United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Washington, DC 20240
http://www.blm.gov

OCT 24 2013

In Reply Refer To:
6500 (200)

Ms. Kathleen Sgamma
Western Energy Alliance
410 17th Street, Suite 700
Denver, Colorado 80202

Dear Ms. Sgamma:

This letter responds to your Information Quality Act (IQA) Information Request for Action (Request) dated July 30, 2013, regarding the *Report on National Greater Sage-Grouse Conservation Measures* prepared by the Sage-grouse National Technical Team (NTT Report).

The Request states that the NTT Report is a highly influential report synthesizing extensive research on sage-grouse conservation measures. The Request further states, "It appears that the BLM has failed to employ proper and necessary public transparency mechanisms.... Western Energy requests the BLM provide specific and detailed information regarding the peer review process employed with respect to the NTT Report."

The information requested from the Bureau of Land Management (BLM) includes—

1. The names and institutions of employment and/or affiliations (e.g., university, scientific organization, corporation, agency, etc.) of all persons contacted for the purposes of providing peer review of the NTT Report;
2. The names and institution of employment or affiliation (e.g., university, scientific organization, corporation, etc.) of those who actually engaged in peer review of the NTT Report (the "Peer Reviewers");
3. The questions asked and/or issues presented to the Peer Reviewers with respect to the NTT Report;
4. Any formal or informal report(s), paper(s), data compilation(s), communication(s), comment(s), red-line(s), summary(ies) or other document type related to the Peer Reviewers' review or impressions of the NTT Report.

You have also submitted a request for this information through the Freedom of Information Act (FOIA). The BLM is currently working on a response to your FOIA request. Based on the underlying legislation and regulations, the BLM's response to your IQA request will include information on items (2) and (3), and the FOIA response will include information on items (1)

and (4). The reference number for your FOIA request is 2013-00641. The responsive records have been submitted by the program staff to the FOIA office for review and release.

Enclosed with this letter you will find several documents that respond to your request for items (2) and (3):

1. A table with the experience, education, and qualification of the peer reviewers. (Enclosure 1)
2. The letter that provides the peer reviewers with their "charge," sent by the Nevada Department of Wildlife. (Enclosure 2)
3. The peer reviewer comments on the NTT Report. (Enclosure 3)
4. The BLM's response to the peer reviewer comments. (Enclosure 4)

As you note in your letter, the BLM is developing peer review guidance. Until that time, the Office of Management and Budget's (OMB) "Final Information Quality Bulletin for Peer Review" (OMB Bulletin) is considered controlling. The OMB Bulletin gives agencies the discretion on releasing the names of peer reviewers, stating, "The names of each reviewer may be disclosed publicly or may remain anonymous (e.g., to encourage candor)" (p. 5). The BLM agrees that it is important to provide the public with information that allows them to determine the qualifications and experience of the peer reviewers. As such, we have included "Enclosure 1," which summarizes the education, experience, and affiliation of each peer reviewer. This information can be used to assure the public that the peer reviewers serve both the utility and objectivity standards set by OMB's guidance, while respecting the privacy interests of the individual reviewers.

As a note related to the BLM's response to the peer reviewers' comments, the BLM revised the NTT Report based on these recommendations to develop the final version that was released in December 2011. The revised drafts will be included in the information provided through your FOIA request, which you should be receiving in the near future. The remaining enclosures respond to other aspects of your request and the information provided to you will be posted to the BLM's IQA webpage for public access.

We appreciate your interest in assuring the NTT Report provides the most accurate information available.

Sincerely,

Edwin L. Roberson
Assistant Director
Renewable Resources and Planning

Enclosure 1 – Greater Sage-Grouse National Technical Team Report
Peer Reviewer Qualifications

Reviewer	Education	Experience		Affiliation
1	PhD, Oklahoma State University - Rangeland Ecology	13+ years	Researcher - Sagebrush Ecosystems	USDA - ARS
2	PhD, University of Wisconsin, Wildlife Biology	30+ years	Research Lead - Terrestrial vertebrates	Wildlife Agency
3	PhD, Colorado State University - Rangeland Resources	30+ years	Researcher - Sagebrush Ecosystems	USDA - ARS
4	MS, Utah State University - Wildlife Biology	30+ years	Land Manager, Policy - Sagebrush Ecosystems	BLM
5	University of Nevada, Reno - Rangeland Mgmt. Specialist	25 years	Researcher - Sagebrush Ecosystems	USDA - ARS
6	PhD, Utah State University - Wildlife	30+ years	Professor, Researcher	University

Brian Sandoval
Governor

STATE OF NEVADA
DEPARTMENT OF WILDLIFE
1100 Valley Road
Reno, Nevada 89512
(775) 688-1500 • Fax (775) 688-1595

KENNETH E. MAYER
Director

RICHARD L. HASKINS, II
Deputy Director

PATRICK O. CATES
Deputy Director

October 11, 2011

Dear Reviewer,

Thank you for volunteering to review the attached conservation measures (CMs) that the BLM's National Technical Team developed to guide Greater Sage-grouse conservation efforts!

I am requesting your review, as the sage-grouse Director sponsor of the Western Association of Fish and Wildlife Agencies, to help the BLM develop a set of conservation options that BLM field managers will apply in the resulting Instruction Memorandum (IM). This IM will be issued without delay, system-wide, and is designed to prevent losses or degradation of habitat and prevent decreases in the distribution of sage-grouse while the BLM revises or amends Resource Management Plans. The revision or amendment process will be completed in 2014.

We are hoping that you will provide us with constructive feedback on the efficacy of these CMs. The measures are provided in context to meet the goals of the IM. We are not asking for a strict scientific review, but rather an assessment of the CM and the appropriateness of circumstances that a manager would apply the CM and will these CMs meet the objectives of preventing losses or degradation of habitat and prevent decreases in the distribution of sage-grouse.

This document is confidential and we request that you do not share, copy or forward it to anyone outside our review team.

As mentioned, the BLM is planning on issuing this IM as soon as possible and we are under very tight time-frames. **I would greatly appreciate getting your review by October 21, 2011**.

San Stiver is coordinating the response for me and will provide the BLM with your reviews along with our review. San's email address is stiver@cableone.net and can be reached by phone (928)899-3732. Again, I apologize for the very short turn-around and appreciate your willingness to review the document.

