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NEPA Coordinator
Bureau of Land Management
Northwest Colorado District
2815 H Road
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Via Electronic Mail (blm_co_nw_sage_grouse@blm.gov) and Electronic Submission (https://www.blm.gov/epl-front-office/eplanning/lup/lup_register.do)

Re: Comments on the Northwest Colorado Greater Sage-Grouse Draft Land Use Plan Amendment and Environmental Impact Statement

Dear Sir or Madam:

The American Petroleum Institute ("API"), Western Energy Alliance ("WEA"), Public Lands Advocacy ("PLA"), Colorado Oil & Gas Association ("COGA") 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") Northwest Colorado 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.

- WEA represents more than 430 companies engaged in all aspects of environmentally responsible exploration and production of oil and natural gas in Colorado and across the West.

- 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.

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

- COGA is a nationally-recognized trade association with the purpose of fostering and promoting the beneficial, efficient, responsible and environmentally sound development, production and use of Colorado oil and natural gas.

- 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.

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 Northwest Colorado with respect to the Greater Sage-Grouse ("GRSG"). Our comments identify several issues and concerns with respect to the DEIS.

We have discovered many serious flaws in the DEIS and the data relied upon therein. Implementation of the preferred alternative in this process would impede the agencies statutory missions and adversely affect the ability to explore for, produce, and transport domestic energy on public lands. The analysis in the DEIS relies on the assumption that development of crude oil and natural gas resources in northwest Colorado would inevitably follow the largely outdated scenario of one well to one pad. We urge the BLM to revise its preferred alternative to be significantly more flexible and adaptive. For example, BLM should recognize and account for modern oil and gas exploration and production techniques that take advantage of directional drilling and multiple wells on a single pad. While not feasible in all scenarios, this modern technology, along with clustered development, in of itself, significantly ameliorates the nature and extent of disturbances in sagebrush habitat. In addition, BLM has not recognized that the level of disturbance associated with a well is not constant throughout its life.

We support BLM's efforts to refine management procedures to conserve and protect GRSG and its habitat on public lands in northwest Colorado 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 northwest Colorado 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. 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.

I. PROCEDURAL BACKGROUND

In March 2010, the USFWS added GRSG as a candidate species under the ESA.[2] The USFWS cited an alleged inadequacy of existing regulatory mechanisms as a factor in its decision.[3] 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]."[4]

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 in ten 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. Here, the BLM proposes to amend: Colorado River Valley Resource Management Plan ("RMP") (projected to be completed in mid-2014), BLM Grand Junction RMP (projected to be completed in early 2014), BLM Kremmling RMP (projected to be completed in mid-2014), BLM Little Snake RMP (BLM 2011) and BLM White River RMP (BLM 1997) and associated amendments.[5] The USFS proposes to amend the Routt National Forest Plan/Oil and Gas Leasing Availability Decision, and associated amendments.[6]

The planning area of this DEIS consists of approximately 8.6 million acres of land in Eagle, Garfield, Grand, Jackson, Larimer, Mesa, Moffat, Rio Blanco, Routt, and Summit counties in Northwest Colorado.[7] The BLM is the lead agency, and the USFS is a cooperating agency in developing the DEIS. The effort is one of seven ongoing within eleven western states. A goal of all such LUP amendments is to ensure consistency across each sub-region, as well as across the range of the GRSG.[8]

A. Greater Sage-Grouse and Sagebrush Habitat

GRSG is a candidate for listing under the ESA, a BLM and USFS sensitive species and a Colorado species of concern.[9] Within the DEIS, GRSG habitat is characterized and separated into three categories:

- **Preliminary Priority Habitat ("PPH")** -Areas that have been identified as having the highest conservation value to maintaining sustainable GRSG populations, including breeding, late brood-rearing and winter concentration areas.

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[2] 75 Fed. Reg. 13910 (Mar. 23, 2010).
[3] 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). .
[4] *Id*. at xxvi.
[5] DEIS at 3.
[6] *Id.*
[7] *Id*. at xvii.
[8] *Id.*
[9] DEIS at 226.

- **Preliminary General Habitat ("PGH")** -Areas of seasonal or year-round habitat outside of priority habitat.

- **Linkage/Connectivity Habitat** -Areas that have been identified as broader regions of connectivity important to facilitate the movement of GRSG and to maintain ecological processes.

GRSG habitat in the Northwest Colorado District consists of approximately 2.4 million acres of PPH, 1.5 million acres of PGH, and 295,800 acres of linkage/connectivity habitat (all acreage figures are regardless of land ownership). PPH, PGH, and linkage/connectivity habitat were mapped in cooperation with Colorado Parks and Wildlife ("CPW").

II. THE NEPA PROCESS

A. Purpose and Need of the DEIS

NEPA requires informed decisions – not environmentally "ideal" decisions.[10] 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.[11]

In this case, the purpose and need of the LUP amendments are, "to inform USFWS's March 2010 'warranted, but precluded' ESA listing petition decision" and ensure BLM and the USFS have adequate regulatory mechanisms in place.[12] The agencies assert that restrictions on land uses and programs must be implemented "to avoid the continued decline" of GRSG through conservation measures specified in the National Technical Team's ("NTT") *A Report on National Greater Sage-Grouse Conservation Measures* (the "NTT Report").[13] The BLM and USFS will consider these measures "in the context of their multiple-use missions."[14]

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.[15] 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.[16] Otherwise, the EIS can be found to be inadequate.[17]

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[10] *See* Nicholas C. Yost, *NEPA Deskbook*, *3rd Ed.*, at 6, Environmental Law Institute (2003).
[11] 40 CFR § 1502.13.
[12] DEIS at 6.
[13] *Id.*
[14] DEIS at 6.
[15] THE NEPA TASK FORCE: Report to the Council on Environmental Quality. Modernizing NEPA Implementation. September, 2003.
[16] Section 1501.6(a)(2); see also CEQ FAQ 14(b)(A)
[17] CEQ FAQ 14(b)(A)

Colorado's Department of Natural Resources is a cooperating agency in the process. In an October 31, 2013 press release, Governor Hickenlooper called upon the BLM to recognize and rely upon the meaningful local and state conservation measures already in place.[18] These measures are described in detail below. We echo this request as it would acknowledge these admirable efforts and help alleviate concerns that multiple use mandates and statutory missions of the BLM and USFS would be eclipsed by the onerous top-down approach in the DEIS. In addition, several counties that will be affected by the DEIS agreed to participate in the planning process as designated cooperating agencies, many of which have signed Memoranda of Understanding ("MOU") with the Northwest District Office.[19] We request that BLM recognize and fully incorporate ongoing efforts undertaken by these counties, as well as feedback that they provided in the scoping process, into the final EIS.

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 of 1960 (16 U.S.C. §§ 528-531).

B. Alternatives Considered in the DEIS

The DEIS contains four alternatives:[20]

- Alternative A: No action
- Alternative B: The NTT alternative
- Alternative C: Conservation groups alternative
- Alternative D: BLM's preferred alternative

C. Alternative D: the Preferred Alternative

Alternative D would apply a No Surface Occupancy ("NSO") stipulation to all un-leased PPH with certain exception, modification, and waiver criteria. A five percent disturbance cap would be applied to GRSG Management Zones ("MZ") with certain exception, modification, and waiver criteria.[21] Surface occupancy or disturbance would be

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[18] Available at: http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovHickenlooper%2FCBONLayout&cid=1251647577416&pagename=CBONWrapper.
[19] DEIS at 986.
[20] *Id*. at xxxii & 38-39.
[21] Such criteria would take BLM and Colorado Parks and Wildlife approval and would likely entail project proponents paying for studies to convince the agencies that sage-grouse populations are stable or increasing and that the proposed activity would have no negative impacts.

prohibited within four miles of a lek in PPH during the lekking and early brood-rearing periods. Surface disturbances would be limited to five percent in any MZ. Where disturbances exceed five percent, mitigation would be required.[22] However, BLM could authorize disturbance in excess of five percent, "if data-based documentation is available to warrant a conclusion that GRSG populations are healthy and stable or increasing."[23]

Such discretionary exceptions, waivers, and modifications could be granted with the concurrence of CPW. However, data presented to BLM and CPW would have to demonstrate GRSG populations are stable or increasing and that the development would not affect GRSG populations.[24] And, as BLM acknowledges, project proponents would have to fund studies to collect this data and demonstrate this was the case. The need to do so would prove nearly impossible to implement in a timely fashion. Accordingly, these provisions could be interpreted to establish a de facto ban on oil and gas development, which is hardly consistent with multiple uses and could prevent companies from exercising their valid existing lease rights.

In some instances, the preferred alternative is <u>more</u> restrictive than the other action alternatives. Concerning fire, Alternative D is the <u>most</u> restrictive alternative. It gives priority to fire operations in PPH and PGH.[25] Incredibly, other resource values are considered only if BLM or the USFS determine an exemption is warranted. The preferred alternative is also the most restrictive on future right-of-way ("ROW") designations. Under Alternative D, 930,500 acres are designated as ROW avoidance areas and another 25,600 acres are designated as exclusion areas.[26] More acreage may also be specified for habitat restoration in Alternative D.[27]

In regard to travel management, Alternative D does not allow construction of new routes or upgrades to existing routes that would adversely affect GRSG populations.[28] This will lead to difficulties in accessing public and private land for oil and gas or other valid uses, project delays, and increased construction costs. *Id.* Moreover, PPH would be managed as an avoidance area (930,500 acres), and limits would be placed on the authorization of ROWs or Surface Use Plans ("SUP") in PPH including the five percent disturbance cap.[29] Seasonal closures would apply to <u>all</u> designated habitat.[30] Travel restrictions could impact access to over one million acres in the planning area.[31] These onerous restrictions largely stem from BLM's incorporation of the NTT Report.[32]

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[22] Ch. 4 DEIS at 524.
[23] Ch. 4 DEIS at 519.
[24] Ch. 4 DEIS at 586.
[25] Ch. 2 DEIS at 526.
[26] *See* Table 4.2, Ch. 4 DEIS at 530-531.
[27] Ch. 4 DEIS at 603.
[28] Ch. 4 DEIS at 583.
[29] Ch. 4 DEIS at 585.
[30] Ch. 4 DEIS at 626.
[31] Ch. 2 DEIS at 625-626.
[32] *See, e.g.* Ch. 5 DEIS at 950.

BLM seems to acknowledge proscriptions in the preferred alternative would affect new oil and gas leasing in conflict with the agencies' multiple-use mandates.[33] Incredibly, operators could only access BLM minerals where, "a particular parcel being considered is sufficiently small and located close enough to private lands or non-NSO federal lands to allow directional drilling into minerals underlying the NSO area."[34]

Under Alternative D, the BLM and USFS would not close habitat to fluid mineral leasing through NSOs, but would rely on controlled surface use ("CSU") or timing limitation ("TL") stipulations instead.[35] However, Table 4.2 of the DEIS indicates the preferred alternatives contain over 1.3 million acres with NSO stipulations and nearly 1 million acres of ROW avoidance. How does this comport with multiple uses and valid existing rights?

BLM characterizes only Alternatives B and C as restrictive enough to push development onto state and private lands. Yet Alternative D, the preferred alternative, has an anthropogenic disturbance cap that is merely two percent higher. Such a minute difference in the disturbance caps proposed indicates there is little practical difference between action alternatives. In fact, <u>all</u> of the action alternatives would decrease oil and gas production due to restrictions placed on development.[36] Such a result is unacceptable and contrary to the agencies' statutory missions. Further, we believe the agencies have failed to comply with provisions of NEPA and CEQ regulations, which require a well-defined range of management alternatives and a clear basis for choosing among the options.[37] While the agencies claim they "will consider a range of reasonable alternatives, including appropriate management prescriptions,"[38] there is little difference between the action alternatives and the DEIS does not include an alternative that truly promotes the traditional multiple use concept and conforms with the Multiple Use-Sustained Yield Act of 1960, the Federal Lands Policy and Management Act of 1976, and the Forest and Rangeland Renewable Resources Planning Act of 1974 as amended by the National Forest Management Act of 1976.

The preferred alternative could mandate placing compressors, gathering and storage facilities outside of PPH; placing new utility developments in existing road and utility corridors; onerous road and pipeline reclamation requirements; burying electric distribution lines; and limiting noise to less than ten decibels above ambient levels in certain times and areas.[39] These measures cumulatively, or even individually, could prove cost-prohibitive to operators.

