

**BEFORE THE UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT DATA QUALITY OFFICIAL**

GARFIELD COUNTY, COLORADO)
GRAND COUNTY, COLORADO)
JACKSON COUNTY, COLORADO)
MESA COUNTY, COLORADO)
MOFFAT COUNTY, COLORADO)
RIO BLANCO COUNTY, COLORADO)
CARTER COUNTY, MONTANA)
FALLON COUNTY, MONTANA)
FERGUS COUNTY, MONTANA)
MCCONE COUNTY, MONTANA)
MUSSELSHELL COUNTY, MONTANA)
PHILLIPS COUNTY, MONTANA)
PRAIRIE COUNTY, MONTANA)
RICHLAND COUNTY, MONTANA)
TOOLE COUNTY, MONTANA)
YELLOWSTONE COUNTY, MONTANA)
ELKO COUNTY, NEVADA)
EUREKA COUNTY, NEVADA)
UINTAH COUNTY, UTAH)
WESTERN ENERGY ALLIANCE)
AMERICAN EXPLORATION & MINING)
ASSOCIATION)
COLORADO MINING ASSOCIATION)
COLORADO WOOL GROWERS ASSOCIATION)
INDEPENDENT PETROLEUM ASSOCIATION)
OF AMERICA)
INTERNATIONAL ASSOCIATION OF)
DRILLING CONTRACTORS)
MONTANA ASSOCIATION OF OIL, GAS &)
COAL COUNTIES)
MONTANA PETROLEUM ASSOCIATION)
NEVADA MINING ASSOCIATION)
PETROLEUM ASSOCIATION OF WYOMING)
PUBLIC LANDS COUNCIL)
UTAH MULTIPLE USE COALITION)

**Data Quality Act Challenge
to U.S. Department of the Interior
Dissemination of Information
Presented in the Bureau of
Land Management National
Technical Team Report**

March 18, 2015

Petitioners

v.

BUREAU OF LAND MANAGEMENT

CHALLENGE PURSUANT TO THE DATA QUALITY ACT

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I. Introduction

The counties and organizations listed above (the “Petitioners”) hereby submit this Challenge for Correction of Information (“Challenge”) against the Bureau of Land Management (“BLM”) *Report on National Greater Sage-Grouse Conservation Measures* (the “NTT Report”)¹ pursuant to the Federal Information Quality Act (44 U.S.C. § 3516) (“Data Quality Act,” or “DQA”), and the “Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information disseminated by Federal Agencies” issued by the Office of Management and Budget (67 Fed. Reg. 8452 (Feb. 22, 2002) (“OMB Guidelines”)), as well as the “Information Quality Guidelines” of the U.S. Department of the Interior (67 Fed. Reg. 50687 (Aug. 5, 2002) (“DOI Guidelines”)) and BLM Guidelines (“BLM Guidelines”)² collectively known as (the “Guidelines”) as well as Presidential memoranda and secretarial orders on scientific integrity and transparency as discussed below.

¹ BLM, Sage-Grouse National Technical Team, *A Report on National Greater Sage-Grouse Conservation Measures*, <http://www.blm.gov/pgdata/etc/medialib/blm/co/programs/wildlife.Par.73607.File.dat/GrSG%20Tech%20Team%20Report.pdf> (Dec. 21, 2011).

² BLM, *Information Quality Guidelines*, http://www.blm.gov/style/medialib/blm/national/national_page.Par.7549.File.dat/guidelines.pdf.

In March of 2010, the U.S. Fish and Wildlife Service (“FWS”) issued a listing decision on greater sage-grouse (“GRSG”) under the Endangered Species Act (“ESA”).³ The FWS cited an alleged inadequacy of existing regulatory mechanisms as a factor in its warranted but precluded decision.⁴ Pursuant to a settlement agreement with activist litigants, the FWS agreed to consider listing the species under the ESA by September 30, 2015.⁵ The settlement agreement is presently being challenged by at least one of the aforementioned Petitioners. In the 2010 listing decision, BLM was identified as having a unique ability to conserve GRSG as it manages 51% of GRSG habitat.⁶ BLM Resource Management Plans (“RMPs”) were identified as an existing regulatory mechanism for GRSG.⁷

In response to the potential listing, BLM chartered a Sage-Grouse National Technical Team (“NTT”) to develop policies and strategies on GRSG conservation under its jurisdiction. On December 27, 2011, the Washington, D.C. BLM Office released Instruction Memorandum number 2012-044,⁸ which directed all BLM planning efforts across the GRSG range to consider conservation measures for GRSG when revising or amending its RMPs, including specifically the NTT Report.⁹

Pursuant to the National Environmental Policy Act (“NEPA”),¹⁰ BLM and the U.S. Forest Service (“USFS”) drafted amendments for some 98 land use plans across 11 western states “to identify and incorporate appropriate GRSG conservation measures...” (the “Land Use

³ 75 Fed. Reg. 13910 (Mar. 23, 2010).

⁴ 75 Fed. Reg. 13910; NTT Report at 4; BLM, *Northwest Colorado Greater Sage-Grouse Draft Land Use Plan Amendment and Environmental Impact Statement*, <https://www.blm.gov/epl-front-office/projects/lup/36511/44083/47470/default.jsp;jsessionid=F525468403EFCDF53E7B387DAE45C8B0?projectName=Northwest+Colorado+Greater+Sage-Grouse+Draft+RMP+and+EIS> at p. xxi (August 2013).

⁵ <http://naturalresources.house.gov/blog/?postid=306049>.

⁶ 75 Fed. Reg. 13910 at 13975.

⁷ *Id.*

⁸ BLM, *BLM National Greater Sage-Grouse Land Use Planning Strategy*, www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2012/IM_2012-044.html (Dec. 27, 2011).

⁹ See Utah GRSG DEIS at 1-24.

¹⁰ 42 U.S.C. §4331 *et seq.*

Plan Amendments”).¹¹ BLM and USFS intend to make final decisions on these plans in 2015 so that regulatory mechanisms are included before FWS makes a listing decision.

The Petitioners have reviewed the NTT Report and found it to be inaccurate, unreliable, and biased in violation of the DQA and the Guidelines. The NTT Report purports to “provide the latest science and best biological judgment to assist in making management decisions.” Instead, the NTT Report represents a partial presentation of scientific information, and justifies a narrow range of preferred conservation measures and policies that will be imposed throughout the West. Among other serious shortcomings described herein, the NTT Report is not based on reasonable consideration of the regulatory tools BLM already has, such as BLM Manual 6840, multiple authorities to require project-specific wildlife protection and habitat enhancement measures, and private on-the-ground conservation efforts.¹²

The DQA, Section 515 of the Treasury and General Government Appropriations Act of FY 2001 (Public Law 106-554), requires federal agencies to ensure and maximize the quality, objectivity, utility, and integrity of information, including statistical information disseminated by federal agencies on or after October 1, 2002. Agencies are required to review the quality of information before its dissemination and treat information quality as integral to every step.

¹¹ BLM, *Federal Agencies Announce Initial Step to Incorporate Greater Sage-Grouse Conservation Measures into Land Management Plans* (Dec. 8, 2011), http://www.blm.gov/wo/st/en/info/newsroom/2011/december/NR_12_08_2011.html (“Greater sage-grouse currently use as much as 47 million acres of land managed by the BLM, and about nine million acres of land managed by the USFS. As many as 98 BLM Resource Management Plans address greater sage-grouse, while the USFS expects to evaluate conservation measures into as many as nine Land and Resource Management Plans considered high priority for the conservation of sage-grouse.”); BLM, *Northwest Colorado Greater Sage-Grouse Draft Land Use Plan Amendment and Environmental Impact Statement* at xxvi, and 5-6 (August 2013), https://www.blm.gov/epl-front-office/projects/lup/36511/44083/47449/Draft_Grouse_EIS_Build_1.pdf (“The COT Report includes areas identified as priority areas for conservation, the most important areas needed for maintaining GRSG representation, redundancy, and resilience across the landscape.”).

¹² See Megan Maxwell, *BLM’s NTT Report: Is it the Best Available Science or a Tool to support a Predetermined Outcome?* at ii. Available at: <http://www.miningamerica.org/wp-content/uploads/NWMA-Review-of-NTT-Report-May-2013.pdf>.

The OMB government-wide guidelines impose three core responsibilities on the agencies:

- First, the agencies must embrace a basic standard of “quality” as a performance goal, and agencies must incorporate quality into their information dissemination practices. OMB’s guidelines explain that “quality” encompasses “utility” (usefulness to its intended users), “integrity” (security), and “objectivity.” “Objectivity” focuses on whether the disseminated information is accurate, reliable, and unbiased as a matter of presentation and substance.
- Second, the agencies must develop information quality assurance procedures that are applied before information is disseminated.
- Third, the OMB government-wide guidelines require that each agency develop an administrative mechanism whereby affected parties can request that agencies correct poor quality information that has been or is being disseminated. If one is dissatisfied with the initial agency response to a correction request he or she may file an administrative appeal.

The NTT Report qualifies as both information disseminated by BLM, and as BLM-sponsored information.¹³ Because U.S. Department of the Interior (“DOI”) agencies are considering Land Use Plan Amendments based upon the NTT Report, and it may be utilized in a listing decision for GRSG under the ESA, the NTT Report is “influential” information subject to even higher standards of quality.¹⁴ The NTT Report is not subject to any exclusion from the DQA nor from the Guidelines.¹⁵

A number of serious flaws exist with the NTT Report that, if implemented, will have enormous social and economic consequences in the West without commensurate benefits to local GRSG populations and habitat. BLM must rectify these issues and recognize that state and local conservation efforts are already underway that have proven more accurate and effective than the top-down, one-size-fits-all federal approach taken in the NTT Report.

Therefore, Petitioners request BLM retract the NTT Report and all reliance thereon in existing and subsequent agency land use plans, Land Use Plan Amendments, decisions on

¹³ BLM Guidelines 1(d).

¹⁴ BLM Guidelines 2(b).

¹⁵ *See, e.g.* BLM Guidelines 1(e).

permits, authorizations, and the listed status of GRSG under the ESA. Alternatively, BLM could issue an amended NTT Report that uses sound analytical methods and the best data available, including specifically the information omitted in the current Report and referenced herein, ensuring transparency and objectivity in the information disseminated.

The best available science indicates that BLM should be far more flexible and adaptive in its approach to GRSG. Among other things, BLM should consider incorporating state, local, and private GRSG conservation plans and efforts consistent with the DQA, the Guidelines, DOI and Presidential orders, and its statutory multiple use mandates discussed herein.

The information disseminated should be corrected upon consideration of the most recent or thorough information from stakeholders, the public and the scientific community. This challenge constitutes the most recent and thorough information such that BLM should retract or amend the NTT Report accordingly.

II. The Petitioners

Petitioners have a direct interest in the quality and integrity of agency science and decision making, to ensure effective conservation. The Petitioners engage in ranching, grazing, mining, and energy development on multiple-use federal, state and private lands throughout the West, or are counties that rely on these activities for their economic and social viability. The Petitioners are particularly attuned to how the NTT Report affects management of public lands in the West. The management restrictions, regulatory measures, and closures recommended in the NTT Report will negatively impact the economy, the future viability of countless communities, local governments, small businesses, family farms and ranches, mining enterprises, electricity and oil and natural gas development in the West. There will be a profound and particularized impact on the Petitioners, as:

- Counties:
 - Colorado: Garfield County, Grand County, Jackson County, Mesa County, Moffat County, Rio Blanco County
 - Montana: Carter County, Fallon County, Fergus County, McCone County, Musselshell County, Phillips County, Prairie County, Richland County, Toole County, Yellowstone County
 - Nevada: Elko County, Eureka County
 - Utah: Uintah County

- Western Energy Alliance (the “Alliance”) represents more than 450 companies engaged in all aspects of environmentally responsible exploration and production of oil and natural gas across the West. The Alliance represents independents, the majority of which are small businesses with an average of fifteen employees.

- American Exploration & Mining Association is a 120 year old, 2,500 member, non-profit, non-partisan trade association based in Washington. AEMA members reside in 42 states and are actively involved in prospecting, exploring, mining, and reclamation closure activities on federally administered lands, especially in the West. Our diverse membership includes every facet of the mining and represents a true cross-section of the American mining community from small miners and exploration geologists to junior and large companies. Most of our members are individual citizens or small businesses.

- Colorado Mining Association is an industry association, founded in 1876, whose more than 1,000 members include individuals and organizations engaged in the exploration, development and production of coal, metals, agricultural and industrial minerals throughout Colorado, the west and the world. CMA’s membership also includes persons and enterprises providing support, services and supplies to the mining industry.

- Colorado Wool Growers Association was founded in 1926. It is premier legislative, regulatory, and policy management organization for the Colorado sheep industry.

- Independent Petroleum Association of America (IPAA) represents the thousands of independent oil and natural gas producers and service companies across the United States. Independent producers develop 95 percent of domestic oil and gas wells, produce 54 percent of domestic oil and produce 85 percent of domestic natural gas. IPAA members are dedicated to meeting environmental requirements while economically developing and supplying energy resources for consumers.

- The International Association of Drilling Contractors (IADC) is a leading oil and gas trade association and it is considered the authoritative body in the drilling space. Headquartered in Houston, Texas, IADC represents the interest of drilling contractors operating throughout the world including all oil and gas producing areas of the United States.

- Montana Association of Oil, Gas & Coal Counties is a non-profit corporation providing leadership on energy issues and promoting responsible energy development for the future of Montana. There are 34 counties that belong to the Association.
- The Montana Petroleum Association is a voluntary, non-profit trade association, whose members include oil and natural gas producers, gathering and pipeline companies, petroleum refineries and service providers and consultants.
- The Nevada Mining Association (NvMA) is a statewide trade organization formed over 100 years ago to address issues facing the mining industry in Nevada. The association has hundreds of members representing mine operators, the exploration community and vendors.
- The Petroleum Association of Wyoming (PAW) is Wyoming's largest and oldest oil and gas organization dedicated to the betterment of the state's oil and gas industry and public welfare. PAW members, ranging from independent operators to integrated companies, account for approximately ninety percent of the natural gas and eighty percent of the crude oil produced in Wyoming.
- The Public Lands Council (PLC), headquartered in Washington, D.C., represents ranchers who use public lands, manage the natural resources and preserve the unique heritage of the West. PLC is a Colorado nonprofit corporation. PLC represents state and national cattle, sheep and grasslands associations. PLC works to maintain a stable business environment in which livestock producers can conserve the natural resources of the West while producing food and fiber for the nation and the world.
- Utah Multiple Use Coalition: Recognizing Utah is a public lands state, eighteen organizations relying on access for natural resources, grazing, recreation and jobs banded together for a single united voice. Through prudent application of multiple-use management principles, precious resources such as timber, wildlife, forage, minerals, energy, water and recreation can co-exist with Utah's unique and sensitive environments. Coalition members include the Utah Farm Bureau, Utah Mining Association, Utah Woolgrowers, Utah Rural Electric Association, and Western Counties Alliance.

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III. The NTT Report Violates the Quality, Objectivity, Utility and Integrity Standards of the DQA and its Guidelines

The NTT Report: (1) was developed with unsound research methods including partial and biased presentation of information; (2) ignores studies that do not support its theses; (3) jumps to conclusions that are not scientifically supported but are pure conjecture; and (4) disseminates information that is neither objective nor reliable and that lacks scientific integrity.

Both the DQA and the Guidelines require agencies to “ensure and maximize” the quality, “objectivity, utility, and integrity” of information disseminated by federal agencies.¹⁶ “Utility” refers to “the usefulness of the information to its intended users, including the public.”¹⁷ For all of the reasons discussed herein, the NTT Report fails to meet quality, objectivity, utility and integrity standards of the DQA, the Guidelines and the additional authorities cited herein. *E.g.* Exhibit A at 1, 19, and 33; *see also* Exhibit B at 17 and 24.

Accordingly, Petitioners ask BLM to correct, retract or supplement information referenced in the NTT Report and also seeks to ensure that all information disseminated by BLM meets the requirements of the DQA and the Guidelines.

A. The NTT Report is Not Transparent

The NTT Report fails to meet quality and utility standards of the DQA and the Guidelines. The OMB Guidelines 11 require a high degree of transparency for influential information such as the NTT Report. Transparency equates to disclosure of the “data and methods of analysis” such that replication of results could be achieved.¹⁸ Peer-review of original

¹⁶ DQA § 515(a), OMB Guidelines, § 11(2), 67 Fed. Reg. at 8458.

¹⁷ OMB Guidelines V(2). 67 Fed. Reg. at 8459 (emphasis added).

¹⁸ OMB Guidelines V(3)(b)(ii).

and supporting data and results “does not necessarily imply that the results are transparent and replicable.”¹⁹

OMB has recognized that the benefits of transparency extend well beyond the ability to identify errors in government work. Far more important is the ability to assess the extent to which results hinge upon an agency’s choices in analysis.²⁰ “Agency guidelines shall, however, in all cases, require a disclosure of the specific data sources that have been used and the specific quantitative methods and assumptions that have been employed.”²¹ OMB explains that: “[i]n assessing the usefulness of information that the agency disseminates to the public, the agency needs to consider the uses of the information not only from the perspective of the agency but also from the perspective of the public. As a result, when transparency of information is relevant for assessing the information's usefulness from the public’s perspective, the agency must take care to ensure that transparency has been addressed in its review of the information.”²²

The NTT Report has been far from transparent. BLM convened closed-door sessions and private correspondence to bolster science cited in the NTT Report shortly before its release to the public. *See* Exhibit A at 1-2. As discussed herein, peer review on the NTT Report was also done behind closed doors and with no public input. *See* Exhibit A at 24-26. BLM failed to disclose virtually any information until forced to do so by the Alliance’s Freedom of Information Act (“FOIA”) litigation.

BLM failed to provide basic information to the public about the NTT Report, despite the heavy reliance on it in multiple Land Use Plan amendments. The Alliance went to great lengths to obtain relevant information about peer reviews on the NTT Report. Faced with agency

¹⁹ OMB, *Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies*, http://www.whitehouse.gov/omb/fedreg_reproducible.

²⁰ *Id.*

²¹ OMB Guidelines V. (emphasis added).

²² OMB Guidelines, § V(2). 67 Fed. Reg. at 8459 (emphasis added).

noncompliance, the Alliance filed two FOIA requests and a FOIA lawsuit against BLM for information that should have already been in the public domain pursuant to the DQA, its Guidelines, and presidential and secretarial memoranda and orders discussed further herein.

FOIA requires an agency to respond to such requests within 20 business days. BLM refused to disclose all of the information requested by the Alliance in these FOIA requests until the Alliance initiated litigation. It took more than seven months to receive the information requested. These actions ultimately resulted in the disclosure of more than 880 pages of relevant information that should have been disclosed and open for public review and comments.

Had BLM complied with the aforementioned authorities, many of the Alliance's extensive legal efforts would have been unnecessary and the public could have timely ascertained whether these documents were scientifically sound and substantially capable of replication.

B. The NTT Report is Not Reproducible

Transparency is a lynchpin to reproducibility. "The purpose of the reproducibility standard is to cultivate a consistent agency commitment to transparency about how analytic results are generated: the specific data used, the various assumptions employed, the specific analytic methods applied, and the statistical procedures employed."²³ "Reproducibility means that the information is capable of being substantially reproduced, subject to an acceptable degree of imprecision."²⁴ The more important the information disseminated, the more rigorous the standard.²⁵

The NTT Report fails to meet DQA standards for quality. The OMB Guidelines provide that higher standards than peer review applies to influential information, namely a "substantial

²³ *Id.*

²⁴ *See* OMB Guidelines V10.

²⁵ OMB Guidelines V10.

reproducibility standard.”²⁶ The DOI and BLM have adopted, and indeed must adopt, OMB Guidelines. In appropriate cases, OMB encourages the agencies to consider “confirmation” as a standard in assessing the objectivity of original and supporting data.²⁷ “The more important the information, the higher the quality standards to which it should be held, for example in those situations involving ‘influential scientific, financial or statistical information’”....²⁸

The NTT Report is highly influential, in that it “will have or does have a clear and substantial impact on important public policies or important private sector decisions.”²⁹ Pursuant to BLM’s Guidelines, the NTT is influential in that it “is expected to have a clear and substantial impact at the national level for major public and private policy decisions as they relate to Federal public lands and resource issues.”³⁰ A clear and substantial impact has a “high probability of occurring,” as BLM and USFS already are in the process of incorporating recommendations from the NTT Report into some 98 Land Use Plan Amendments across the nation.³¹

The NTT Report fails to meet the substantially reproducible standard required under the DQA and the Guidelines. *E.g.* Exhibit A at 2-3, 18, 20, and 33; *see also* Exhibit B at 3-4, 10-12, 26-27, and 29.