Sincerely,

Kenneth E. Mayer

Ken Mayer
Director

KM:sjs

Conservation Measures/Proposed Planning Decision

1) Introductory comments by reviewers

   a) **R1 -** First of all, putting together range-wide recommendations for sage-grouse conservation measures is an unenviable and difficult task fraught with ecological complexities, strong and diverse opinions, and judicial and political realities. To that end my hat is off to those in the spotlight, and I wish you the best going forward. That said, the impact of this document will be substantial and long-lasting; realistically it could be the standard that governs most land management activities on much of the public land in 11 western states. With that in mind I have done my best to critically evaluate the utility of the current draft and provide constructive comments for its improvement.
   b) **R2 -** I have reviewed the "Conservation Measures/Proposed Planning Decisions" document. It is easily the most far-reaching sage grouse conservation strategy that BLM has ever considered, and they should be commended for its development. There are areas where I believe the strategy can be strengthened, and/or blow back minimized which will make the strategies more effective.
   c) **R3 -** I will preface my comments by saying that I am not entirely sure about the intent or expected outcomes associated with the document, and that I focused on the Range Management, Fire and Fuels Management, and Habitat Restoration sections. The letter from Ken Mayer provided a clue as to the intent (".. to help BLM develop a set of conservation options that BLM field managers will apply in the resulting Instruction Memorandum (IM)"). If the goal here is to outline conservation options for sage-grouse, then the document seems to fall short in my view. The shortcomings I see fall into several categories:
      1) There is no introduction as to the intent of the document, it reads as a laundry list of items. There is no discussion of the seasonal requirements of sage-grouse to provide managers a context for their actions. There are limited references to the state-level sage-grouse plans. A good deal of effort went into these plans and they contain valuable information that should be incorporated into the planning process.
      2) There seems to be no focus on identifying the limiting habitats as a first step. How can managers be expected to prioritize their efforts if there is no analysis of which habitats are most limiting?
      3) If we are to maintain sage-grouse habitat it will be critical to identify and understand the risks to each particular habitat type. There seems to be limited discussion of risk analysis in the sections I reviewed.
      4) If the document is to be applied across the sage-grouse range it does not make sense to use specific numbers (15% sagebrush cover or 12 inches of precipitation) on plant communities that vary tremendously over even small distances. Use concepts that make ecological sense (site potential or risk factor), rather than trying to simplify our complex landscapes.
      5) It seems that everyone familiar with the subject recognizes that sage-grouse require large intact landscapes, yet there is no mention of a landscape perspective or spatial scale in the document. For example, a series of 5 acre projects may sound good on paper, but may do nothing to help the bird.

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. Since the IM is to be used to revise or amend Resource Management Plans, which are long-term in nature, it seems to me that a broader discussion in this document would be of more value.

d) **R4 –** No Comments
e) **R5 –** No Comments
f) **R6 –** Opening paragraph. I don't really see any habitat and population objectives.

2) Comments on Structure

a) **R1 -** They develop a list of conservation strategies that apply to priority habitat and don't define it?? The definition they gave could be changed to "to be determined." The devil is completely in that detail. Even using core area is inadequate, in that many "cores" are based only on leks, and may or may not include other important seasonal habitat. I understand the need and desire to have a flexible definition to accommodate variation across the range, but far better to have a base definition to which states can append other criteria as necessary, than to defer the definition.
b) **R2 –** The document states at the beginning that the "following conservation measures are designed to achieve population and habitat objectives stated in this report", yet no population or habitat objectives were stated. I assume they are in another part of the document I did not see. The document is an odd mix of scientific citations and policy decisions, with no real tie between the two. I expected a science document that reviewed the literature, laid out what is known about program area impacts to sage grouse, and where the uncertainties lie. The science review would lead to a range of numbers and alternative approaches, which would then segue into a policy document that described the approach chosen. The science team would develop the science document, the program managers the policy outcome emanating from it. This seems a strange blend of policy loosely backed by citations, with no analysis of the 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, the former finding it over-reaching and the latter inadequate.
c) **R3 –** No Comments
d) **R4 -** The organization could be more consistent. Various sections address high-priority areas and general areas, some don't include both (i.e., only address high-priority), and some points are repeated over in several activities. There should be a section containing provisions common to all activities for both high-priority and general areas (such as for reclamation/restoration, roads, other infrastructure). Then the separate activities can have activity-specific provisions.
    i) Are the habitat references to occupied habitat, unoccupied habitat, both? One of my concerns is that actions may be taken in presently unoccupied habitat that can compromise its value for sage-grouse. That needs to be explicitly addressed. Unoccupied habitat can still be a high-priority area.
    ii) There is no activity section for Fish/Wildlife/Special Status Plants actions as they may otherwise affect sage-grouse (e.g., rehab projects for species other than sage-grouse). Also, such a section (or Range) should contain provisions for identifying seed reserves to be managed for seed collection.

iii) There should be a Planning-specific section/provision/umbrella for all of these sections. One provision would be that "No planning effort will be initiated until a complete HAF evaluation has been completed for the entire planning area under consideration and adjacent sage-grouse habitats that may be impacted by activities in the planning area under consideration." Further, All BLM land use plans should contain a section about relevant or associated LWG plans and their applicability to BLM actions and provisions in the area addressed by the LUP

iv) Soil productivity needs to be explicitly addresses when considering alternatives for activity plans and plans of operation. Burying of lines, constructing roads, installing livestock facilities, etc. All seek to exploit the deepest, most productive soils which can have the most detriment to habitat productivity.

v) All activity plans should explicitly address PECE considerations, i.e., the certainty of implementation and certainty of effectiveness. Given the budget situation for the foreseeable future, plan projections of rosy success are often nothing more than happy bullroar. I've seen it too many times before.

e) **R5 –** No Comments

f) **R6 –** No Comments

3) General Comments

i) **R1- Space and time**

(1) A central premise in ecology is the notion that ecological processes unfold in both space and time. Lack of consideration of space, and particularly (in this document) time is a critical mistake that, to me, renders this document problematic, if not dangerous. Let's consider both dimensions and how they might influence the current document.

As written, there is essentially no consideration of the temporal dynamics of plant communities that provide sage-grouse habitat. For example, let's consider a mountain big sagebrush community with high abundance of perennial grasses and shrubs. Furthermore, let's say that there are numerous small (< 1-m tall) western juniper plants present. If we forget about time, then we might look at this community and say that it would provide great habitat for specific life history stages of sage-grouse and thus it should be "left alone" from a management standpoint. However, given what we know about juniper encroachment, if we leave it alone for long enough (perhaps 70 to 90 years) it will eventually transition to juniper dominance and the shrub (and perhaps perennial grass) component will be lost. At that point it is no longer sage-grouse habitat. An alternative would be to burn the plant community while it is still in the early stages of juniper encroachment. This would remove the shrub component and dramatically reduce quality of or eliminate (depending on burn size) sage-grouse habitat at the site. However, grouse habitat would improve as sagebrush abundance recovered over time; based on available literature this process might take 2 decades. So, at the end of twenty years, we could either have a recovered sage-grouse habitat without juniper (i.e., with fire) or be well on our way to losing this site as sage-grouse habitat (i.e., juniper dominance in the absence of fire or other management action). The point of all this is that in ecological systems that operate in both space and time, we cannot categorize either disturbance or management actions in the absence of considering the temporal component. Overlooking the temporal aspects of ecological disturbances such as fire promotes a

species-centric focus in which disturbance effects are characterized using the intellectually pedestrian notions of "good" or "bad" without consideration of the specific temporal context within which these disturbances unfold. This, in turn, reinforces a focus on sage-grouse, rather than a focus on the ecology of the ecosystems to which the integrity of sage-grouse habitat is subservient.