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[33] Ch. 4 DEIS at 633-634.
[34] *Id.*
[35] Ch. 5 DEIS at 957.
[36] CH. 5 DEIS at 961.
[37] 40 CFR § 1502.14
[38] Ch. 1 DEIS at 25.
[39] *Id.*

III: THE DEIS RELIES UPON DATA AND REPORTS THAT ARE FUNDAMENTALLY FLAWED

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 ("DQA").

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.[40]

Throughout the DEIS, frequently cited sources fail to meet: (1) the best available science standard under the ESA; (2) standards of integrity, objectivity, and transparency under the 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."[41] For the reasons referenced below, 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.[42] 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.[43] "Utility" refers to the usefulness of the information to its intended users and the public.[44] 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

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[40] Press Release, Biodiversity Conservation Alliance, *Sage Grouse Takes Center Stage in Oil and Gas Controversy*, (Feb. 26, 2003).
[41] 16 U.S.C. §1533(b)(1)(A).
[42] 44 U.S.C. §§3504(d)(1), 3516.
[43] DQA §515(a), OMB Guidelines, § 11(2), 67 Fed. Reg. at 8458.
[44] OMB Guidelines, § V(2). 67 Fed. Reg. at 8459. (emphasis added).

and substance. "Objectivity" is considered an overall standard of quality.[45] The U.S. Department of the Interior ("DOI") has also adopted DQA Guidelines ("DOI Guidelines").[46] Among other things, the applicable guidelines favor peer-reviewed information.[47]

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."[48]

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."[49] 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.[50]

The DOI's Departmental Manual ("DOI Manual")[51] 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."[52]

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.

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[45] 67 Fed. Reg. 8452, 8458 (Feb. 22, 2002).
[46] Available at: http://www.fws.gov/informationquality/
[47] *See* OMB 2002 available at: http://www.whitehouse.gov/omb/fedreg_reproducible; OMB, Final Information Quality Bulletin for Peer Review (2004).
[48] A*vailable* at http://www.doi.gov/ocio/guidelines/515Guides.pdf (DOI Guidelines)).
[49] 74 Fed. Reg. 10671, 10671 (March 11, 2009).
[50] *Id.*
[51] *Available at:* http://elips.doi.gov/elips/browse.aspx.
[52] *Id.* at 3.5(L).

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. Action alternatives in the DEIS were largely derived from the NTT Report.[53]

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 cited or mentioned at least 19 times 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"[54] 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."[55]

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.[56] This makes it difficult to provide scientific verification of the NTT Report's claims.[57]

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.[58] This limits the ability of outside reviewers or the public to verify claims in the NTT Report and

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[53] *Id*. at xxxii.
[54] NTT Report at 19.
[55] Sec. of the Interior Order No. 3305 (Sept. 29, 2010), *available at*: http://www.doi.gov/news/pressreleases/upload/Sec-Order-No-3305.pdf.
[56] 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").
[57] *Id*. at 14.
[58] *Id*.

reduces the report's scientific credibility.[59] Additionally there are articles listed in "Literature Cited" that are not used within the NTT Report itself.[60]

The NTT Report is also guilty of misleading use of authority.[61] For example, the NTT Report stipulates that with regard to fuel management, sagebrush cover should not be reduced to less than 15%.[62] However, Connelly et al. 2000, the source cited, does not support this proposition.[63] Connelly et al. 2000 states that land treatments should not be based on schedules, targets, and quotas.[64] 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.[65] 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."[66]

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.[67]

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.[68] This creates a serious conflict of interest.[69]

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[59] *Id*.
[60] *Id*.
[61] *Id*.
[62] Available at: http://www.blm.gov/pgdata/etc/medialib/blm/co/programs/wildlife.Par.73607.File.dat/GrSG%20Tech%20Team%20Report.pdf
[63] NWMA Review at 14.
[64] 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).
[65] NWMA Review at 14.
[66] *Available at: http://www.gpo.gov/fdsys/pkg/FR-2011-01-21/pdf/2011-1385.pdf.*
[67] 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 A.
NTT Review at p. 2 attached hereto as Exhibit A.
[68] NWMA Review at 4.
[69] 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-

The DOI 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."[70]

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."[71] 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]."[72]

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."[73] 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."[74] 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.[75] 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.[76]

In this case, the NTT Report also failed to address several comments and issues raised by peer reviewers.[77] Some of the issues the NTT Report failed to include support for the

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12172010.pdf); Department Manual, Part 305, Chapter 3 (http://www.fws.gov/science/pdf/DOIScientificIntegrityPolicyManual.pdf).

[70] Dept. of the Interior, Department Manual, Part 305, Chapter 3, p.3 (http://www.fws.gov/science/pdf/DOIScientificIntegrityPolicyManual.pdf).

[71] *Id*. at 3.7(A)(5).

[72] *Id*. at 3.7(A)(7) – (9).

[73] *Id*. at 3.7(B)(1).

[74] *Id*. at 3.7(B)(5) – (6).

[75] Ramey NTT Review at ¶ 7.1, p.41.

[76] *Id*. ¶ 7.1, p.42.

[77] Ramey NTT Review at ¶ 7.2, p. 42.

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.[78] This is contrary to DOI and BLM guidelines on the DQA.[79] It also contradicts BLM's own DQA memorandum specifically addressing peer review.[80] Accordingly, BLM's reliance on the NTT Report should be carefully reconsidered.

2. 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").[81] With regard to addressing perceived impacts from oil and natural gas, the preferred alternative expressly relies upon the COT Report.[82] Much like reliance on the NTT Report, BLM applies measures from the COT Report to <u>all</u> action alternatives.[83] 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."[84]

a. Questionable Status as a Scientific Document

The COT Report provides no original data or quantitative analyses.[85] The COT Report even fails to provide a comprehensive and unbiased review of all of the available scientific literature on the GRSG.[86] As a result, outdated information and assumptions are perpetuated in the COT Report.[87] Moreover, the COT Report places undue reliance on the database *NatureServe* for threats rankings. *NatureServe* comes with a noteworthy disclaimer:

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[78] NWMA Review at 2.
[79] 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.
[80] 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.
[81] DEIS at 5.
[82] *See* Table 4.2, Ch. 2 DEIS at 530.
[83] *Id.*
[84] *Id.*.
[85] 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 B.
[86] *Id*.
[87] *Id*.

> 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 about the suitability of the information delivered from this server or any other documents that are referenced to or linked to this server....[88]

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.

b. 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.[89] Garton et al. 2011 is the most frequently cited paper in the COT Report.[90] There are serious methodological biases and mathematical errors with the COT Report.[91] These issues were also present in the final revisions of Garton et al. 2011.[92] Furthermore, the data and programs used in Garton et al. 2011 are not public and therefore the results are not reproducible.[93] 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.[94] Some estimate total GRSG populations at or near 500,000 birds.[95] 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.[96] 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.

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[88] *See* http://www.natureserve.org/explorer/servlet/NatureServe?searchSciOrCommonName=greater+sage+grouse

[89] 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).

[90] Ramey COT Review at 1.

[91] *Id*. at 2.

[92] *Id*.

[93] *Id*.

[94] 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).

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

[96] Ramey COT Review at 1.

Moreover, there is no evidence of any reproducible, quantitative methodology used in assigning rankings to threats in each population and GRSG management zone.[97] The ranking of threats in the COT Report appears to be entirely subjective.[98]

c. Peer Review on the COT Report

The FWS disclosed some of the data and information related to peer review of the COT Report.[99] 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.[100] 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.[101]

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]."[102] Contributing team members included five representatives of the USFWS and ten representatives of state agencies in the GRSG range.[103] 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[104] and the need to avoid conflicts of interest.[105] Among other things,

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[97] *Id*. at 2.
[98] *Id* .
[99] 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.
[100] Scientific Peer Review of the Sage-Grouse Conservation Objectives Draft Report at 3.
[101] *Id.* at 2.
[102] 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").
[103] *Id*.
[104] Interagency Cooperative Policy for Peer Review in Endangered Species Act Activities 59 Fed. Reg. 34270 (Jul. 1, 1994); OMB Guidance; Final Information Quality Bulletin for Peer Review 70 Fed. Reg. 2664 (Jan. 14, 2005); Memorandum for the Heads of Executive Departments and Agencies. 74 Fed. Reg. 10671 (Mar. 11, 2009), available at: http://www.gpo.gov/fdsys/pkg/FR-2009-03-11/pdf/E9-5443.pdf (http://www.whitehouse.gov/sites/default/files/microsites/ostp/scientific-integrity-memo-12172010.pdf); Performance Work Statement for Scientific, Technical and Advisory Services (http://www.fws.gov/informationquality/peer_review/IDIQ_Performance_Work_Statement_17Nov2011.pdf) ; Information Quality Guidelines and Peer Review (http://www.fws.gov/informationquality/topics/InformationQualityGuidelinesrevised6_6_12.pdf).
[105] 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

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 problems to be avoided in its conflicts policy.[106] 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);[107] authorship with NTT members; and authorship with other influential GRSG authors including Doherty, Naugle, and Knick.[108] 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).
>
> **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

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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).

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

[107] 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.

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

modified to maintain populations within natural gas fields."[109] 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.

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.

f. 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…."[110] Reviewers identified an astonishing lack of reference to at least 15 relevant scientific papers.[111]

Fundamentally, the COT Report did not meet its stated objectives with regard to the degree to which threats need to be ameliorated.[112] Risk levels may need to be reconsidered and there was doubt expressed that threat ratings were credible.[113] 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.[114]

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."[115] He further stated, "COT should be urging for enhanced, improved and additional management actions because the "continued" is not adequate as is across most

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[109] 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.
[110] Scientific Peer Review of the Sage-Grouse Conservation Objectives Draft Report at 3.
[111] *Id*. at 7.
[112] *Id.* at 5.
[113] *Id*. at B-16.
[114] *Id*. at 7.
[115] *Id*. at B-16.

of the species range."[116] Reviewer 2 praised Garton, along with "limited" scientific references and expert opinion as the "strongest part" of the COT Report.[117] 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.[118] Resistance and resilience were never quantified causing some to label them redundant, of little use, and little substance.[119] Reviewers also cited generalities, uncertainties, and questions regarding whether some recommendations were feasible or practicable.

Reviewer 1 admonished the COT Report to acknowledge that we truly do not know the magnitude of population declines of GRSG.[120] Some concepts were ambiguously defined and not enough information was provided to assess threat ranking.[121] 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.[122]

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.[123] 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.[124] The COT Report did not analyze how, if threats are addressed, population persistence may be altered.[125] 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."[126]

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.[127] He also noted that management actions were largely at the purview of the states.[128]

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[116] *Id*. at B-17.
[117] *Id*. at B-19.
[118] *Id*. at 5.
[119] *Id*. at 4.
[120] *Id*. at B-4.
[121] *Id*. at B-23.
[122] *Id*. at B-23.
[123] *Id*. at B-27.
[124] *Id*. at B-7.
[125] *Id*. at B-9.
[126] *Id*. at B-21.
[127] *Id*. at B-3.
[128] *Id*. at B-3.

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.[129] Reviewer 2 noted several priority areas seem to have been labeled in an inconsistent manner.[130] Descriptions of seasonable habitat were also lacking.

Reviewer 4 questioned how the footprint of renewable energy development might differ from nonrenewable energy development[131] and that statements in the COT Report about predation were speculative with no empirical basis.[132] Reviewer 4 pointed out that direct relationships between specific habitat characteristics and population change are limited, if not lacking entirely.[133] 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.[134] He continued, "[T]his severely limits our ability to predict the response of sage-grouse populations to changes in their habitats."[135] Similarly, Reviewer 5 remarked that conclusions in the threats analysis were based upon findings stemming from professional opinion.[136]

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.

3. 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."[137]

a. 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,

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[129] *Id*. at B-7.
[130] *Id*. at B-15.
[131] *Id.* at B-28.
[132] The COT Report suggests the best way to mitigate predation is to maintain quality habitat with good connectivity.
[133] Scientific Peer Review of the Sage-Grouse Conservation Objectives Draft Report at B-26.
[134] *Id.* at B-27.
[135] *Id.* at B-29.
[136] *Id.* at B-33.
[137] NWMA Review at 4.

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.[138]

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 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.

b. 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."[139] 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.

c. 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."[140] 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

[138] DEIS at 509.
[139] DEIS at 946.
[140] DEIS at 950.

data associated with them resulting in no significant correlations between predictor and response variables.[141] This lack of data infers Johnson et al. 2011 is not an example of the best scientific data available.

d. 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.[142] 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.

e. 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.[143] 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.