C. The NTT Report Fails the Required Robustness Checks

To the extent the agency believes it cannot disclose certain information in the NTT Report, robustness checks are required for ensuring compliance with the DQA because the public will not be afforded any other mechanism for determining objectivity, utility and reproducibility.

In fact, the “agencies shall apply especially rigorous robustness checks to analytic results and

²⁶ 67 Fed. Reg. 8452, 8457 (Feb. 22, 2002).

²⁷ *Id.*

²⁸ OMB Guidelines V(3)(b)(ii).

²⁹ *See* OMB Guidelines V(9).

³⁰ BLM Guidelines 2(b).

³¹ Aris Evia, National System of Public Lands, *BLM & Sage-Grouse Management & Conservation*, <http://onda.org/get-involved/events/desert-conference-2012/presentations/sage-grouse-aris-evia> at page 8.

document what checks were undertaken.”³² DOI Guidelines mirror this requirement, but the NTT Report did not undergo rigorous checks.

The OMB explained in its February 22, 2002 agency-wide guidelines that the “general standard” for these robustness checks is “that the information is capable of being substantially reproduced, subject to an acceptable degree of imprecision.”³³ “For example, a qualified party, operating under the same confidentiality protections as the original analysts, may be asked to use the same data, computer model or statistical methods to replicate the analytic results reported in the original study.”³⁴

The robustness checks required are missing or inadequate. For all but a handful of the studies relied upon by the NTT Report, complete data are not publicly available.

D. The NTT Report Contains Conflicts of Interest

The Departmental Manual (“DOI Manual”)³⁵ 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.”³⁶

A number of the relevant regulations and guidance stress the importance of independence³⁷ and the need to avoid conflicts of interest.³⁸ Among other things, independence

³² OMB Guidelines V3.b.ii.B.ii (emphasis added).

³³ 67 Fed. Reg. 8452, 8457 (Feb. 22, 2002).

³⁴ OMB, *Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies*, http://www.whitehouse.gov/omb/fedreg_reproducible (effective Jan. 3, 2002).

³⁵ Available at: <http://elips.doi.gov/elips/browse.aspx>.

³⁶ 305 DM 3.

³⁷ Interagency Cooperative Policy for Peer Review in Endangered Species Act Activities 59 Fed. Reg. 34270 (Jul. 1, 1994); OMB Peer Review Bulletin; 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>

means that a peer reviewer should 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.³⁹

The NTT Report fails on all those standards. A small number of GRSG specialist-advocates have had a disproportionate influence on formulating federal policy including their overlapping participation in preparation of the NTT and COT Reports as well as the highly influential USGS GRSG Monograph and peer reviews thereon. Since the three documents have interlocking relationships among their authors and peer reviewers which overlap with the authors of the few studies on which the Reports depend, the result is an insularity that clearly violates DQA and the Guidelines. More diverse expertise and viewpoints are clearly needed.

BLM failed to consider a range of diverse and objective scientific viewpoints and, instead, relied heavily on a small, select group of specialist-advocates with homogenous and biased opinions. For instance, Dr. Jack Connelly served as both a COT member and as the co-editor of the Monograph. Dr. Steven T. Knick was an NTT author and another co-editor of the Monograph. Similarly, Shawn Espinosa was involved in the preparation of both the NTT and COT reports. Likewise, Dr. David E. Naugle was not only an NTT member, but also served as a

(<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).

³⁸ Policy on Committee Composition and Balance and Conflicts of Interest for Committees Used in the Development of Reports (<http://nationalacademies.org/coi/>); Final Information Quality Bulletin for Peer Review 70 Fed. Reg. 2664 (Jan. 14, 2005); Memorandum for the Heads of Executive Departments and Agencies (<http://www.whitehouse.gov/sites/default/files/microsites/ostp/scientific-integrity-memo-12172010.pdf>); Department Manual, Part 305, Chapter 3
(<http://www.fws.gov/science/pdf/DOIScientificIntegrityPolicyManual.pdf>).

³⁹ Available at: <http://www.nap.edu/openbook.php?isbn=0309059437&page=9>

source of support for the FWS document, which cited his work frequently.

Further demonstrating the lack of diversity along with the lack of independence in authorship is the fact that the authors of these influential reports frequently cited to their own previous work. For instance, Naugle, an NTT member, cited to his own work, Walker and Naugle 2011, in preparing the NTT Report. Another NTT member, Knick, cited his own work repeatedly throughout the NTT report. Knick and Hanser 2011 was cited six times in the NTT report, Knick et al. 2003 was cited once in the NTT Report, and Knick et al. 2011 was cited six times in the NTT report.

If these authors weren't citing their own work, they were citing the work of colleagues with whom they had a long history of collaboration. For example, in the NTT Report, Naugle cited to Doherty et al. 2008 six times, Walker et al. nine times, Holloran 2005 twelve times, and Tack three times. However, Naugle had previously collaborated and co-authored papers with each of the four aforementioned authors. Naugle published Naugle et al. 2011a, which included as co-authors Doherty, Walker, Copeland, Holloran, and Tack. Naugle and Walker were also co-authors on another paper, Doherty et al. 2011. Naugle also co-authored at least three other papers with Doherty (Doherty et al. 2010a, Doherty et al. 2010b, and Doherty et al. 2011). Doherty and Holloran have been co-authors on at least one other paper.

The Reports rely on the same limited set of studies, reflecting a lack of diversity of viewpoints among the Reports. Doherty et al. 2008 was cited six times in the NTT Report and once in the COT Report. Walker et al. was cited nine times in the NTT Report and twice in the COT Report. Holloran 2005 was cited twelve times in the NTT Report and twice in the COT Report and nineteen times in the 2010 FWS listing decision on GRSG. Knick et al. was cited once in the NTT Report and fourteen times in the COT Report. Knick and Hanser was cited six

times in the NTT Report, eight times in the COT Report, and thirty-eight times in the 2010 GRSG listing decision. Knick et al. was cited six times by the NTT Report and twice by the COT Report. Leu and Hanser 2011 was cited in the USGS Monograph and three times in the COT Report. Yet with all the self-referential citing, these Report authors failed to consider a wide body of scientific literature, which is provided in Exhibit C.

Finally, there were a number of instances where authors who contributed to the Reports reviewed and edited their own work. For instance, Naugle served as his own editor for Naugle et al. 2011a. Similarly, in the NTT Report, Knick cited to his own work, Knick et al. 2003, which he also edited.

These facts demonstrate that a handful of scientists, who have pre-established professional relationships and singular viewpoints, have had a disproportionately substantial influence on the Reports. When there is reliance upon singular viewpoints, and researchers who have overlapping participation in preparation of influential documents and peer reviews, there is a violation of the governing authority on scientific research and data. Such actions also fail to maintain independence and the avoidance of conflicts of interest.

Furthermore, many of the authors responsible for the reports leading to the listing of the species have historically demonstrated a disregard for the policies on independence in the peer review process. The Center for Environmental Science, Accuracy, & Reliability (“CESAR”) exposed similar issues in its review of the USGS GRSG Monograph, which involved a number of the authors who were also involved in the NTT and COT Reports, and found a lack of independence in both authorship in peer review.⁴⁰ Likewise, here, there is a discernible pattern of disregard for the policies and regulations governing independence and conflicts of interest.

⁴⁰ <https://www.hightail.com/download/UW14OU1VMVh0TWxYd3NUQw>.

As recently as March 12, 2015, Reese, Beck, and Holloran co-signed a letter to individual White House and DOI officials advocating for the most egregious regulatory restrictions in the NTT Report and virtually threatening an ESA listing if such measures were not adopted.⁴¹ Other signatories included COT member Connelly, NTT member Rinkes and Monograph authors Garton and Braun. This and similar activity indicates that these scientists have overstepped their bounds, and have gone from providing independent, objective science to advocating policies based on their biases.

The conflicts of interest that permeate the NTT Report violates numerous sources of authority, including the DQA, its implementing Guidelines, the DOI Manual, NAS policy and various secretarial orders and presidential memoranda discussed herein.

E. The NTT Report Did Not Undergo Adequate nor Open Peer Review

The NTT Report failed to undergo adequate peer review as required by the DQA, the Guidelines and the presidential and secretarial orders and memoranda discussed herein. Peer review is a process by which something proposed, as for research or publication, is evaluated by a group of experts in the appropriate field.⁴² Peer review is used to ensure work meets the appropriate standards of the scientific and technical community,⁴³ and maximizes the quality, objectivity, utility, and integrity of provided information.⁴⁴ Reviewers are typically anonymous and independent to help foster unvarnished criticism and to discourage cronyism in funding and publication decisions,⁴⁵ and are not selected from among the authors' close colleagues, students, or friends. Such was not the case here.

⁴¹ Baker et al. letter to Secretary of the Interior Sally Jewell and Secretary of Agriculture Tom Vilsack dated March 11, 2015.

⁴² Merriam-Webster, "peer review," <http://www.merriam-webster.com/dictionary/peer%20review>.

⁴³ *Id.*

⁴⁴ OMB, *Memorandum for Heads of Departments and Agencies* ("M-05-03"), http://www.cio.noaa.gov/services_programs/pdfs/OMB_Peer_Review_Bulletin_m05-03.pdf.

⁴⁵ *See Id.* at 2.

1. Peer Review Standards

The DOI's Information Quality Mission Statement provides, in pertinent part:

“In order to ensure the accuracy and integrity of its published scientific information, DOI follows a robust peer review process wherein the information undergoes internal peer review and is subject to public scrutiny. DOI agencies are to maintain the highest standards possible for published information to ensure integrity and transparency.”⁴⁶

We question how “robust” the peer review process actually was. For one, BLM failed to meet applicable peer review planning standards.⁴⁷ In addition, BLM did not subject peer review of the NTT Report to any public scrutiny.

DOI Guidelines require not only that information be consistent with the Guidelines, but that the agency maintain an administrative record of review proceedings.⁴⁸ BLM failed to do so. Further, for influential information, DOI commits to provide “more rigorous review of the conclusions than the review performed by the originating office.”⁴⁹ No such rigorous review was undertaken for the NTT Report.

The government-wide guidance to peer review of government science is established in the “*Final Information Quality Bulletin for Peer Review*” issued by the Office of Management and Budget (OMB) of the Executive Office of the President (the “OMB Peer Review Bulletin”).⁵⁰ The OMB Peer Review Bulletin provides detailed guidelines for peer review of influential scientific information and applies more stringent peer review requirements to highly influential scientific assessments. Peer review shall be solely of scientific and technical

⁴⁶ DOI, Chief Information Officer, *Information Quality Mission Statement*, <http://www.doi.gov/archive/ocio/iq.html> (emphasis added).

⁴⁷ See DOI: Chief Information Officer, Department of the Interior Information Quality Mission Statement, DOI Bulletin for Peer Review, http://www.doi.gov/archive/ocio/iq_1.html.

⁴⁸ DOI Guidelines II.5.

⁴⁹ *Id.*

⁵⁰ *Id.*

matters.⁵¹ It typically evaluates 1) the clarity of hypotheses, 2) the validity of the research design, 3) the quality of data collection procedures, the robustness of the methods employed, 4) the appropriateness of the methods for the hypotheses being tested, 5) the extent to which the conclusions follow from the analysis, and 6) the strengths and limitations of the overall product.⁵²

The OMB Peer Review Bulletin requires that reviewers are selected based upon 1) expertise, to ensure that the selective reviewer has the knowledge, experience, and skills necessary to perform the review; 2) balance, to represent a diversity of scientific perspective relevant to the subject; 3) independence, to ensure that the reviewer was not involved in producing the draft document to be revised; and 4) conflict of interest, to examine prospective reviewers' potential financial conflict including significant investments, consulting arrangements, employer affiliations, and grants/contracts.⁵³

The rigorous review required by the DQA, the Guidelines and the OMB Peer Review Bulletin was not completed for the NTT Report.

2. Peer Review Failed to Undergo Public Comments

BLM failed to produce administrative record for peer review as required by the DQA and the Guidelines. Further, DOI provides no evidence that it rigorously reviewed the NTT Report. BLM certainly did not submit peer reviews on the NTT Report to the public for review and comment. Only upon commencement of FOIA litigation did BLM divulge the information requested relative to peer review on the NTT Report. This information should have already been publically available pursuant to the authorities referenced above.

⁵¹ U.S. Nuclear Regulatory Commission, *Applying OMB Peer Review Guidelines* (ML05100303), <http://www.nrc.gov/public-involve/ml051600303.pdf>

⁵² *See Id.* at 3.

⁵³ OMB, Memorandum for Heads of Departments and Agencies ("M-05-03"), http://www.cio.noaa.gov/services_programs/pdfs/OMB_Peer_Review_Bulletin_m05-03.pdf.

The OMB Peer Review Bulletin⁵⁴ established specific requirements for “influential scientific information” and “highly influential scientific assessments.” Agencies are directed to disclose the names of the reviewers and their affiliations.⁵⁵ And, “an agency conducting a peer review of a highly influential scientific assessment must ensure that the peer review process is transparent by making available to the public the written charge to the peer reviewers, the peer reviewers’ names, the peer reviewers’ report(s), and the agency’s response to the peer reviewers’ report(s).”⁵⁶ BLM failed to do so.

BLM issued a Memorandum in June of 2013⁵⁷ summarizing its policy with respect to public transparency in the peer review process (the “BLM Memorandum”). If the peer review process is challenged under the Information Quality Act, the peer reviewer’s name(s), the peer reviewer’s report(s), and the agency’s response to the peer reviewer’s report(s) must be made public.⁵⁸ BLM did not meet these requirements.

In reference to its peer review planning process requirements, DOI directs readers to links⁵⁹ to its agencies’ websites. Notably, the BLM peer review link contains absolutely no reference to peer review nor to peer review planning.⁶⁰ Rather, BLM simply links to its DQA Guidelines and challenges and responses thereunder.⁶¹ Following the links regarding Peer

⁵⁴ 70 Fed. Reg. 2664 (Jan. 14, 2005).

⁵⁵ *Id.* (emphasis added).

⁵⁶ *Id.*

⁵⁷ BLM, Assistant Director, Information Resources Management, 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.

⁵⁸ See BLM, *Data Quality Guidelines/Bulletin for Peer Review*, http://www.blm.gov/wo/st/en/National_Page/Notices_used_in_Footer/data_quality.html; see also Bureau of Land Management, *Information Quality Guidelines*, http://www.blm.gov/style/medialib/blm/national_page.Par.7549.File.dat/guidelines.pdf (updated February 9, 2012).

⁵⁹ It should be noted that the most recent Peer Review Report referenced by DOI in its link for “Information Quality and Peer Review Reports,” was from FY2010.

⁶⁰ http://www.blm.gov/wo/st/en/National_Page/Notices_used_in_Footer/data_quality.html.

⁶¹ *Id.*

Review Reports to BLM, it appears BLM has never submitted a Peer Review Report for public review.

3. Persuasive Showing the NTT Report Was Not Objective

OMB guidelines state that information will generally be presumed to be objective if data and analytic results have been subjected to formal, independent peer review; however, this presumption is rebuttable “based on a persuasive showing by a petitioner in a particular instance.”⁶² The OMB guidelines also specify certain standards for agency sponsored peer reviews. The issue is what will be considered a “persuasive showing” that will overcome the presumption of objectivity under the proposed agency guidelines. An example of such a review is the process used by scientific journals.⁶³ However, even journal peer review does not necessarily equate to quality. As OMB has recognized, there are well-documented examples of flawed science published in respected journals.⁶⁴ Accordingly, the presumption is rebuttable.⁶⁵

In this case, BLM has not met the applicable standards. As referenced above, serious conflicts issues abound with regard to the reviewers of the NTT Report and those selected to help bolster scientific weaknesses therein shortly before its release.

The peer review of the NTT Report was coordinated by Nevada Department of Wildlife Director, Ken Mayer. Incredibly, the reviewers were not asked to provide a scientific review:

“[W]e are not asking for a strict scientific review, but rather an assessment of the CM [conservation measures] and the appropriateness of circumstances that a manager would apply the CM and will these CMs meet the objectives of preventing losses or degradation of habitat and prevent decreases in the distribution of sage-grouse.”⁶⁶

⁶² 67 Fed. Reg. 8452, 8454 (Feb. 22, 2002).

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ Ken Mayer letter to NTT Report reviewers (Oct. 11, 2011).

This clearly violates the letter and intent of the DQA, the OMB Peer Review Bulletin and the Guidelines. It should also be noted that reviewers were given only ten days to review the NTT Report.⁶⁷

The peer review process was hardly open or rigorous. The Alliance was forced to litigate against BLM under FOIA to obtain what should have been disclosed and open for public comment. Moreover, BLM failed to address several comments and issues raised by peer reviewers in the NTT Report. *See* Exhibit A at 26-33. These issues constitute the “persuasive showing” required to overcome the presumption of objectivity. Even then, some of the reviewers expressed real concerns with the NTT Report. “In summary, the approach taken in the document is rather short-term and narrow, and it seems to miss the opportunity to take a more holistic and long-term view of sage-grouse management.”⁶⁸ Another reviewer noted “The document is an odd mix of scientific citations and policy decisions, with no real tie between the two. This seems a strange blend of policy loosely backed by citations, with no analysis of science. Because there is no iteration of the rational scientific basis for the very prescriptive strategies, I would anticipate strong blowback by Industry and by Environmental Groups... .”⁶⁹

Yet another reviewer remarked, “[T]he document suffers from a 1-size fits all approach that lacks context.” Exhibit A at page 28. Lumping all seasonal habitats into either “priority” or “general” is “tremendously simplistic.”⁷⁰ Additional criticism included a lack of definition of priority and general habitat, a lack of performance or realistic adaptive management; and a lack of flexibility with regard to No Surface Occupancy (“NSO”) buffer requirements.⁷¹

⁶⁷ *Id.*

⁶⁸ Reviewer 3 at 2.

⁶⁹ Reviewer 2 at 2; *see also* Exhibit A at 31..

⁷⁰ Reviewer 2 at 5.

⁷¹ *Id.* at 6 and 15; *see also* NTT Report at 20-23 (No surface occupancy or use is allowed on the lands described),

BLM clearly failed to address these fundamental shortcomings with the NTT Report. Peer review of the NTT Report was inadequate because each of the comments received were not incorporated or rebutted by the NTT in writing, as is the accepted practice in scientific peer review. *See* Exhibits A and B. Accordingly, the NTT Report falls short of the DQA, the Guidelines and the OMB Peer Review Bulletin.⁷² It also contradicts BLM’s own DQA memorandum specifically addressing peer review.⁷³

F. The NTT Report Was Not Based on the Best Available Science

The NTT Report fails to meet DQA standards for quality, objectivity, utility and integrity. Agencies are directed⁷⁴ to adopt congressional standards of scientific integrity stemming from the Safe Drinking Water Act (“SDWA”).⁷⁵ For agency action based on science, the SDWA standards must entail “(i) the best available, peer-reviewed science and supporting studies conducted in accordance with sound and objective scientific practices; and (ii) data collected by accepted methods or best available methods (if the reliability of the method and the nature of the decision justifies use of the data).”⁷⁶ Executive Order 13562 also requires that regulations “must be based on the best available science.”⁷⁷

Here, the NTT Report and the studies cited therein fail to meet the best available science standards. *See* Exhibit A at 2, 6 and 10; *see also* Exhibit B at 10-11 and 24-25. Specifically, it suffers: flawed methodology, modeling and assumptions as well as erroneous and biased interpretation of results. Significant uncertainties in the NTT Report are ignored and conjecture

⁷² http://www.blm.gov/pgdata/etc/medialib/blm/national/national_page.Par.7549.File.dat/guidelines.pdf.

⁷³ BLM, Peer Review of Influential Scientific Information, http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2013/im_2013-137__peer.html (June 6, 2013).

⁷⁴ OMB Guidelines V3.b.ii.B.ii.C.

⁷⁵ 42 U.S.C. § 300g-1(b)(3)(A).

⁷⁶ OMB, Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated, http://www.whitehouse.gov/omb/fedreg_reproducible.

⁷⁷ Federal Register, Vol. 76, No. 14 (January 21, 2011) at 3821. Executive Order 13563: *Improving Regulation and Regulatory Review*, <http://www.gpo.gov/fdsys/pkg/FR-2011-01-21/pdf/2011-1385.pdf>.

and opinion are presented as facts. Moreover, the onerous regulatory measures recommended in the NTT Report are far from justified. In fact, they impose an incredible burden on the Petitioners and the public without scientific justification.