The current document does a better job with space (as compared to time) but I think the document needs to more explicitly consider the spatial context within which sage-grouse management is set. You need to better incorporate spatial variability in site potential via the use of ecological site descriptions and realize the interrelationships between ESD's and the effects of management actions. For example, under "Emergency Stabilization and Rehabilitation", you state, in part: " … Re-establishment of sagebrush overstories shall be the highest priority for rehabilitation efforts based on site potential." This may be fine for high elevation sites, but, I strongly disagree for low-elevation sites where annual grasses are biggest threat to ecological integrity. The "highest priority" on these sites should be maintaining ecological integrity of the site by having something other than annual grasses present. The highest probability treatment in this case is to seed perennial grass species, which are, at present, the best defense (once established) against annual grass invasion. Shrubs are harder to establish on these sites and restoration of that component should take place after or in conjunction with securing the ecological integrity of the site. Thus, the appropriate management actions, and in this case the order of appropriate management actions, is strongly tied to ecological site. This concept needs to be specifically addressed to avoid on-the-ground problems for BLM. I would recommend either 1) sufficiently vague language to allow for flexibility at more local scales, 2) explicitly recognizing the need for reliance on ESDs, or, ideally, 3) both.

The document also misses the mark when it comes to larger scale variation associated with inter and intraregional variation in plant community ecology. This is a serious omission. For example, the present-day disturbance ecology of relatively low elevation big sagebrush communities is in stark contrast to that of higher elevation big sagebrush communities. Using southeast Oregon as an example, too much fire has been associated with proliferation and spread of annual grasses in lower elevation plant communities; arguably the single greatest threat to sage-grouse habitat at lower elevations. At higher elevations, too little fire is associated with encroachment of native conifers (namely western juniper) into sagebrush/bunchgrass habitats to the extent that conifer-associated loss of sagebrush habitat is now the greatest threat (as defined by the state-level sage-grouse working group) to sage-grouse habitat in the state. 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 sage-grouse. Otherwise, we are faced with species-centric generalizations of the effects of ecological processes that may or may not represent ecological reality.

ii) **Native vs. introduced grasses**

(1) Exotic annual grasses are a serious and ongoing threat to low elevation sage-grouse habitat throughout the range of the species. At present, our ability deal with annual grasses at large spatial scales is very limited. The best management option currently available involves establishment of perennial grasses, which inevitably brings up the discussion of native vs. introduced species. Re-seeding with either group can be difficult at low elevations. However, the bulk of the peer-review literature clearly indicates that introduced perennial grasses (namely crested wheatgrass and its affiliates) are the highest probability choice. My point is that maintaining the ecological integrity of these sites

through establishment of perennial vegetation should be the first priority, and the best shot at making that happen at low elevations is with introduced species. I say this in full recognition of the fact that subsequent conversion of these introduced communities back to native has proven incredibly difficult and with present technology is simply not feasible at large spatial scales.

iii) **Climate change**
(1) I would suggest that language directing managers to consider future climate change in determining seeded species be taken out. Present knowledge of climate change is not at the stage (i.e. accurate enough) where we can predict future climate to the extent that we are designing seed mixes based on those predictions and we have enough problems to worry about with restoration success in the present climate.

iv) **Other thoughts**
(1) What happens when potential of the ecological site is at odds with stated sage-grouse habitat requirements? This could be clarified by specifically incorporating Ecological Site Descriptions and not using cut-off values such as 15% sagebrush canopy cover.
(2) The notion that grazing privileges in sage-grouse areas should be retired when base property is transferred or a current operator is willing to retire such privileges assumes grazing is automatically a problem and can't be used as a tool for habitat management. It also assumes that grouse are the highest and best use of the land…this HAS to be addressed before these guidelines become policy or serious problems will arise. What about FLPMA…where does it fit into the picture?
(3) The notion that no treatments will be allowed in known winter range seems a bit draconian. What if winter habitat is also breeding habitat? Dave Dahlgren's research has demonstrated how small patch-scale sagebrush reduction treatments can be used to create beta diversity that improves grouse habitat while retaining sagebrush dominance at large scales. Again, the issue of spatial scale.
(4) Document suggests not using fire to treat sagebrush in less than 12-inch precipitation zones. I generally agree with this, but at the same time I have a problem with making these broad generalizations about ecosystems, the properties of which vary strongly across sites and over time.

b) **R2 -** Almost all of the emphasis is on preventing additional habitat loss or degradation on BLM land, with relatively little effort spent on strategies to improve existing habitat. BLM has huge opportunities to remove fences, close roads, control weeds, eliminate crested wheat grass, develop springs, etc., to make degraded habitats better, and this should be emphasized as much as not making things worse.

i) The document suffers from a 1-size fits all approach that lacks context. Lumping all sage grouse seasonal habitats in all locations across the range regardless of population size or relative importance of the population into either "priority sage grouse habitats" or "general sage grouse habitats" strikes me as tremendously over simplistic. When combined with very prescriptive direction, it may lead to strong opposition, which may lead to weak application of the IM.

ii) The document does not define either "priority" or "general" sage grouse habitat. Without a definition the conservation measures have no meaning. I asked for a definition, and what I was given was this:

(a) *Preliminary Priority Habitat* (PPH) is the area identified as having the highest conservation value relative to maintaining sustainable Greater Sage-Grouse populations. The PPH are being identified by state wildlife agencies and the BLM (these may also be referred to as "core areas" in some states).

(b) *Preliminary General Habitat* (PGH) is occupied habitat outside of PPH as identified by state wildlife agencies and/or the BLM.

iii) The definition for priority habitat is circular, in that "highest conservation value to maintain sustainable Greater sage grouse populations" is also not defined. There are as many definitions for core areas as there are states, most at present are lek-based and therefore don't consider brood rearing or winter habitats unless they occur within whatever buffer is used. The definition for general habitat is occupied habitat, so in that case why not just use occupied habitat? I would expand that however to include 'unoccupied but potentially suitable habitat."

iv) Priority habitat must be defined before this document goes out for wider review, rather than kicking that can down the road. The elements that must be included would be lek/nesting habitat (rather than using arbitrary buffers may want to include proportions of nesting hens included and let the buffer vary with habitat quality and local characteristics), late brood-rearing habitats, and winter concentration areas. It would be far preferable to have a base definition that is amended locally, than to have no definition and allow each state and potentially Field Office to develop their own.

v) There is no performance aspect or adaptive management component. The document begins by stating that the following conservation measures are designed to achieve population and habitat objectives stated in this report, yet that is the only time population and habitat objectives are mentioned. What happens if the conservation measures don't achieve population and habitat objectives? Some type of rigorous adaptive management must be the final conservation strategy, where the effectiveness of these measures, and the degree to which sage grouse habitat and populations are conserved by these measures (in the face of other threats), are constantly evaluated and reassessed. There is a sentence on monitoring that says a monitoring strategy for sage-grouse and sagebrush will be developed for adaptive management purposes, but this ignores the critical feedback aspect of adaptive management, where data collections feed back to change management strategies where necessary.

c) **R3 –** No Comments.

d) **R4 –** No Comments.

e) **R5 –** No Comments.