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[141] *Id*. at section 17.3.
[142] DEIS at 945.
[143] DEIS at 946.

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.[144] 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.

IV. THE DEFINITION OF GRSG HABITAT IN THE DEIS IS UNSUPPORTED BY SCIENTIFIC EVIDENCE

A. Historic Habitat

The DEIS stated "156 million acres of sagebrush that existed historically were reduced to 119 million acres by 2004" and "56% of the potential pre-settlement distribution of habitat is currently occupied by GRSG."[145] However, the historic habitat of GRSG is extremely uncertain due to an incomplete record and imprecise estimations of sagebrush extent. Furthermore, it is likely that the extent of sagebrush would have changed even without human interference due to climactic variability. As a result, it is impossible to know with any scientific certainty the effect human activities have had on historic GRSG habitat. Accordingly, any discussion of "pre-European" historic habitat is without support and misleading.

B. Preliminary Priority Habitat

The DEIS defines PPH as "areas that have been identified as having the highest conservation value to maintaining sustainable GRSG populations including breeding, late brood-rearing, and winter concentration areas."[146] Once a decision on the DEIS is made, PPH will become priority habitat.[147] PPH was mapped in coordination with CPW.[148]

CPW identified PPH as "areas of high probability of use (summer or winter, or breeding models) within a 4-mile buffer around leks that have been active with at least one male

[144] CESAR Report at 17.
[145] DEIS at 242.
[146] DEIS at xxii & 4.
[147] *Id*.
[148] *Id*. at 5.

displaying within the last 10 years."[149] The scientific literature, however, defines an active GRSG lek as locations where two or more males have been observed and documented actively courting females.[150] This means that potentially inactive leks have been designated as PPH thereby greatly expanding the areas in which proscriptive regulation will occur but with no demonstrable benefit to GRSG. Moreover, BLM's definition of an active lek is different: "a traditional display area attended by two or more male GRSG in two or more of the previous 5 years."[151] Inconsistency in how a lek is defined pervades the DEIS.

CPW based its definition of habitat on probability models that are of low resolution (i.e. a one-kilometer moving window) rather than recent observational data and accurate population counts.[152] CPW acknowledged the limitations of modeling in a presentation by recognizing models "are only as good as the data input and are not perfect."[153]

Under the DQA, the use of models developed by third parties must also be reproducible. This reproducibility standard generally requires that the models used to develop such information be publicly available. Here, the definition of active leks in the DEIS does not correspond to how active leks are defined in the scientific literature. In short, CPW's method of determining PPH did not use the best scientific data available. This flawed definition of habitat consequently resulted in inflated numbers in various areas of the DEIS such as a charts describing acres of oil and gas leases in GRSG habitat and acres of coal potential in GRSG habitat.[154]

V. PROPOSED FOUR-MILE BUFFERS IN THE DEIS ARE UNSUPPORTED BY SCIENTIFIC EVIDENCE

Alternative D, the BLM's preferred alternative, proposes a seasonal (March 1 through July 15) four-mile NSO buffer around active leks during lekking, nesting and early brood rearing in all designated habitat.[155] The DEIS supported this proposition by citing sources that

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[149] Colo. Parks and Wildlife, *Greater Sage-Grouse Preliminary Priority and General Habitat in Colorado* Available at: http://wildlife.state.co.us/SiteCollectionDocuments/DOW/Maps/WildlifeSpecies/Birds/GrSG_PPH_PGH_20120309_Final.pdf (last accessed Oct. 4, 2013).
[150] Doherty, K.E., D.E. Naugle, H.E. Copeland, A. Pocewicz, and J.M. Kiesecker. 2011. Energy development and conservation tradeoffs: systematic planning for Greater Sage-Grouse in their eastern range. Pp. 505–516 in S.T. Knick and J.W. Connelly (editors). Greater Sage-Grouse: ecology and conservation of a landscape species and its habitats. Studies in Avian Biology (vol. 38), University of California Press, Berkeley, CA.
[151] DEIS at 226.
[152] Liza Rossi & Tony Apa, Colo. Parks and Wildlife, *Greater Sage-Grouse Distribution and Habitat Mapping in Colorado*.
[153] *Id*.
[154] DEIS at 297, 303-04.
[155] DEIS at 161-165; The dates for nesting/early brood-rearing habitat vary by field office. Every field offices' nesting/early brood-rearing habitat starts on March 1 except for the White River Field Office which starts on April 15. All of the field offices' nesting/early brood-rearing habitat ends on June 30 with the exception of White River which ends on July 8. However, BLM statewide dates for nesting/early brood-rearing habitat are March 1 – July 15.

most GRSG nest within four miles of leks.[156] For example, the DEIS cites the NTT Report for the proposition that "oil and gas development and its infrastructure negatively influence GRSG behavior and demographics at distances of up to four miles."[157] However, the buffers proposed in the DEIS are far more extensive than necessary because of the reliance of the DEIS on suspect data, assumptions, and modeling.

A. Four-mile NSO Buffers Contain Methodological Errors

The NTT Report stated that "[I]mpacts as measured by the number of males attending leks are most severe near the lek, remain discernible out to >4 miles (Holloran 2005, Walker et al. 2007, Tack 2009, Johnson et al. 2011), and often result in lek extirpations (Holloran 2005, Walker et al. 2007)."[158] However, the NTT failed to mention the methodological problems of those studies or the fact that none of those studies reported a population-level decline in GRSG (rather than a localized effect on rates of male lek attendance near the disturbance).

B. Four-mile NSO Buffers are Impractical and Unreasonable

A four-mile radius NSO buffer effectively restricts all activity within 50 square miles surrounding each lek.[159] This will fundamentally preclude oil and natural gas development on hundreds of thousands of acres across northwest Colorado with crippling economic effects to the region while providing no significant benefit to species populations. Moreover, this would stymie exploration and development in the Piceance Basin, one of the major production areas in the country, as well as prospective production from the Niobrara and Mancos shales.[160]

Given the topography of the planning area, there is substantial acreage within four miles of leks that is not sage grouse habitat. This overly broad restriction will greatly limit year-round development and its associated benefits, which include reduced truck traffic, fewer emissions, and phased development. Furthermore, the agencies have not provided a mechanism to ground-truth the habitat areas on a project-specific basis before imposing restrictions, or to monitor its quality or use in the future. Without ground-truthing and future monitoring, the agencies will likely preclude multiple use in areas that do not actually support GRSG habitat or active leks, unnecessarily preventing economic activities without commensurate benefit to GRSG populations and habitat.

Even the NTT Report states that a "4-mile NSO buffer would not be practical given most leases are not large enough to accommodate a buffer of this size, and lek spacing within priority habitats is such that lek based buffers may overlap and preclude all development."[161] Thus, four-mile NSO buffers are unsupported by the best scientific

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[156] *Id*. at 242 & 247. Sources cited include Colorado GRSG Steering Committee 2008, Apa 2007, and Petch 2009.
[157] *Id* at 516.
[158] NTT Report at 20.
[159] *Id*. at ¶6.4.8. p.32.
[160] *Id*.
[161] NTT Report at 21.

evidence, impractical, unnecessary, and more punitive to the oil and gas industry than they are of conservation value. We therefore urge BLM to reject the proposed four-mile NSO buffers in favor of a more realistic approach that deals with the specific cause and effect mechanisms that underlay demonstrable threats to GRSG in each local population.

C. The DEIS Fails to Analyze Alternatives to the Four-mile NSO Buffer

Under NEPA, all federal agencies must evaluate the potential environmental consequences of any proposed "major Federal action[s] significantly affecting the quality of the human environment."[162] In this case, BLM has failed to meet this requirement. Among other issues, the BLM has failed to adequately consider the effect of its proposed GRSG management on the human environment in this DEIS.[163] This is a key issue because there is nothing in the ESA or case law that elevates species protection over the health, welfare, and safety of humans.[164]

The discussion of alternatives required by NEPA is limited by an agency's statutory objectives and the "underlying purpose and need" to which the agency is responding in proposing alternatives.[165] The courts have excused federal agencies from considering alternatives that require legislative or administrative changes.[166] As the Second Circuit Court of Appeals stated, "[S]tatutory objectives provide a sensible compromise between unduly narrow objectives an agency might choose to identify to limit consideration of alternatives and hopelessly broad societal objectives that would unduly expand the range of relevant alternatives."[167] In this case, implementation of the DEIS conflicts with valid existing rights granted under federal and state laws. A NEPA process (or even an ESA listing) cannot amend or alter these laws.[168]

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[162] 42 U.S.C.A. § 4332(C).
[163] *See In re Delta Smelt Consolidated Cases*, Order,Nos. 09-00407, - 00422, -00631, -00892, -00480 (E.D. Cal. Dec. 9, 2009).
[164] *Id.*
[165] *See, i.e. Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 551-55 (1978) (Where the Court rejected a claim that the Nuclear Regulatory Commission should have reviewed energy conservation as an alternative to the licensing of a nuclear power plant); 40 CFR § 1502.13; 40 CFR § 1508(9)(b).
[166] *See Roosevelt Campobello International Park Commission v. EPA*, 684 F. 2d 1041, 1047 (1st Cir. 1982) (Where the court held federal agencies need only consider alternatives which are consistent with the purposes of a proposed project.).
[167] *City of New York v. United States Dep't of Transp.*, 715 F.2d 732, 743 (2d. Cir. 1983), appeal dismissed, 465 U.S. 1055 (1984).
[168] *See, i.e., Vermont Yankee Nuclear Power Corp. v. Natural Res. Def. Council, Inc.*, 435 U.S. 519, 551-55 (1978) (Where the Court rejected a claim that the Nuclear Regulatory Commission should have reviewed energy conservation as an alternative to the licensing of a nuclear power plant); *City of New York v. United States Dep't of Transp.*, 715 F.2d 732, 743 (2d Cir. 1983), appeal dismissed, 465 U.S. 1055 (1984) (Where the court reasoned, "[S]tatutory objectives provide a sensible compromise between unduly narrow objectives an agency might choose to identify to limit consideration of alternatives and hopelessly broad societal objectives that would unduly expand the range of relevant alternatives."); *Roosevelt Campobello International Park Commission v. EPA*, 684 F. 2d 1041, 1047 (1st Cir. 1982) (Where the court held federal agencies need only consider alternatives which are consistent with the purposes of a proposed project); 40 CFR § 1502.13; 40 CFR § 1508(9)(b).

Here, in this DEIS, every action alternative evaluated incorporates a four-mile NSO buffer. Accordingly, BLM has failed to cover a full spectrum[169] of alternatives and failed to take the requisite "hard look"[170] at alternatives to this overly restrictive prescription.

Finally, by acting on flawed measures in the NTT Report, the COT Report and the GRSG Monograph, BLM has committed itself to an action before making a final decision. This could be construed as pre-decisional and an irreversible, irretrievable commitment of resources contrary to NEPA.[171]

D. Data Does Not Support the Need for Four-mile NSO Buffers

There is no data that shows that a four-mile NSO buffer would address any specific threat to GRSG or result in any quantifiable benefit to GRSG.[172] This one-size-fits-all approach clearly fails to address specific threats or their underlying mechanisms.[173] Further, it leaves no allowance for conservation plans tailored to local conditions.[174] Conservation measures best suited to one region are not necessarily suited to another region.[175] It is particularly important to acknowledge local conditions because the negative impacts of federal environmental decisions fall "solely on states, local communities, businesses, jobs, and private property owners."[176]

The notion that a four-mile NSO buffer is necessary is clearly refuted by data from the Pinedale Planning Area.[177] There, data showed a GRSG population increase despite intensive energy development that has occurred in Jonah, Labarge, and Pinedale Anticline within four miles of active leks.[178] Notably, many of these areas developed prior to widespread use of directional drilling and clustered development. Accordingly, impacts from oil and gas development today are likely to be even smaller.

Four-mile NSO buffers are unsupported by the best scientific evidence because other scientific data has demonstrated that four-mile NSO buffers are not necessary. This is another reason why BLM must reject the proposed four-mile NSO buffers around leks in favor of a more realistic approach in the final EIS.