The entire process initiated by BLM to incorporate the NTT Report into its Land Use Plan Amendments is fraught with substantial procedural, legal and scientific flaws. BLM's NTT Report is the source for many of the scientific flaws (described above), which was recognized by DOI employees and discussed in internal emails questioning the legality of some of the conservation measures recommended in the NTT Report:

“...But, does the NTT really want to recommend something that is blatantly illegal(?)...”⁷⁸

Peer reviewers for the NTT Report also warned the team of the scientific and legal flaws:

“Are you going to sit back and have catastrophic wildfires dictate your outcome?...Are winter ranges a constant vegetation type? No, so why would you state such an objective?...This type of passive management is helping further degrade critical habitats...”⁷⁹

This seems a strange blend of policy *loosely* backed by citations, with no analysis of the science (emphasis added).⁸⁰

Regrettably, DOI decision-makers did not heed warnings like this from DOI staff and peer reviewers and proceeded with publishing the NTT Report knowing that there were significant internal concerns about the report. For these reasons, and due to the over reliance on the NTT Report across alternatives, the Land Use Plan Amendments suffer in quality, specifically utility and scientific integrity, and are thus, inconsistent with the requirements of the DQA, Guidelines, and presidential memoranda.

⁷⁸ FOIA Response, *supra*, note 3.

⁷⁹ Maxwell, note 2 at 5 (internal citation omitted).

⁸⁰ *Id.* at 3 (internal citation omitted).

Unfortunately, the NTT Report and many of the studies upon which it relies have significantly flawed assumptions, questionable analytic models and questionable statistical procedures. *See* Exhibit A at 14-15; *see also* Exhibit B at 1, 4, 7, 21-23, 26, and 29-30. Virtually all of the significant studies relied upon in the NTT Report utilize models. *See* Exhibit B, *gen.* The NTT Report relies extensively upon these models and even models built upon models to evaluate the alleged human footprint on sagebrush habitat and alleged GRSG population responses. In contravention of the Guidelines, BLM has not demonstrated to OMB that there is no other option than to use these third-party models.

While federal agencies often use various models developed by third parties to formulate policies based upon influential scientific information, OMB Guidelines require that influential scientific information be reproducible. This reproducibility standard generally requires that the models, data used to develop the models, and computer code used to develop such information be publicly available.

Here, BLM has not identified several sources in the NTT Report and has not disclosed the supporting data and models for the public to assess the objectivity of the Report. The models relied upon are quite complex. However, because the underlying data used in many of them have not been fully released nor provided to peer reviewers for independent analysis, they are neither transparent nor reproducible. The peer reviewers, journal editors, or scientific and regulatory audience cannot independently evaluate the quality and potential biases in the data and studies.

Moreover, the data have been collected by different people in different states using different standards and levels of effort--all of which have changed over time. The data are not properly curated or maintained in a central repository. Metadata to describe precisely how the

data were collected, recorded and summarized along with quality and control assurances are undocumented. Additionally, depending upon the state or federal agency, key variables have not been released. Simply put, the raw data and methods that one could potentially use to reproduce the final data sets are not available either because they are not released, undocumented, or may no longer exist. The models themselves often exhibit a complete lack of transparency and reproducibility. *See Exhibit B, gen.*⁸¹ What little background presented to the public regarding the models is presented in a confusing fashion with only vague references to the assumptions upon which it was based.

States within the range of the GRSG collect annual counts on leks. Integral to understanding GRSG is the means by which to count their populations and to predict potential trends. As discussed in Exhibits A and B herein, agency biologists have cherry-picked lek count data from the states to form the basis of opinions memorialized in the key reports utilized by BLM. The modeling efforts within these studies form the backbone of the federal, top-down approach being imposed through the Land Use Plan Amendments. *See Exhibit A at 2, 15, 19-20, and 33-34; see also Exhibit B at 7, 10, 13, and 28.* Without the underlying data, these reports are neither transparent nor reproducible.

Through its FOIA efforts and litigation, the Alliance learned the NTT authors recognized significant scientific shortcomings with their draft report. As a result, a “Science Support Team” was convened in a closed-door meeting in Phoenix, Arizona shortly before the report was finalized to “further strengthen the science underpinnings to our conservation measures.” Likely in violation of the Federal Advisory Committee Act (“FACA”), BLM provided no public notice

⁸¹ Note: The NTT Report does not mention that Walker et al. 2007 used model selection procedures that were not statistically reliable. The study used nine predictor variables, with just nine years of data, to compare 19 models, in an attempt to identify combinations of predictor variables that would potentially explain patterns in the data. However, for model selection to work properly, the number of predictor variables must be smaller in comparison to the number of observations (in this case, the number of years of data).

nor opportunity to participate in the Science Support Team effort. Former Colorado Division of Wildlife Director Tom Remington led the effort, constituting another likely FACA violation, as Remington was no longer an agency employee when this occurred.⁸² The identities of persons involved in this review were finally provided through FOIA litigation.

The NTT Report and efforts to bolster the science cited within it were rife with conflicts. Two of the “Science Support Team” members that were disclosed after FOIA litigation, Naugle and Knick, were frequently cited in the NTT Report. Naugle et al. 2011 (chapter 21 of the GRSG Monograph) was cited eight times in the 2010 WBP decision and three times in the NTT Report. Knick 2011 (chapter 13 of the GRSG Monograph) was cited nine times in the 2010 WBP decision, four times in the COT Report and once in the NTT Report; Knick and Hanser 2011 (chapter 18 of the Monograph) was cited 38 times in the 2010 WBP decision, eight times in the COT Report and six times in the NTT Report. In the NTT review process, Dr. Knick added a citation to himself in the NTT Report for the flawed proposition, “[S]mall increases in the human footprint (a collective measure of anthropogenic disturbance) within 3.1 miles resulted in large increases in probability of lek extirpation.”

Where the science could not be bolstered, Tony Apa, an NTT member, wrote in an email to other NTT members Hagen, Kick, Naugle, Deibert, Kemmner, Espinosa, Robinson, and Morales:

“I’ve tried to identify those biological recommendations that may need a scientific citation. I’ve taken my hand at highlighting as well and those things I flagged are in grey. I’m working on an introductory part on certainty of conclusions and inference space with regards to science without relating it to any study in particular and run it by everyone. *If we don’t have the science I’m assuming it will be our best professional judgement* (emphasis added).

⁸²http://www.blm.gov/style/medialib/blm/wo/Information_Resources_Management/data_quality_2.Par.10399.File.d at/2013%201104%20BLM%20Response_Sgamma%20Letter%20-%202013-10-24.pdf

Recognizing issues with scientific support and the issues raised by reviewers, Appendix A was added to the NTT Report to allegedly provide “context” for the conservation measures.⁸³ However, Appendix A is simply an excerpt from the 2010 listing decision describing the life history requirements of the GRSG. It does little to address the significant issues raised by reviewers or pursuant to the DQA and the Guidelines as discussed herein.

The NTT also attempts to provide justification for the science used in the report by providing Appendix B: “Scientific Inference.” While inference is commonly made in scientific research, all other aspects of the study must be sound, and the inferred conclusion must logically follow from the facts. In Appendix B, BLM states:

“Many of the studies cited are from different researchers, study sites, methodologies, and/or years which assists and improves the certainty of the conclusion and inference space (Fig. 1), *but ultimately, it is incumbent upon managers to assess their level of risk (consequences of being wrong) with management decisions based upon the cited findings.*”⁸⁴

Because several of the most influential studies cited in the NTT Report contain significant flaws (*See* Exhibits A and B) any inferences made by study authors or BLM is also flawed. Furthermore, by making recommendations and then seeking scientific justification for them, the NTT was in effect backing into their preferred conclusions rather than providing a comprehensive and objective treatment of alternatives.

G. The NTT Report Lacks Objectivity and Exhibits Bias

The NTT Report is biased by the use of policy-driven assumptions, inferences, and uncertainties that are not supported by scientific data. It inadequately treats uncertainties through presumptive interpretations of data and inaccurate portrayal of threats through differential treatment of environmental factors.

⁸³ *See* Maxwell, *infra* at 1.

⁸⁴ NTT Report at 57

The DQA requires agencies to issue guidelines ensuring and maximizing the “objectivity” of all information they disseminate. The OMB guidelines implementing the legislation define “objectivity,” and that definition includes a requirement that information be “unbiased” in presentation and substance. “Objectivity,” along with “unbiased,” is correctly considered to be, under the OMB guidelines, an “overall” standard of quality.⁸⁵

In this case, the NTT Report fundamentally and erroneously assumes GRSG populations are in decline, and that declines in lek attendance equate to population declines. It also concedes to a near-total lack of knowledge on how GRSG respond to anthropogenic disturbance, yet proposes multitudes of unfounded regulatory restrictions to address them.⁸⁶

The NTT Report is not presented in an accurate, clear, complete and unbiased manner.⁸⁷ See Exhibits A and B, *gen.* For example, with regard to coal mining, without substance or authority, the NTT report recommends finding all surface mining of coal unsuitable under certain criteria.⁸⁸ With no support, it recommends granting no new mining leases unless all surface disturbances are outside priority habitat as well as restrictions on facility and timing restrictions and other mitigation requirements are recommended. In the absence of unbiased supporting evidence, the NTT Report asserts that energy development causes impacts that are “universally negative and typically severe,” a false sentiment extracted directly from Naugle 2011a.

Naugle served as his own editor for Naugle et al. 2011a. This GRSGS Monograph chapter is cited eight times in the 2010 WBP decision and three times in the NTT Report for the erroneous narrative that oil and natural gas development is uniformly deleterious to GRSG populations. The authors examined 32 published papers, reports, management plans, and theses

⁸⁵ 67 Fed. Reg. 8452, 8458 (Feb. 22, 2002).

⁸⁶ See NTT Report at 57.

⁸⁷ See OMB Guidelines V(3)(a).

⁸⁸ NTT Report at 24.

regarding biological responses of sage grouse to energy development and then dismissed all but seven studies. This "*critical review*" is not impartial because the authors are also authors on four of the seven pieces of the literature reviewed. Four of the seven studies focused on impacts to GRSG in areas of *intensive* energy development and are not necessarily representative of less intensive energy development, development based on newer environmental regulations, or newer technologies. Studies not written by the authors were reinterpreted.

The NTT Report relies upon Naugle for the frequently repeated and erroneous assumption that avoidance results in population decline to support the flawed "professional judgement" that 3% disturbance caps are necessary for GRSG. However, Naugle et al. 2011a does not mention, measure or support a 3% threshold. It is seriously misrepresented in the NTT Report.

Yet another issue is the NTT Report's proposal to withdraw priority habitat from locatable mineral entry without providing any scientific justification. Based on studies readily available to the NTT, USGS in its baseline environmental report published after the NTT Report found that mining of various Federal mineral resources (locatable and saleable) currently affects approximately 3.6% of potential GRSG habitat directly *across the entire range* of the GRSG. Despite having the same information available to them about the small amount of impact, the NTT Report proposed withdrawing lands from locatable mineral entry. Withdrawals of the magnitude proposed by the NTT conflict with FLPMA's⁸⁹ multiple-use mandate, § 22 of the General Mining Law, and the Mining and Minerals Policy Act;⁹⁰ and cannot be implemented.

⁸⁹ 43 U.S.C. §§ 1701 *et seq.* (E.g. Under Section 1701(a)(7) of FLPMA, BLM is required to manage the public lands on the basis of multiple use and sustained yield. 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 historic values.); *see also Norton v. Southern Utah Wilderness Alliance*, 542 U.S. 55, 58 (2004).

⁹⁰ 30 U.S.C. §§ 22-24, 26-30, 33-35, 37, 39-43, 47 (2000).

Withdrawal of this magnitude can only be made by an Act of Congress or by the Secretary pursuant to the requirements and procedures of FLPMA § 204(c) for a period not to exceed 20 years.

Where appropriate, BLM states it will seek input from appropriate stakeholders and the scientific community.⁹¹ Here, BLM has sought only selective input in a way that likely violates FACA as well as the DQA and its Guidelines. Moreover, the fields of GRSB biology and ecology have not been stagnant. To the contrary, newer and more sophisticated modeling, as well as evolving understanding of ecologically mechanisms impacting the GRSB is now available. *See* Exhibit C. This has “substantially changed” the body of knowledge; and thus, supersedes and outdates the draconian, ill-formed opinions and policy measures found in the NTT Report. For example, the one-size-fits-all application of the proposed conservation measures has been categorically opposed by the scientific community and other DOI agencies, including even FWS and USGS.

The NTT Report presents a biased view of oil and natural gas operations by conveying that “impacts are universally negative and typically severe.” It then selectively presented information in support of its conclusions, while ignoring contrary information. Key assertions in the NTT Report are both biased and in error, especially the frequently repeated, but erroneous assumption, that a temporary decrease in lek counts immediately adjacent to active wells is equivalent to a population decline.

The NTT Report is also biased in its characterization of sagebrush restoration efforts. While restoration in some areas can be challenging, it is a result of multiple compounding factors, which are not necessarily present across the range of the species. Further, it is overly

⁹¹ BLM Guidelines 2(c).

simplistic and inaccurate to say that restoration is too difficult, or unsuccessful. Restoration and the factors that limit restoration are far too complicated to make such a blanket statement.

All of the aforementioned issues evidence bias and lack of objectivity in contravention to the DQA, the Guidelines and Executive Order 13563, which calls for “objectivity of any scientific and technical information and processes used to support [an] agency’s regulatory actions.”⁹²

H. The NTT Report Contains Selective Citations

All scientific information and data, not just selective use of information, needs to be made available and considered in influential documents such as the NTT Report. The NTT Report selectively presents information while ignoring information contrary to its preferred conservation measures. Rather, it represents a partial presentation of scientific information to justify a narrow range of preferred conservation measures and policies. Exhibit C contains an extensive selection of studies completely ignored in the NTT Report or published subsequent thereto.

The NTT Report omits numerous scientific papers and reports on oil and gas mitigation measures for GRSG, the mitigation of raven predation on GRSG, the fact that the GRSG disperse over greater distances than previously thought, and that they traverse (fly) over or around roads, agricultural areas, and oil and gas development.⁹³ *See also* Exhibits A and B, *gen.* The NTT Report is obsolete due to the rate at which research on the GRSG is being conducted. BLM must consider studies like Kehmeier et al. 2014 to ensure the integrity of its policies and

⁹² Available at: <http://www.gpo.gov/fdsys/pkg/FR-2011-01-21/pdf/2011-1385.pdf>.

⁹³ J. Kehmeier, N. Wojcick, J. Millspaugh, C. Hansen, M. Rumble, S. Gamo and G. Miller, *Overview of Greater-Sage-Grouse Monitoring Efforts*, Chokecherry and Sierra Madre Wind Energy Project, Carbon County, Wyoming (2014).

information it disseminates. *See* Exhibit C. Neither did BLM use the best available science on beneficial impacts of livestock grazing and predator control, as discussed below.

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.⁹⁴ This makes it difficult to provide scientific verification.⁹⁵ For example, 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.⁹⁶ This limits the ability of outside reviewers or the public to verify claims reducing the NTT Report’s utility and usefulness, and reduces the report’s scientific integrity.⁹⁷ Additionally there are articles listed in “Literature Cited” that are not used within the NTT Report itself.⁹⁸ The NTT Report is also guilty of misleading use of authority.⁹⁹ *See also* Exhibits A and B, *gen.* Finally, the NTT Report ignores substantial information and fails to include studies published in subsequent years. *See* Exhibit C. For these reasons the NTT Report fails to meet the standards of utility, integrity, and ultimately quality pursuant to the DQA.

The NTT Report often mis-cites studies as if they support its preconceived regulatory goals. For example, the NTT Report stipulates that with regard to fuel management, sagebrush cover should not be reduced to less than 15%.¹⁰⁰ However, Connelly et al. 2000, the source cited, does not stand for this proposition.¹⁰¹ This one-size-fits-all prescription does not take into account differences in seasonal requirements, or the importance of understory health. In some

⁹⁴ Maxwell *infra* at 13-14.

⁹⁵ *Id.* at 14.

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ *Id.*

¹⁰⁰ Available at:

<http://www.blm.gov/pgdata/etc/medialib/blm/co/programs/wildlife.Par.73607.File.dat/GrSG%20Tech%20Team%20Report.pdf>.

¹⁰¹ Maxwell at 14.

site-specific instances, reducing sagebrush may be appropriate to enhance native perennial grasses. Importantly, Connelly et al. 2000 distinguished between types of habitat and provides that corresponding sagebrush canopy percentages vary from 10% to 30% depending on habitat function and quality.¹⁰² Connelly et al. 2000 does state that land treatments should not be based on schedules, targets, and quotas.¹⁰³

Further, in the discussion regarding prescribed burns, Connelly et al. 2000 notes that not all prescribed burns result in adverse impacts to GRSG. Rather, impacts are dependent upon the type of seasonal habitat. While the author does describe some adverse impacts related to nesting habitat, this cited paper does not discuss any of these prescribed burn treatments in terms percentage of canopy cover.¹⁰⁴

IV. Proposed Restrictions are Contrary to the DQA

The new best management practices (“BMPs”) proposed in the NTT Report are unnecessarily restrictive, are not supported by scientific information, do not address specific cause and effect mechanisms that are known to be deleterious to sage grouse, and in some cases are not achievable (i.e. restoring land to pre-mining topography). These recommendations were made without any tracking and testing of the effectiveness of existing BMPs.

Throughout the NTT Report, BLM proposes proscriptive management regimes based upon fundamentally flawed science including:

- Four-mile No Surface Occupancy (NSO) of active leks
- 3% limit on surface disturbance
- 50-70% sagebrush cover threshold
- Right-of-Way (ROW) exclusion and avoidance areas
- 1 disturbance per 640 acres.

¹⁰² *Id.*

¹⁰³ 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).

¹⁰⁴ *See* Connelly et al. 2000 at 972-974.

In addition, the BLM through the NTT Report proposes arbitrary conservation measures based on unproven assumptions that:

- a minimum range of 70% of the acreage in sagebrush cover is required for long-term persistence of GRSG
- 15-25% minimum canopy cover is necessary in all GRSG seasonal habitats
- a temporary decrease in local lek attendance equates to a population decline.

These arbitrary measures conflict with studies that indicate sagebrush cover preference differs between seasons, and thus using a single percent cover is inappropriate and is not supported by scientific research described in the literature. *See Exhibit C.* Moreover, a one-size-fits-all limit of 3% on disturbances is unsupported, as discussed in detail below.

BLM manages millions of acres of GRSG habitat across 11 western states, which consists of highly varied ecological conditions, as well as varied threats to the GRSG and its habitat. The NTT Report provides recommendations for GRSG across its entire range including specific habitat prescriptions applicable to all GRSG seasonal habitats. Although this “one-size-fits-all” management approach may be convenient to administer, it is completely inappropriate for the GRSG because of their broad ecological range, variations in population traits and characteristics and the variability in habitat conditions and threats within the range. These variations make managing GRSG and their habitat a complex task that must consider site-specific conditions and variables. Simplifying GRSG management by creating range-wide habitat prescriptions or percent disturbance thresholds fails to target the specific sub-regional and population scale factors, as well as seasonal habitat preferences. The simplistic “one-size-fits-all” approach completely fails to recognize this variation and complexity. This critical flaw renders the habitat management recommendations in the NTT Report likely fail to protect GRSG and habitat range-wide and could even result in unintended adverse consequences. For example, the NTT’s passive restoration and fire management strategies, and one-size fits-all vegetative requirements

could increase the risk of catastrophic fire and habitat destruction in areas already under extreme threat of wildfire by limiting grazing that reduces fuels and repurposing firefighting resources toward suppression (which will result in additional fuel build up and larger fires as compared to using controlled burns). In addition, proposed prohibitions on road construction and travel restrictions hinder access for firefighting and other purposes as seen in Oregon.

A. Four-Mile Buffers in the NTT Report are Unsupported by Scientific Evidence

The presumed necessity of a four-mile radius NSO buffer around sage grouse leks is based upon the subjective opinion of selected authors. *See* Exhibit A at 18-19; *see also* Exhibit B at 5-6, 13, 23, and 30. The studies cited in support of a four-mile buffer did not test this as compared to alternative buffer distances, thus, the NTT Report mischaracterized the findings of these studies.¹⁰⁵

The primary rationale presented by the NTT Report that the majority of nests are located within four miles of a lek such that four-mile NSOs are required is not sound. There are no data that demonstrate a four-mile buffer addresses any specific threat such as predation, functional disturbance of leks from noise or activity, or that such a buffer would result in any quantifiable benefit in terms of increased survivorship or reproduction. Instead, the presumed necessity is solely based upon the subjective opinions expressed in the NTT Report and correlative studies regarding local lek counts, none of which identify any causal mechanism for localized effects which are improperly characterized as negative and permanent population effects.

