omission is particularly worrisome because hypothesis testing is an essential part of the scientific process. The omission of hypothesis testing by the authors makes the scientific status of this document, let alone best scientific data available, questionable at best.

Accordingly, for all of the reasons above, it is strongly recommended that BLM carefully reconsider its reliance upon the NTT Report, COT Report, and the six chapters of the GRSG Monograph highlighted above for the purposes of this DEIS.

VII. BIAS AGAINST OIL AND GAS

Most of the oil and gas activity within the decision area is in the Uintah, Carbon, Emery, and Rich GRSG population areas.[326] There are some 747,900 acres of federal mineral estate with high oil and natural gas potential (95 percent of the affected federal mineral estate) and an additional 215,800 acres with moderate oil and natural gas potential (24 percent of the affected

[324] DEIS at 946.
[325] CESAR Report at 17.
[326] DEIS at 1-8.

federal mineral estate).[327] BLM recognizes these areas will be disproportionately affected by the DEIS[328], but does not amend or modify the Preferred Alternative to account for that affect.

In regards to competition from other wildlife species, BLM recognizes elk may forage heavily in low elevation sagebrush during heavy snow years and that this could impact vegetation and decrease sagebrush cover. Inexplicably, BLM states such impacts on GRSG could be "detrimental or beneficial."[329] Yet BLM makes an assumptive leap, operating from the perspective that energy development is harmful and that a warmer and drier climate due to climate change is certain to occur.

How can BLM determine solar energy development is not a threat to GRSG that merits analysis in the DEIS?[330] The agencies boast about working with local communities, state regulators, industry, and other federal agencies "in building a clean energy future by providing sites for environmentally sound development of renewable energy on BLM-administered and National Forest System lands."[331] We find no such a commitment to developing domestic oil and natural gas in the DEIS. To the contrary, the entire document seems designed to hinder responsible production and the benefits therefrom for decades. While BLM and the USFS recognize various oil and gas leasing analyses and decisions on USFS lands, no such documents seem to be recognized on BLM lands.[332]

With no explanation for the discrepancy, wind energy can occur within one mile of a lek in BLM's preferred alternative, while oil and gas development can only occur four miles from a lek.[333] Similarly, BLM contemplates the action alternatives will have no impact on dispersed recreation in the planning area.[334]

BLM also vastly overestimates the perceived value of recreation and the perceived value of GRSG conservation in its economic analysis. As a result, it understates the economic impacts of its proposed actions that are sure to significantly harm local communities, jobs and the economy. For example, BLM estimated the "nonmarket" value of recreation to be more than half a billion dollars per year in the planning area.[335] BLM also cited an "average stated willingness to pay of between $15 and $58 per household per year in order to restore a self-sustaining population or prevent regional extinction…."[336] The methodology for these highly suspect figures does not withstand scrutiny or reproducibility as required by the ESA, the Data Quality Act or the standards of integrity required by Presidential and Interior Department memoranda and orders.

The DEIS would hinder the economic benefits of oil and natural gas development across the planning area. As BLM acknowledges, severance taxes in Utah in 2010 exceeded $72 million

[327] DEIS at 3-193.
[328] *Id.*
[329] DEIS at 4-43.
[330] See DEIS at 1-17.
[331] 3.19 DEIS at 3-181.
[332] *See* DEIS at 1-22.
[333] *See* DEIS at 4-219.
[334] *See* DEIS at 4-133.
[335] DEIS at 3-250.
[336] DEIS at 3-251.

and federal mineral royalties approached $150 million—one third of which was distributed to local governments.[337] The value of oil and gas extracted from Utah in 2010 was approximately $3.4 billion.[338] Through this DEIS, the agencies would significantly curtail oil and gas production and development with devastating economic consequences to local communities, jobs and the economy. For example, even BLM acknowledges the DEIS will be so restrictive and punitive that development on private lands would be negatively affected. "[R]estriction placed on new fluid minerals leasing in PPMA could discourage new development of non-federal lands because it may no longer be economically viable to develop nonfederal lands in PPMA."[339] How does this reconcile with BLM's assumption that only 23 fewer wells would be drilled under Alternative D than Alternative A?[340]

Socio-economic analysis will use quantitative models such as IMPLAN or RIMSII, and JEDI for analysis.[341] Given the above examples of conflicting numbers and economic analyses, we question whether modeling will meet the standards for integrity, transparency and reproducibility required.