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[169] *See Klamath-Siskiyou Wildlands Center v. U.S. Forest Service*, 373 F. Supp. 2d 1069, 1088-89 (E.D. Cal. 1994).
[170] *See, e.g. All Indian Pueblo Council v. United States*, 975 F.2d 1437, 1444-46 (10th Cir. 1992).
[171] *See* 40 C.F.R. § 1502.2(g).
[172] Ramey NTT Review at ¶ 6.4.6, p.31.
[173] *Id*.
[174] *Id*. at ¶ 5.1, p. 21-22.
[175] NWMA Review at 3.
[176] Western Governor's Association, *Policy Resolution 13-08 – Endangered Species Act*, p. 3.
[177] Ramey NTT Review at ¶ 6.4.7, p.31.
[178] Ramey NTT Review at ¶ 6.4.7, p.31-32; *See also* Wyoming Game and Fish Department, *Wyoming Sage-Grouse Population Lek Count Data* (2013). Wyoming Oil and Gas Conservation Commission *Well Data*; Disturbance Data from PAPO, JDMIS, and PDMIS databases.

VI. ANTHROPOGENIC DISTURBANCE CAPS IN THE DEIS ARE OVERLY BROAD AND BURDENSOME

Alternative D, BLM's preferred alternative, proposes an anthropogenic disturbance cap of less than five percent and a total disturbance cap of less than 30 percent.[179] The DEIS defines anthropogenic disturbance as the "physical removal of sagebrush habitat, including paved highways, graded gravel roads, transmission lines, substations, wind turbines, oil and gas wells, pipelines, landfills, homes, and mines."[180] The DEIS defines total disturbance as "all loss of sagebrush from all causes including anthropogenic disturbance, wildfire, plowed field agriculture, and vegetation treatments.[181] While Appendix F of the DEIS provides certain exceptions to the disturbance caps,[182] the caps are still overly broad and burdensome.

It is not clear how BLM calculates that a five percent cap could allow 60 percent more surface disturbance than a three percent cap in PPH.[183] We question BLM's assertion that the preferred alternative will allow greater flexibility when, at the same time, it is impossible to quantify alleged benefits.[184] We understand acreages may be recalculated and revised based upon additional GIS data.[185] Yet, how can the public be expected to meaningfully comment, and how can the BLM adequately analyze alternatives, when such changes could occur? BLM needs to utilize more robust mapping efforts such as those described in Garfield County's proposed alternative, which reflects a more accurate and pragmatic approach to GRSG conservation.[186]

While a five percent disturbance cap is slightly less restrictive than the three percent cap in the other action alternatives, BLM states, "one of the 21 MZs is already above that amount, another is at 4.6 percent, and four more are nearly halfway to 5 percent with the current level of development."[187]

To provide evidence to seek approval for activities beyond what the proposed disturbance caps would allow, operators would have to conduct their own studies at a cost of potentially years and millions of dollars. Then, operators would have the burden to prove to BLM and CPW that data from the studies supports the ability to continue with the

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[179] DEIS at p. 42; Bureau of Land Management, Appendix F – Disturbance Cap Management, DEIS, p. F-1 – F-2 (August 2013).
[180] Bureau of Land Management, Appendix F – Disturbance Cap Management, DEIS, p. F-1 (August 2013).
[181] DEIS at 155, 178 & 195.
[182] The standard exception is that disturbance may exceed the cap without additional mitigation if "data-based documentation is available to warrant a conclusion that GRSG populations in the applicable Colorado GRSG management zone are healthy and stable at objective level, or increasing, and that a specific proposal for development would not adversely affect GRSG populations due to habitat loss or disruptive activities. Bureau of Land Management, Appendix F – Disturbance Cap Management, DEIS, p. F-5 (August 2013).
[183] DEIS at 638.
[184] DEIS at 646.
[185] Ch. 2 DEIS at 36.
[186] *See* DEIS Appendix C.
[187] Ch. 4 DEIS at 646.

proposed action. Such a restrictive approach in the preferred alternative renders it essentially indifferent from the other action alternatives.

A. Data Does Not Support the Need for Disturbance Caps

One of three sources[188] cited for disturbance cap management is the NTT Report. The NTT Report presented no scientific data that achieving less than 30 percent total disturbance is: (1) scientifically defensible; (2) achievable; (3) would result in stable GRSG populations; (4) would not result in irreparable harm to other species; and (5) would not unnecessarily have a negative effect on local economies.[189]

B. Disturbance Caps Leave No Room for Plans Tailored to Local Conditions

Much like the four-mile NSO buffers, the proposed disturbance caps are one-size-fits-all regulatory prescriptions with no allowance for GRSG conservation plans tailored to local conditions.[190] BLM counts fee and state land against the disturbance caps. As development proceeds within a MZ, BLM development would necessarily have to be deferred. As a result, there is little or no opportunity for return on investment in federal leases and possible drainage for federal oil and gas resources to offsetting mineral leases that are not restricted.

C. Disturbance Caps Would Create a Permitting Rush

Such caps would have significant unintended consequences. For example, disturbance caps would likely cause a "permitting rush" where oil and gas operators and other users of federal lands would submit projects as fast as possible in anticipation of declining cap space.[191] This would cause a serious backlog for permitting agencies and be a detriment to future oil and gas operations in Northwest Colorado.[192]

D. The DEIS Fails to Properly Consider Alternatives to the Disturbance Caps

Alternatives B and C propose a three percent disturbance cap.[193] While the preferred alternative is slightly more flexible (five percent), this token difference hardly qualifies as a meaningful alternative.[194] It is impossible for BLM to take the "hard look" required by NEPA when all action alternatives share the same goals.[195] Again, BLM has failed to

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[188] The other sources are: U.S. Depart. of the Interior, BLM, *Geographic Information Systems Data*. Unpublished data. BLM, various District and Field Offices, CO (2013); and J. Bohne, T.R. Rinkes and S. Kilpatrick. *Sage-Grouse Habitat Management Guidelines for Wyoming*. Wyoming Game and Fish Department, Cheyenne, WY (2007).
[189] Ramey NTT Review p. 2.
[190] *Id*. at ¶ 5.1, p. 21-22.
[191] Western Energy Alliance, *Northwestern Greater Sage-Grouse Draft Environmental Impact Statement and Land Use Planning Amendments*, White Paper, p. 4 (October 2013).
[192] *Id*.
[193] DEIS at 461.
[194] *Id*.
[195] Ch. 2. DEIS at 40.

adequately analyze different alternatives or their effect on the human environment and therefore fails to qualify as the "hard look" required by NEPA. Furthermore, it would be impossible for the disturbance cap to be implemented without affecting valid existing rights.

E. The DEIS Provides the BLM with Unprecedented Discretion to Disapprove Projects on Public Lands to Compensate for Disturbances on Private Lands

While the agencies state they will not inventory private lands or monitor the activities of private landowners, they will track and account for large projects on private lands and apply them against disturbance caps. [196] Consequently, decisions made on private lands would affect what the BLM can authorize on public lands, yet the agencies will not have accurate inventories. 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 socio-economic benefits to local communities would be in jeopardy.

VII. SCIENCE DOES NOT SUPPORT ALLEGED NOISE IMPACTS IN THE DEIS

The DEIS claims that noise and human activity from fluid mineral development has been shown to influence GRSG behavior.[197] The DEIS cites the NTT Report for the proposition that "recent studies have consistently demonstrated that oil and gas development and its infrastructure influence GRSG behavior and demographics at distances of up to 4 miles."[198] The DEIS further claims that oil and gas development prompts "declines in lek persistence and male attendance, yearling and adult hen survival, and nest initiation rates."[199] Such is not the case.

Studies cited in the NTT Report (Patricelli et al. 2010,[200] Blickley et al. in preparation[201] and Bickley and Patricelli in press),[202] did <u>not</u> find population declines as a result of noise from oil and gas operations.[203] Rather, they observed a transient period of disturbance to GRSG at leks where playbacks of high levels of noise occurred.[204] Even if they stood for the proposition cited, there were numerous deficiencies with the equipment used in the study

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[196] DEIS at F-3
[197] *Id*. at 516.
[198] *Id*.
[199] *Id*.
[200] G.L. Patricelli, J.L. Blickley, & S. Hooper, *Incorporating the Impacts of Noise Pollution into Greater Sage Grouse Conservation Planning*. 27th Meeting of the Western Agencies Sage and Columbian Sharp Tailed Grouse Technical Committee Workshop in Twin Falls, Idaho (2010).
[201] J.L. Blickley, D. Blackwood, & G.L. Patricelli, *In Preparation, Experimental Evidence for Avoidance of Chronic Anthropogenic Noise by Greater Sage Grouse*,University of California-Davis.
[202] J.L. Blickley & G.L. Patricelli, *In Press, Potential Acoustical Masking of Greater Sage Grouse Display Components by Chronic Industrial Noise. Ornithological Monographs*..
[203] Ramey NTT Review ¶ 6.5, p.33.
[204] *Id*.

(substandard microphone, recorder, and playback speakers).[205] Finally, the data from these studies is not publically available which renders the results unreproducible.[206]

The DEIS also cites Blickely et al. 2012, Holloran 2005 and Manier et al. 2013 in alleging, "noise from drilling, roads, and ancillary structures has been implicated as an important determinant in declining male lek attendance."[207] However, data on lek locations and attending male numbers from CPW demonstrates that, as of 2012, currently active GRSG leks occur on, or immediately adjacent to roads, pipeline corridors, and well pads.[208]

VIII. THREATS TO GRSG ARE OVERSTATED IN THE DEIS

Through the planning process, BLM proposes proscriptive management regimes based upon fundamentally flawed science. At the same time, BLM acknowledges "GRSG in Colorado have been increasing for about the last 17 years, and breeding populations have not declined for the last 39 years,"[209] and that sagebrush habitat in Jackson County (which harbors the second largest population in the planning area) is, "largely intact, and there is little threat of fragmentation."[210]

BLM fails to acknowledge the size of the GRSG population sufficiently negates threats. In fact, many species have been delisted or removed from candidate status with far less significant population numbers and ranges:

- The FWS withdrew the black-tailed prairie dog ("BTPD") from candidate status despite significant variations in certain populations. In the 12-month finding for the BTPD, the FWS noted that urbanization represents a locally substantial loss of occupied habitat, but in a range-wide context, it is not significant. The FWS further stated, given population estimates in Colorado and elsewhere, urbanization cannot be considered a threat at present or in the foreseeable future, either in Colorado or range-wide, despite the fact that "considerable effects due to this factor have occurred in the past."[211]

- The FWS removed the peregrine falcon from the list of endangered and threatened species with only 1,650 peregrine breeding pairs in the United States and Canada.[212]

- The FWS withdrew its proposal to list the mountain plover where the current total population of mountain plovers was estimated to be between 5,000 and 11,000 individuals.[213]

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[205] *Id*. ¶ 6.6, p.35-36.
[206] *Id*. ¶ 6.5, p.33.
[207] DEIS at 517.
[208] Ramey COT Review at ¶ 13.2 p.19.
[209] DEIS at 253 citing Figure 3-5.
[210] DEIS at 246.
[211] 69 Fed. Reg. 51217 (Aug. 18, 2004).
[212] Press Release, U.S. Fish and Wildlife Service, The Peregrine Falcon is Back!, (Aug. 20, 1999).

• Due to the size of the current Aleutian Canada goose population (37,000 individuals) and the management practices on currently used goose habitats, the FWS found that potential threats such as development, variable market conditions, changing agricultural practices, and adverse climactic conditions did not threaten the continued survival of the species. The FWS stated it believed that the size of the population was such that it would have time to intervene on behalf of the subspecies should any of these become threats to the continued survival of the subspecies.[214]

The DEIS asserted that it analyzed impacts by type, context, duration, intensity, and whether the impact is direct or indirect.[215] However, the BLM failed to provide any citations or support whatsoever for its methodology.

The DEIS failed to give sufficient attention to threats such as predation, parasites, and infectious diseases.[216] The DEIS completely dismissed the threat of hunting even though 207,430 GRSG were harvested between 2001 and 2007.[217]

A. The DEIS Does Not Adequately Address Predation

Under Alternative D, the BLM preferred alternative, there is only one preferred design feature ("PDF") which address predation. The PDF, which is for all designated habitat, is to "remove standing and encroaching trees within at least 100 meters of occupied GRSG leks and other habitats (e.g., nesting, wintering, and brood rearing) to reduce availability of perch sites for avian predators, as appropriate, and resources permit."[218] This approach is extreme and ineffective because it does not consider other perch sites or land-based predators such as red foxes and coyotes. Moreover, it is extreme because it calls for the clear-cutting of trees, which will have an adverse impact on other species. This approach can hardly be held up as a scientific and effective approach to minimize the threat of predation.