Further, the flawed opinions of the NTT authors are based on assumptions that nesting habitat is the limiting factor across all populations, and that 90% of all nests must be protected in order for GRSG to persist. However, there is no evidence that a four-mile buffer will result in

¹⁰⁵ The NTT Report mis-cites Giesen 1995, Graham and Jones 2005 and Graham and Connell 2004 as support for 4-mile buffers. These papers lacked any hypotheses testing. Rather, they simply recorded finding GRSG nests within four miles of leks.

quantifiable population level benefits to GRSG in terms of increased survivorship or reproduction. Data from the Pinedale Planning Area demonstrate GRSG populations have increased despite intensive energy development in Jonah, Labarge, and the Pinedale Anticline within four miles of active leks.¹⁰⁶ See Exhibit A at 5-6, and 17-21. Notably, many of these areas developed prior to widespread use of directional drilling and clustered development. Accordingly, impacts from oil and natural gas development today are smaller.¹⁰⁷

The NTT Report states 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).”¹⁰⁸

However, the NTT Report 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. See Exhibit A at 5 and 18; see also Exhibit B at 30. The population predictions made by Holloran 2005 have failed to manifest, and Walker et al. 2007 and Johnson et al. 2011 are severely flawed. See Exhibit A at 4-5, and 24; see also Exhibit B at 10, 13, and 30. These are hardly the “strong evidence” in support of draconian land use and timing restrictions that the NTT purports. NTT at 19.

The NTT Report also fails to mention that Holloran 2005, using much larger sample sizes (n=213 vs. n=77), reported nest success that was virtually identical and not significantly different between disturbed and undisturbed areas compared to Lyon and Anderson's (2003) results. The NTT Report cannot selectively use results from Lyon and Anderson (2003) to support its

¹⁰⁶ *Id.*; 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.

¹⁰⁷ Applegate and Owens 2014; Kirol et al. 2015.

¹⁰⁸ NTT Report at 20.

recommendations while failing to state that they were statistically insignificant and contrary to more recent and comprehensive data. The DQA requires that information used by agencies be based upon verifiable and repeatable data, and not based upon opinion.

These buffers are driven by policy considerations rather than defensible biological criteria and do nothing to mitigate specific cause and effect threats to GRSG. This one-size-fits-all approach clearly fails to address specific threats or their underlying mechanisms, and variation in seasonal habitat use across populations. *See* Exhibit A at 5, 18- 21; *see also* Exhibit B at 7-8, 18, 22, and 26. Further, it leaves no allowance for conservation plans tailored to local conditions. Conservation measures best suited to one region are not necessarily suited to another region. *See* Exhibit B at 7, 11, 26 and 30. 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.”¹⁰⁹

The practical effect of the proposed restrictions would be to protect vast areas of non-habitat and marginal habitat with no demonstrable benefit to the GRSG populations. The area of this four-mile radius surrounding each lek is 50 square miles.¹¹⁰ *See* Exhibit A at page 19. Given the topography of the GRSG habitat, substantial acreage within four miles of leks might not be suitable GRSG habitat. This overly broad restriction will greatly limit activities including year-round oil and natural gas development and its associated benefits, which include reduced truck traffic, fewer emissions, and phased development.¹¹¹

The Land Use Plan Amendments, discussed in detail below are incorporating NTT recommendations for seasonal four-mile NSO buffers around active leks during lekking, nesting,

¹⁰⁹ Western Governor’s Association, *Policy Resolution 13-08 – Endangered Species Act*, p. 3.

¹¹⁰ NTT Report at 32.

¹¹¹ Ramey et al. 2011.

and early brood rearing in all designated habitat.¹¹² Even the NTT Report states that a “4-mile NSO [no surface occupancy] 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.”¹¹³

For all of these reasons, the information disseminated does not meet DQA standards for objectivity and integrity, and must therefore, be retracted or corrected. Moreover, by acting on flawed measures in the NTT Report, 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.¹¹⁴

B. Disturbance Caps in the NTT Report are Unsupported

The NTT Report proposes a 3% cap on disturbance that is not scientifically supported. Instead it is based on opinions, selective citation, and invalid assumptions that temporary displacement of GRSG in a developed area equates to a population decline, or that GRSG avoidance of an area equates to a population decline.

The NTT Report presented no scientific data that achieving less than 3% 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. *See Exhibits A and B, gen.*

¹¹² *See* NW CO GRSG 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.

¹¹³ NTT Report at 21.

¹¹⁴ *See* 40 C.F.R. § 1502.2(g); *see also* Applegate and Owens 2014; and Kirol et al. 2015.

While BLM states that mapping data for these disturbance thresholds will be consistent with the DQA,¹¹⁵ it has yet to recognize that the best mapping data are from the states and local governments.

For instance, Garfield County developed a Greater Sage-Grouse Conservation Plan based on the best available science and a tailored approach to private and public land management to benefit the species.¹¹⁶ In recognition of the County's unique GRSG habitat characteristics (i.e. extreme topographic variation and naturally fragmented suitable habitat patches), Garfield County commissioned an in-depth analysis of its 2,956 square miles, revealing that nearly 70% of Garfield County is not suitable for GRSG.¹¹⁷ However, there are small but important patches of suitable GRSG habitat in Garfield County, amounting to at least 70,000 acres.¹¹⁸ Garfield County's plan accordingly focuses conservation efforts on that suitable habitat.

In addition, the NTT Report makes no allowance for including local sage grouse conservation plans at the county level or by private landowners that have tailored conservation measures to local conditions, including unique habitat and threats, and socio-economic factors. *See also* Exhibit A at 3, 16, and 18.

State and local conservation efforts have proven more accurate and effective than the one-size-fits-all federal approach taken in the NTT Report. *See* Exhibit A at 2, 15-16, and 21. In fact, in the Land Use Plan Amendments, BLM admits that local data have been omitted and there

¹¹⁵ *Id.*

¹¹⁶ Garfield County, Board of County Commissioners, *Greater Sage-Grouse Conservation Plan*, http://www.garfield-county.com/community-development/documents/FINAL-Approved-Grouse-Plan-Amendment%201_11-20-2014.pdf (adopted Mar. 18, 2013) (amended Nov. 17, 2014) (Habitat mapping provided by state and federal agencies were not accurate and did not provide adequate planning information)

¹¹⁷ *Id.* at 10-17, and 35-37 (the Garfield County plan utilized highly sophisticated and peer reviewed habitat modeling completed in November of 2014 that proved a 67% decrease in potentially suitable habitat from Colorado Parks and Wildlife's model, indicating that CPW and BLM over-mapped 147,000 acres of private and public land).

¹¹⁸ *Id.* at 7-8, 16-18, and 25-26 (acreage includes suitable habitat for all range of GRSG lifespan behavioral requirements).

are inconsistencies between Western Association of Fish and Wildlife Agencies (“WAFWA”)-level and local planning-level data.¹¹⁹

The concept of capping anthropogenic and total disturbances envisioned is fundamentally flawed, and BLM has not provided sufficient scientific data to support the disturbance cap concept or its effectiveness. Further, BLM has not explained the difference between temporary and permanent disturbances, and how each will be applied towards the threshold. For example, BLM defines “temporary use” as an activity “considered to be one that is not fixed in place and is of short duration.”¹²⁰ This definition lacks specificity and could be widely interpreted. By contrast, the Utah state conservation plan specifically defines “temporary” as “[a]ny ground disturbing activity where the effects would be expected to last less than five years.”¹²¹

Oil and natural gas development activities are by nature temporary disturbances. The highest level of surface disturbance associated with development occurs during the construction drilling and completion phases, which can last from a few weeks to a few months. Once production is achieved, companies reclaim a large portion of the area disturbed for development and long-term disturbance represent only a small fraction of the initial disturbance.

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.¹²² As one NTT reviewer stated:

“if this document is to be effective in defining conservation measures on a range-wide basis, it must take into account the considerable large-scale variation in plant community ecology present within the range of the GRSG. Otherwise we are faced with species-centric generalizations of the effects of ecological processes that may or may not represent the ecological reality.”¹²³

¹¹⁹ See UT GRSG DEIS, 3.1 at 3-2.

¹²⁰ See UT GRSG DEIS at Glossary-26.

¹²¹ *Utah’s Conservation Plan for Greater Sage-Grouse*. Page 28. February 14, 2013.

¹²² *Id.* at ¶ 5.1, p. 21-22.

¹²³ NTT Report Peer Review Comments at 4.

Again, the peer reviewers warn against the rigidity of the NTT's one-size-fits-all measures and their applicability range-wide. BLM has not addressed these significant issues in the NTT Report in contravention of the DQA and the Guidelines.

BLM has not provided sufficient scientific data to support the disturbance thresholds concept or its effectiveness. These issues, along with the opaque calculation methodology, are fraught with challenges that will prevent consistent and clear implementations. Disturbance caps are not based on the best available science. They are based upon the opinions of authors, and selective citation of information rather than data. *See Exhibit A at 2-3, 8, 17-19, 22, 24, and 33; see also Exhibit B, gen.*

C. Habitat Threshold Discrepancies

BLM through the NTT Report proposes a blanket 15-25% sagebrush canopy threshold for all seasonal habitats. The information contained in "Appendix A" to the NTT Report does not support the habitat thresholds enumerated in the NTT Report. In fact, the NTT Report's one-size-fits-all recommendations would likely lead to contrary results applied across the range.¹²⁴

It is well known that sagebrush cover requirements vary between seasons and across populations. In some cases sagebrush is not even the limiting factor, rather "other" shrub cover is the most important factor.¹²⁵ For example, one peer reviewer notes that 20% sagebrush cover is not necessarily "healthier" than an area that has 10% sagebrush cover and good grass densities. Another peer reviewer states, "[i]n many areas site potential will be below 15% so this blanket

¹²⁴ Maxwell *infra* at 1.

¹²⁵ *See* Kolada E, M. Casazza, J. Sedinger. 2009. Ecological factors influencing nest survival of greater sage-grouse in Mono County, California. *The Wildlife Society, Journal of Wildlife Management* 73(8):1341-1347.

statement seems a little irrelevant. Why not say the sagebrush will not be reduced below site potential...”¹²⁶

In addition, in a report produced by USGS, the authors further call into question the sagebrush cover objective in the NTT Report with this statement:

“The natural variation in vegetation, the dynamic nature of sagebrush habitats, and the variation in the habitats selected by GRSG across a landscape imply that characterizing habitats *using a single value or narrow range of values, for example, 15- to 25-percent sagebrush-canopy cover in breeding habitat [Citation omitted], is insufficient to describe GRSG habitat requirements.* The differing seasonal habitat requirements of GRSG dictate that multiple vegetation attributes, across the landscape and in particular sites, are important, reinforcing emphasis that combinations of shrub overstory and herbaceous understory, which are both important as habitat components during different seasons, are important in combination and across scales.”¹²⁷

One of the primary objectives of the NTT Report is “to protect sage-grouse habitats from anthropogenic disturbances that will reduce distribution or abundance of sage-grouse.”¹²⁸ To achieve this, the NTT sets forth sub-objectives. Two of the four sub-objectives assert that 70% of the range within priority habitat needs to provide “adequate” sagebrush habitat to meet GRSG needs, and that discrete anthropogenic disturbances in priority habitat be limited to less than 3% of the total GRSG habitat *regardless of ownership* (NTT at 7).¹²⁹ However, these objectives are not supported by the literature. *See* Exhibits A and B, *gen.* The NTT Report failed to disclose that very little is known about adequate patch size, which is the minimum range of the landscape required for the GRSG to persist. Scientific research has refuted the belief that there is a widely-accepted or “magic” number in terms of habitat patch size or population number that can defensibly be used to identify a “viable” population of any species, much less GRSG.¹³⁰ Yet the

¹²⁶ NTT Report Peer Review Comments at 16.

¹²⁷ Manier at 24, internal citation omitted.

¹²⁸ NTT Report at 7.

¹²⁹ *See* Maxwell at 2.

¹³⁰ Flather et al. 2011.

NTT Report perpetuates a “magic number” nonetheless: “Within priority habitat, a minimum range of 50-70% of the acreage in sagebrush cover is required for long-term GRSG persistence (Aldridge et al. 2008, Doherty et al.2010, Wisdom et al. 2011).”¹³¹

The NTT Report failed to disclose the critical statistical flaws associated with Wisdom et al. 2011. Thus, differentiating and applying significance or importance of each variable is flawed and should be taken with less than a grain of salt. For example, sagebrush cover was just one of 22 variables evaluated by Wisdom et al. 2011 and the authors did not adequately account for correlation among variables.

The NTT Report also mischaracterized cited studies to support the sagebrush cover objective. At best, Aldridge et al. 2008 suggests that “*preferably*” 65% is necessary for GRSG to persist, but the results of this study give measurements related to range persistence and how that correlates to extirpation and only provides this threshold anecdotally. These results do not indicate that 70% or even 65% of the habitat must be suitable, only that fringe populations are more likely to be extirpated.¹³² In addition, both Aldridge et al. 2008 and Wisdom et al. 2011, rely on Schroeder et al. 2004’s pre-settlement mapping, which is highly subjective and speculative. CESAR identified significant issues with Schroeder et al. 2004.¹³³

Moreover, the USGS baseline environmental report (Manier) indicates that habitat fragmentation “generally begins to have significant effects on wildlife when suitable habitat becomes less than 30 to 50% of the landscape” (USGS Report at 26), considerably below the blanket 70% threshold. BLM fails to show how the goal of 70% sagebrush cover in priority habitat is necessary, reasonable, and achievable, or how it would actually benefit GRSG.

Hubbell and Hubbell 2011; Ramey et. al. 2014.

¹³¹ NTT Report at 6.

¹³² See Maxwell at 15.

¹³³ <https://www.hightail.com/download/UW14OU1VMVh0TWxYd3NUQw>.

Neither the NTT Report nor its attached “Appendix A” provide sufficient reasons or support for these habitat thresholds nor for consolidating all GRSG seasonal habitat range-wide regardless of relative importance or quality.

D. Noise Restrictions in the NTT Report are Unsupported and Unreasonable

The NTT's one-size fits all noise recommendations for oil and natural gas operations violate the DQA and the Guidelines in that they are not scientifically sound. Ambient sound levels of 20-24 db(A) and a 10 db(A) limit is a one-size-fits-all recommendation that is not representative of local conditions and is unrealistically low for windy areas where the research was conducted. The proposed noise levels are unsupported by any sort of unbiased, systematic data collection across seasons. They are made without any knowledge of what thresholds would limit sage grouse reproduction or survivorship.

The NTT's treatment of noise is completely inconsistent with the previous background of 39 dBA background plus the 10 decibel threshold. This overly restrictive threshold is based on a questionable study referenced directly in the NTT Report and will be difficult, if not impossible to achieve. Specifically, 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 NTT Report and replace it with the 39 dBA which is currently in use when assessing noise considerations in GRSG habitat. *See Exhibit A at 11, and 17-20; see also Exhibit B at 2 and 27.* None of the noise studies cited in the NTT Report, Patricelli et al. (2010), Blickley et al. (in preparation), or Blickely and Patricelli (*in press*) found population declines as a result of noise from oil and gas operations. Further, the NTT Report did not accurately portray the methods and results of the studies by Patricelli et al. (2010) and Blickley et al. (in preparation). Recordings of operations and traffic noise were

played back at the edges of leks at sound pressure levels in excess of what they would be on the majority of lands managed by the BLM where oil and natural gas operations occur.

The NTT Report noise recommendations were based on the subjective opinions of the authors of cited studies rather than data. *See Exhibit A at 19-20; see also Exhibit B at 2 and 27.* The cited studies, all performed by one research group, used substandard equipment and employed methods that were inconsistent with professional data collection and reporting standards in the industry that are used to ensure unbiased and systematic data collection. Exhibit B at 26. What is being proposed for noise thresholds is an impossible standard to achieve found in an idyllic wilderness setting and described with non-standard equipment and unaccepted techniques; BLM land that is administered for multiple uses is not pristine wilderness. Moreover, for all but a handful of studies, complete data is not publicly available. The raw data in the cited noise studies that has been made available is not reproducible.

These studies do not support the proposition for which they are cited in the NTT Report. They do not report population-level effects to GRSG. Rather, temporary avoidance was observed under very specific circumstances with no evidence of deleterious effects on fitness. *See Exhibit A at 5, and 17-18; see also Exhibit B at 2, 6, 11, 17, and 30.* Moreover, the authors, and the NTT Report, fail to examine whether noise could have positive effects on GRSG—such as interference with predation or whether daily motorized trips to noise monitoring stations to replace batteries may have interfered with test results.

The most recent science indicates GRSG use greater variances in habitat¹³⁴ and that noise tolerances and habitat selection in areas of high road density are greater than previously

¹³⁴ Reinhart et al. 2013

documented.¹³⁵ Moreover, topographic roughness appeared to be a much stronger indicator of habitat avoidance than anthropogenic disturbances.

V. The NTT Report Misrepresents Several Key Issues

A. Population Trends and Persistence

The NTT Report fundamentally and erroneously ignores accurate population data and adopts flawed modeling approaches that have consistently failed to accurately predict populations. The NTT Report also ignores natural population fluctuations and creates a narrative that assumes GRSG populations are in decline despite contrary evidence. Such assertions are without basis given the status of GRSG populations today.¹³⁶

For example, Utah's 2009 Greater Sage-Grouse Management Plan states that Utah has 429 known leks, 304 of which have been active in the past 5 years. Some 328 leks are occupied. Moreover, Garton et al. 2011 and Knick and Hanser 2011 are no longer the best available science, as discussed in detail below.

Predicted population declines have failed to come true; particularly in the Pinedale area in Wyoming. While surface disturbance from oil and natural gas had local negative effects on male lek attendance, it did not result in significant effects at a population level.¹³⁷ In Pinedale, specific predictions of population level declines have failed to come true.¹³⁸ Rather, the Pacific Decadal Oscillation ("PDO") a climate index derived from sea surface temperatures in the North Pacific accounted for 78% of population variations in Pinedale and 67% in Wyoming GRSG working groups.¹³⁹ If the primary climate drivers of GRSG populations are not taken into

¹³⁵ Patricelli et al. 2012.

¹³⁶ See Ramey, Thorley and Ivey 2014.

¹³⁷ Ramey, Thorley and Ivey 2014.

¹³⁸ Ramey and Ivey 2014.

¹³⁹ Ramey, Thorley and Ivey 2014.

account in the NTT Report (and they are not) then management prescriptions are based on erroneous information and suffer from fundamental flaws.

BLM's reliance on Connelly et al. (2004) and Garton et al. (2011) in its Land Use Plan Amendments to "normalize[d] and analyze[d] the lek data to provide less biased population trend conclusions across the range of the species" is also misplaced.¹⁴⁰ BLM has not produced any data to demonstrate that the targets for GRSG populations and leks are achievable or how the targets will allegedly enhance genetic connections, especially when the role of female grouse in the population monitoring is completely ignored. In addition, Ramey et al. 2014 detected several errors in the calculations of Garton et al. 2011 that dramatically skew probabilities to estimated declines over time. *See* Exhibit D at 3 and 6.¹⁴¹

There is no evidence of the purported population declines nor genetic isolation that BLM contends. In his recently published study, Dr. Robert Zink, "compare[d] genetic variability measures with quantitative estimates of population trends to determine whether the effects of population declines can be observed at two geographic scales in the microsatellite and mitochondrial DNA data..."¹⁴² Populations in decline should show reduced genetic diversity with corresponding risks to population persistence. But for GRSG, Dr. Zink found, "the expected population genetic signatures of differences in population size were not observed." Dr. Zink concluded, "[T]here is no clear evidence that the population genetic variability of the greater GRSG has been influenced by range reduction and fragmentation" and that "there is no evidence of heightened inbreeding in smaller populations."

It should be noted that FWS and USGS convened a closed-door workshop on October 22-23, 2014 in Ft. Collins, Colorado entitled "Expert Elicitation Workshop on the Genetics of

¹⁴⁰ UT GRSG DEIS 3.2.1 at 3-8.

¹⁴¹ Ramey et al. 2014.

¹⁴² *See* Zink 2014.