Travel and Transportation

1) Priority sage-grouse habitat areas

a) **R1 –** No Comments.

b) **R2 –** This is a good example where opportunities to make things better as opposed to not making them worse exist. The document talks about completing activity level plans within 5 years and

"where appropriate" designating routes within priority habitats as administrative access only. Routes that are adjacent (w/in ¼ to ½ mile?) to leks should be moved away from leks or closed, and seasonal closures should be considered within lek areas similar to what Gunnison County has done in Colorado. Travel management plans should be reviewed within some reasonable time frame to consider de-designating and closing routes near leks or brood areas.

The ROW exclusion in priority habitats is good, but the exception is troubling. Simply excusing new road construction within priority habitats by requiring off-site mitigation if it causes surface disturbance to exceed 2.5% is not adequately protective. I don't know where 2.5% comes from, 1% surface disturbance in core areas is the number I've seen from Naugle's work. It also matters greatly whether that road is ¼ mile or 3 miles from a lek (or merely crosses nesting habitat), and whether that lek has 5 males or 300; 1- size fits all is not the right model here. The purpose of the ROW matters as well; oil and gas rigs vs. mountain bikes. You can't mitigate loss of a 100 bird lek if frequent traffic caused abandonment.

"Take advantage of opportunities" to remove, bury or modify existing power lines seems to be very weak guidance that is a long way from any instruction that would lead to these actions. This should be recast as actions that field offices must take.

c) **R3—**No Comments.
d) **R4 –** I don't see anything about seasonal closures in this section. At the end of the first point is the phrase "at a minimum." What else would qualify?

   With respect to the 2.5% surface disturbance, this should be changed to something like "if the total infrastructure footprint to sage-grouse habitat would exceed 2.5%, then off-site mitigation at least equal to the total footprint will be required." Although a powerline, road, etc., may only physically impact a small area that would not cause an area to exceed 2.5%, the effective habitat impacts (footprint) could affect much more than the 2.5% physical disturbance area.
e) **R5 –** No Comments.
f) **R6 –** No Comments.

Recreation

1) Special Recreation Permits
   a) **No Comments.**
2) Recreational Management Areas
   a) **No Comments.**

Lands/Realty

Rights of Way

1) General Comments on Lands/Realty
   a) **R4 –** re: "entire footprint" - is this only the physical footprint or the effective habitat footprint? Same point to be made regarding the phrase "existing disturbance." Second point, re:

"disturbance exceeds 2.5%" See previous comment (earlier email) regarding physical versus habitat disturbance. Third point (evaluate and take advantage of ...) This should apply generally, not just to priority areas. Insert "and proposed" between "existing power" so it reads "existing and proposed power lines." Under "Planning Direction Note," to the last sentence, after "during the planning process" add " ... resulting in it becoming an exclusion area not subject to the exceptions described above."

b) **R5 –** Why address only those disturbances that are larger than 2.5% of the area? All disturbances should be addressed. The inability to address small areas usually leads to bigger problems (i.e. weed infestations).

Removing, burying, or altering power lines will most likely add disturbances to the plant community that will be very difficult to rehabilitate in many habitat types and thus decrease suitable habitat and increase weed infestations in sage grouse habitats

Land Tenure Adjustment

2) Priority sage-grouse habitat areas and general habitat areas
   a) **R1 –** No Comments
   b) **R2 --** Retaining priority habitat in public ownership seems to be a good strategy both as a conservation measure to protect against conversion and to shift the burden of management of a potentially listed species to the government. I do think the language about acquisition of privately held habitat is a bit open ended, and would suggest modifying that to reflect acquisition of in-holdings or key parcels that are contiguous to public ground so as not to appear like a Federal land grab. I wouldn't also allow for the sale of BLM land to private conservation organizations (land trusts) or state agencies as long as there are conservation easements or other protections in place to ensure sage grouse habitat is preserved in perpetuity. There are situations where taking land out of multiple use mandates may well be in the best interest of sage grouse.
   c) **R3 –** No Comments.
   d) **R4 –** Land Tenure Adjustment: this section only addresses priority sage-grouse habitat areas. It should also address general sage-grouse habitat areas. Also the point made in the draft is only about ownership patterns. The priority should be placed on acquiring/managing/consolidating sage-grouse habitat. That's probably intended, but as worded it is only inferred, not explicitly stated.
   e) **R5 –** Land exchange part appears to me to be very difficult. Private land owners own much of the water on arid western lands. In my experience they hold those properties in high regard and do not want to give those holdings up, especially to the government.

   Again, the mineral rights are more sacred than the riparian areas, mineral rights are seldom sold, but rather quick deeded from generation to generation. Working in Nevada I commonly hear "you never sale mineral rights", so with this mentality how achievable would this be.
   f) **R6 –** No Comments.

Proposed Land Withdrawals

3) Priority sage-grouse habitat areas

   a) **R2 --** "Lands within priority sage-grouse habitat areas will be proposed for mineral withdrawal." I understand and support what withdraw means in this context, but don't understand what proposed means? What happens after the proposal, and what guidance is provided relative to appeals etc.?
   b) **R4 –** The example given (military range buffer area) seems like an isolated situation, not something more likely to be encountered across sage-grouse range. Can a better example be provided? Is the buffer example one that is already under active consideration?? Fantasizing (again, think the present budget situation), what if bases are closed and habitat reverts to the BLM? How would restoration be conducted and who would pay?

Range Management

1) General
   a) R1 -- No Comments.
   b) R2 -- These strategies seem pretty tepid and largely reflect commitments that BLM has already made. The statement "Consider at least one alternative in the NEPA document required for permit renewal, if an effective deferred system that meets sage-grouse habitat requirements are not already in place" doesn't seem to make sense as written since there is always more than one alternative considered. I believe it is supposed to say "consider at least one *deferred grazing* alternative" as opposed to consider at least one alternative. Non-use for some period should also be explicitly mentioned as a management action that should be considered when sage grouse habitat elements are not met by sites capable of meeting them. While non-use or denial of permit applications may be possible outcomes under "grazing decisions", neither are listed as one of the 5 management actions to be considered, all of which assume some level of grazing use.

   There is too much emphasis on protecting crested wheat grass seedings ("introduced perennial grass seedings"). Understanding they may concentrate grazing pressure, the reality is there is an opportunity cost associated with the potential sage grouse habitat those stands could be providing and are not, that is ignored here. Sage grouse would be better off if large tracts of crested wheat are converted back to sage grouse/native grass and forb communities, with AUMs reduced if necessary if loss of crested wheat stands reduces forage availability. This is also true of large burns within occupied range, which should be explicitly mentioned as targets for sagebrush re-establishment.