More importantly, the DEIS fails to discuss four recent papers by Coates on nest predation that describe potential benefits of anti-perch devices on power poles and fence posts; burying power lines to eliminate perches for raptors and ravens; or trash control measures to eliminate food subsidies to ravens, magpies, red foxes, and coyotes; or using predator management in an adaptive management framework.

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[213] 68 Fed. Reg. 53083 (Sept. 9, 2003); *see also* Press Release, U.S. Fish and Wildlife Service, U.S. Fish and Wildlife Service Withdraws Proposal to List the Mountain Plover as a Threatened Species, (Sept. 8, 2003).
[214] 66 Fed. Reg. 15643 (Mar. 20, 2001); *see also* Press Release, U.S. Fish and Wildlife Service, An Endangered Species Success Story: Secretary Norton Announces Delisting of Aleutian Canada Goose, (Mar. 19, 2001).
[215] DEIS at 457.
[216] *Id*. at 535.
[217] DEIS at 535; 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).
[218] Bureau of Land Management, Appendix I – Required Design Features, Preferred Design Features, and Suggested Design Features, DEIS, p. I-13 (August 2013).

B. Parasites and Infectious Diseases

The DEIS contains an unrealistic design feature to minimize exploitation of coal bed natural gas ponds by *Culex tarsalis* to curb the effects of the West Nile Virus ("WNV"). Alternative D proposes a PDF for all designated habitat, "when authorizing new ponds for watering livestock, evaluate the proposed design for features that reduce the potential for creating mosquito breeding habitat in conjunction with features that makes the pond fit for the purpose for which it is intended" and refers to Alternative B for energy-related water disposal[219] Alternative B proposes to:

> (1) Increase the size of ponds to accommodate a greater volume of water than is discharged…;
>
> (2) Build steep shorelines to reduce shallow water and aquatic vegetation around the perimeter of impoundments…;
>
> (3) Maintain the water level below that of rooted vegetation for a muddy shoreline that is unfavorable habitat for mosquito larvae…;
>
> (4) Construct dams or impoundments that restrict down slope seepage or overflow by digging ponds in flat areas rather than damming natural draws or lining constructed ponds in areas where seepage is anticipated…;
>
> (5) Line the channel where discharge water flows into the pound with crushed rock or use a horizontal pipe to discharge inflow directly into existing open water…;
>
> (6) Line overflow spillway with crushed rock, and construct the spillway with steep sides to preclude the accumulation of shallow water and vegetation; and
>
> (7) Fence pond site to restrict access by livestock and other wild ungulates that trample and disturb shorelines, enrich sediments with manure and create hoof print pockets of water that are attractive to breeding mosquitoes.[220]

Compliance with this PDF would be impossible in arid areas such as northwestern Colorado even if the standards were based upon sound reasoning or verifiable standards – they are not. Therefore, it is essential that BLM identify viable alternative designs, or allowance for their development, in the planning documents. With respect to ponds for watering livestock, the PDF is vague and fails to provide any standards. Further, with respect to energy related water disposal, this PDF is overreaching and would have a

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[219] Bureau of Land Management, Appendix I – Required Design Features, Preferred Design Features, and Suggested Design Features, DEIS, p. I-2 (August 2013).
[220] *Id*. at I-2 – I-3.

negative impact on other species that would likely outweigh any positive impacts to GRSG. It also appears to violate BLM's multiple-use mandate and would threaten valid existing rights.[221]

Additionally, the DEIS fails to consider Colorado Oil and Gas Conservation Commission ("COGCC") regulations regarding energy-related water disposal and whether those regulations may already be effective in combating WNV.[222]

C. DEIS Does Not Adequately Address Hunting

Some 207,430 GRSG were harvested during hunting seasons between 2001 and 2007.[223] However, the DEIS also pays little attention to hunting as a threat stating "the BLM has no authority over [hunting]; therefore, there is no resource program for addressing this threat to GRSG and their habitat."[224]

The BLM's failure to address hunting as a threat is a gross exclusion to conservation efforts of the GRSG. A summary of population information found that GRSG lived longer, have higher winter survival rates, lower rates of reproduction, and are more migratory over greater distances than previously thought.[225] As a result, ongoing hunting is likely a contributor to declines in GRSG populations. Additionally, new data and research published by Gibson et al. 2011 have refuted the frequently repeated belief that there is a no additive demographic effect of hunting on GRSG populations. Thus, the hunting of populations in North Park (Jackson County), Grand County, and Moffat County will have an effect not only on those populations but also on nearby populations that are not hunted (but are genetically and demographically linked by dispersal).[226]

D. The DEIS Overstates the Threat of Oil and Gas Development

The DEIS displays a strong bias against oil and gas development in its discussion of threats to GRSG by focusing on threats from oil and gas while ignoring or downplaying other threats.[227] While BLM acknowledges less than one percent of PPH and PGH are directly influenced by oil or gas wells, it states 99 percent are within the likely effects buffer (11.8

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[221] *See* 43 U.S.C. §§ 1701(a)(7) & 1702(c).
[222] *See* Colo. Dept. of Nat. Resources, COGCC Rules and Regulations, 900-Series E&P Waste Management (May 30, 2011), *available at*: http://cogcc.state.co.us/RR_Docs_new/rules/900Series.pdf.
[223] 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).
[224] DEIS at 38.
[225] John W. Connelly, Christian A. Hagen, and Michael A. Schroeder, *Characteristics and Dynamics of Greater Sage-Grouse Populations*, *in* Greater Sage-Grouse Ecology and Conservation of a Landscape Species and its Habitats. Studies in Avian Biology (vol. 38) p. 53 - 67 (Steven T. Knick and John W. Connelly eds., 2011).
[226] Gibson, R. M., V. C. Bleich, C. W. McCarthy, T. L. Russi. (2011) Recreational hunting can lower population size in greater sage-grouse. Pp. 307-315 in B.K. Sandercock, K. Martin, and G. Segelbacher (eds.). Ecology, Conservation, and Management of Grouse. *Studies in Avian Biology* (vol. 39), University of California Press, Berkeley, CA.
[227] DEIS at 529-536.

miles) of these wells.[228] There is no verifiable, reproducible scientific evidence to support such an expansive statement.

There are three major oil and gas producing basins within the planning area: the Piceance, Sand Wash and North Park Basins.[229] Notwithstanding BLM's statement to the contrary, there is little, if any, evidence for "widespread" geothermal energy development or oil shale development in the planning area.[230] Moreover, citations to increases in natural gas demand and major increases in drilling activity within the planning area are clearly dated and flawed.[231]

The DEIS claims that the oil and gas development and infrastructure are threats to Northwest Colorado GRSG populations.[232] While oil and gas development and infrastructure can contribute to GRSG mortality and disturbance this is not always the case.[233] For example, in the Pinedale Planning Area in Wyoming GRSG numbers have actually increased while development has also increased.[234]

The DEIS states in several different locations that roads, especially those associated with oil and gas development, have a significant negative impact on GRSG populations.[235] However, data on lek locations and attending male numbers from CPW have shown that currently active leks occur on, or immediately adjacent to, roads, pipeline corridors, and well pads.[236] These data also contradict the DEIS's repeated proposition that GRSG need intact sagebrush cover.[237]

The DEIS stated that emissions from oil and gas developments could be detrimental to the air quality in the planning area.[238] Yet the DEIS acknowledges, "None of the alternatives analyzed in this EIS is statistically better or worse with respect to impacts on air quality."[239] Current and future emissions estimates for oil and gas developments were developed "from peak construction, production, and operations."[240] The DEIS estimates surface area disturbances for oil and gas developments "at five- and ten-acre increments to accommodate the well pad, access roads, and infrastructure developments for single-well and multi-well pads."[241] However, the DEIS provides no data or verifiable source to support these various estimates. The DEIS discusses the impacts of each alternative at various field offices and the approximate level of disturbance oil and gas developments

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[228] Ch. 5 DEIS at 952.
[229] DEIS at 296.
[230] Ch. 5 DEIS at 952.
[231] *Id.*
[232] *Id*. at 529 & 530.
[233] Ramey COT Review at ¶ 13.2 p.19.
[234] *Id*.
[235] DEIS at 516, 517, 530.947, 949, 950,
[236] Ramey COT Review at ¶ 13.2 p.19.
[237] DEIS at 516, 533, 953
[238] *Id*. at 784.
[239] *Id*. at 804.
[240] *Id*. at 785.
[241] *Id*. at 786.

have already reached under the respective disturbance caps, but fails to provide any citations for this data or support for these estimates.

E. Climate Change is Not a Threat to GRSG

While we appreciate that the BLM did not specifically adopt measures in the DEIS to address climate change, we take issue with BLM's characterization of climate change as a "profound" threat to GRSG.[242] Analysis of climate change should be outside the scope of the DEIS.[243] First, its effects are not within the "reasonably foreseeable future."[244] Second, regional climate models are problematic because they compound the inherent problems in the global models and lack verifiability due to insufficient "calibration" data necessary to perform proper statistical analysis.[245] Localized climate projects are problematic for mountainous areas because current global climate models are unable to capture the variability of climate phenomena in mountainous regions at a local or regional scale.[246] Despite these gross limitations, BLM leaps to the conclusion that climate change is a "profound" threat to GRSG.[247] This type of predetermined analysis is clearly inconsistent with the best available science standard under the ESA and the standards of quality and objectivity required by the DQA. The LUP process is not a proper tool to attempt to regulate climate change.

IX. BLM FAILED TO ADEQUATELY CONSIDER THE ECONOMIC IMPORTANCE OF OIL AND GAS IN THE DEIS

The BLM failed to appropriately weigh and consider whether and how any of the alternatives affect oil and gas exploration and production as well as the tremendous economic impacts that will follow. For example, the estimated economic impacts from the proposed listing of the Gunnison sage-grouse could approach a staggering $290 million per

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[242] DEIS at 805.
[243] DEIS at 385-386.
[244] The definition of "threatened," requires the species to be "likely to become an endangered species within the foreseeable future." Because climate change cannot satisfy the requirement for "threatened" it certainly does not rise to the level of "endangered." 16 U.S.C. § 1532(20).
[245] The global model commonly relied upon is the 2007 Intergovernmental Panel on Climate Change (IPCC), which recognizes its fundamental uncertainties stating, "uncertainty in climate change projections has always been a subject of previous IPCC assessments Uncertainty arises in various steps towards a climate projection (figure reference omitted). For a given emissions scenario, various biogeochemical models are used to calculate concentrations of constituents in the atmosphere. Various radiation schemes and parametrizations are required to convert these concentrations to radiative forcing. Finally, the response of the different climate system components (atmosphere, ocean, sea ice, land surface, chemical status of atmosphere and ocean, *etc*.) is calculated in a comprehensive climate model. In addition, the formulation of, and interaction with, the carbon cycle in climate models introduces important feedbacks which produce additional uncertainties." Available at: http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch10s10-1.html; Foley, A.M., Uncertainty in Regional Climate Modeling: A Review, Progress in Physical Geography, 34(5) 647–670, 2010.
[246] *See, e.g.* 78 Fed. Reg. 2509.
[247] DEIS at 805.

year in Colorado alone.[248] The GRSG has a much more significant range with far more overlap with economic activities such as oil and gas. Economic impacts from this proposed action would likely be much more severe.

According to the Wall Street Journal, the average American household gained about $1,200 a year from domestic oil and gas production.[249] The research firm IHS concluded that the "unconventional revolution" contributed $163 billion to U.S. households last year.[250] These estimates are predicted to double by 2020 and triple by 2025.[251]

The University of Colorado's Leeds School of Business reports that Colorado's oil and gas industry recorded $9.3 billion in production value in 2012.[252] With direct employment of more than 51,200 jobs and average wages over $74,800, oil and gas is crucial to a strong and growing economy in Colorado.[253] Domestic oil and gas production from northwestern Colorado will help reduce dependence on foreign oil and provide much-needed jobs and revenues. Unfortunately, BLM has failed to adequately consider these issues in its NEPA analysis.