Greater-Sage Grouse” (the “Workshop’). The aim of the Workshop was auspiciously to work on “specific technical questions.” The way in which the agencies convened this Workshop also drew sharp rebukes and calls for transparency from 18 Members of Congress in an October 16, 2014 letter to Interior Secretary Sally Jewell.¹⁴³ Petitioners believe the way the Workshop was convened and conducted likely violates FACA, the DQA and its Guidelines as well as presidential memoranda and DOI orders on scientific integrity and transparency. We caution BLM not to adopt or incorporate any alleged findings from this closed-door Workshop, and instead to incorporate the work of Dr. Zink.

The NTT Report mischaracterizes the health of GRSG populations. Zink 2014 found that despite reported population declines, populations were not experiencing genetic decline typically associated with imperiled species. As discussed below, GRSG populations naturally fluctuate and differences in methodologies and inaccuracies inherent in lek counts must be considered. In Utah, the number of leks counted has increased from a low of 125 to 361 currently.¹⁴⁴ In regards to males counted, the increase is even more dramatic: 1,555 males in 1996 to 5,973 in 2006 (280%).¹⁴⁵

BLM also acknowledges in its Land Use Plan Amendments that, “GRSG in Colorado have been increasing for about the last 17 years, and breeding populations have not declined for the last 39 years,”¹⁴⁶ 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.”¹⁴⁷ Data from the Nevada Department of Wildlife (NDOW) indicates GRSG

¹⁴³ Committee on Natural Resources, *18 Members of Congress Question the Interior Department’s Bias & Lack of Transparency with Federal Sage Grouse Science* (October 16, 2014)

<http://naturalresources.house.gov/news/documentsingle.aspx?DocumentID=397887>

¹⁴⁴ Utah GRSG DEIS 3.2.1 at 3-8.

¹⁴⁵ *Id.*

¹⁴⁶ *See* Northwest Colorado GRSG DEIS at 253 *citing* Figure 3-5.

¹⁴⁷ *Id.* at 246.

populations have been increasing over the last three years. According to NDOW, the 2010 fall population estimate increased about 18% compared to the 2009 estimate, and the population has been increasing since 2008. Only by ignoring valid state data can the NTT Report persist in a narrative of population decline.

By mischaracterizing the nature of GRSG population trends, the NTT Report violates the DQA, the Guidelines and the additional authorities referenced herein.

B. GRSG Populations Naturally Fluctuate

Fundamentally, the NTT Report fails to recognize that populations of any given species naturally fluctuate. This significant error of omission violates quality, objectivity and integrity standards of the DQA and the Guidelines. Populations of many species are known to be extremely dynamic and it is critical to understand the trends in population dynamics and the factors responsible for population variability to properly evaluate and manage a species. Understanding natural fluctuations in abundance and the population dynamics of individual and range-wide populations is also essential for the proper status assessment of a species.

GRSG live longer, have higher winter survival rates, lower rates of reproduction, and are more migratory over greater distances than acknowledged in the NTT Report.¹⁴⁸ The NTT Report fails to take into account that populations of species are responsive to such factors as seasonal and long-term fluctuations in regional weather conditions, short-term weather extremes and stochastic events, intra- and inter-species competition for resources, intra- and inter-species behavioral competition, predator-prey relationships, and subtle or severe changes in habitat quality. As discussed in Section I.3 above, climactic patterns associated with the PDO greatly influence GRSG populations in Wyoming.¹⁴⁹ These and other factors may influence a species

¹⁴⁸ Connelly et al. 2011.

¹⁴⁹ See Ramey, Thorley and Ivey 2014..

greatly, and may mask or prevent a correct interpretation of direct and indirect anthropomorphic factors.

GRSG populations characteristically exhibit multi-annual fluctuations in abundance (Appendix 1, Figure 1 and 2), indicating that some mechanism or combination of mechanisms are causative factors.¹⁵⁰ Factors influencing GRSG abundance may include weather patterns and the composition and abundance of predators that influence nesting success (Montana GRSG Working Group 2005). Nesting success and chick survival is considered to be the most significant parameter affecting population dynamics.¹⁵¹

Published studies of factors affecting nest success and GRSG chick survival have focused on micro-scale habitat factors such as percent coverage and height of forbs and grasses and availability of arthropods.¹⁵² These studies follow logically from previous research on GRSG brood habitat selection (Sveum et al. 1998, Drut et al. 1994a, Wallestad 1971, Klebenow 1969) and chick diets (Drut et al. 1994b, Johnson and Boyce 1990, Peterson 1970, Klebenow and Gray 1968). The NTT Report ignored many relevant studies. *See Exhibit C.* Collectively, these studies clearly demonstrate that nesting GRSG typically select relatively mesic habitats with abundant forbs and arthropods and that chick survival is highly correlated with these factors. Chick survival has been shown to be an important determinant of population growth rates, yet relatively little is known about chick survival at the population level relative to large-scale abiotic factors such as regional variation precipitation and temperature.

Guttery et al. 2013 reported that climatic variables play a primary role in determining GRSG reproductive success and the study demonstrated that temperature and precipitation have significant effects on chick survival. Similarly, Blomberg et al. 2012 found strong correlation

¹⁵⁰ USFWS 2013, Fedy and Doherty 2010, Montana GRSG Working Group 2005.

¹⁵¹ Schroeder et al. 1999.

¹⁵² Aldridge and Boyce 2007, Dahlgren et al. 2010, Gregg and Crawford 2009.

between multiple climatic variables and GRSG population dynamics (see Appendix 1, Figure 3 and Figure 4). These, and many other studies published subsequent to the NTT Report, must be considered by BLM. *See Exhibit C.*

Annual recruitment of GRSG was higher in years with higher precipitation, based on annual precipitation, annual rainfall, and average winter snow depth. Likewise, GRSG population growth was positively correlated with annual rainfall and mean monthly winter snowpack in the study area. Annual survival of adult male GRSG was negatively affected by high summertime temperatures, with higher survival rates in years with relatively low maximum temperatures. These results are consistent with the hypothesis that water balance in sagebrush systems is important to GRSG populations and the stability of GRSG populations is dependent upon stable annual survival rates and occasional large inputs of new individuals into the population when climatic conditions are favorable for chick and juvenile survival.

Extended periods of below normal precipitation and shorter term severe drought may reduce the abundance and duration of herbaceous cover at nest sites, and result in a reduction in the quantity and quality of food resources available to hens and chicks, which, if severe, could jeopardize GRSG survival.¹⁵³ The NTT Report conveniently ignored environmental impacts to GRSG and focused almost exclusively on alleged human impacts. Prolonged drought during the 1930's and mid-1980's to early 1990's coincided with declining GRSG populations throughout much of the species' range (Patterson 1952, Fischer 1994, Hanf et al. 1994, Connelly and Braun 1997, Braun 1998). From 1985 through 1995, the entire range of GRSG experienced severe drought as defined by the Palmer Drought Severity Index, with the exceptions of north-central Colorado and southern Nevada (USFWS 2013). Heath et al. 1997 concluded that drought conditions during spring and summer 1994 in Wyoming resulted in impaired productivity and

¹⁵³ McCarthy and Kobriger 2005, Connelly et al. 2004, Fischer et al. 1996.

decreased survival of GRSG, most likely because of subsequent decreases in forb production and increased predation resulting from a lack of sufficient cover.

The amount and timing of spring and summer rainfall affects annual plant production and influences population dynamics of GRSG, causing short term fluctuations of less than 10 years in GRSG abundance.¹⁵⁴ Wet springs often result in increased green-up and an increase in the variety of forbs, and consequently insects, on the sage-steppe thereby increasing chick survival.¹⁵⁵ Wyoming Game and Fish Department 2009 reported increases in GRSG numbers in Wyoming during the late 1990's with some individual leks seeing three-fold increases in the number of males between 1997 and 1999. This increase was synchronous with increased spring precipitation over the period. The return of drought conditions in the early 2000's appeared to have led to decreases in chick production and survival, thus resulting in declining populations. Conversely, extreme precipitation during spring and summer caused widespread flooding in 2011 in southeastern Montana and increased GRSG nest failure and depressed hatch rates.¹⁵⁶

Cold, wet weather or extremely low temperatures during the hatching period can result in loss of chicks and young birds to hypothermia.¹⁵⁷ Measures of drought, precipitation, and temperature can be correlated to winter snow pack which is known to be a major driver of vegetation dynamics throughout much of the mountainous regions of western North America.¹⁵⁸ Long, cold winters with deep snows that cover sagebrush plants on winter ranges can be a threat to survival because GRSG are totally dependent upon sagebrush as food during winter months.¹⁵⁹

¹⁵⁴ Eustace 2002.

¹⁵⁵ McCarthy and Kobriger 2005, Blomberg et al. 2012.

¹⁵⁶ Foster et al. year unknown.

¹⁵⁷ McCarthy and Kobriger 2005, Hannon and Martin 2006.

¹⁵⁸ Walker et al. 1993.

¹⁵⁹ McCarthy and Kobriger 2005.

Until several recent studies, there was no evidence that severe winter weather affected GRSG populations unless sagebrush habitat had been greatly reduced (Connelly et al. 2000). Danvir 2002 recorded declines in a GRSG population following deep snow winters of 1985-86 and 1992-93 in Wyoming. The theory being that the GRSG survival rates declined because the species became more visible, and vulnerable to predation, and that there was increased competition with jackrabbits, mule deer, and other grouse for the sagebrush foliage available above the snowpack. Moynahan et al. 2006 found that a severe winter affected survival of GRSG in Montana from 2001 to 2004. Similarly, Anthony and Willis 2009 reported strong evidence that severe weather (i.e., mean daily min. temp, extreme min. temp, snow depth) affected survival of female GRSG in southeastern Oregon.

The effects of both annual and long-term fluctuations in weather patterns on the nest success and survival of GRSG have been well documented. Short-term fluctuations in weather patterns are significant factors contributing to the annual and near future population status, while long term weather patterns have a greater effect on condition of habitats occupied by the population and play a larger role in determining the long term trends of the population.¹⁶⁰

Critical information on natural population fluctuations and the factors that drive them such as weather patterns and survival rates are glaringly omitted in the NTT Report. Taking into account natural fluctuations in GRSG population and their primary drivers, and using explicit, data-driven population models such as Bayesian hierarchical state-space models must be included in any objective and statistically rigorous evaluation of the population status.¹⁶¹ An accurate assessment of GRSG population dynamics and fluctuations are also critical to proper species management and developing effective conservation and mitigation strategies. Rather

¹⁶⁰ McCarthy and Kobriger 2005.

¹⁶¹ Coates et al. 2014.

than conducting a trends analysis or considering environmental factors that impact populations, the NTT Report blindly assumes that long-term population trends can be controlled through restrictions on human activity and curtailing multiple uses of public lands.

In addition, the NTT Report sets an improper regulatory threshold that GRSG populations must be stable or increasing in all cases, which is arbitrary, capricious, and unscientific in violation of the DQA, the Guidelines and the additional authorities cited herein.

C. Predation and Predator Control

The NTT Report ignores substantive threats to GRSG in favor of pre-conceived notions of human impact in violation of the DQA and the Guidelines. Predation is the most common cause of direct mortalities of the GRSG. GRSG eggs are preyed upon by red foxes (*Vulpes vulpes*), coyotes (*Canis latrans*), American badgers (*Taxidea taxus*), common ravens (*Corvus corax*), and black-billed magpies (*Pica hudsonia*). Common predators of juvenile and adult GRSG are golden eagles (*Aquila chrysaetos*), prairie falcons (*Falco mexicanus*), other raptors, coyotes, American badgers, and bobcats (*Lynx rufus*). Younger birds, especially broods, are preyed upon by common ravens, red foxes, northern harriers (*Circus cyaneus*), weasels (*Mustela sp.*), and various species of ground squirrels and snakes.

Of these predators, the common raven is the most abundant and has the greatest impact on the survivorship of the GRSG. Raven populations have increased an estimated 300% in the past 27 years in the United States (Sauer et al. 2008) with reports of 1,500% increases within a 25-year period in some areas of the West.¹⁶² The NTT Report virtually ignores this critical fact. While not a migratory species, crows and ravens are inexplicably protected under the Migratory Bird Treaty Act (“MBTA”).¹⁶³ Nowhere does the NTT Report call out that the primary predator

¹⁶² Boarman 1993.

¹⁶³ 50 C.F.R. § 20.100.

of GRSG is protected by the MBTA such that predator control efforts that would benefit GRSG are hindered by regulatory red-tape and FWS approvals.

Mortality due to predation during the first few weeks after hatching is estimated to be 82%.¹⁶⁴ In regards to Gunnison sage-grouse, “survival of juveniles to their first breeding season was estimated to be low (10%),” which could be similar for GRSG.¹⁶⁵ The NTT Report alleges nest success and survival studies are impacted by predation only where poor land management, which the NTT Report seems to characterize as grazing, is an issue. Failure to recognize the significant impacts of predation and the attempt to attribute such impacts to human influences clearly exhibits bias in the NTT Report. Moreover, nothing is presented to quantify the habitat conditions that are purported to increase the significance of predation and nothing to identify the significance those conditions to sage grouse habitat throughout their range in the NTT Report.

The common raven is clever and highly adaptable, which allows it to opportunistically exploit food resources provided by human activities. Ravens routinely forage at landfills, in dumpsters, and at livestock operations and they commonly scavenge on carcasses of animals killed by vehicle strikes. The explosive increase in raven abundance has resulted in large increases in predation, and has contributed to the severe decline of many species including the desert tortoise (*Gopherus* sp.), marbled murrelet (*Brachyramphus marmoratus*), least tern (*Sternula antillarum*), California condor (*Gymnogyps californianus*), and GRSG.¹⁶⁶

The NTT Report suggests GRSG nest predation and nest success is related to the amount of herbaceous cover surrounding nest sites.¹⁶⁷ However, the NTT Report ignores substantial evidence indicating that most GRSG nests are lost to predators such as red foxes, badgers,

¹⁶⁴ Gregg *et al.* 2007.

¹⁶⁵ GUSG Threatened Listing, 79 FR 69192, 69274 (Nov. 20, 2014).

¹⁶⁶ Snyder *et al.* 1986; Borman 2003; Boarman *et al.* 2006; Bui 2009; Bui *et al.* 2010; Wyoming Game and Fish 2012.

¹⁶⁷ Connelly *et al.* 1994, Braun 1998, Schroeder and Baydack 2001, Coates 2007, Hagen 2011.

coyotes, black-billed magpies, and common ravens, even in excellent GRSG habitat. *See* Exhibit A at 11-13; *see also* Exhibit B at 22.¹⁶⁸

The negative effects of predation and raven abundance on nest success have been well documented. GRSG nests are subject to varying levels of predation, either total (all eggs destroyed) or partial (one or more eggs are destroyed). In either case, hens abandon the nests.¹⁶⁹ Re-nesting efforts may partially compensate for the loss of nests due to predation (Schroeder 1997) but may not completely offset the losses. Additionally, the presence of high numbers of predators within a GRSG nesting area may negatively affect GRSG productivity without causing direct mortality. Loss of breeding hens and young chicks to predation can influence overall GRSG population numbers, as these two groups contribute most significantly to population productivity.¹⁷⁰

According to Valkama et al. (2005), predation may influence grouse population dynamics by reducing nest success, survival of juveniles especially during the first few weeks after hatching, and annual survival of breeding age birds. Similarly, others found that nest predation can be a limiting factor for GRSG population sustainability.¹⁷¹ Moynahan et al. (2007) reported that 54% of nest failures were caused by predation. Gregg et al. (2007) estimated that GRSG mortalities due to predation were as high as 82% during the first few weeks after hatching.

Raven abundance was strongly associated with GRSG nest failure in northeastern Nevada, resulting in negative effects on GRSG reproduction.¹⁷² The study associated increased raven abundance with a reduction in the time spent off the nest by female GRSG, thereby potentially compromising the ability to secure sufficient nutrition to complete the incubation

¹⁶⁸ *See also* Gregg et al. 1994, Heath et al. 1997, Holloran 1999, Connelly et al. 2004.

¹⁶⁹ Coates 2007.

¹⁷⁰ Baxter et al. 2008.

¹⁷¹ Nelson 1955, Gregg et al. 1994, Schroeder and Baydack 2001.

¹⁷² Coates 2007.

process. Similarly, high corvid abundances attributed to increased GRSG nest and brood failure in western Wyoming (Bui 2009). Coates and Delehanty (2010) found that GRSG nest failure and observed raven predation of GRSG nests were associated with indices of raven abundance. Decreases in daily survival rate (DSR) of GRSG were attributed to increased raven abundance.

Unlike other population limiting factors (e.g., habitat, weather, and drought), predation can realistically be reduced by applying appropriate management measures.¹⁷³ Management of some predator populations, especially raven populations occurring in areas where GRSG mortality is high, is needed to ensure that GRSG populations are not depressed by a known and easily mitigated source of mortality.

In 2001, the U.S. Department of Agriculture (USDA) Animal Plant Health Inspection Service (APHIS) Wildlife Services (WS) initiated a systematic raven management program in Nevada to reduce raven numbers in GRSG habitat. The primary method of raven removal was through chicken egg baits treated with DRC-1339 (3-chlorop- toluidine hydrochloride). Coates and Delehanty (2004) observed that GRSG nest success near these raven removal activities was significantly greater (73.6%) than the mean nest success (42.6%) based on 14 studies from 1941 to 1997.¹⁷⁴ They also observed that raven numbers in treated areas declined from a high of 5/km² to low of 0.31/km² over a period of five month.

In 2007, the USDA/APHIS/WS began testing the effects of the removal of common ravens using baits treated with DRC-1339 to livestock depredation in southern Wyoming. This program provided additional information of the potential effects of raven removal on GRSG nest success. It was found that the nest success of GRSG was reduced when ravens were present within 550 meters of a nest. The study also reported that the abundance of ravens can be

¹⁷³ Cote and Sutherland 1997.

¹⁷⁴ Schroeder et al. 1999.

substantially reduced at a relatively large scale (15-km radius or 706.5 km²) by using DRC-1339; raven densities decreased by 61% at removal sites compared to an increase of 42% at non-removal sites. In areas occupied by ravens, average GRSG nest survival was estimated at 22%; and in areas absent of ravens, nest survival was estimated at 41%. This suggests that areas with high raven populations may contribute to lower GRSG population growth rates (Dinkins 2013). Cote and Sutherland (1997), using meta-analytic techniques, found that predator removal has a large, positive effect on post breeding population size and hatching success for several species of game birds.

Results of these raven removal efforts suggest that well-designed raven management strategies could substantially increase GRSG nest survival rates in areas where raven predation is a substantial contributing factor to nest failure. Long-term solutions to reduce artificially high raven abundances are necessary to address the detrimental effects of raven predation on GRSG and other imperiled species. Reducing raven abundance has been shown to be effective using some lethal means, and reducing numbers may also be possible using other as yet untested lethal and non-lethal means. Effective lethal control might be accomplished by shooting, removal of raven nests and eggs, and poisoned baits. Effective non-lethal control might be accomplished by reducing or eliminating nesting structures and/or making subsidized food resources such as road-kill, dead livestock, and garbage, unavailable. Despite the research and application of these methods for raven management, the NTT selectively chose to disregard them.

The negative effects of predation on the nest success of the GRSG have been well documented and should be included in any objective and complete analysis of threats to GRSG. The FWS GRSG listing decision (USFWS 2010) recognized predation as a primary threat to the

GRSG and devoted three pages of discussion to this issue.¹⁷⁵ Despite this, some recent efforts to develop range-wide conservation objectives for the GRSG and to inform the public of the upcoming 2015 listing decision failed to recognize and address predation as a primary threat to the species. The NTT Report fails to recognize predation as the single most important factor affecting the abundance of the GRSG.

The NTT Report virtually ignored the topic of predation and the major body of scientific literature on raven predation and experimental data on predator management. Substantial and critically important information on these topics is available from a variety of sources including Boarman 1993; Boarman 2003; Boarman et al. 1995; Boarman and Heinrich 1999; Boarman et al. 2006; Bedrosian and Craighead 2010; Bui 2009; Cagney et al. 2010; Christiansen 2011; Coates 2007; Coates and Delehanty. 2004; Coates et al. 2008; Coates and Delehanty 2010; Conover et al. 2010; Cote and Sutherland 1997; DeLong 1995; Gregg et al. 1994; Heinrich et al. 1994; Moynahan et al. 2007; Preston 2005; Ramey, Brown, and Blackgoat 2011; Schroeder and Baydack 2001; Snyder et al. 1986; Sovada et al. 1995; Watters et al. 2002; and Webb et al. 2009. Finally, recent work Baxter et al. 2013 shows even bottlenecked GRSG populations can see marked population improvements following predator control efforts.¹⁷⁶

The NTT Report ignored the body of literature relevant to raven predation on GRSG, including its deleterious effect on survivorship and recruitment, and most importantly, the integrated management strategies that can reduce losses of GRSG. Only two references related to predation on GRSG were cited (Greg et al. 1994 and Hagen 2011) and the word “raven” was mentioned only once, at page 63. The NTT Report did not mention predator management that could benefit GRSG within high risk areas and instead, viewed predation as a byproduct of

¹⁷⁵ 75 Fed. Reg. at 13910.