   Structural range improvements, including fencing, corrals, livestock handling structures etc., are prohibited within priority habitats unless they conserve, enhance or restore sage grouse habitat. It is impossible to determine whether they conserve, enhance or restore sage grouse habitat or not without some explicit criteria as to when they do and when they don't that is context and scale relevant. For instance I can't envision a situation where a fence line that goes through a lek would on balance conserve, enhance or restore sage grouse habitat regardless of offsetting gains

from a livestock management perspective. If the fence simply went through winter range and excluded livestock from important brood habitat, I could.

c) R3 – No Comments.

d) R4 -- Change "or" to "and". Third point; last sentence. In the last sentence, use of the term "productive" implies that Connelly et al. and Hagen et al. included unproductive recommendations in the publications.

e) R5 --I have always had a problem with this "Rangeland Health" thing. I understand it to a point, but the reality is that the health is in the eye of the beholder. Is a big sagebrush/bunchgrass habitat with 10% sagebrush cover and good perennial grass densities less healthier than 20% sagebrush cover and less perennial grasses? Remember, good long-lived perennial grass densities are the best way to suppress cheatgrass fuel loads that is critical in protecting sage grouse habitats. The 20% big sagebrush cover may very well be suppressing the much needed long-lived perennial grasses. Also, plant measurements taken by numerous individuals, even with a strict protocol, have high error, so in many cases the data you analyze does not represent on-the-ground situations. You risk not achieving stated goals and objectives due to this disconnect between data collected and on-the-ground realities.

Managing vegetation composition and understanding on-the-ground site potential is very good!

It is very difficult to modify grazing systems in the arid west. With such variations in forage productions the climate does not offer annual predictions, therefore livestock are put out on the range during drought years in the same manner as during rare wet years. Our rangelands simply do not provide the flexibility to accommodate the livestock producer without some kind of financial hardship. Most livestock producers are lacking winter allotments and have to feed or supplement their stock at a high cost, therefore they are chewing at the bit to get their livestock back on the range early and keep them out their as long as possible. One of the best ways to manage livestock is to get the cowboy back on the horse and to focus on the distribution part of the management.

Perhaps using programs that help pay for this labor could be addressed. On 3 ranch operations that I work with closely, there is an average of 1 cow/200 + acres, yet we have hot spots from improper grazing management because the rancher is now a farmer/mechanic and trying to produce winter forage for his stock. Placing the cowboy back on the horse and manually moving their stock will be much more beneficial and less time consuming than sitting down at the table and trying to change their numbers and seasons of use. You want this effort to be achievable then be careful when placing the livestock industry on the defensive, the only ones that make out are the lawyers. I once had a livestock operator in Colorado tell me that it was "hard to swallow someone coming in and decreasing his equity in such a closed minded fashion, how would they like it if I came in and took out a bedroom and bathroom out of their home". He ended up selling his property to a developer. If this mentality is consistent out there, wildlife in general could pay a price.

e) R6 -- No Comments.

2) Implementing Management Actions after Land Health and Habitat Evaluations

a) R1 – No Comments.

b) R2 -- See comments above.

c) R3 -- Maybe this makes sense to folks internal to BLM, but I did not really understand the point of this paragraph. This is the only place where ESDs are mentioned and that is probably a mistake. ESDs should probably be the basis for many of the evaluations and actions taken by BLM. That would provide for some consistency across the county.

- ***"****BLM will manage for vegetation composition and structure consistent with site potential (based on ESDs) to achieve sage-grouse seasonal habitat objectives." This sentence (as modified) seems to cover the topic pretty well.*
- Implement management actions (grazing decisions, AMP/Conservation Plan development, or other agreements) to modify grazing management to meet seasonal sage-grouse habitat requirements. Consider singly or in combination changes in: 1) Season or timing of use, 2) Numbers of livestock, 3) Distribution of livestock use, 4) Intensity of Use, and 5) Type of Livestock (e.g., cattle, sheep, horses, llamas, alpacas and goats). **Reviewer comment "***Doesn't BLM have a reference document on grazing management? If not it might be worth saying that mangers should use the approach outlined in USDA-NRCS National Conservation Practices Guide for prescribed grazing (using grazing to achieved specific vegetation objectives) with a focus on specific sage-grouse habitat needs."*

d) R4 -- Under "Implementing Management Actions after ... Evaluations", second sentence; insert the phrase "sage-grouse conservation" after "at least one", and change "deferred" to "grazing". It doesn't matter what the new system is if it is effective (recognizing that the deferment period could conceivably be for several years). Change "are" to "is".

e) R5—See comments above.

f) R6 – No comments.

3) Riparian Areas and Wet Meadows

a) R1 – No Comments
b) R2 – See Comments above
c) R3 -- Analyze springs, seeps and associated pipelines to determine if modifications are necessary to maintain the continuity of the predevelopment riparian area within priority sage-grouse habitats. Make modifications where necessary, considering impacts to other water uses when such considerations are neutral or beneficial to sage-grouse.

Reviewer Comment: *Woody plant encroachment is a major threat to riparian systems in the western part of the range (juniper species primarily in OR, ID, and NV), but I imagine there is pine encroachment in higher elevation meadows in other parts of the range as well. There areas are lost as habitat if nothing is done.*

d) R4 -- first point, lead sentence. These areas should be managed <u>everywhere</u> for PFC, period. That's a fundamental tenet of land management.

Third point re: water development; wells and stock ponds should be included among the types of developments allowable only when sage-grouse habitat would benefit. Water developments almost

always exploiting vegetation on the most highly productive soils to increase or otherwise facilitate livestock grazing. There are also almost always invasive species issues associated with livestock facilities, and the analysis horizon for EAs and LUPs is generally only ten years, which is not nearly long enough (my opinion). It's only a matter of time until a new invader arrives or climatic parameters become suitable for invasives establishment in, or expansion from disturbed areas. The impact area(s) for livestock facilities can include areas well away from the immediate facilities, such as underneath stands of trees (e.g., mountain mahogany) when livestock use the trees for shading and hammer the vegetation and soils as a result of prolonged presence These areas become sources for invasive establishment and spread and it's only a matter of time before they expand by one or more mechanisms into adjacent higher-quality vegetation stands. Lots of examples in the Owyhees, Jarbidge where I have taken photos of such areas where cheatgrass has become well-established and is lying in wait for the right conditions and already fingering out along cowpaths.

e) R5 -- How many of these wet meadows are private? How does this affect the ability to meet these management goals? Here they are discussing building fences, earlier they discussed removing fencing. Is fencing harmful to sage grouse? Again, simply placing a cowboy back on the range will reduce hot season grazing! Building a fence around so many riparian areas will only increase maintenance and repair which may add disturbances to the overall area and in most cases place the livestock producer in a position where they are spending time repairing fence on top of farming/mechanic duties rather than moving and actively managing livestock. Don't these fences just add perches for predators?

Remember, site potential is important as stated earlier, but don't forget the inherent potential of plant species to germinate, sprout and establish in the face of such exotic species such as cheatgrass. The best known method to suppress cheatgrass is through the establishment of long-lived perennial grasses such as bluebunch wheatgrass and crested wheatgrass. In the more arid locations of the Great Basin the return of Wyoming big sagebrush back into these disturbed habitats is more successful following the decrease in wildfire frequencies that can be achieved through seeding of introduced species such as crested wheatgrass. This is important because the open window of seeding following a Wyoming big sagebrush wildfire is that 1st fall season following the wildfire event. If the seeding fails because of the choice to seed species with less inherent potential, the window closes and then some more aggressive, costly methodology to rehabilitate the habitat is then needed. This latter approach is of high risk and lower returns; don't fail during this open window!!! By highly preferring native species that have little or no chance of achieving the stated goals, which leads to further degradation in many circumstances.