The restrictions in the preferred alternative would result in a reduction in oil production of 26% and a reduction in natural gas production of 39% in the planning area. Based on the *Total Economic Impact* calculations, this equates to an anticipated economic reduction of $133,955,100 due to lost oil production and $465,702,127 due to lost natural gas production. Further, federal royalties and state severance taxes would see an annual reduction of $3,138,235. This decreased production and resulting loss of economic impact is significant and should compel the agencies to reevaluate the proposed restrictions on oil and natural gas development.

In addition, these figures may even be understated because the agencies wrongly assume that the resources within the four mile NSO radius (over 50 square miles) may be reached by directional or horizontal drilling methods and/or adjacent state or private parcels (see above). The agencies have further underestimated the negative socioeconomic impacts that will result from the proposed management strategy because the socioeconomic analysis is biased in favor of non-market valuation methods. Due to this bias, the agencies have overestimated non-market valuations and underestimated the negative economic impact on local communities, Utah, Wyoming, and the nation.

Notwithstanding the issues above, the annual economic cost of the BLM preferred alternative could exceed $60 million and an additional $3 million per year in lost federal royalties and severance taxes.[342] BLM estimates that Alternative D would result in almost $41 million less output per year, 159 less jobs and $8 million less in annual earnings, when compared with Alternative A.[343] We suspect actual economic impacts would be much worse than BLM calculates. BLM must correct these deficiencies in the economic analysis before preparing the final LUPA/EIS and subsequent ROD.

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[337] DEIS at 3-252.
[338] DEIS at 3-246.
[339] DEIS at 4-77.
[340] DEIS at 4-78.
[341] DEIS at 1-18.
[342] Tables 4.45 and 4.49, DEIS at 4-305.
[343] DEIS at 4-300.

VIII. LOCAL, STATE AND TRIBAL CONSERVATION EFFORTS

BLM planning regulations require that RMPs be "consistent with officially approved or adopted resource-related plans, and the policies and procedures contained therein, of other federal agencies, state and local governments, and Indian tribes, so long as the guidance and RMPs also are consistent with the purposes, policies, and programs of federal laws and regulations applicable to public lands" (43 CFR 1610.3-2(a)).[344]

The BLM and Forest Service commit to "consider" provisions of pertinent plans and seek to resolve inconsistencies with state, local, and tribal plans.[345] However, the agencies have ruled out many important components of such plans. Worse, they have excluded some from consideration in the DEIS. For example, the agencies "recognize" the Utah Governor's 10-year Strategic Energy Plan and the Uintah Basin Energy Zone, yet fail to incorporate them into any of the action alternatives in the DEIS.[346] As discussed further herein, key components (such as iron-clad protection of valid existing rights and private property) of the Conservation Plan for Greater Sage-Grouse in Utah have been omitted from BLM's preferred alternative. Similarly, 11 local sage grouse working group plans have been referenced without meaningful incorporation into the DEIS.[347]

Chapter 5 of the DEIS details many areas where the DEIS differs from, or outright excludes, local or state conservation efforts and goals such as protection of private property rights and recognition of the value of energy development. We urge BLM to more appropriately address the concerns of the state and local governments in its preferred alternative and ROD.