¹⁷⁶ Baxter et al. 2013.

human activities that could be regulated by land health assessments and emphasizing vegetation cover as a means to measure and mitigate livestock use; or increasing landscape level habitat connectivity. This extremely passive and scientifically untested approach is speculative at best and will not result in a reduction of the short- or long-term threats caused by high raven abundances.

Even though the NTT Report contends that predation impacts are solely related to habitat condition, there is no information to suggest that habitat conditions alone will compensate for excessively high predator populations. Rather, the NTT Report should incorporate recommendations for predator management as an important tool to assure GRSG survival.

The information disseminated concludes that, regardless of habitat conditions, predation does not affect GRSG populations in general. However, the removal of predators was a primary factor in the recovery and delisting of the Aleutian Canada goose in North America.¹⁷⁷ In delisting the Aleutian Canada goose, FWS also recognized the removal of predators benefited not only that species, but many other bird species on the islands, including puffins, murre, and auklets.¹⁷⁸

The NTT Report provides limited and selective evaluations of threats to GRSG, and ignores the major body of scientific literature that is available on raven predation and experimental predator management. In order to comply with the DQA and the Guidelines, BLM needs to address and incorporate this information on the effects of predation and predator control into the NTT Report.

¹⁷⁷ 66 Fed. Reg. 15643 (Mar. 20, 2001); *see also* FWS News Release, March 19, 2001.

¹⁷⁸ 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).

D. Hunting

The NTT Report virtually ignores hunting as a threat to GRSG. FWS has estimated the GRSG population to be 535, 542.¹⁷⁹ Some 207,430 GRSG were harvested during hunting seasons between 2001 and 2007.¹⁸⁰ 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 some populations can have an effect not only on those populations but also on nearby populations that are not hunted (but are linked by dispersal).¹⁸¹

The BLM must address and incorporate up-to-date information on threats to GRSG from hunting in the NTT Report to comply with the DQA and the Guidelines.

E. West Nile Virus

The NTT Report overstates the threat to GRSG from the West Nile Virus (WNV). It recommends pest management through a number of pesticide applications, yet fails to acknowledge mosquitoes are already sufficiently managed and there are new technologies other than larvicides that have been proven effective to controlling mosquito populations. According to data from the Centers for Disease Control (CDC), the risk to avian species from WNV has declined to virtually nothing since 2006. This is another example of BLM using only a portion of the available information to address the impacts, in this case of WNV on GRSG, resulting in onerous and unfounded mitigation requirements.

F. Oil and Natural Gas Operations

While conceding there is little published research on the topic, BLM describes energy development as one of the greatest threats to GRSG. As one example, Holloran 2005 and Knick and Hanser 2011 (Knick and Hanser were cited six times in the NTT Report and 38 times in the

¹⁷⁹ 75 Fed. Reg. 13910, 13921 (Mar. 23, 2010).

¹⁸⁰ Reese and Connelly 1997.

¹⁸¹ Gibson et al. 2011.

2010 GRS listing decision) claim populations in the Colorado Plateau have a 96% chance of declining below 200 males by 2037 due primarily to threats from oil and gas.

Significant flaws in the NTT Report include mandates with respect to habitat requirements and threshold values, issues of scale and failure to recognize and incorporate existing regulatory and conservation efforts.¹⁸² For example, BLM has ignored uncertainties inconvenient to its one-size-fits-all regulatory approach and failed to acknowledge studies that might lead to a broadening of conservation alternatives to decision-makers.¹⁸³

The NTT Report, as well as Naugle et al. and Copeland 2011a, and other studies herein, grossly exaggerate the potential impacts of energy development and GRSG despite the findings that there is little overlap between energy development (and potential for development) and GRSG habitat.¹⁸⁴

The NTT Report heavily relies upon Knick et al. 2013, Knick and Hanser 2011, Garton et al. 2011 and others. But the majority of the underlying data relative to these studies, especially that collected before the late 1990s, is nearly worthless (as is some of the more recent data) due to undocumented methods, mixed methods, suspect values, satellite leks, incorrect datums, single counts, biased counts, and uncertainties that are not acknowledged. *See Exhibit B, gen.*

There are significant issues with the NTT Report itself, and the supporting studies upon which it relies. *See Exhibits A and B, gen.* BLM has not utilized accepted methods or best available methods along with sound and objective scientific practices in the NTT Report.¹⁸⁵

The NTT Report failed to acknowledge lower impact technologies and mitigation currently in

¹⁸² *See Maxwell, infra at 4, 16.*

¹⁸³ *See Ramey et al. 2011; see also Exhibit C.*

¹⁸⁴ *See John Platt, Scientific American, Sage Grouse and Oil Drilling Can Co-Exist, Says New Report, <http://blogs.scientificamerican.com/extinction-countdown/2014/10/17/sage-grouse-oil-drilling/> (Oct. 17, 2014); (please note that Naugle and Copeland are not cited in the NTT report, but were reviewed because studies that are cited in the NTT report cite Naugle and Copeland).*

¹⁸⁵ *Id.*

use by the oil and natural 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”¹⁸⁶ but provides no scientific data to support that assertion. Further, the research that supports the one-size-fits-all recommendations in the NTT does not represent less intensive development scenarios.¹⁸⁷

Other 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,¹⁸⁸ and others, demonstrates that temporary GRSG population variations can occur in historic oil and gas areas in Wyoming. In addition, more recent studies conducted in Wyoming suggest that GRSG respond positively to mitigation.¹⁸⁹ *See* Exhibit C.

The projected negative effects of oil and natural gas were greatly overestimated in those early studies, such as Lyon and Anderson 2003, Holloran 2005, Walker et al. 2007, and Doherty et al. 2008. This can be attributed to the fact that those studies were conducted before extensive restoration and mitigation efforts for sage grouse were undertaken, and before improved technology such as directional drilling and clustered development had reduced overall environmental impacts.¹⁹⁰ It is imperative that BLM acknowledge these facts as well as technical information compiled by BLM on contemporary oil and natural gas well technology and best management practices for wildlife mitigation.

¹⁸⁶ NTT Report at 19.

¹⁸⁷ Applegate and Owens 2014.

¹⁸⁸ Taylor, R.C., B. Russell, and B.P. Taylor 2010. Synopsis Greater sage-grouse populations and energy development in Wyoming: 2010 update. Unpublished report by Taylor Environmental Consulting, Casper, Wyoming.

¹⁸⁹ Kirol et al. 2015.

¹⁹⁰ *See* Ramey et al. 2011; Applegate and Owens 2014.

Companies may not apply for an APD without first completing project-specific environmental analysis under NEPA. When BLM determines that there will be significant impact to GRSG or other resources for that matter, it prepares an Environmental Impact Statement (EIS) that includes mitigation measures for protecting GRSG. BLM and the companies make a firm commitment that the mitigation measures in the EIS will be enforced through Conditions of Approval (“COA”) on APDs. As the APD is absolutely required before drilling can occur, this amounts to a regulatory mechanism that should be recognized by FWS. In fact, a study prepared by SWCA Environmental Consultants found that most major oil and natural gas companies have more stringent standards in place than the agencies acknowledge. From just a sample of 103 NEPA documents for oil and natural gas projects, the study found that companies have implemented 773 conservation measures for GRSG. This equates to an average of 6.5 firm, enforceable regulatory commitments through Conditions of Approval (COAs) on APDs to protect GRSG.¹⁹¹

These measures include monitoring existing populations; restricting human activities to protect leks; interim and final reclamation; noxious weed control; dust suppression through application of water or chemical suppressant to roadways; seeding of all disturbed areas that are not used during the well production phase; NSO buffers to protect wetlands; and general noise abatement.¹⁹² Companies have performance standards in place to proactively reduce threats to the GRSG.¹⁹³ Additionally, the oil and natural gas companies have made concerted efforts to

¹⁹¹ See *Id.* at page 5; see also List of NEPA Documents Reviewed beginning at page 35.

¹⁹² *Id.* at page 7-8.

¹⁹³ *Id.* at page 23.

reduce human-subsidized GRSG predators, and access to wastewater pits to prevent GRSG oiling and drowning.¹⁹⁴

Ultimately, SWCA Environmental Consultants determined that when appropriate conservation and mitigation measures are used, NEPA is a valid regulatory mechanism to protect and conserve the GRSG, as there is certainty that each COA or conservation measure will be implemented.¹⁹⁵ The effectiveness of the NEPA process is enhanced when coupled with monitoring performed by oil and natural gas operators as well as state and federal agencies.¹⁹⁶

Moreover, the COT Report fails to acknowledge the regulatory mechanisms already inherent to BLM's regulation and management of the onshore oil and natural gas program. No drilling, access, seismic studies or any other surface disturbing work can proceed without regulatory authorization by BLM. This regulatory authorization comes in multiple forms, but the primary are commitments made in project-specific NEPA documents, and Applications for Permit to Drill ("APD").

Companies may not apply for an APD without first completing project-specific environmental analysis under NEPA. When BLM determines that there will be significant impact to GRSG or other resources for that matter, it prepares an Environmental Impact Statement (EIS) that includes mitigation measures for protecting GRSG. BLM and the companies make a firm commitment that the mitigation measures in the EIS will be enforced through Conditions of Approval ("COA") on APDs. As the APD is absolutely required before drilling can occur, this amounts to a regulatory mechanism that should be recognized by FWS. In fact, a study prepared by SWCA Environmental Consultants found that oil and natural gas companies have more

¹⁹⁴ *Id.* at page 18; *see also* 139 (Exxon Mobile: "It will be the responsibility of the operator to effectively preclude migratory bird access to, or contact with, reserve pit contents that possess detrimental properties (i.e., through ingestion or exposure) or have potential to compromise the water-repellent properties of birds' plumage").

¹⁹⁵ *Id.* at page 27.

¹⁹⁶ *Id.* at page 31.

stringent standards in place than the agencies acknowledge. From just a sample of 103 NEPA documents for oil and natural gas projects, the study found that companies have implemented 773 conservation measures for GRSG. This equates to an average 6.5 firm, enforceable regulatory commitments through COAs on APDs to protect GRSG.¹⁹⁷

These measures include monitoring existing populations, restricting human activities to protect leks, interim and final reclamation, noxious weed control, dust suppression through application of water or chemical suppressant to roadways, enforcing speed limits, seeding of all disturbed areas that are not used during the well production phase, NSO buffers to protect wetlands, and general noise abatement.¹⁹⁸ Additionally, oil and natural gas companies have made concerted efforts to reduce human-subsidized GRSG predators, and access to wastewater pits to prevent GRSG oiling and drowning.¹⁹⁹

NEPA is indeed a valid regulatory mechanism to protect and conserve GRSG, as there is certainty that each COA or conservation measure will be implemented.²⁰⁰ The Western Governor's Association has compiled similar useful information on existing conservation efforts.²⁰¹ The State of Colorado audited COAs recommended by Colorado Parks and Wildlife through Colorado Oil and Gas Conservation Commission rules and found a 97% adoption and implementation rate:

“Results show very high correlation between Best Management Practices (BMPs) recommended by SPW for protection of GrSG habitat and voluntary adoption. In other words, CPW met with operators every time a permit for drilling in GrSG habitat was sought. During those consultations, CPW recommended a series of actions designed to minimize or eliminate impacts on habitat. Adoption of those recommendations by an operator is entirely voluntary under the 1200-series

¹⁹⁷ See *Id.* at page 5; see also List of NEPA Documents Reviewed beginning on page 35.

¹⁹⁸ *Id.* at page 7-8.

¹⁹⁹ *Id.* at page 18; see also 139 (Exxon Mobile: “It will be the responsibility of the operator to effectively preclude migratory bird access to, or contact with, reserve pit contents that possess detrimental properties (i.e., through ingestion or exposure) or have potential to compromise the water-repellent properties of birds’ plumage”).

²⁰⁰ *Id.* at page 27.

²⁰¹ <http://www.westgov.org/>.

regulations, but our analysis suggests that they are adopted 97% of the time. Please see Appendix B for the full report.”²⁰²

The BLM has ignored these, and other, extensive existing regulatory mechanisms in the NTT Report in violation of the DQA and the Guidelines. This regulatory certainty should be acknowledged by BLM in the NTT Report.

G. Livestock Grazing

The NTT Report fails to recognize the best available science on livestock grazing. Among others, the NTT Report recommends changes in grazing regarding season or timing of use, numbers of livestock, distribution; intensity of use, and type of livestock.²⁰³ In addition, the Report recommends removing, modifying or marking fences and, most egregiously, the retirement of grazing permits and allotments.²⁰⁴

Instead of focusing on the negative impacts of historic grazing the agency should be evaluating the application of and results of modern proper grazing management.²⁰⁵ Historic grazing and research reports of specific grazing practices are immaterial to the question of how modern grazing management practices affect sage grouse habitat.

A 1990 US-DOI BLM report shows that good condition rangeland increased by 100% and poor condition rangeland decreased by 50% between 1936 and 1989. In the years since, there has been extensive progress in the implementation of proper grazing management on federal, state and private lands. Furthermore, it is more important and useful to consider

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<http://cpw.state.co.us/Documents/WildlifeSpecies/SpeciesOfConcern/GreaterSageGrouse/ColoradoSynthesisReportFINAL.pdf>

²⁰³ The NTT Report cites Connelly et al. 2011c for this proposition. Issues with Connelly et al. are addressed elsewhere herein.

²⁰⁴ The NTT Report cites Crawford et al. 2004 for this proposition.

²⁰⁵ See Launchbaugh 2012; Mosley and Brewer 2006; Briske et al. 2011.

rangeland trends rather than current condition. Regardless of current ecological status, rangelands that are in an upward ecological trend also have improving sage grouse habitat.

It is well established that “In the 1960s and 1970s, Idaho had large numbers of sage grouse and extensive livestock grazing. This suggests that healthy sage grouse populations and livestock grazing are compatible. In short, livestock grazing that results in rangeland in good ecological condition also provides acceptable sage grouse nesting, chick rearing and winter habitat.”²⁰⁶

Two elements of the NTT Report are clearly contradictory where in one case it suggests grazing has an impact on predation that may affect bird populations and in the second case concludes that predation does not affect bird populations. Moreover, the Wyoming Department of Agriculture has strongly stated livestock grazing has no negative effects on the GRSG.²⁰⁷

According to the USDA National Agricultural Statistics, Wyoming sheep numbers were at or near all-time highs the same year greater sage grouse numbers were at or near all time highs (1969).²⁰⁸ Sheep numbers have dropped precipitously over the last several decades in Wyoming and other western states.²⁰⁹ Predator numbers have increased accordingly. In fact, the Wyoming Department of Agriculture stated, “[H]abitat alteration caused by livestock grazing (mosaic creation), as well as the predator control offered by livestock producers, have improved and benefited [sic] sage grouse.”²¹⁰

Besides ignoring these data from the states, which are the most accurate source, BLM wholly failed to analyze the effectiveness of current livestock grazing and range management

²⁰⁶ Idaho Sage Grouse Management Plan (1997).

²⁰⁷ Letter from Jim Schwartz, Wyoming Department of Agriculture, to Dr. Pat Diebert, U.S. Fish and Wildlife Service (July 30, 2004) (on file with the Wyoming Department of Agriculture).

²⁰⁸ <http://www.nass.usda.gov:81/ipedb/report.htm>.

²⁰⁹ *Id.*

²¹⁰ Letter from Jim Scwharz, *infra*.

frameworks, standards, and guidelines and failed to consider site-specific considerations to provide case-by-case determinations of effective regulatory mechanisms actually needed for a location. BLM's one-size-fits-all approach is inappropriate.²¹¹

FWS explicitly stated in the 2010 listing decision that it “lack[ed] the information necessary to assess how [the implementation of rangeland health assessments] effects [sic] sage-grouse conservation.” Yet in the NTT Report BLM declared the existing regulatory mechanism for livestock grazing and range management inadequate, an assertion simply not backed by actual data or analysis.

BLM's definition of “disruptive activity” is entirely too broad and arbitrary, and risks precluding livestock grazing in certain areas during the March 1 to June 30 timeframe without a sound scientific basis. BLM further failed to consider that livestock grazing benefits GRSG habitat and that regulatory restrictions on grazing could threaten the viability of ranching in the West. This is contrary to the DQA, its Guidelines and the best interests of the GRSG.

The NTT Report also undercuts the balanced grazing program passed by Congress as the Taylor Grazing Act (“TGA”). Congress intended TGA land be used primarily for grazing. The NTT Report advocates single-use management in direction contravention to existing laws such as the TGA. Accordingly, the NTT Report as implemented through Land Use Plan Amendments and/or a potential listing of GRSG will result in significant economic and social impacts. Federal agency demands for current conservation efforts fail to provide a true holistic approach to managing multiple ownership lands in an economically sustainable manner.

BLM must recognize that regulatory burdens such as those advocated in the NTT Report, could prove so burdensome that ranching on private lands will become unsustainable. Private lands integral to GRSG conservation will then be marketed and sold. When this land is

²¹¹ See Schutlz 2004 (specific herbaceous height and cover values across the range of GRSG are inappropriate).

subdivided, GRSG populations may suffer. Accordingly, the very regulatory mechanisms proposed may threaten the productive private and public land relationships that sustain ranching, rural communities and wildlife populations.

The NTT Report did not include input from any affected stakeholders or interdisciplinary experts aside from state and federal scientists and specialists. It ignores regional variances in GRSG needs, and does not present a comprehensive representation of the literature and research surrounding livestock grazing. For example, the NTT Report ignored Cagney et al. 2010 which demonstrates positive attributes of grazing in Wyoming for nesting and early brood rearing habitat.

While the NTT Report briefly mentions the role of livestock grazing in reducing fine fuels and states that “proper livestock management...can assist in meeting GRSG habitat objectives,” it fails to recognize that grazing is a key contributor to GRSG habitat and conservation and omits the many positive impacts of grazing. Grazing is integral to reducing fuels.²¹² Without grazing, GRSG habitat would suffer greatly in the West.²¹³ The many contributions of grazing and ranching, which are largely ignored or understated in the NTT report, include:

- Preservation of open space
- Noxious weed and invasive species eradication and containment
- Production of forb growth that is preferred by GRSG to non-grazed areas
- Wildfire prevention and controlled burn efforts
- Development of wildlife watering sources, including placement of bird ladders in troughs
- Predator management

Other problems with the NTT Report include: the recommendation to authorize only new water developments “when priority sage-grouse habitat would benefit from the development,” a clear

²¹² See Davies et al. 2008; Diamond et al. 2009; Messmer and Peterson 2009; Freese et al. 2013; Taylor 2006; and Mosley and Roselle 2006.

²¹³ See Launchbaugh 2012; Mosley and Brewer 2006; Briske et al. 2011.

violation of state water laws in contravention of the McArran Amendment; and illegal recommendations for retirement of grazing permits in priority sage-grouse areas. The NTT Report goes so far as to direct planners to “identify the specific allotment(s) where permanent retirement of grazing privileges is potentially beneficial.” Such aberration from federal statute is vehemently opposed by the Public Lands Council and other agricultural groups as it would put at risk ranchers’ ability to stay in business, thereby threatening the open spaces which they own and/or manage and which constitute vast areas of GRSG habitat.

Not only did the BLM Washington, D.C. office require BLM to change regulatory mechanisms applicable to livestock grazing and range management, IM 2012-044 directed BLM Field Offices to adopt a variation of the NTT report as the preferred alternative in Land Use Plan Amendments in violation of NEPA and FLPMA. BLM’s decision to rely on this report lacked a rational factual foundation in violation of the DQA and the Guidelines.

As the Public Lands Council has stated in its comments, “[P]reordaining the outcome of Land Use Plan Amendments is unlawful ... and particularly arbitrary “given neither the NTT report nor BLM independently ever analyzed the issue of whether existing regulatory mechanisms governing livestock grazing and range management were adequate to protect [GRSG].”²¹⁴

H. State, Local and Private Conservation Efforts

The NTT Report fails to recognize the states have undertaken significant efforts to conserve GRSG. State conservation plans are preferable alternatives to the misdirected management protocols in the NTT Report. Federal agencies can rely upon state, regional, and

²¹⁴ Public Lands Council (PLC) and the National Cattlemen’s Beef Association (NCBA) Comments on Wyoming Greater Sage-Grouse 9-Plan EIS, March 26, 2014, P. 4-6.

local plans in their consideration of environmental impacts under NEPA,²¹⁵ yet BLM has not adequately considered state and local GRSG conservation planning efforts pursuant to 43 CFR § 1610.