Is the Federal Government going to go into the business of managing their own livestock? In the part about retiring grazing permits I have this question: Only about 7% of Nevada is considered mountain brush habitat, whereas Wyoming big sagebrush is the major plant community. Where is the fuels management? The removal of livestock will most likely result in increased bunchgrasses/fuel loads in the mountain brush habitats. These fuel loads will probably result in increased wildfires in these habitats that will burn critical sagebrush communities. In the Wyoming big sagebrush communities, the perennial bunchgrasses are largely gone and cheatgrass is now the dominant herbaceous vegetation. Whether cheatgrass is 1" high or 12" high it will still produce seed and build seed banks. Even though wildfires occur with the presence of livestock, the reduction of such grazing would result in extreme build-ups of fuel loads. Again, resulting in further loss of critical shrub communities. The simple removal of livestock will not result in the return of healthy big sagebrush/bunchgrass communities, especially in Wyoming big sagebrush communities. So, how do you plan on managing these fuel loads?

Also, these string meadow systems will have increase in herbaceous grass species and decrease the forb component, how do you manage the meadows to increase the critical forb component without some type of grazing management? Yes horses can achieve that, but they are not managed and therefore many meadow systems will not receive this treatment and the risk of decreasing critical sage grouse habitat needs also increases. This is not effective management.

f) R6 – No Comments.

4) Treatments to Increase Forage for Livestock/wild ungulates

a) R1 – No Comments.
b) R2 – See comments above.
c) R3 – For example: Some introduced grass seedings are an integral part of a livestock management plan and reduce grazing use in important sagebrush habitats or serve as a strategic fuels management area.
Reviewer Comment: Be careful here – we have had limited success converting crested wheatgrass stands to natives in the Great Basin and if this sort of approach is attempted in the wrong setting there is a risk of conversion to annual invasive grasses and entry into short fire return cycles.
d) R4 – No Comments
e) R5 – See Comments above.
f) R6 – No Comments

5) Structural Range Improvements and Livestock Management

a) R1 – No Comments
b) R2 – See comments above
c) R3 – Modify first sentence: Any new structural range improvements and location of supplements (salt or protein blocks) will be designed to conserve, enhance, or restore sage-grouse habitat through an improved grazing management system relative to sage-grouse objectives. (Structural range improvements include but are not limited to: cattleguards, fences, exclosures, corrals or other livestock handling structures; pipelines, troughs, storage tanks [including moveable tanks used in livestock water hauling], windmills, ponds/reservoirs, solar panels and spring developments.)

d) R4 -- Third point "Evaluate existing structural ..." Ensure that such evaluations address potential invasives as I discuss above. Monitoring programs should include regular statistical sampling and photo monitoring of invasive islands to document whether or not incremental creeping from the disturbed areas is taking place.

e) R5 – See comments above.

f) R6 – No Comments.

6) Retirement of Grazing Privileges

a) R1 – No Comments.

b) R2 – No Comments.

c) R3 – *Seems like the first thing to do is to assess the effects of retiring the grazing.* If the result of no grazing is increased risk of fire, then it might be worth reconsidering.

d) R4 – This should also include retirements outside of high-priority areas so that livestock use within high-priority areas can be shifted out of the high-priority areas when desired.

e) R5 – No Comments.

f) R6 – No Comments.

Wild Horse and Burros Management

1) General Comments.

a) **R1 –** No Comments.

b) **R2 –** Woefully inadequate measures. While managing wild horses and burros to AML levels in priority sage grouse habitats would be a good start, the AML levels themselves must be re-evaluated and in almost all cases lowered to conserve sage grouse habitat.

c) **R3 –** No Comments.

d) **R4 –** No Comments.

e) **R5 –** Pretty short addressing of the horses/burros issue. If you are going to mention fencing, water hole dispersal etc., with livestock then even with a proper management level of horses you need to address hot season use and the degradation of these water holes by horses and burros.

f) **R6 –** On-going section: Prioritize gathers ***?? not sure what this is*** in priority sage-grouse habitat, unless removals are necessary in other areas to prevent catastrophic environmental issues, including herd health impacts.

Minerals

1) General Comments

a) R1 – No Comments.

b) R2 -- Closing priority habitats to mineral development and not renewing existing leases in priority habitats is a huge conservation measure, depending of course on the definition of priority habitat that is ultimately settled on. Applying a NSO stipulation within 3.1 miles of a lek, and within winter concentration areas is also a big step. I also support the requirement that Master Development Plans be required in priority habitats, as opposed to individual APDs. In the Master Development Planning process, some consideration should be given to waivers within 3.1 miles of peripheral/small leks, in exchange for maintaining NSO near true "core" lek areas. In other words, leks of a half dozen males that are isolated are less important to sage grouse conservation than core areas where the 3.1 mile buffer may encompass several leks and hundreds of grouse.

The exception to the NSO stipulation when the entire lease area is within 3.1 miles is reasonable considering property rights conveyed with existing leases, but new leases should not be granted on parcel sizes so small as to make this likely. The full 3.1 mile buffer contains almost 20,000 acres, which is likely an unreasonable minimum lease size, but lease minimums of at least 1,000 acres should be instituted so keeping disturbance to within less than 1% of the surface within breeding areas can be accomplished.

I do think some additional flexibility is called for. The exceptions to the NSO state that if the entire lease is within 3.1 miles of a lek or a winter concentration area (which will not be uncommon), then the pad must be placed in the "most distal" part of the lease. Depending on topography and other habitat aspects, the most distal portion of the lease may or may not be the best place to put the pad from a sage grouse perspective, and some exception that is demonstrably beneficial to sage grouse should be allowed.

I think another conservation strategy that should be considered is to not lease Federal mineral under State Wildlife Areas or private ground that is managed for the benefit of sage grouse. In the latter case a conservation easement and sage grouse management plan should be required.

Again I question whether less than or equal to 2.5% surface area disturbance with no more than 1 pad per section is adequately protective of sage grouse. Need to ensure that if infill development is allowed under these circumstances it is restricted to existing pads/roads only.

One protection needs additional clarification, namely "a seasonal restriction will be applied that prohibits surface-disturbing activities during the nesting and early brood-rearing season in all priority sage-grouse habitat during this period". Again, without a definition of priority habitat it is not clear what this means. If priority habitat includes winter range, which it should, then breeding season timing stipulations would not be appropriate there. I would suggest a buffer around leks (0.6 miles?), to which could be added early brood-rearing habitat not contained within that buffer. Seasonal timing stipulations have generally not been effective sage grouse conservation strategies for a variety of reasons, and are particularly vexing to industry given huge directional drilling rigs that are expensive to operate and difficult and expensive to move. If the net effect of timing stipulations is to push drill rigs to private land that may be better habitat, sage grouse are likely to be negatively impacted. Master Management Plans should be developed that allow for exceptions to seasonal timing stipulations when impacts are mitigated by other conservation strategies.

