

**From:** [Deibert, Pat](#)  
**To:** [Ireland, Terry](#)  
**Subject:** Re: updated version of comments  
**Date:** Monday, November 18, 2013 3:25:22 PM  
**Attachments:** [Comments on GRSB Public Draft EIS pd TI CC edits 11-17-13 clean with comment bubbles pd.doc](#)

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Here are my replies. Some of these have to be deferred to Lief as they are his comments.

I'm out of here - have a migraine and need to go until things go projectile...

On Mon, Nov 18, 2013 at 8:25 AM, Ireland, Terry <[terry\\_ireland@fws.gov](mailto:terry_ireland@fws.gov)> wrote:

Hi Pat,

Had a short discussion with Patty just now about the last sentence in the first paragraph regarding Alternative D meeting COT. We're trying to be as accurate as possible in that sentence without saying we think Alternative D should be the proposed action. As you know, we think Alternative D is workable but just needs either Alternative B or C measures inserted or modifications to some measures. Anyhow, sent you the clean copy with that sentence left in track changes so you could see how Patty and I changed it.

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got leks?

Fish and Wildlife Service Comments on August 2013 Northwest Colorado Greater Sage-grouse  
Public Draft Land Use Plan Amendment and Environmental Impact Statement

GENERAL

We have reviewed the DEIS considering the objectives identified in the 2013 Conservation Objectives Team report (COT report), which details the necessary actions for the conservation of greater sage-grouse (GRSG). We believe that measures outlined in Alternative D, along with our additions and modifications, most closely meet the objectives identified in the COT report.

Appendix B, Fig. 2-1, p. B-7 (and Appendix G, Cap Management): Many lek sites and surrounding habitats occur outside of the GIS SWReGap vegetation classes that identify ecological sites supporting sagebrush (Figure 2-1). By our calculations, approximately 10% of the leks (and vegetation within 200 m) in Colorado occur in three other vegetation classes: Inter-mountain Basins Semi-Desert Grassland, Rocky Mountain Lower Montane-foothill Shrubland, and Southern Rocky Mountain Montane-Subalpine Grassland. These vegetation classes should be included in the habitats subject to the disturbance cap because these mapped areas are important to GRSG in Colorado. Therefore, the disturbance cap should apply to all “sage-grouse habitats” rather than “ecological sites supporting sagebrush.” This would allow for limited disturbance on all habitats used by sage-grouse, not just sagebrush types, including grassland, mesic meadow, and mountain shrub vegetation types. We realize that a site-specific disturbance cap analysis will need to be done when permitting individual projects, and that leks would likely be included in the [cap] analysis and calculations, independent of ecological site maps” (p. F-3). For the purposes of NEPA analysis, and because maps used for planning purposes are often extended beyond their original intent, the three additional vegetation layers should be included in Fig. 2-1.

Appendix F: Please provide a justification for allowing 5% disturbance in PPH versus the NTT recommendation of 3% or a lower disturbance level. In paragraph 2 of this Appendix, it should state: “Alternative D limits anthropogenic disturbance in PPH to 5 percent of ecological sites capable of supporting...”

P. F-3, lines 20-34: The disturbance cap would apply to ecological sites supporting sagebrush and areas specially identified by CPW as contributing to the health of GRSG populations, independent of ecological site maps. The disturbance cap should be applied to all habitats within 0.6 mile of known leks. Disturbance from human activity in close proximity to active leks, nesting, and brood rearing habitat disturbs sage-grouse regardless of the habitat type in which the disturbance occurs. Applying this consistent buffer would also simplify necessary habitat mapping efforts, reduce the likelihood of habitat mapping errors, eliminate habitat assessment discrepancies near leks, and help to protect non-sagebrush habitats that can also be important to GRSG (e.g., grassland in proximity to sagebrush).

**Comment [K1]:** ?? “Necessary” is too strong in my opinion.

**Comment [IT2]:** Agree. Done.

**Comment [IT3]:** Agree to Creed’s comment below. Wording is tricky I realize, but I think Creed’s is a little more accurate. Done.

**Comment [K4]:** I recommend rewording to state, “We believe that the measures outlined in Alternative D, along with our additions and modifications, meet the objectives identified in the COT report.”