Moreover, BLM must comply with Executive Order No. 13211.[254] That order directs any agency that takes an action with a "significant adverse effect" on the supply of domestic energy resources to "appropriately weigh and consider the effects of the Federal Government's regulations on the supply, distribution, and use of energy," and to prepare and submit to OMB's Office of Information and Regulatory Affairs a "Statement of Energy Effects" for their "significant energy actions."[255]

Here, the DEIS contains only a very brief discussion of the potential economic impacts. It fails to give a concrete economic impact analysis on the oil and gas industry under the preferred alternative and merely states which counties would contain workers most affected by implementation.[256] This cursory review is insufficient. As noted above, the oil and gas industry is an integral part of Colorado's economy with vast economic benefits not only throughout the state, but throughout the nation.

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[248] [248] Industrial Economics Incorporated, Economic Analysis of Critical Habitat Designation for the Gunnison Sage-Grouse, p. 5-16 (Aug. 27, 2013) http://www.fws.gov/mountain-prairie/species/birds/gunnisonsagegrouse/20130909DraftEconomicAnalysisFor%20CriticalHabitat.pdf.
[249] Tennille Tracy, *Households Gained $1,200 Thanks to Surging U.S. Oil Production*, WALL ST. J. BLOG (Sept. 4, 2013, 8:45 AM), http://blogs.wsj.com/economics/2013/09/04/households-gained-1200-thanks-to-surging-u-s-oil-production/.
[250] *Id*.
[251] *Id*.
[252] Brian Lewandowksi and Richard Wobbekind, *Assessment of Oil and Gas Industry: 2012 Industry Economic and Fiscal Contributions in Colorado* (July 2013), http://www.coga.org/pdf_studies/UniversityofColorado_LeedsSchoolofBusiness_Oil&NaturalGasIndustry_EconomicStudy2012.pdf.
[253] *Id*.
[254] *Available at:* http://www.gpo.gov/fdsys/pkg/FR-2001-05-22/pdf/01-13116.pdf.
[255] Exec. Order No. 13211, 66 Fed. Reg. 28355 (May 18, 2001).
[256] DEIS at 903.

Oil and gas, mining, and agriculture are critical to the economic vitality of Northwest Colorado. However, BLM concedes the preferred alternative is no different from Alternative B with regard to "mandatory BMPs" with the greatest potential to affect the economic viability of oil and gas.[257] Unfortunately, implementation of the preferred alternative would discourage modern oil and gas development techniques and create real uncertainty. For example, oil and gas companies will have great difficulty planning for operations without a better understanding of where and how habitat is drawn (including locations of leks) and how disturbance caps are calculated and implemented.

BLM admits Alternatives B and Alternative C could be so restrictive that development is pushed to state and private lands.[258] The same could be said for the preferred alternative. BLM also admits all action alternatives would result in a decrease of oil and gas production to due higher regulatory burdens.[259]

The DEIS should have given more consideration to how Alternative D would affect the oil and gas industry and northwest Colorado. For example, the difference in impacts to oil and gas across action alternatives in Table 5.4 fails to take these significant disincentives to development into account. Characterization of these impacts as "relatively minor" is unsupportable.[260] Projected gas production in the preferred alternative (Alternative D) is only 13% lower than the current management scenario (Alternative A), and projected oil production is only 5% lower. The projection that the restrictions and closures in the preferred alternative, including the disturbance cap and NSO designations, will only decrease production by such a small amount is inaccurate.

X. THE DEIS FAILS TO RECOGNIZE EXISTING REGULATORY MECHANISMS ARE SUFFICIENT TO PROTECT GRSG

Federal agencies can rely upon state, regional, and local plans in their consideration of environmental impacts under NEPA.[261] BLM has not adequately considered state and local GRSG conservation planning efforts pursuant to 43 CFR 1610. Reference to the efforts (Chapter 1, Section 1.7) alone is insufficient. Moreover, it is unclear why BLM did not carefully consider COGCC rules regarding wildlife and surface water and the Colorado Greater Sage-grouse Conservation Plan in consideration of alternatives in the NEPA process.

A. COGCC Rules Regarding Wildlife and Surface Water

The DEIS failed to give appropriate consideration to COGCC rules. COGCC rules were promulgated to protect public health, safety, and welfare, including the environment and

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[257] DEIS at 639.
[258] Ch. 5 DEIS at 957.
[259] Ch. 5 DEIS at 961.
[260] *See* Ch. 5 DEIS at 976.
[261] *See, e.g.* 40 CFR § 1502.21; *Georgia River Network v. U.S. Army Corps of Engineers*, 334 F. Supp. 2d 1329, 1345 (N.D. Ga. 2003) (agency properly relied upon federal, state and local regulations, including local land use plan); *Sierra Club North Star Chapter v. La Hood*, 693 F. Supp. 2d 958, 990 (D. Minn. 2010) (accepting reliance on local plans in indirect effects analysis).

wildlife resources, from the impacts resulting from oil and gas development in Colorado. C.R.S. § 34-60-105(1) (Commission has the power to make and enforce rules); and § 34-60-106(2)(d) (Commission has authority to regulate "[O]il and gas operations so as to prevent and mitigate significant adverse environmental impacts on any air, water, soil, or biological resource resulting from oil and gas operations to the extent necessary to protect public health, safety, and welfare, including protection of the environment and wildlife resources, taking into consideration cost-effectiveness and technical feasibility.").

Wildlife issues are covered in the 1200-Series of the COGCC's rules, which intended to implement the legislative declaration stated in HB 07-1298 to "plan and manage oil and gas operations in a manner that balances development with wildlife conservation in recognition of the state's obligation to protect wildlife resources and the hunting, fishing, and recreational traditions they support, which are an important part of Colorado's economy and culture."[262] Some of the specific ways the COGCC's rules provide protection to GRSG are discussed below. The rules were updated as recently as September 2013.

1. Wildlife Resources and Sensitive Wildlife Habitat

The COGCC broadly defines "wildlife resources" as "fish, wildlife and their aquatic and terrestrial habitats."[263] Consequently, wildlife habitat is subject to the COGCC's protection in addition to the wildlife species themselves.

In addition, the COGCC specifically designates "Sensitive Wildlife Habitat" for certain species.[264] Prior to seeking a permit to drill or preparing a Comprehensive Drilling Plan, oil and gas developers must review Sensitive Wildlife Habitat maps (as well as Restricted Surface Occupancy maps) maintained by the COGCC and if the proposed development location falls within the designated areas, the developer must bring this to the attention of the COGCC for its consideration.[265] These Sensitive Wildlife Habitat maps are dynamic and subject to update on a biennial basis and may be modified through the rulemaking procedures.[266]

2. Comprehensive Drilling Plans and Geographic Area Plans

Comprehensive Drilling Plans are defined generally as plans created by one or more companies covering future oil and gas operations in a defined geographic area that identifies the natural features of the area, describes future oil and gas operations, identifies

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[262] Colo. Rev. Stat § 34-60-102(1)(a)(IV).
[263] Colo. Dept. of Nat. Resources, Oil & Gas Conservation Comm. COGCC Rules and Regulations, 100-Series Definitions (August 1, 2013), *available at*: http://cogcc.state.co.us/RR_Docs_new/Rules/Completed%20Rules.pdf
[264] *Id*.
[265] *Id*. at Rule 1201.
[266] *Id*. at 100-Series Definitions.

potential impacts, and develops agreed-upon measures to avoid, minimize, and mitigate the impacts.[267]

"Geographic Area Plans are intended to enable the COGCC to adopt basin-specific rules that promote the purposes of the Act."[268] They cover entire fields or geologic basins and could include the activities of several different companies over a period of ten years or more.[269] The COGCC may adopt a Geographic Area Plan after a public hearing and upon consultation with CPW, the Colorado Department of Public Health and Environment, and local governmental designee(s).[270] They are to consider local government comprehensive plans or other local government long-range planning tools in their deliberations.[271] Geographic Area Plans "may include alternative development scenarios, designate units, adopt spacing orders, implement sampling or monitoring plans, or require consolidation of facilities within the area covered by the Plan."[272]

3. Consultations on Wildlife

With limited exceptions,[273] companies must consult with CPW and COGCC to identify possible conditions of approval for drilling in Sensitive Wildlife Habitat, for increases in well density, or where a company seeks a variance to the wildlife rules.[274] In many respects, the COGCC emulated the federal ESA in crafting its consultation provisions.

The procedure for consultation includes submittal of a description of the proposed well, the affected wildlife resources, and proposed mitigation.[275] The company, COGCC, the surface owner, and CPW have 40 days to conduct the consultation.[276] Rule 1202 directs the Director to determine whether conditions of approval are necessary to minimize adverse

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[267] Colo. Dept. of Nat. Resources, Oil & Gas Conservation Comm., COGCC Rules and Regulations, 100-Series Definitions (August 1, 2013), *available at*: http://cogcc.state.co.us/RR_Docs_new/Rules/Completed%20Rules.pdf
[268] *Id*. at Rule 513(a).
[269] *Id*. at Rule 513(b).
[270] *Id*. at Rule 513(c)(2&3).
[271] *Id*. at Rule 513(c)(3).
[272] *Id*. at Rule 513(c)(4).
[273] Consultation need not occur where adverse impacts have already been minimized as part of a prior COGCC action, i.e. approval of a Form 2A, variance or Comprehensive Drilling Plan, or where CPW already approved a wildlife mitigation, protection, or conservation plan for the area. According to COGCC staff's Statement of Basis and Purpose: "Consultation under Rule 306.c will also not be required where the proposed new well would involve a one-time increase of surface disturbance of one (1) acre or less per well site at or immediately adjacent to an existing well site; the COGCC determined that such activity is expected to generate only de minimis impacts. Consultation will also not be required where CPW has waived consultation or where the consultation would otherwise be unwarranted, such as when an operator demonstrates that the wildlife species or habitat otherwise intended to be protected is not present. . . ." Colo. Dept. of Nat. Resources, Oil & Gas Conservation Comm., December 11, 2008 Statement of Basis, Specific Statutory Authority and Purpose (Statement of Basis and Purpose) at 80.
[274] *See* Colo. Dept. of Nat. Resources, Oil & Gas Conservation Comm., COGCC Rule 1202(b) http://cogcc.state.co.us/RR_Docs_new/rules/1200Series.pdf (April 1, 2009).
[275] *Id*. at Rule 306(c)(2)(A).
[276] *Id*. at Rule 306(c)(2)(C).

impacts in Sensitive Wildlife Habitat and to evaluate requests for variances from the wildlife provisions of the rules.

"Minimize adverse impacts" is defined to mean:

> wherever reasonably practicable, to (i) avoid adverse impacts from oil and gas operations on wildlife resources, (ii) minimize the extent and severity of those impacts that cannot be avoided, (iii) mitigate the effects of unavoidable remaining impacts, and (iv) take into consideration cost-effectiveness and technical feasibility with regard to actions taken and decisions made to minimize adverse impacts to wildlife resources, consistent with the other provisions of the Act.[277]

"Mitigation" is then defined as:

> . . . measures that compensate for adverse impacts to such resources, including, as appropriate, habitat enhancement, on-site habitat mitigation, offsite habitat mitigation, or mitigation banking.[278]

CPW can request consultation under the Rules where activities may occur "within areas of known occurrence or habitat of a federally threatened or endangered species, as shown on the CPW Species Activity Mapping ("SAM") system."[279] CPW may also make written recommendations to the COGCC on conditions of approval to minimize adverse impacts to wildlife resources or on whether a variance request should be granted.[280]

Where the company, the Director of the COGCC, CPW and the surface owner agree to conditions of approval, these conditions of approval shall be incorporated into approvals.[281] Where consultation results in permit-specific conditions of approval to minimize adverse impacts to wildlife resources, the Director shall attach such permit-specific conditions only with the consent of the affected surface owner.[282]

Rule 1202(c) provides that conditions of approval shall be guided by a list of Best Management Practices for Wildlife Resources ("BMP") that will be maintained on the COGCC website. The list of BMPs are to be developed by a stakeholder group which is to, "develop a compilation of science-based, technologically, and economically feasible practices for minimizing adverse impacts from oil and gas operations in sensitive wildlife

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[277] *Id*. at 100-Series Definitions. *See also* Rule 1202(a).
[278] *Id*.
[279] *Id*. at Rule 306(c)(1)(A(iii).
[280] *Id*. at Rule 306(c)(3)(A).
[281] *See* Colo. Dept. of Nat. Resources, Oil & Gas Conservation Comm., COGCC Rule 306(c)(3)(B) http://cogcc.state.co.us/RR_Docs_new/rules/300Series.pdf (August 1, 2013).
[282] *Id*. at Rule 306(c)(3)(B).

habitat."[283] The stakeholder group will include COGCC and CPW staff as well as representatives of industry, environmental groups and surface and mineral owners.[284]

In selecting conditions of approval from such BMPs or other sources, the Director is to consider the following factors, among others:

(1) Existing BMPs for the geologic basin;

(2) Site-specific and species-specific factors;

(3) Anticipated direct and indirect effects on wildlife resources;

(4) The extent to which conditions of approval will promote the use of existing facilities and reduction of new surface disturbance;

(5) The extent to which legally accessible, technologically feasible, and economically practicable alternative sites exist for the proposed new oil and gas location;

(6) The extent to which the proposed operations will use technology and practices which are protective of the environment and wildlife resources;

(7) The extent to which the proposed location minimizes surface disturbance and habitat fragmentation;

(8) The extent to which the proposed location is within land used for residential, industrial, commercial, agricultural, or other purposes, and existing disturbances associated with such uses; and

(9) Permit conditions, lease terms, and surface use agreements that predate December 11, 2008.