I generally support the BMPs as mandatory conditions of approval, but the process needs to recognize that Industry frequently finds better ways to do things more quickly than BMPs are modified, so any mandatory aspect needs to allow for better approaches to be approved.

Prioritizing off-site mitigation to priority habitat areas, and to the population impacted makes sense, but the whole question of when mitigation is required, to what degree, and even what constitutes mitigation needs a great deal more development. This document is silent on that, which leaves it entirely to field discretion. The currency of mitigation needs to be developed, with credit given for mitigation over and above that required.

Requiring that sage-grouse habitat objectives are incorporated into reclamation planning is good, but evaluation must be outcome based. Applying good practices is not adequate, industry must continue to manage reclaimed sites until sage-grouse habitat is restored to required levels.

c) R3 – No Comments.

d) R4 – Best Management Practices; I'd like to see a provision that whenever possible everything, including structures traditionally left above ground, such as well trees, will be buried. In some cases it would be necessary to dig pits to get structures below grade. Cost is seemingly the primary issue, but if it is technologically possible, it should be considered. It would be good somewhere to establish a sizeable pilot area where non-traditional practices could be implemented and

evaluated. Cam Aldridge and I have talked in the past about facilities being totally buried on the Sheffield military training area in Canada, and it seems to work well, without compromising the military mission or raising havoc with the buried facilities.

e) R5 – No Comments.

f) R6 – *Alternative B I don't follow the Alternative A and Alternative B? Is one to be deleted? A is better for the species than is B?*

What is Appendix A?

Reviewer suggests adding: A seasonal restriction will be applied that prohibits surface-disturbing activities during the **lekking,** nesting and early brood-rearing season in all priority sage-grouse habitat during this period.

- Require unitization **?? not sure what this is** when deemed necessary for proper development?? and operation of an area (with strong oversight and monitoring) to minimize adverse impacts to sage-grouse according to the Federal Lease Form, 3100-11, Sections 4 and 6. **I don't understand this one – it seems confusing.**

Under BMPs on page 11: **Roads** *These are all duplicates of those on page 8* **and;**

Operations: *These are mostly duplicates – why the redundancy? Can't the statements about roads and Operations be numbered and stated once and then later mentioned by number in appropriate sections?*

Page 12: Reclamation *Redundant;* **Locatable** *misspelled.*

Fire and Fuels Management

1) Fuels Management

a) R1 – No Comments.

b) R2 – Prohibiting Fuels Management treatments in known winter range is too restrictive. There may be situations where the fuels treatment is small enough or in higher precipitation zones with ample forage where treatments will be beneficial (i.e., where winter range is also brood habitat). Similarly, excluding fire in areas with less than 12-inches of annual precipitation is also too restrictive, as size of treatment definitely matters.

c) R3 –

- Do not reduce sagebrush canopy cover to less than 15% (Connelly et al. 2000, Hagen et al. 2007) unless the fuels management objective requires additional reduction in sagebrush cover to meet strategic protection of priority sage-grouse habitat. Closely evaluate the benefits of the fuel break against the additional loss of sagebrush cover in the EA process. **Reviewer comment:** *In many areas site potential will be below 15%, so this number seems a little irrelevant. Why not say the sagebrush will not be reduced below site potential unless required for strategic reasons? There is a need to insert some language about reducing the risk of wildfire and post-fire expansion of invasive species.*

- No treatments will be allowed in known winter range. **Reviewer comment:** *Seems a little extreme –what if there is a risk of loss of winter range that might require some treatment?*
- Do not use fire to treat sagebrush in less than 12-inch precipitation zones (e.g., Wyoming big sagebrush or other xeric sagebrush species; Connelly et al. 2000, Hagen et al. 2007, Beck et al. 2009). **Reviewer comment:** *This sort of blanket statement is bound to create unintended negative consequences. Again, I would suggest refering to site potential. Site potential in a 12" precipitation zone in eastern Wyoming is different from a 12" zone in eastern Oregon. The western part of the sage-grouse range in dominated by a winter precipitation climate, the eastern part of the range has much more summer precipitation. Temperature and thus evaporation potential during the period precipitation comes can have a big impact on site potential. Along the same lines, north slopes have a very different site potential and set of risk factors than south slopes even in the same precipitation zone.*
- **Reviewer suggests:** It might be better to include a statement to the effect that treatments must be analyzed with regard to the risk of invasive species expansion.

d) R4 – Clarify/define the terms "native seeds" and "non-native seeds". Does this mean locally collected seeds, the same species of seeds collected from anywhere (BLM has had problems in the past with, for example, sagebrush seed being planted that was collected hundreds of miles away from where it was collected. Not good.), or truly exotic species?

In the third point, change "etc." to "or other activities", and delete the last phrase "that benefits sage-grouse". That's the reason it's being done in the first place.

e) R5 – "No treatments will be allowed in known winter range". Are you going to sit back and have a catastrophic wildfire dictate your outcome? Wouldn't you rather implement a fuels management plan that can reduce the chances of a wildfire taking out an entire mountain range (e.g. Montana's). Or would you rather close the lid to the tool box and take the chance that back to back years of above precipitation occurs that build up cheatgrass and other fuels and just wait for a dry lightning storm and see another mountain range burn completely. The wildfire storms of 1999 are not that long ago!!! Again this holds true for PJ encroachment as well.

Are winter ranges a constant vegetation type? No, so why would you state such an objective? These plant communities are continually changing, no matter how subtle they appear. This type of passive management is helping further degrade critical habitats. Be pro-active and vision what the habitat needs will be in 20-25 years down the road and approach the issue in this manner rather than letting outside forces dictate the destructive outcome that is sure to happen by being passive.

If a wildfire burns a cheatgrass dominated landscape, what is protecting the site from grazing for 2 years going to accomplish, other than the build-up of more cheatgrass biomass? Does someone magically think that the system will restore itself? Where the hell is the evidence of this? Is your

management promoting fuel loads? Remember, with each fire season comes a cheatgrass fueled wildfire that destroys more and more unburned sagebrush islands.

Where is the table or data that suggests the probability of native seeds versus introduced seeds for fuels management or restoration/rehabilitation? How do you accomplish your goals and objectives without such information?

f) R6 – Page 15

- Do not reduce sagebrush canopy cover to less than 15% **Reviewer comment***; Why reduce it in the first place? There should be strong evidence to reduce any sagebrush canopy given the great variety of negative things that can happen during and after 'reduction activity'* (Connelly et al. 2000, Hagen et al. 2007) unless the fuels management objective requires additional reduction in sagebrush cover to meet strategic protection of priority sage-grouse habitat. Closely evaluate the benefits of the fuel break against the additional loss of sagebrush cover in the EA process.