**Comment [UF&WS5]:** We should not recommend a specific alternative at this point, but rather components from existing alternatives that can be cobbled together to make a better option. Hence my suggested edits.

**Comment [UF&WS6]:** Suggest numbering comments for clarity.

**Comment [IT7]:** Pat, number just in the general section or all sections?

**Comment [UF&WS8R7]:** Your call – just an organizational suggestion.

**Comment [UF&WS9]:** This sentence confused me so this is a suggested re-write. I hope I caught the intent....

**Comment [UF&WS10]:** It currently reads “less than” which isn’t accurate. Leads the reader to believe it 4% and below

Appendix G: The Surface Reclamation Plan developed by the White River Field Office was included as the model to follow for reclamation of surface impacts. However, on P. 168, Table 2.4, Fluid Minerals, NTT #60 it states that bonds would be secured to ensure that reclamation "...would result in full restoration of the lands to the condition it was found prior to disturbance." Please describe the discrepancy between this standard and the standard in Appendix G. Also Appendix G states that "Reclamation success criteria on sage-grouse habitats would generally be contingent, where prescribed, on evidence of successful establishment of desired forbs and sagebrush. Reclaimed acreage would be expected to progress without further intervention to a state that meets sage-grouse cover and forage needs based on site capability and seasonal habitat use as per Appendix A, "Structural Habitat Guidelines" from the *Colorado Greater Sage-grouse Conservation Plan*." The Service recommends that a minimum threshold of reclamation success based on GRSG habitat structure be identified in the Final EIS to clearly define reclamation successful for GRSG.

Table 2.4: An often-used conservation measure under Alternative D in the DEIS paraphrased here states: 'in each of the Colorado management zones retain a minimum of 70% of ecological sites capable of supporting 12% canopy cover of Wyoming big sagebrush or 15% canopy cover of mountain sagebrush with a 30% disturbance cap from loss of sagebrush from all causes (anthropogenic, wildfire, plowed field agriculture, and vegetation treatments, mappable stands of cheatgrass and PJ, but not irrigated meadows...'. Although we recognize the intent of this conservation measure is to not count things such as wildfire and cheatgrass in the 5% anthropogenic disturbance cap, use of this conservation measure depends on scale and location. Consequently, we request that use of this conservation measure be justified in the FEIS including a description of supporting information. Furthermore, if the conservation measure remains in the FEIS there needs to be a clarifying statement added to it that no new anthropogenic disturbance will be authorized if the 30% cap is reached (even if fire, for example, is the primary reason the cap is reached).

Table 2.4: An often-used caveat under Alternative D paraphrased here states that the DEIS will: 'consider GRSG habitat requirements in conjunction with all resource values managed by BLM/USFS, and give preference to GRSG habitat unless site-specific circumstances warrant an exemption'. Please identify or bookend the potential exemptions in the FEIS. Furthermore, the FEIS needs to state that reporting of exemptions or exceptions will be done.

**FIRE**

(BLM Programs: Fuels Management, Fire Operations, Emergency Stabilization and Restoration, Habitat Restoration):

The BLM should minimally follow BLM Instruction Memorandum (IM) No. 2013-128, or as appropriate more recent IM's for fuels management and fire operations direction.

P. 177, Table 2.4, Fuels Management, NTT Item 75, Alternative D: The conservation measure to not reduce canopy cover to less than 15% should be applied to All Designated Habitat (ADH).

**Comment [UF&WS11]:** the specific vegetation requirements listed in Colorado's Conservation Plan should be cited as well as the measure of 'functionality' or 'occupancy' and whether they are included in the definition of "restoration success". Too often "reclamation success" could be and is defined as vegetation established to reduce the risk of erosion... not taking into consideration the functionality of the restored vegetation relative to GRSG needs.

**Comment [IT12]:** Pat are you saying to add more here or in the FEIS?

**Comment [UF&WS13R12]:** In the FEIS, but we need to help define what we want. I would suggest consistency with the state.

**Comment [UF&WS14]:** This is a minimal canopy cover.

**Comment [IT15]:** Pat, what exactly depends on scale and location?

**Comment [UF&WS16R15]:** Scale would be whether or not it is measured at the project level, vs. PAC, vs. population. I think location may refer to inside or outside PAC or PPH.