Rule 1203 sets forth an extensive list of sixteen general operating requirements in sensitive wildlife habitat including, with some qualifiers, installing wildlife crossovers and escape ramps, consolidating new facilities, minimizing rig mobilization and demobilization, sharing and consolidating new corridors for pipeline rights-of-way and roads, engineering new pipelines to reduce field fitting and excessive right-of-way widths and reclamation, and reducing traffic associated with transporting drilling water and produced liquids through the use of pipelines, large tanks, or other measures where technically feasible and economically practicable.

Rule 1204 sets forth five general operating requirements that must be adhered to statewide. These include using bear-proof dumpsters, disinfecting some equipment to

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[283] Colo. Dept. of Nat. Resources, Oil & Gas Conservation Comm, December 11, 2008 Statement of Basis and Purpose (Statement of Basis and Purpose) at 81.
[284] *Id*. at 81.

prevent whirling disease in cutthroat trout habitat, minimizing surface disturbance and the number and length of oil and gas roads, establishing staging and chemical storage areas outside of riparian areas and floodplains, and using minimum practical construction widths for new rights-of-way where pipelines cross riparian areas, streams and critical habitats.[285]

4. Restricted Surface Occupancy Areas

Even more significant restrictions apply to Restricted Surface Occupancy ("RSO") Areas; described as areas critical to the conservation of species or habitats as thereby entitled to a higher level of protection.[286] Rule 1205(a) specifies that, "[O]perators shall avoid Restricted Surface Occupancy areas to the maximum extent technically and economically feasible when planning and conducting new oil and gas development operations, except:

(1) When authorized following consultation under Rule 306.c.(3);

(2) When authorized by a Comprehensive Drilling Plan;

(3) Upon demonstration that the identified habitat is not in fact present;

(4) When specifically exempted by CPW; or

(5) In the event of situations posing a risk to public health, safety, welfare, or the environment (emphasis added).[287]

New ground disturbing activities are to be avoided in RSOs, including construction, drilling and completion, non-emergency workovers, and pipeline installation activity, to minimize adverse impacts to wildlife resources.[288] However, production, routine maintenance, repairs and replacements, emergency operations, reclamation activities, or habitat improvements are not prohibited in RSOs.[289]

Where a company seeks to construct an oil and gas facility in an RSO, the company must either make an affirmative showing to the Director that avoidance of the area is technically or economically infeasible or that fits within an exception described in Rule 1205(a).[290] Consultation with CPW may be required to determine conditions of approval for such a location.[291]

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[285] Colo. Dept. of Nat. Resources, Oil & Gas Conservation Comm., COGCC Rule 1204 http://cogcc.state.co.us/RR_Docs_new/rules/1200Series.pdf (April 1, 2009).and Statement of Basis and Purpose at 83, http://cogcc.state.co.us/RuleMaking/FinalDraftRules/COGCCFinalDraftRules_110708.pdf.
[286] Colo. Dept. of Nat. Resources, Oil & Gas Conservation Comm, December 11, 2008 Statement of Basis and Purpose (Statement of Basis and Purpose) at 84-85.
[287] *See* Colo. Dept. of Nat. Resources, Oil & Gas Conservation Comm., COGCC Rule 1205(a) http://cogcc.state.co.us/RR_Docs_new/rules/1200Series.pdf (April 1, 2009).
[288] *Id*. at Rule 1205(b).
[289] *Id*.
[290] *See* Colo. Dept. of Nat. Resources, Oil & Gas Conservation Comm., December 11, 2008 Statement of Basis and Purpose (Statement of Basis and Purpose) at 84.
[291] *Id*.

One exception allows for risks to the health, safety, welfare or the environment of the general public.[292] The other exceptions largely mirror exceptions to consultation under Rule 1202: where activities in such an area have been authorized following consultation under Rule 306(c); where a Comprehensive Drilling Plan is in place; where the identified habitat is not present; or when specifically exempted by CPW.[293] Any new ground disturbing activity in RSOs must be avoided, unless one of the exceptions noted above applies.[294]

On September 17, 2013, the COGCC updated the RSO map and Sensitive Wildlife Habitat map to reflect CPW's map of high priority GRSG habitat in northwest Colorado based on best available science for incorporation into the DEIS.[295] Among others, RSOs include areas within 300 feet of cutthroat trout habitat and areas within 300 feet of Gold Medal streams and lakes. The COGCC was to convene a stakeholder process to address additional riparian areas and potential designations as RSOs because of their importance to fish and wildlife.[296]

5. Intervention in COGCC Proceedings

Rule 509 governs intervention and participation in adjudicatory proceedings. Local governments and the Colorado Department of Public Health and Environment may intervene as of right, and without fees, to raise environmental, health, safety, and welfare concerns for the general public.[297] CPW may likewise intervene to raise concerns about adverse impacts to wildlife resources.[298] Other parties, e.g. environmental groups, may also file protests or intervene in proceedings by permission of the COGCC.[299]

6. COGCC Form 2A

The COGCC Wildlife Rules are implemented, in part, through one of the agency's seminal documents, Form 2A (location assessment).[300] The very first item on Form 2A (consultation) seeks information on whether operators are within sensitive wildlife habitat, wildlife restricted surface occupancy areas and whether the location is included in a Comprehensive Drilling Plan that addresses those issues.[301]

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[292] *Id*.
[293] *Id*. at 85.
[294] *Id*.
[295] Colo. Dept. of Nat. Resources, Oil & Gas Conservation Comm., Statement of Basis, Specific Authority, and Purpose: Updates to Restricted Surface Occupancy Areas and Sensitive Wildlife Habitat Maps at 3. (September 2013) http://cogcc.state.co.us/RR_Docs_New/CpwMapUpdate2013/1307RM01StatementBasisPurpose_FinalDraft20130910.pdf.
[296] *Id.* at 82-83.
[297] *See* Colo. Dept. of Nat. Resources, Oil & Gas Conservation Comm., COGCC Rule 509(a) http://cogcc.state.co.us/RR_Docs_new/rules/500Series.pdf (April 1, 2012).
[298] *Id*.
[299] *Id*.
[300] COGCC Rule 1201-2.
[301] COGCC Form 2A (August 2013), *available at:* http://cogcc.state.co.us.

Detailed information is then collected on the location, the facilities to be used, and the methods of construction and financial assurances for reclamation.[302] Item 13 seeks information about plant communities, including but not limited to riparian plants.[303] Item 14 on Form 2A queries on water resources at the location including: whether it is a sensitive area, whether it is a riparian area, whether Clean Water Act compliance is required, whether Rule 317B Surface Water Supply Area buffers apply, and the distance to the nearest surface water.[304]

B. Colorado Greater Sage-Grouse Conservation Plan

Colorado Governor John Hickenlooper issued a press release on October 31, 2013 urging the BLM to rely upon local and state efforts to conserve GRSG.[305] "Given the unique landscapes and natural resources in Colorado, a Colorado-based solution is more practical that one handed down by the federal government," Hickenlooper said. "We hope the Bureau of Land Management will look at the public-private partnerships that have been so successful in Colorado as a model on how to get things done." The release also noted that Colorado has protected more than 74,000 acres of GRSG habitat (primarily via conservation easements) and another 24,000 acres are managed by other conservation organizations such as The Nature Conservancy. Habitat treatments, such as invasive plant removal, have also been conducted on 50,000 acres and management plans are in place on 273,000 acres of GRSG habitat.[306]

The Colorado Greater Sage-Grouse Conservation Plan ("CCP") is meant to facilitate the conservation of GRSG and their habitats in Colorado. According to CPW, the state chose a grassroots approach of developing local GRSG working groups and plans prior to the development of a statewide plan. The culmination of a two-year effort, the CCP was designed to supplement these local efforts and to bring a statewide perspective to sage-grouse conservation. The CCP will help consolidate information along with the best available information and science on species conservation. It aims to facilitate recovery of the species and result in its removal from the state's Species of Concern list.

The CCP was developed through an extensive process with multiple stakeholders. The drafters of the plan also provided for public comment and input. The plan includes a "Conservation Assessment" on GRSG biology, "Issues Potentially Affecting GRSG" on challenges to GRSG conservation and "Analysis" to assess issues and explore potential management scenarios. It also includes a "Conservation Strategy" section for use in conjunction with "GRSG Structural Habitat Guidelines" (Appendix A) and "GRSG Disturbance Guidelines" (Appendix B).

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[302] *Id.*
[303] *Id.*
[304] *Id.*
[305] Available at: http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovHickenlooper%2FCBONLayout&cid=1251647577416&pagename=CBONWrapper
[306] *Id.*

The CCP recognizes populations in North Park and Northwest Colorado are large and stable. The Middle Park population is smaller but stable. Populations on the periphery of the range either have no long-term data or illustrate a slight downward trend.

C. Local Working Groups

The DEIS mentions the following local working groups, but fails to meaningfully consider them, their plans, or efforts in the analysis of alternatives.[307]

1. Northwest Colorado Greater Sage-Grouse Conservation Plan

The Northwest Colorado Greater Sage-Grouse Conservation Plan covers Colorado's most significant GRSG population. The Plan covers over four million acres in Moffat, Routt and Rio Blanco counties. Some 2.5 million acres are currently occupied by GUSG. The Plan uses ten MZs for following population trends, applying conservation measures, and evaluating progress.

2. The Parachute-Piceance-Roan Greater Sage-Grouse Conservation Plan

The Parachute-Piceance-Roan Greater Sage-Grouse Conservation Plan aims to learn more about the population in its region in order to maintain and improve habitat and develop a framework to guide management efforts and maintain the population while integrating existing and potential land use activities in the area.

3. North Park Greater Sage-Grouse Conservation Plan

Published in 2001, the North Park Greater Sage-Grouse Conservation Plan is to protect and preserve working lands and property rights while working with the public and land managers to secure habitat, develop cost efficient conservation plans and measures, and monitor GRSG populations.

4. Middle Park Sage Grouse Conservation Plan

With a focus on habitat issues including agriculture, grazing, development, and recreation, the Middle Park Sage Grouse Conservation Plan was developed in 2004 and includes coordination of county land use planning with the habitat needs of GRSG.

5. Northern Eagle/Southern Routt Greater Sage-Grouse Conservation Plan

Developed in 2004, the Northern Eagle/Southern Routt Greater Sage-Grouse Conservation Plan provides for long-term management strategies for grazing, predation, recreation, and resource development. It also addresses habitat change, disease, and pesticides.

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[307] DEIS at 27.

6. Successful Reclamation in Northwestern Colorado

Reclaimed surface coal mines in northwestern Colorado are being used by GRSG for breeding, nesting, brood-rearing, and winter range. Studies at Colowyo Coal Co. and with Trapper Mining revealed that GRSG had moved into these reclaimed areas where they had not been observed before. This indicates even the most intensive land uses are but temporary impacts that can be successfully reclaimed for valuable GRSG habitat.[308]

D. Conservation Easements

BLM should acknowledge Colorado is a national leader in open space protection and conservation easements. Unfortunately, the DEIS gives short-shrift to conservation easements. While BLM concedes that conservation easements could limit development through private ownership thus "indirectly protecting vital resources,"[309] it references private land in conservation easements only once: "Sage-Grouse Initiative has secured conservation easements on 208,000 acres…across the GRSG range" the majority of which are located in Wyoming.[310] The BLM failed to mention, let alone analyze, conservation easements on private lands in Eagle, Garfield, Grand, Jackson, Larimer, Mesa, Moffat, Rio Blanco, and Routt counties.