Depending on how BLM maps priority habitat, the flawed management prescriptions found in the NTT Report could extend to areas outside GRSG habitat, thereby imposing onerous restrictions with no benefit to the species. Such areas, include towns, rock outcrops, alkali flats or piñon-juniper stands, and would be identified by site-specific review by agency biologists in discussion with the states and other agencies as appropriate.²¹⁶ Local government, industry and agriculture are noticeably absent from such discussions.

BLM must provide for appropriate input from such stakeholders, refine its habitat mapping using higher resolution data, delete areas of non-habitat and marginal habitat from consideration, and refrain from imposing restrictions that are not scientifically defensible. Furthermore, BLM has 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 uses in areas that do not actually support GRSG habitat or active leks, unnecessarily preventing economic activities without commensurate benefit to GRSG populations and habitat. Garfield County, Colorado's GRSG mapping provides a keen example of how federal, and even state, mapping unnecessarily includes huge expanses of areas that are not GRSG habitat.

Similarly, as Utah Governor Herbert has pointed out, state plans better balance future economic activities with robust protections for GRSG, and were developed using a bottom-up

²¹⁵ 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).

²¹⁶ See MA-GRSG-2, Table 2.1, UT GRSG DEIS at 2-16.

process with input from diverse stakeholders, rather than the top-down approach taken by the agencies.²¹⁷

The NTT Report fails to adequately consider the states' primary authority over wildlife management and their central role in managing GRSB populations and habitat within their borders. The states are better suited than the federal government to manage GRSB as such action falls within their traditional jurisdiction and professional expertise. Active consultation between the states and federal agencies, as well as local governments and local GRSB working groups, is a more effective approach than the top-down, one-size-fits-all restrictions in the NTT Report.

The NTT Report mischaracterizes conservation efforts on private land as inferior to federal land acquisition and management. This view is contrary to what has been espoused as the "new paradigm" of cooperative conservation. There are numerous published papers on the success of private land conservation versus a federal "command and control" approach that have been ignored in the NTT Report. *See* Exhibit A at 9.²¹⁸

Even the federal government's Sage Grouse Initiative has recognized the importance of private lands to GRSB conservation.²¹⁹ Irrigation on private land provides an important link to GRSB leks which are often located on drier public lands. As *The Progressive Rancher* reported, hundreds or more small homesteads covered large portions of Nevada in the late 1800s to the mid-1900s.²²⁰ The homesteads were nearly always located on a spring or stream that the owners used to irrigate meadows. The homesteaders also vigorously shot and trapped predators, such as

²¹⁷ <http://fox13now.com/2014/11/13/sage-grouse-gets-federal-protection-utah-officials-react/>.

²¹⁸ The NTT Report assumes that voluntary conservation measures on private land are inferior to federal land management and recommends the transfer of private lands into the federal domain.

²¹⁹ Sage Grouse Initiative. 2014. *Private Lands Vital to Conserving Wet Areas for Sage Grouse Summer Habitat*, Science to Solutions Series Number 4. Sage Grouse Initiative. 4pp. <http://www.sagegrouseinitiative.com/>.

²²⁰ *Progressive Rancher*, July/August Edition. http://www.progressiverancher.com/Resources/ProgressiveRancher_JulyAug2014.pdf.

coyotes, ravens and badgers. As the Reason Foundation summarized, “[T]he result, according to the article, was a higher sage grouse population than exists today and a distinct geography to the grouse’s high quality water-dependent habitat: lots of it in small pockets scattered widely across the landscape.”²²¹

Contrary to some assertions, federal regulation of private land is not conducive to continued conservation. Rather, federal regulation has a significant chilling effect on local, state and private conservation efforts. For example, when the FWS proposed listing the Gunnison GRSG despite over \$50 million in state investment and 65,000 acres of private lands protected by conservation easements, county officials felt deeply betrayed. Commission Chair Paula Swenson said she was “furiously frustrated” and Commissioner Jonathan Houck, former mayor of the town of Gunnison, said he felt “cut off at the knees.”²²² Upon listing the Gunnison GRSG, Colorado Governor John Hickenlooper, in a significant bipartisan press release with Members of Colorado’s Congressional Delegation, stated:

“We are deeply disappointed the U.S. Fish and Wildlife Service chose to ignore the extraordinary efforts over the last two decades by the state, local governments, business leaders and environmentalists to protect the Gunnison sage grouse and its habitat. This sends a discouraging message to communities willing to take significant actions to protect species and complicates our good faith efforts to work with local stakeholders on locally driven approaches. In short, this is a major blow to voluntary conservation efforts and we will do everything we can, including taking the agency to court, to fight this listing and support impacted local governments, landowners and other stakeholders.”²²³

²²¹ Brian Seaholes, *Sage Grouse Success is Inextricably Linked to Ranching and Farming in the West According to the Co-author of a Groundbreaking New Study*, <http://reason.org/blog/show/sage-grouse-success-is-inextricably#> (Oct. 9, 2014 at 9:43 AM).

²²² Lynn Bartels, The Denver Post, *Gunnison Seeks to Protect Grouse, Residents from Endangerment Listing*, http://www.denverpost.com/news/ci_26539987/gunnison-seeks-protect-grouse-residents-from-endangerment-listing (Sept. 15, 2014).

²²³ Official Colorado State Web Portal, *Gov. Hickenlooper, Senators Bennet and Udall and Congressman Topton Issue Statements on Gunnison sage Grouse Listing Decision*, <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovHickenlooper%2FCBONLayout&cid=1251658153409&pagename=CBONWrapper> (Nov. 12, 2014) (last visited on Dec. 23, 2014 at 4:43 PM).

In response to the Gunnison listing decision, the Colorado Cattlemen’s Association issued a release titled, “Lawsuit-Inspired Listing Ends 20 Years of Conservation Efforts.”²²⁴ Similarly, in a letter to Interior Secretary Sally Jewel, the Western Governor’s Association expressed deep disappointment in one-size-fits-all regulatory restrictions proposed for GRSG and that coordination with the states was “treated more as an afterthought.”²²⁵

These assertions are backed by sound evidence. According to the NRCS, private conservation efforts declined by 95% when the FWS proposed listing the bi-state population of GRSG. Even worse, private landowners understandably manage their lands specifically to avoid the presence of species once they have been listed under the ESA.²²⁶

In ignoring the benefits of state, local and private conservation efforts violates the DQA, the Guidelines and the additional authorities discussed herein.

I. Multiple-Use Mandates

The NTT Report conflicts with BLM’s statutory multiple-use mandate, as it elevates conservation above all other uses of public lands. Implementation of the NTT Report in Land Use Plans Amendments will impede BLM’s statutory mission and adversely affect agriculture, recreation, local governments, utilities, mining and the ability to explore for, produce, and transport domestic energy on public lands.

In enacting the Federal Land Policy and Management Act in 1976 (FLPMA, 43 U.S.C 1701 *et seq*), Congress directed the Secretary of the Interior to consider a broad range of resource issues, land characteristics, and public needs and values in determining how public lands should

²²⁴ <http://us8.campaign-archive2.com/?u=8f5fe0c71eb61a94f0da35e3f&id=7432815534>

²²⁵ <http://westgov.org/news/298-news-2014/800-western-governors-concerned-federal-work-with-states-on-sage-grouse-conservation-an-afterthought-see-clear-concise-input>

²²⁶ Brian Seasholes of the Reason Foundation has provided an excellent summary of landowner reactions to the perverse disincentives of the ESA: <http://reason.org/blog/show/the-state-of-the-birds-2014-report>.

be managed. FLPMA directs BLM to manage public lands for multiple uses and to consider a wide range of resource values, including the need to protect wildlife and quality of habitat, in the context of the Nation's needs for minerals, energy, food, fiber, and other natural resources. Section 102(a)(8) requires BLM to manage the public lands in a "manner that will protect the quality of scientific, scenic historical, ecological, environmental...values" (U.S.C. 1701(a)(8)). Section 102(a)(7) establishes multiple use and sustained yield land management directives and requires the Secretary to develop "... goals and objectives [that are] established by law as guidelines for public land use planning, and that management be on the basis of multiple use and sustained yield unless otherwise specified by law" (U.S.C. 1701(a)(7)). In defining the term "multiple use" FLPMA § 103(c) directs the Secretary to ensure:

"...the management of the public lands and their various resource values so that they *are utilized in the combination* that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources...to conform to changing needs and conditions; the use of some land for less than all of the resources; *a combination of balanced and diverse resource uses* that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values." (43 U.S.C § 1702(c), emphasis added).

Therefore, under the multiple-use requirements, wildlife and other uses are on equal footing. Consequently, BLM must strike an appropriate balance between potentially competing interests and land management objectives, while considering the needs of *all* species, including the needs of humans. This balance is to be achieved in the Section 102 land use planning process and the resulting RMPs. *FLPMA does not authorize the subordination of any of these uses in preference*

for a single land use such as sage-grouse habitat conservation. BLM in applying an emphasis on one resource, GRSB, across 50 million acres²²⁷ is not consistent with FLPMA.

BLM must also consider how the GRSB centric management contained in the NTT Report and the resulting land use plan amendments is appropriate in the context of other special status species. BLM must resolve these issues and explain how the NTT Report's recommendations by way of land use restrictions, prohibitions, and withdrawals achieve the required balance in managing the public lands. If the recommendations found in the NTT are not implementable than the NTT Report itself lacks the requisite "usefulness" or utility pursuant the DQA.

The NTT Report recommends measures in direct conflict with the Mineral Leasing Act of 1920, Mining Law of 1872 (General Mining Law, 30 U.S.C. 21a et seq), Mining and Minerals Policy Act (MMPA, 30 U.S.C. §21(a)) , and the withdrawal regulations at 43 Code of Federal Regulations (CFR) Part 2300, respectively. The NTT Report cannot amend nor alter the agencies' statutory missions. Nor can it impact valid existing rights. The NTT Report also likely conflicts with the U.S. Forest Service Organic Act, and that agency's 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).

J. NEPA

Pursuant to IM 2012-044 BLM initiated the NEPA process to evaluate the NTT conservation measures. IM 2012-044 requires the inclusion of one alternative that considers the conservation measures identified in the NTT Report. However, BLM has failed in its land use plan amendments to include the second directive of the IM, which is to consider *all applicable*

²²⁷ BLM, News Release: *Federal Agencies Announce Initial Step to Incorporate Greater Sage-Grouse Conservation Measures into Land Management Plans*, http://www.blm.gov/wo/st/en/info/newsroom/2011/december/NR_12_08_2011.html.

conservation measures, not just those in the NTT Report, consistent with law. BLM in its Land Use Plan Amendments has not provided for compliance with applicable laws, standards, implementation plans, and BLM and Forest Service policies and regulations, and has failed to use the best available science and inappropriately targets secondary threats in its Land Use Plan Amendments. The NTT Report proposes habitat prescriptions, prohibitions, and withdrawals that are not scientifically supported (described above) as required by the regulations that implement NEPA at 40 C.F.R §1502.24:

"Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements. They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement. An agency may place discussion of methodology in an appendix."

The NTT Report and the principles underlying the NTT Report create policies that assume that GRSG conservation is the highest and best use of the land, while subordinating other interests, mineral exploration and development, without adequate analysis of the economic impacts these policies will have on stakeholders as recognized in internal emails between DOI employees who were involved with developing the NTT Report:

"...Overall, the NTT Report conservation measures (planning prescriptions) are complete game-changers for any actions within the Priority Habitats where there are valid existing rights and showstoppers for those actions where there are no valid existing rights..."

For example, withdrawals of the magnitude proposed by the NTT through the NEPA process conflict with the FLPMA's multiple use mandate, § 22 of the General Mining Law, and the Mining and Minerals Policy Act; and cannot be implemented through the land use planning process. Withdrawal of this magnitude can only be made by an Act of Congress or by the Secretary pursuant to the requirements and procedures of FLPMA § 204(c) for a period not to exceed 20 years.

The Council on Environmental Quality (CEQ) regulation at 40 CFR § 1502.16(c) requires BLM to include discussion of “[p]ossible conflicts between the proposed action and the objectives of Federal, regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies, and controls for the area concerned.” Several of the habitat prescriptions, land use restrictions, and prohibitions proposed by the NTT and included in the NEPA analyses conflict with existing land use plan goals and objectives for minerals, BLM’s own policies including those contained in Manual 6840, the Mining and Minerals Policy Act, the General Mining Law, and BLM’s multiple-use mandate, which represents a fatal flaw rendering the Land Use Plan Amendments both inadequate and inconsistent with existing laws and policies, and thus, cannot be implemented, and fails to meet the standard of utility under the DQA.

The conflict between GRSG conservation and the prohibition through administrative fiat against mineral, oil and natural gas and other commodity development must not be ignored. Unfortunately, BLM fails to recognize and disclose this conflict in the various Land Use Plan Amendments. BLM has an obligation under existing law to comply with federal, state, and local policies, including but not limited to balancing resources and to recognize the nation’s need for domestic mineral resources.

The NEPA process requires an agency to rigorously explore and objectively evaluate all reasonable alternatives so that decision-makers and the public are fully informed. NEPA documents are intended to be used as a tool during the planning and decision-making process (40 C.F.R. §§1502.14(a), 1502.14(b),(d)). Substantial case law exists regarding the range of alternatives that need to be included in an Environmental Impact Statement (EIS), and “[t]he

existence of a viable but unexamined alternative renders an environmental impact statement inadequate” (*Resources Ltd. v. Robertson*, 35 F.3d 1300, 1307 (9th Cir. 1993)).

BLM has consistently and uniformly failed in its Land Use Plan Amendments to provide a detailed evaluation of Manual 6840 and other BLM policies pertaining to GRSG conservation and is inconsistent with NEPA and the guidance in Section 6.6 of BLM’s NEPA Handbook (H-1790-1):

“The range of alternatives explores alternative means of meeting the purpose and need for the action...The broader the purpose and need statement, the broader the range of alternatives that must be analyzed. You must analyze those alternatives necessary to permit a reasoned choice (40 C.F.R 1502.14...In determining the alternative to be considered, the emphasis is on what is “reasonable”... Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense...” (BLM Handbook H-1790-1 at 49 – 50).

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.²²⁸ The courts have excused federal agencies from considering alternatives that require legislative or administrative changes.²²⁹ 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.”²³⁰ In this case, implementation of the NTT Report conflicts with valid existing rights granted under federal and state laws. The NTT Report, its adoption through a NEPA

²²⁸ 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).

²²⁹ 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.).

²³⁰ *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).

process or even an ESA listing cannot amend or alter these laws.²³¹ Here, BLM has failed to cover a full spectrum²³² of alternatives to the land use restrictions and prohibitions to the NTT Report and failed to take the requisite “hard look”²³³ at alternatives to the NTT Report’s overly restrictive prescriptions.

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.”²³⁴ In this case, BLM has failed to meet this requirement. Among other issues, BLM has failed to adequately consider the effect of its proposed GRSG management on the human environment.²³⁵ 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.²³⁶

In the NTT Report, BLM has failed to adequately analyze different alternatives or their effect on the human environment and therefore fails to qualify as the “hard look” required by NEPA in proposing these radical restrictions. For example, it would be impossible for the disturbance cap to be implemented without affecting valid existing rights.

²³¹ 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).

²³² See *Klamath-Siskiyou Wildlands Center v. U.S. Forest Service*, 373 F. Supp. 2d 1069, 1088-89 (E.D. Cal. 1994).

²³³ See, e.g. *All Indian Pueblo Council v. United States*, 975 F.2d 1437, 1444-46 (10th Cir. 1992).

²³⁴ 42 U.S.C.A. § 4332(C).

²³⁵ See *In re Delta Smelt Consolidated Cases*, Order, Nos. 09-00407, - 00422, -00631, -00892, -00480 (E.D. Cal. Dec. 9, 2009).

²³⁶ *Id.*

VI. The DQA Applies to the NTT Report

DOI issued its Guidelines to ensure high quality information is generated, used, and disseminated; and to comply with OMB's charge that each agency adopt the DQA Guidelines.²³⁷ "The Department's methods for producing quality information will be made transparent, to the maximum extent practicable, through accurate documentation, use of appropriate internal and external review procedures, consultation with experts and users, and verification of its quality."²³⁸ Information released by DOI will be reproducible to the extent possible and influential information shall be produced with "a high degree of transparency about data and methods."²³⁹ "Analytic results shall generally require sufficient transparency about data and methodology that an independent reanalysis could be undertaken by a qualified member of the public resulting in substantially the same results."²⁴⁰

A. Information Dissemination Product

The OMB Guidelines define "Information Dissemination Product" as "any books, paper, map, machine-readable material, audiovisual production, or other documentary material, regardless of physical form or characteristic, an agency disseminates to the public. This definition includes any electronic document, CD-ROM, or web page."²⁴¹

The NTT Report was disseminated electronically by BLM. Accordingly, it meets the definition of "information dissemination product." The intended users of this information include BLM, USFS, state and local governments, domestic energy producers, agricultural producers, public land managers, local and state governments, and the general public.

²³⁷ See DOI, *Information Quality Guidelines Pursuant to Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001*, <https://www.doi.gov/docs/InformationQualityGuidelines.pdf>.

²³⁸ *Id.* at page 1, Section II.

²³⁹ *Id.*

²⁴⁰ *Id.* at page 2.

²⁴¹ 67 Fed. Reg. 8452, 8460 (Feb. 22, 2002).

The OMB Guidelines define “[d]issemination” as “agency initiated or sponsored distribution of information to the public.”²⁴² The NTT Report was disseminated by BLM. BLM created its National Technical Team in 2011, “to develop new or revised regulatory mechanisms, through RMPs, to conserve and restore the greater sage-grouse and its habitat on BLM-administered lands on a range-wide basis over the long term.”²⁴³ BLM has represented the NTT Report as, and used it in support of, an official position of the agency in such a way that the Guidelines apply.²⁴⁴ Neither the authors of the NTT Report nor BLM have disclaimed that the NTT Report is not information subject to correction or retraction under the DQA. BLM has disseminated the NTT Report by, among others, publication on its website.²⁴⁵

B. Third-Party Information

To the extent BLM considers the NTT Report third-party information, the DQA and its Guidelines still apply. Certain third-party information that an agency makes public is also subject to the DQA and the Guidelines. “If third-party submissions are to be used and disseminated by Federal agencies, it is the responsibility of the Federal Government, under the [Data] Quality Act, to make sure that such information meets relevant information quality standards.”²⁴⁶

The Guidelines state third-party information endorsed, adopted, disseminated or relied upon, must meet the quality, objectivity, utility and integrity standards required by the DQA and

²⁴² 67 Fed. Reg. 8452, 8460 (Feb. 22, 2002).

²⁴³ <http://www.blm.gov/pgdata/etc/medialib/blm/co/programs/wildlife.Par.73607.File.dat/GrSG%20Tech%20Team%20Report.pdf>.

²⁴⁴ OMB, Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility and Integrity of Information Disseminated, http://www.whitehouse.gov/omb/fedreg_reproducible.

²⁴⁵ <http://www.blm.gov/pgdata/etc/medialib/blm/co/programs/wildlife.Par.73607.File.dat/GrSG%20Tech%20Team%20Report.pdf>; *see also* OMB Guidelines V(8).

²⁴⁶ OMB, Information Quality: A Report to Congress, www.whitehouse.gov/sites/default/files/omb/info/fy03_info_quality_rpt.pdf (April 30, 2004).

should be subject to DQA correction. DOI Guidelines expressly apply to non-Departmental parties that develop scientific and technical information on its behalf.²⁴⁷

Here, BLM failed to issue disclaimers explaining that it would not use, rely upon, or endorse the disseminated information. In fact, BLM commissioned the NTT Report specifically to address and incorporate recommendations into its land use planning processes.²⁴⁸ Many DOI and BLM employees contributed to the NTT Report. Consequently, the DQA and the Guidelines clearly apply.

C. The DQA Applies Notwithstanding Draft Land Use Plan Amendments

While some of the information disseminated relates to Land Use Plan Amendments that have been open for public comment, BLM is not excused from compliance with the DQA and the Guidelines. Information present in rulemaking records, both completed and ongoing, comprises much of the information disseminated by federal agencies. Neither the DQA itself nor OMB's Guidelines exclude rulemaking records from coverage. OMB, DOI and BLM Guidelines each require a timely process for correcting errors in all agency information made publicly available, including information used in rulemakings.