A. Utah Division of Oil, Gas and Mining

The Utah Division of Oil, Gas and Mining ("Division") is part of the Utah Department of Natural Resources.[348] The mission of the Division is "to regulate the exploration and development of coal, oil and gas, and other minerals in a manner which encourages responsible reclamation and development; protects correlative rights; prevents waste; and protects human health and safety, the environment, and the interests of the state and its citizens."[349] The Division was created by the Utah Oil and Gas Conservation Act.[350]

Originally the Division of Oil and Gas Conservation, the Utah Legislature assigned the Division the responsibility of administering the Mined Land Reclamation Act.[351] In 1975, it became the Division of Oil, Gas and Mining.[352] The Division's responsibilities include regulating oil and gas exploration and development; permitting, inspecting, and enforcing mine operations; reclaiming

[344] DEIS at 5-7.
[345] DEIS at 1-19.
[346] DEIS at 1-20.
[347] DEIS at 1-21.
[348] *See* www.ogm.utah.gov.
[349] *See* http://linux1.ogm.utah.gov/WebStuff/wwwroot/division/aboutus.html.
[350] Utah Code § 40-6-15 (2013).
[351] Utah Code § 40-8-1 (2013).
[352] *See* http://linux1.ogm.utah.gov/WebStuff/wwwroot/division/aboutus.html.

abandoned mine sites (under Title IV of SMCRA); and regulating the disposal of produced water from oil and gas sites (given primacy by EPA).[353] In addition to these functions, the Division is made up of a seven-member quasi-judicial Board.[354] The Board is responsible for policy development, considering appeals of Division actions, and rulemaking functions.[355] The Board's rules and regulations are found at Rule 641 of the Utah Administrative Code.[356]

The Division is composed of several programs: Oil and Gas Program, Minerals Program, Coal Program, and Abandoned Mine Reclamation Program. The Oil and Gas Program's mission is "to promote the exploration, development and conservation of oil and natural gas resources in Utah; to foster a fair economic return to the general public for such resources; and to maintain sound regulatory practices to ensure environmentally acceptable activities."[357]

By legislative mandate, the Oil & Gas Program has oversight responsibility for all operations related to the production of oil and natural gas; the spacing and location of wells; operations to increase ultimate recovery; the disposal of salt water and oil-field wastes; the flaring of natural gas from oil wells; and the underground and surface storage of oil, natural gas, and products.[358] The Oil & Gas Program's responsibilities and procedures are codified in the Utah Administrative Code, Rule 649.[359]

IX. THE DEIS WILL IMPACT VALID EXISTING RIGHTS

While the agencies claim that the DEIS and LUP amendments will recognize valid existing rights, the management restrictions for GRSG could wholly or partially deny operators their rights. The disturbance threshold concept proposed by BLM could result in the denial of projects simply because other disturbances have decreased available threshold space, ultimately denying valid existing lease rights. By using the threshold concept, BLM may uphold the valid existing rights of one leaseholder at the expense of another. BLM cannot unilaterally modify existing oil and gas leases or deny development on a lease after it has been issued.

We point out that not only did BLM fail to follow the direction contained in BLM Handbook H-1624-1 which directs in Chapter III B – Procedural Guidance at section 7.d.1,: "The least restrictive stipulation that effectively accomplishes the resource objectives or uses for a given alternative should be used;" the DEIS also fails to meet the requirements of FLPMA, the Energy Policy Act of 2005 and the Energy Policy and Conservation Act of 2000 ("EPCA").

A. FLPMA

The Federal Land Policy and Management Act ("FLPMA") clearly identified mineral exploration and development as a principal or major use of the public lands.[360] To that end,

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[353] *Id.*
[354] *Id.*
[355] *Id.*
[356] Utah Admin. Code r. 641-100 to 641-119 (2013).
[357] *See* http://oilgas.ogm.utah.gov/About_Us/Mission.htm.
[358] *See* http://oilgas.ogm.utah.gov/About_Us/responsibilities.htm.
[359] Utah Admin. Code r. 649-1 to 649-10 (2013).
[360] 43 U.S.C. § 1702(l).