Page 16

- Do not use fire to treat sagebrush in less than 12-inch precipitation zones **Reviewer comment:** *I'd prefer no use of fire in any sagebrush in a priority sagebrush area* (e.g., Wyoming big sagebrush or other xeric sagebrush species; Connelly et al. 2000, Hagen et al. 2007, Beck et al. 2009).
- Monitor and control **Reviewer comment:** *How is monitoring to be done? And only the Lord knows how to control invasives post-treatment, biologists sure don't* invasive vegetation post-treatment. *Does anyone really think this will happen on the ground?*

3) Emergency Stabilization and Rehabilitation (ES&R)

a) R1 – No Comments.
b) R2 – No Comments.
c) R3 –

- Consider potential changes in climate when proposing post-fire seedings using native plants. Selecting native plants adapted to a warmer climate with more variable precipitation should be considered given the longevity of native plants. **Reviewer comment:** *There is no basis for this suggestion. To date there is no research I am aware of showing that plant species are changing their ranges. And the movements are likely to be so slow that managers will be able to adapt without introducing new species (in other words those species will have become part of the system by the time we need to actively consider them in seeding mixes). We have enough trouble establishing the existing native species on most sites. I know Interior is under pressure to "respond " to climate change, so if you must, put in a statement to the effect that species mixes will be adjusted as information on changes in species ranges becomes available.*

d) R4 – No Comments.

e) R5 – No Comments.

f) R6 – No Comments.

Habitat Restoration

a) R1 – No Comments.

b) R2 – No Comments.

c) R3 –

- Habitat restoration objectives should include sage-grouse habitat parameters as defined by Connelly et al. 2000, Hagen et al. 2007 or if available, appropriate local information. **Reviewer comment:** *(state sage-grouse plans for example?)* Meeting these objectives within priority sage-grouse habitat areas would be the highest priority.
- Consider potential changes in climate when proposing restoration projects using native plants. Selecting native plants adapted to a warmer climate with more variable precipitation will be considered given the longevity of native plants. **Reviewer comment (bad idea—see above)**

d) R4 – No Comments.

e) R5 – No Comments.

f) R6 – No Comments.

Monitoring Strategy

a) R1 – No Comments.

b) R2 – No Comments.

c) R3 –

- Long-term monitoring strategy of sage-grouse and sagebrush will be developed and implemented for adaptive management. Regular updates would reflect changes in distribution in priority habitats once functional habitat is restored and used by sage-grouse.

I know invasive species can be considered a part of most sections, but given their importance relative to grouse and grouse habitat, it seems odd that the coverage of this issue is so sparse.

d) R4 – Page 17, Sixth point "Work as an interdisciplinary team ..." Again, this is a fundamental tenet for BLM as a management agency. It shouldn't be necessary to remind people to do what their jobs already require. And if it's going to be mentioned under one activity, it should be mentioned in all. A final side note here: Not all that many years ago, Fire Management was an entity unto itself and, in fact, did not always work closely with other disciplines. It may be that mentioning this here harkens back to that time and some folks may want to keep it.

e) R5 – This section needs to be titled Restoration/Rehabilitation since the use of non-native seeds are an option.

It is very theoretical to suggest using species that are more adapted to warmer or drier climates (assisted succession) in a management plan. Are you suggesting seeding Wyoming big sagebrush in a mountain big sagebrush zone? This approach, which we have worked with for 10+ years, suggests that it works. Do you really want to make management decisions of this magnitude off of a theory?

This is not restoration, but rather revegetation. There is nothing wrong with testing this theory further, but it should probably be under fuels management, not restoration.

There is an underlying tone to use native seeds in the argument of "native". It would be a mistake to go to a site and try and restore it without understanding the risks of such efforts. You could use needle-and-threadgrass or Thurber's needlegrass in a restoration effort @ $135/lb and not add any value to your outcome because the lack of understanding. It is very difficult for this species to be successfully seeded, but yet we did it under the "native" argument. **Far too often seed mixes are put together under what looks good on paper or someone's ecological site description, rather than what are the chances we can get this species established and help prevent further degradation! Afterall, this effort is to protect and enhance sage grouse habitat, right?**

In the effort to restore sagebrush densities, it should be noted that there are levels of big sagebrush which are detrimental to big sagebrush itself. Once the big sagebrush reaches higher percent covers, long-lived perennial grasses will decrease, cheatgrass will then be the void and fire will follow. It always amazes me how many folks miss the point that cheatgrass starts under the shrub, excellent safe-site with litter and moisture, and then mines the site out into the inter-spaces. **Sagebrush does not suppress cheatgrass.** Sagebrush over-stories should be more defined and managed by the local resource managers specific to the site since it is of "highest priority". I truly see the concern because **we are not very good at restoring or protecting sagebrush**, but sitting back and hoping that the sagebrush community is not destroyed has not worked. We aged big sagebrush communities (both mountain and Wyoming) and found the ages from 20-75 yrs of age. Mountain big sagebrush built small numbers of seed banks but really not enough to sustain itself without some type of outside help. No seed banks were recorded from Wyoming big sagebrush communities. The return of Wyoming big sagebrush on our 28 yr old plots is absent, yet the mountain big sagebrush community had various return rates from 15% cover in 10 years to only 8% cover in 15 yrs at another site. These goals and objectives need to be flexible and more lenient or they will never be achieved for some habitats. The reality is that in many of these habitats we would be ecstatic to have 10% sagebrush cover!!!

f) R6 – No Comments.

Literature Cited

Endangered first citation misspelled.

Many citations are not in this document. Assume they are in accompanying document.

Bureau of Land Management
Scientific Support document for the National Technical Team report
Recommendation to National Sage-grouse Policy team

November 9, 2011

Following completion of the National Technical Team (NTT) report, there was discussion among the scientists involved in the development of the report that an additional meeting of strictly the agency biologists and scientists was needed to future outline and detail the scientific basis and rationale for the NTT report's conservation actions.

In addition, several scientists commented during the external Western Association of Fish and Wildlife Agencies review process that the NTT report would likely be susceptible to considerable criticism from industry or other partners concerning the proposed conservation measures for Greater Sage-Grouse across the range of the species. The current report lacks sufficient rationale or scientific justification to lead readers directly from the research or literature citation to the recommended action.

It may be beneficial to the BLM and sage-grouse management partners to develop a more explicit supporting science document to complement the NTT report and further link the recommended necessary actions to existing science. As an alternative, this linkage could be made within the NTT report itself. This could be done by reconvening the wildlife/sage-grouse biologists, researchers, and academia from the original NTT group to summarize specific conservation actions with a clearer tie and explanation from the supporting science for each measure or group of measures. It is also recommended that instead of a traditional meeting facilitator, it may be worthwhile to select a strong research leader who has demonstrated critical thinking with regard to all research application to lead this process and finalize the support document. This could be an independent researcher not currently involved in the process but familiar with the appropriate literature, such as Dr. Tom Remington, recently retired Director from Colorado Parks and Wildlife (former Division of Wildlife) and former sage-grouse researcher. Dr. Remington (or a similar person) could insure that the assembled group would focus on and carry forward the actual research findings rather than multiple interpretations of those studies. Linking multiple studies could build a more solid foundation for basis of recommended conservation measures and leave the BLM and others less susceptible to scientific challenges during the planning strategy and implementation process.