OMB Guidelines implement § 3504(d)(1) of the Paperwork Reduction Act ("PRA").²⁴⁹ Section 3504 (d)(1) requires that "with respect to information dissemination, the [OMB] director shall develop and oversee the implementation of policies, principles, standards, and guidelines to apply to Federal agency dissemination of public information, regardless of the form or format in which such information is disseminated... ." ²⁵⁰

²⁴⁷ DOI Guidelines II.4; DOI Guidelines V.

²⁴⁸ <http://www.blm.gov/pgdata/etc/medialib/blm/co/programs/wildlife.Par.73607.File.dat/GrSG%20Tech%20Team%20Report.pdf>.

²⁴⁹ 44 U.S.C. § 3516.

²⁵⁰ 44 U.S.C. § 3504(d)(1).

Moreover, a DQA challenge may be undertaken separate from the challenger's comments in a rulemaking.²⁵¹ The agency has a duty to respond to comments under the Administrative Procedures Act ("APA")²⁵² and a duty to respond to challenges filed by any person under the DQA.²⁵³ Challenges may arrive before, during, or after an agency disseminates the information.²⁵⁴

On September 5, 2002, OMB Memorandum further clarified that agencies should respond to DQA challenges sooner than provided in rulemakings.²⁵⁵ Where information is disseminated before the final agency action, challenges may be brought under the DQA where a response would not unduly delay issuance of the agency action, so long as the complainant has shown a reasonable likelihood of suffering actual harm.²⁵⁶

In a rider to its Omnibus Appropriations Bill, Congress restricted DOI from issuing a final rule on GRSG in 2015.²⁵⁷ Further, BLM has already announced delays in finalizing Land Use Plan Amendments for GRSG.²⁵⁸ Accordingly, the retraction and correction of information requested by the Petitioners will not cause undue delay. As discussed at length herein, the NTT Report, if left uncorrected, will cause substantial actual harm to the Petitioners by implementing

²⁵¹ James T. O'Reilly, *The 411 on 515: How OIRA's Expanded Information Roles in 2002 Will Impact Rulemaking and Agency Publicity Actions*, Section 54:2, Admin. L. Rev. 835 (2002).

²⁵² 5 U.S.C.A. § 551 *et. seq.* (1946).

²⁵³ *Id.* at 836.

²⁵⁴ *Id.* at 847.

²⁵⁵ John D. Graham, OMB, *Memorandum for the President's Management Council on Agency Information Quality Guidelines*, www.whitehouse.gov/sites/default/files/omb/inforeg/pmcmemo.pdf (Sept. 5, 2002).

²⁵⁶ Frederick R. Anderson, *The National Law Journal*, *Data Quality Act*, http://thecre.com/pdf/20130620_data_quality_act_anderson.pdf (October 18, 2002).

²⁵⁷ See Sally Jewell, DOI, *Statement by Interior Secretary Sally Jewell on the Sage-Grouse Rider in the FY15 Omnibus Bill*, <http://www.doi.gov/news/pressreleases/statement-by-interior-secretary-sally-jewell-on-the-sage-grouse-rider-in-the-fy15-omnibus-bill.cfm>; see also Robert Pear, N.Y. Times, *From Contribution Limits to the Sage Grouse: What is in the Spending Bill*, <http://www.nytimes.com/2014/12/13/us/key-points-from-the-spending-bill.html?action=click&contentCollection=U.S.&module=RelatedCoverage®ion=Marginalia&pgtype=article>.

²⁵⁸ See BLM, *Frequently Asked Questions: Timeline*, http://www.blm.gov/wo/st/en/prog/more/sagegrouse/frequently_asked_questions.html#timeline; see also BLM, *Haines Planning Area Draft RMP Amendment*, http://www.blm.gov/ak/st/en/prog/planning/ring_of_fire_plan/Haines_Block_Supp_EIS_Amend.html.

unduly restrictive regulatory measures, predominantly based upon irreproducible, biased and speculative reports and outdated science on public lands throughout 11 western states.

Reliance on undocumented or scientifically unreasonable error and uncertainties, biases, and misrepresentations in the NTT Report will dramatically alter the use of millions of acres of public lands²⁵⁹ without offering protection to the GRSG. To avoid actual but unnecessary harm to the Petitioners, the western states, local governments, private landowners and stakeholders, BLM must timely respond to this DQA challenge, retract statements and conclusions based on undocumented or scientifically unreasonable error and uncertainties, biases, and misrepresentations in the disseminated information.

Where, as here, the Petitioners have provided “significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts,” BLM should use existing mechanisms to remedy the situation “such as re-proposing a rule or supplementing a NEPA analysis.”²⁶⁰ The flaws contained in the NTT Report are so numerous and severe, corrective action in this case must include a retraction of the NTT Report and its proposed conservation measures, and their withdrawal from consideration in alternatives in Land Use Plan Amendments. In the alternative, BLM can issue a significantly modified NTT Report correcting the numerous errors and utilizing the best available information as discussed herein.

²⁵⁹ See BLM, *Mineral and Surface Acreage Managed by the BLM*, http://www.blm.gov/wo/st/en/info/About_BLM/subsurface.print.html; see also Congressional Research Service, *Federal Land Ownership: Overview and Data*, <http://fas.org/sgp/crs/misc/R42346.pdf>; BLM, News Release: *Federal Agencies Announce Initial Step to Incorporate Greater Sage-Grouse Conservation Measures into Land Management Plans*, http://www.blm.gov/wo/st/en/info/newsroom/2011/december/NR_12_08_2011.html (“Greater sage-grouse currently use as much as 47 million acres of land managed by the BLM, and about nine million acres of land managed by the USFS”).

²⁶⁰ DOI Guidelines III.

D. Highly Influential Information

The information disseminated here readily qualifies as influential information. As OMB states: “[T]he more important the information, the higher quality standards to which it should be held... .”²⁶¹ Ordinary information is distinguishable from “influential” information, which is scientific, financial and statistical information having a clear and substantial impact on important public policies or important private sector decisions. “Influential” information is subject to higher standards of quality and should be reproducible by qualified third parties. Information disseminated in the NTT Report is information of extreme importance to states, landowners, user groups, and local conservation efforts.

OMB Guidelines define “influential” requests for correction as those of a substantive nature, which sought “something more than a straightforward webpage or data fix.” “Influential” also indicates “that the agency can reasonably determine that dissemination of the information will have or does have a clear and substantial impact on important public policies or important private sector decisions.”²⁶²

The information disseminated in the NTT Report is information of extreme importance. It qualifies under the Guidelines as substantive notices, policy documents, studies and guidance relied upon by the agency to make decisions that could affect multiple federal and state agencies, local governments, tribes and private individuals in 11 western states, and on tens of millions of acres of public lands. The conservation measures in Land Use Plan Amendments were developed by the NTT which included staff and scientists from BLM, FWS, U.S. Geological Survey (“USGS”), Natural Resources Conservation Service, and state fish and game agencies.

²⁶¹ 67 Fed. Reg. 8452 (Feb. 22, 2002).

²⁶² Id. at 8455.

Their work culminated in the NTT Report. Many of the action alternatives in the 98 Land Use Plan Amendments were largely derived from the NTT Report.²⁶³

This information is clearly “influential scientific, financial, or statistical information” that crosses state and agency boundaries and affects private and public decisions under the DQA and the Guidelines. Specific to BLM Guidelines, the NTT Report is “expected to have a clear and substantial impact at the national level for major public and private policy decisions as they relate to Federal public lands and resource issues.”²⁶⁴

Disseminated information is to be corrected upon consideration of the most recent or thorough information from stakeholders, the public and the scientific community.²⁶⁵ This challenge constitutes the most recent and thorough information.

E. Petitioners are “Affected Persons” Qualified to Bring a DQA Challenge

OMB's Guidelines also require each agency to establish administrative mechanisms that allow “affected persons” to seek and obtain the correction of information that does not meet the OMB Guidelines.²⁶⁶ OMB makes clear that the purpose of the administrative mechanism is to “facilitate public review” of agency compliance with the Guidelines.²⁶⁷ OMB Guidelines concluded that “affected persons are people who may benefit or be harmed by the disseminated information. This includes persons who are seeking to address information about themselves as well as persons who use information.”²⁶⁸ Such a definition provides the public with a right to agency-disseminated information that meets high DQA standards; and with a right to correct any publicly disseminated information that does not meet these standards. BLM Guidelines provide

²⁶³ http://www.blm.gov/wo/st/en/info/newsroom/2011/december/NR_12_08_2011.html

²⁶⁴ See BLM Guidelines 2(b).

²⁶⁵ *Id.*

²⁶⁶ 67 Fed. Reg. at 8452.

²⁶⁷ *Id.*

²⁶⁸ 66 Fed. Reg. 49718, 49721 (Sept 28, 2001).

that any individual or person “who may use, be benefitted by, or be harmed by the disseminated information” is an “affected person.”²⁶⁹

Petitioners are “affected persons” within the meaning of the Guidelines.²⁷⁰ Petitioners and their members or constituents rely upon public and private lands within the range of the GRSG for the production of natural resources, agricultural goods and products, recreation, wildlife conservation, and for revenues distributed to the states and local governments.²⁷¹ Petitioners have a reasonable likelihood of suffering actual harm from dissemination of the NTT Report unless BLM resolves this complaint prior to the final agency actions and information products at issue herein.²⁷² There is no separate process or mechanism by which the Petitioners can raise these issues or seek redress regarding the fatal flaws and shortcomings of the NTT Report.²⁷³

The Petitioners have used, and will use, the information disseminated to better inform and guide their business decisions. Their members and/or constituents are similarly affected by information regarding GRSG numbers, dispersal, and distribution, as well as alleged threats to the species. Where the species is located, how it disperses, and where it is distributed could have strict regulatory consequences for producers of agricultural products, energy, and natural resources from implicated public lands. In addition, local governments rely upon continued access to public lands for natural resources, recreation, taxes and other revenue streams generated thereby. Accordingly, Petitioners could be “benefitted by, or be harmed by” the faulty information at issue.

²⁶⁹ See BLM Guidelines 4(b).

²⁷⁰ BLM Guidelines 4(b).

²⁷¹ BLM Guidelines 4(c).

²⁷² BLM Guidelines 4(f).

²⁷³ BLM Guidelines 4(f).

Petitioners are involved in extensive conservation efforts across the West to conserve the GRSG while also preventing unfounded federal regulatory restrictions and a listing under the ESA, which would prove less effective than the state and local efforts underway. These conservation efforts include the collection of data and the compilation of ongoing state, local and private conservation efforts for the GRSG. Petitioners have established their interests in ensuring that their members and constituents, as well as the public at large, has the opportunity for open and robust debate regarding the information disseminated.

VII. The NTT Report Does Not Comply with Other Federal Standards

While scientific integrity and transparency in agency decision making are enumerated priorities for this administration, the NTT Report falls far short of these goals. *See* Exhibit A at 6-7 and 35.

A. The NTT Report is Contrary to Presidential Direction on Scientific Integrity and Transparency

On March 9, 2009, President Obama issued a 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.”²⁷⁴ When scientific or technological information is considered in policy decisions, the information is to be subject to well-established scientific processes, including peer review where appropriate. Agencies are directed to appropriately and accurately reflect that information in complying with relevant statutory standards.²⁷⁵

President Obama committed to “an unprecedented level of openness in Government,” by “work[ing] together to ensure the public trust and establish a system of transparency, public

²⁷⁴ 74 Fed. Reg. 10671, 10671 (March 11, 2009).

²⁷⁵ *Id.*

participation, and collaboration.”²⁷⁶ The president believes “[o]penness will strengthen our democracy and promote efficiency and effectiveness in Government.”²⁷⁷ “Transparency promotes accountability and provides information for citizens about what their Government is doing.”²⁷⁸

President Obama reaffirmed his commitment to scientific integrity as part of his second term’s scientific agenda in 2012.²⁷⁹ More specifically, the President has “insisted that we be open and honest with the American people about the science behind our decisions.”²⁸⁰ Furthermore, “only by ensuring that scientific data is never distorted or concealed to serve a political agenda, making scientific decisions based on facts, not ideology, and including the public in our decision making process will we harness the power of science to achieve our goals – to preserve our environment and protect our national security; to create the jobs of the future, and live longer, healthier lives.”²⁸¹

In contravention to this presidential direction, the NTT Report presents a distorted and biased view of threats to the GRSG and mechanisms proposed to protect them. It is riddled with misrepresentation, misuse of citations, and reliance on opinion rather than the scientific method.

B. The NTT Report is Contrary to DOI Scientific Integrity Standards

The NTT Report runs afoul of DOI direction on scientific integrity. The DOI Manual that implemented secretarial order: Integrity of Scientific and Scholarly Activities (effective Jan. 28, 2011) 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

²⁷⁶ Barack Obama, *Transparency and Open Government: Memorandum for the Heads of Executive Departments and Agencies*, http://www.whitehouse.gov/the_press_office/TransparencyandOpenGovernment.

²⁷⁷ *Id.*

²⁷⁸ *Id.* (emphasis added).

²⁷⁹ See Barack Obama, Science Debate 2012, <http://www.sciencedebate.org/debate12/> at No. 11 (Sept. 4, 2012).

²⁸⁰ *Id.*

²⁸¹ *Id.*

science and scholarship, that ensures objectively, clarity, reproducibility, and utility.”²⁸² On December 16, 2014, DOI updated and strengthened the policy to “ensure that all Interior employees and contractors uphold the principles of scientific integrity.”²⁸³ Interior Secretary Sally Jewell stated that “the Department must lead federal efforts to ensure robust scientific integrity policies because science is the very foundation of [their] mission.”²⁸⁴ Decision making: “must be robust, of the highest quality, and the result of as rigorous scientific and scholarly processes as can be achieved. Most importantly, it must be trustworthy.”²⁸⁵

The NTT Report falls short of these standards. Contrary to the DOI Manual, its description of “science” makes no mention of hypothesis testing or potential falsification.²⁸⁶ The NTT Report relies on a subjective interpretation of results which is a clear departure from the scientific method. It started with preferred conservation measures and then sought to justify them to reverse-engineer the recommendations. The NTT hardly qualifies as “rigorous scientific and scholarly process[es] as can be achieved.” See Exhibit A at 22-23; see also Exhibit B at 10, 12-14, 16 and 31.

The NTT Report is also patently outdated.²⁸⁷ It has been superseded by multiple DOI guidance documents, including the COT Report, BLM’s Greater Sage-Grouse Baseline Report

²⁸² DOI Manual, Available at: <http://elips.doi.gov/elips/browse.aspx>.

²⁸³ U.S. Department of the Interior, *Press Release: Interior Department Announces Strengthened Scientific Integrity Policy for Employees and Contractors*, <http://www.doi.gov/news/pressreleases/interior-department-announces-strengthened-scientific-integrity-policy-for-employees-and-contractors.cfm>.

²⁸⁴ DOI, *Integrity of Scientific and Scholarly Activities*, <http://www.doi.gov/scientificintegrity/index.cfm?renderforprint=1&>

²⁸⁵ DOI, Departmental Manual: 305 DM 3, <http://www.fws.gov/science/pdf/DOIScientificIntegrityPolicyManual.pdf> (January 28, 2011).

²⁸⁶ 305 DM 3.5(N).

²⁸⁷ FWS, Research Update: *Study Shows Taller Grass Benefits Nesting Sage-Grouse*, http://www.fws.gov/greatersagegrouse/documents/Research/20141219_Study_Grass%20Height%20Influences%20Nest%20Success.pdf (Dec. 22, 2014) (new information helps local, state and federal bodies manage the species effectively)

(“BER”), and the Buffer guidance,²⁸⁸ all of which categorically oppose one-size-fits-all management. GRSG science and understanding have evolved as well. Despite being outdated, the NTT report continues to be used as the basis of forthcoming Land Use Plan Amendments.

BLM has also failed to meet its charge in OMB Circular A-130, as “[a]gencies should inform the public as to the limitations inherent in the information dissemination product (e.g., possibility of errors, degree of reliability, and validity) so that users are fully aware of the quality and integrity of the information.”²⁸⁹

C. Paperwork Reduction Act

We question whether BLM demonstrated in a Paperwork Reduction Act submission to OMB that the proposed collection of information in the NTT Report was collected, maintained and used consistent with the DQA Guidelines.²⁹⁰

VIII. Conclusion

The NTT Report is a highly influential document, as BLM and USFS are using it to make substantial land use decisions across nearly 60 million acres of public lands throughout 11 western states. As such, it must adhere to the standards of quality, integrity, objectivity and utility in the Data Quality Act as well as administration standards of scientific integrity and transparency. Unfortunately, the NTT Report fails to meet these requirements. Much of what the Report presents as “science” has no basis in scientific design or scientific evidence. And the most frequently cited sources in the Report are irreproducible, biased and speculative and outdated. *See* Exhibits A and B, *gen.* Opinions must not be represented as fact nor dictate decisions that are required to be based on scientific data.

²⁸⁸ *E.g.* BLM, *Greater Sage-Grouse Baseline Report* (BER),

http://www.blm.gov/wo/st/en/prog/more/sagegrouse/ber_data_portal.html (last updated June 3, 2013).

²⁸⁹ Alice Rivlin, OMB, Circular No. A-130: *Memorandum for Heads of Executive Departments and Establishments*, http://www.whitehouse.gov/omb/circulars_a130 (Feb. 8, 1996) (last visited Dec. 30, 2014 at 2:36 PM).

²⁹⁰ DOI Guidelines VI.

The NTT Report violates the Data Quality Act, the Guidelines and the additional authorities cited herein as it is not presented in an accurate, reliable and unbiased manner. The NTT Report cherry-picked what scientific papers it wished to discuss, presented misleading information, presented much information out of context, and simply ignored large numbers of studies that refute many of its conclusions.

The NTT Report does not represent the best available science as required to meet the standards of quality, objectivity and integrity required in the DQA. Rather, the NTT Report is comprised of assumptions built upon assumptions. It fails to address the limitations of the underlying data and studies used to reach its conclusions and fails to acknowledge that circumstantial evidence rather than scientific evidence underlies most of the information presented.

BLM cannot rely on the biased opinions and selective presentation of information to support recommendations that are unsupported by data. The NTT not only violates BLM's multiple-use mandate, but elevates GRSG concerns above human health, safety, and scientific transparency.

Because the information disseminated in the NTT Report is not objective, it also fails to have any utility for those persons making management decisions regarding multiple uses of the public lands. As detailed in the text herein and in the Exhibits attached, the NTT Report failed to:

- Use sound analytical methods in carrying out scientific and analyses and in preparing risk assessments
- Use reasonably reliable and reasonably timely data and information (e.g., collected data such as from surveys, compiled information, and/or expert opinion)
- Ensure transparency in its dissemination by identifying known sources of error and limitations in the data

- Evaluate data quality and, where practicable, validate the data against other information when using or combining data from different sources
- Ensure transparency of the analysis, to the extent possible, consistent with confidentiality protections, by
 - Presenting a clear explanation of the analysis to the intended audience
 - Providing transparent documentation of data sources, methodology, assumptions, limitations, uncertainty, computations, and constraints
 - Explaining the rationale for using certain data over other data in the analyses
 - Presenting the model or analysis logically so that the conclusions and recommendations are well supported.
- Clearly identify sources of uncertainty affecting data quality
- Clearly state the uncertainty of final quantitative estimates
- Demonstrate that the data and data collection systems used are of sufficient quality and precision that uncertainty in the final estimates is appropriately reproducible
- Provide an explanation of the nature of uncertainty in its analysis.

The errors contained in the NTT Report are improperly influencing BLM's decision making about management of the public lands. Reliance on this biased and faulty information has and will continue to harm the Petitioners. In addition to the damage to the Petitioners, the public, GRSG and the economy will be negatively impacted based upon the errors in the NTT Report.

The Petitioners respectfully requests that BLM retract the NTT Report and all reliance thereon in existing and subsequent Land Use Plans Amendments, as well as decisions on permits and authorizations. Alternatively, BLM could, as required by the DQA and the Guidelines, issue an amended NTT Report that uses sound analytical methods and the best data available while ensuring transparency and objectivity. Any amended Report should incorporate all reliable information, not just the data supporting false hypotheses. It should also identify the limitations

of data used rather than stating assumptions as fact. Finally, any amended Report should use and include the best available data as discussed herein.

Respectfully submitted this 18th day of March, 2015.

Holsinger Law, LLC

A handwritten signature in black ink, appearing to read 'K. Holsinger', with a stylized flourish at the end.

Kent Holsinger
Attorney for Petitioners