FLPMA requires the BLM to foster and develop mineral activities, not abolish or severely impede such development. Under FLPMA, BLM is required to manage the public lands on the basis of multiple use and sustained yield.[361] "'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.'"[362] "Of course not all uses are compatible."[363] We recognize the challenging task BLM in managing public lands 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 RMP.

B. Energy Policy Act of 2005

Section 363 of the Energy Policy Act of 2005 ("EP Act") requires federal land management agencies to ensure that lease stipulations are applied consistently and to ensure that the least restrictive stipulations are utilized to protect many of the resource values to be addressed. The 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 measures must be a fundamental element of a balanced analysis and documented accordingly in the DEIS.

C. Energy Policy and Conservation Act of 2000

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.

[361] 43 USC § 1701(a)(7) (2006).
[362] *Norton v. Southern Utah Wilderness Alliance,* 542 U.S. at 58 (quoting 43 U.S.C. § 1702(c)).
[363] *Id.*

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 EP Act. BLM recognized the intent of the 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 Instruction Memorandum ("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 Final EIS. 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. BLM recognized the intent of the 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 eliminated using the planning process.

X. Wrongful Assumptions about Horizontal Drilling and Drilling Locations

The agencies wrongly assume that operators can drill horizontally to access oil and natural gas resources beneath NSO buffers around leks from lands outside those buffers. Due to limitations to maximum reach capabilities, production success, drainage area, and engineering technology, horizontal drilling cannot be employed in every field for every type of development. The geology of many formations in Utah and Wyoming, combined with the limitations of horizontal drilling and production technologies, often requires operators to drill wells directionally (in some cases closer to vertically), rather than horizontally. As such, the agencies should not assume that horizontal drilling is feasible in all scenarios.

The agencies also wrongly assume that operators would be able to access federal minerals within four miles of a GSG lek by drilling from existing or new well pads on nearby state and private lands. While operators are likely to move operations to other areas that are unencumbered by NSO stipulations rather than forego production and capital investments entirely, the agencies

wrongly assume that operators have the ability to do so in all circumstances. There are many geological, economic, and administrative factors that come into play when determining whether to move development to substitute areas. Even if operators are able to utilize locations on state or private parcels in lieu of federal parcels, in many cases it is impossible to develop one without the other as the operator may require the federal parcel or parcels for access, ROWs, infrastructure, or some other purpose requisite to fully develop the resource play.

XI. CONCLUSION

The undersigned have significant concerns with the DEIS. Reliance upon the NTT Report, the COT Report and the GRSG Monograph is misplaced because these documents fail to meet established standards for scientific integrity and peer review under the ESA, the DQA, and Presidential and DOI memoranda and orders. Accordingly, proposed disturbance thresholds, four-mile NSO buffers, and treatment of alleged threats to GRSG by oil and gas are fundamentally flawed and must not be imposed. Moreover, implementation of these onerous prescriptions would interfere with the statutory multiple-use mandates of the BLM and USFS and valid existing rights with significant adverse effects to energy production and the economy in Utah and Wyoming.

We support both the Wyoming and Utah plans as an alternative to many management protocols in the preferred alternative and strongly encourage the agencies to more meaningfully incorporate them into the preferred alternative. BLM must also recognize the states' primary authority over wildlife management and central role in managing GRSG populations and habitat within its borders. The states are better suited than the federal government to perform this function as it falls within its traditional jurisdiction and professional expertise. Accordingly, we urge the BLM to revise its Preferred Alternative to be significantly more flexible and adaptive. BLM also needs to fully recognize that GRSG populations in Utah are stable or increasing. Finally, myriad local, state, tribal and federal conservation measures are already in place. Taken together with clustered development and modern technology, effective management already ameliorates threats and disturbances to GRSG in sagebrush habitat.

Thank you for considering these comments and recommendations.

Very truly yours,

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