Approximate Acres Covered by Conservation Easements in DEIS Planning Area[311]

County	**Approximate Acres Covered by Conservation Easements**
Eagle	4,958
Garfield	6,395
Grand	11,667
Jackson	17,004
Larimer	30,022
Mesa	5,480
Moffat	18,260
Rio Blanco	21,708
Routt	49,018
Summit	0
Total	**164, 512**

[308] Available at: http://www.blm.gov/nhp/spotlight/sage_grouse/success/colorado_mines.htm; http://www.blm.gov/wo/st/en/prog/more/fish_wildlife_and/wildlife/colowyo_trapper.html.
[309] DEIS at 812
[310] *Id*. at 949.
[311] Personal Comm. K. Stak, Great Outdoors Colorado (Oct. 22, 2013).

Maps Depicting Conservation Easements in the Planning Area[312]

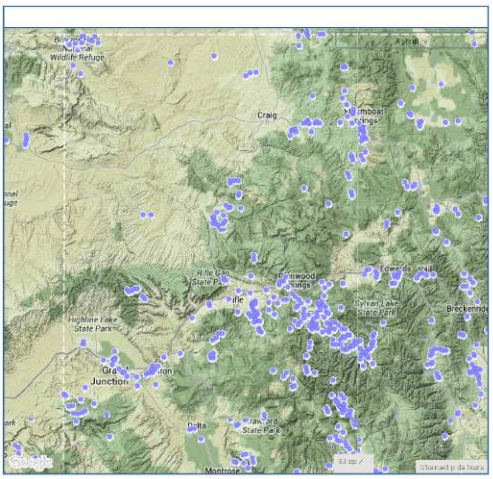

Figure 1
Conservation Easements within Planning Area

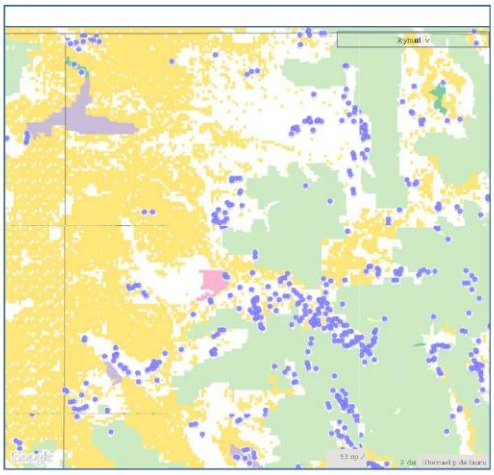

Figure 2
Conservation Easements with Federal Land Ownership within Planning Area

We urge BLM to consider these myriad successful local and state conservation efforts rather than proscriptive top-down management approaches based upon questionable science.

XI. VALID EXISTING RIGHTS

There are currently 552,600 acres of existing federal oil and gas leases in PPH and PGH areas in the planning area.[313] While the agencies claim that the DEIS and LUP amendments will recognize valid existing rights,[314] the management restrictions for GRSG could wholly or partially deny operators their rights. "With respect to oil and gas leases, 'valid existing rights' vary from case to case, but generally involve rights to explore, develop, and produce within the constraints of the lease terms, laws and regulations."[315]

In this case, the disturbance cap concept proposed by BLM could result in the denial of projects simply because other disturbances have decreased available cap space, ultimately denying valid existing lease rights. According to Appendix F in the DEIS which outlines the disturbance cap methodology, "the BLM has no authority to deny valid existing rights; consequently, decisions made by entities with valid existing rights would affect what the BLM can authorize for other potential users of land it administers in the management zone."[316] In other words, by using the cap 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.

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[312] Available at: http://www.conservationeasement.us/browse/map
[313] DEIS at 297.
[314] DEIS at *xxix.*
[315] Available at: http://www.blm.gov/co/st/en/nm/canm/01.html.
[316] DEIS at F-4.

XII. RECLAMATION

The proposed Surface Reclamation Plan creates unnecessarily prescriptive and burdensome requirements that may actually undercut the agencies' reclamation objectives. For example, the seed mix application requirements are inherently flawed because the prescribed seed mixes are not diverse enough to meet plant community requirements. The agencies would achieve reclamation goals more effectively by setting performance-based standards and enabling companies to meet them using innovative reclamation methods, rather than prescriptive, one-size-fits-all approaches.

XIII. MONITORING FRAMEWORK

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. Without a clear framework, the implementation of a complex monitoring system is certain to be fraught with problems. Because major decisions will be based on the DEIS tracking database, it is imperative that the system work efficiently and effectively.

Flaws in a monitoring framework, along with the proposed disturbance caps will create an administrative quagmire that hinders or stops oil and gas development. The relationship between the proposed disturbance caps and the Appendix J monitoring framework is unclear. For example, while the Disturbance Cap Management (Appendix G) credits reclamation, there is no clear path by which reclamation information is incorporated into the BLM's monitoring framework. Instead, the monitoring framework seems to create and assess its own disturbance information. This means that site-specific anthropogenic disturbances such as well pads and pipelines will be included in the DEIS monitoring, but reclamation and mitigation projects may be ignored such that the disturbance area for energy development will not be reduced during subsequent analyses. This would artificially inflate disturbance 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 be reduced 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 well pad, or two pads? Without clear criteria, BLM's data will lack consistency between field offices, and operators will have no certainty regarding implementation.

Limited funding and staff at BLM will exacerbate the problem. We have real concerns a database managed by a federal agency with tight budgets and limited staff hours for database management. Given funding constraints, it is uncertain that staff or critical technology updates will be available for a new tracking database in Colorado.

BLM cites GRSG databases in Wyoming as models for effectively tracking disturbance; however; these systems have faced significant challenges and require significant resources.

The Jonah Infill Data Management System, cited in the DEIS,[317] has serious issues at present. BLM should clearly define its criteria for determining the disturbance level and consider reliance on a non-federal entity or entities to manage the database.

XIV. Project Prioritization

According to the DEIS, the agencies will consider the relative value to society in terms of employment and tax revenue versus the potential impact to GRSG, and make decisions accordingly. Considering the relative value of a project versus the potential impacts on GRSG is a positive step forward, but the metrics that will be used in the evaluation have not been explained in the DEIS. Without a clear statement on methodology, the agencies will have too much discretion to approve or disapprove projects based on subjective criteria. The agencies must explain the methodology and metrics that will be used to evaluate the relative value to society versus the potential impacts on GRSG.

XV. DESIGN FEATURES

Alternatives B and C require design features for oil and natural gas development that may not be technically feasible, economic, or appropriate. While most of these design features in the preferred alternative are "preferred" or "suggested" instead of "required," it is important that BLM does not *require* operators to utilize design features that are not feasible. BLM should retain a list of practical BMPs that are effective and applicable based on site-specific circumstances, rather than required design features that may not be universally applicable. Other issues include:

A. 1.5.2 Issues and 1.6 planning criteria

The issues identified in the DEIS include "fluid minerals" and "ROWs, including transmission;" however, the document failed to provide the parameters under which these issues would be addressed. For example, the following elements of the fluid minerals issue could have been identified:

- Reasonable GRSG management options will be analyzed in order to protect or enhance opportunities to explore for and develop oil and gas resources.
- Reasonable GRSG mitigation measures will be designed in order to limit or avoid impacts to surface resources while seeking ways to provide important access to public lands for leasing, development and transportation activities.

Instead BLM chose to employ unsubstantiated scientific methodology to unnecessarily confound future fluid mineral development within the planning area.

With respect to the Planning Criteria, the DEIS states:

[317] DEIS at 191.

- The approved LUPAs will comply with FLPMA; NEPA; CEQ regulations at 40 CFR 1500–1508; US Department of the Interior regulations at 43 CFR 46 and 43 CFR 1600; USFS regulations at 36 CFR 220; BLM Land Use Planning Handbook (H-1601-1) (BLM 2005a), Appendix C (Program-Specific and Resource-Specific Decision Guidance Requirements) for the affected resource programs; the BLM NEPA Handbook (H-1790-1) (BLM 2008a); USFS Handbook 1909.15; and all other applicable BLM and USFS policies and guidance.

- "Reasonable Foreseeable Development Scenarios ("RFDS") and planning for fluid minerals will follow BLM Handbook H-1624-1 and current fluid minerals manual guidance for fluid mineral (oil and gas, coal-bed methane, oil shale) and geothermal resources. For National Forest System lands, the USFS will use applicable and relevant policy and procedures."

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,: "<u>The least restrictive stipulation that effectively accomplishes the resource objectives or uses for a given alternative should be used;</u>" 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").

1. 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.[318] To that end, 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.[319] "'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.'"[320] "Of course not all uses are compatible."[321] 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.

2. 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 <u>least restrictive stipulations</u> 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*

[318] 43 U.S.C. § 1702(l).
[319] 43 USC § 1701(a)(7) (2006).
[320] *Norton v. Southern Utah Wilderness Alliance*, 542 U.S. at 58 (quoting 43 U.S.C. § 1702(c)).
[321] *Id.*

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.

3. 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.

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 <u>least restrictive necessary</u> 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.

B. Appendix I – Required Design Features, Preferred Design Features, and Suggested Design Features, Regional Mitigation Strategy

Appendix I 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 RFDs are needlessly restrictive, scientifically unfounded, and ignore specific cause and effect mechanisms. Most egregiously, they were designed without any benefit of tracking and testing of the effectiveness of currently required BMPs and mitigation measures. Moreover, many the NTT BMPs 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 Bureau 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 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 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.

For example, the Lander Proposed RMP/EIS (Appendix H, Page 1522) states within General RDFs that: "In applying protections for greater Sage-grouse protections, all projects must evaluate (1) whether the conservation measure is reasonable (see 43 Code of Federal Regulations [CFR] 3101.1-2 for the definition of "reasonable" for fluid mineral leases) and consistent with valid existing rights, and (2) whether the action is in conformance with the RMP. Each conservation measure will be evaluated on a site-specific basis for likely effectiveness on a cost-benefit basis."

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 as well as the CPW 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:

1. Table I.1

BLM suggests management of a number of structural modifications for water impoundments.

COMMENT: Such a program can only be viewed as a needless waste of federal taxpayer dollars because the State of Colorado 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 the jurisdiction of the COGCC. Establishing these new federal programs would be a waste of manpower and tax dollars because they would merely attempt to duplicate State programs.

2. 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.

1. RDF (ADH) Increase the size of ponds to accommodate a greater volume of water than is discharged. This will result in un-vegetated and muddy shorelines that breeding Cx. tarsalis avoid (De Szalay and Resh 2000). This modification may reduce Cx. tarsalis habitat but could create larval habitat for Culicoides sonorensis, a vector of blue tongue disease, and should be used sparingly (Schmidtmann et al. 2000). Steep shorelines should be used in combination with this technique whenever possible (Knight et al. 2003).

34/63. Restrict pit and impoundment construction to reduce or eliminate threats from WNV

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

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. 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.[322] Therefore, these management approaches on produced waters clearly are not in the best interests of NW Colorado's mammalian food sources or mammalian related economics.

3. Fluid Mineral Operations – Priority or General Habitat

18/55. 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 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.

[322] Ruder, M.G., Parasites and Vectors 201, 5:236

10/56. 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.

13/61. 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."

22. 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.

23. 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.

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

27. 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.

30/59. 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.

32. 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?

33. 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.

35. 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 COGCC already has jurisdictional oversight of the surface discharge monitoring program on non-tribal lands in Colorado. Therefore, it would be wholly inappropriate for BLM to attempt to implement this poorly conceived NTT BMP in Northwest Colorado.

36. 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. 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.

37. 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.

XVI. LACK OF SITE-SPECIFIC CONSIDERATIONS IN INDIVIDUAL PLANNING AREAS

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 all three 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. For example, the draft White River Resource Management Plan Oil and Gas Amendment ("RMPA") proposes a "threshold cap" to manage disturbance. If an operator limits disturbance on its leases overlapping GRSG habitat to below a certain percentage, it may develop year-round. 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 GUSG population is healthy and strong. These two management policies are inconsistent and will lead to confusion.

XVII. 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 caps, 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 affects to energy production and the economy in northwest Colorado.

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 Colorado are stable or increasing[323] and that modern oil and gas exploration and production techniques take advantage of directional drilling and multiple wells on a single pad which significantly reduces any impacts to surface resources. Finally, myriad local, state 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 this these comments and recommendations.

Very truly yours,

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[323] *Id*. at 253-54.

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