**Comment [IT17]:** Pat, as BLM informed us this conservation measure is not included in other DEIS's. Given that we are wondering how impacts of large fires are being addressed in reference to disturbance caps if something like this conservation measure is not included in the other DEIS's?

**Comment [UF&WS18R17]:** Not sure I understand – fire is part of the disturbance cap

**Comment [UF&WS19]:** This is a mis-interpretation of the literature. It depends on the scale and location, so its fair to ask for justification of this measure, including a description of supporting information.

**Comment [IT20]:** Pat, what do you mean by bookend?

**Comment [UF&WS21R20]:** The breadth of the range. What is the worst, and what is the best.

P. 178, Table 2.4, Fuels Management, NTT Item 76, Alternative D: The conservation measure to apply appropriate seasonal restrictions for vegetation management should be applied to ADH.

P. 179, Table 2.4, Fuels Management, NTT Item 78, Alternative D: The text under this item mentions conditions to consider when using prescribed fire. We recommend BLM include a risk analysis, including parameters such as tolerable level of cheatgrass allowed for a prescribed burn/natural ignition fire, in the Final EIS.

P. 183, Table 2.4, Emergency Stabilization and Restoration, NTT #89: Alternative B language should be selected as a conservation measure to consider climate change when proposing restoration seedings and to consider seed from warmer regions of the subject plant's range.

P. 185, Table 2.4, Habitat Restoration, NTT #94: Alternative B language should be selected as a conservation measure to consider climate change when proposing restoration seedings and to consider seed from warmer regions of the subject plant's range.

NON-NATIVE, INVASIVE PLANT SPECIES  
(BLM Programs: Nearly all)

Non-native, invasive plant control and monitoring measures are scattered throughout the DEIS by BLM/USFS Programs. Provide a list of Programs where the measures are addressed so they are more easily found and provide references to sections in individual BLM and USFS Land Use Plans where non-native, invasive plant control and monitoring measures will continue to be used under the Plans.

Insert COT report conservation measure #3 to monitor and control invasive plants for at least 3 years post-wildfire under Fuels Management, Emergency Stabilization and Restoration, and Habitat Restoration sections.

BMPs to reduce the spread of non-native invasive plants such as washing equipment, etc. should be included.

ENERGY DEVELOPMENT  
(BLM Programs: Fluid Minerals, Wind, Solar)

In regards to determining if an exception can apply for proposed energy projects if the 5% disturbance cap is reached, criteria should be developed for determining a healthy and stable or increasing GRSG population and the process should be described in the FEIS. Furthermore, inclusion of a detailed description of criteria for determining what constitutes habitat loss and disruptive activities to GRSG is recommended, such that it is clear the 5% disturbance cap can be accurately measured.

P. 163, Table 2.4, Fluid Minerals, NTT #49: On existing leases, alternative B would impose a limit of one permitted disturbance per section (640 acres) in PPH. We assume this means no more than one pad or one compressor station or one centralized water facility etc., per section. We recommend that this Condition of Approval be included in the proposed plan, although

**Comment [UF&WS22]:** This may be a moot point if BLM includes Ken Mayer's fire risk table in their documents. I would leave the comment in for now.

**Comment [UF&WS23]:** I haven't seen any disturbance protection for known Winter Concentration Areas (WCAs). Are these not designated in the Colorado Conservation Strategy?

**Comment [IT24]:** Pat, I'm not sure what you're asking and what you mean by the CO cons. Strategy?

**Comment [UF&WS25R24]:** The conservation plan (previous plan)

calculated as an *average* of 1 disturbance per 640 acres over all PPH within a given Colorado Management Zone. This would allow for the clustering of such disturbances, thereby minimizing fragmentation of habitats, and allows for greater flexibility in development design and planning at the master development plan scale while limiting development to a level compatible with existing GRSG populations. If certain Colorado Management Zones are already above this disturbance density (e.g., MZ 16, 17), and not all leases are held by production yet, we recommend granting lease extensions until older disturbances that are no longer in use are reclaimed allowing for new disturbances to be permitted once again. We realize that BLM does not have the authority to infringe upon existing lease rights.

**Comment [UF&WS26]:** I would add emphasis here.

P. E-8. GRSG PPH COA-47-51d. For existing oil and gas leases within PPH, it appears that the preferred alternative under COA-47-51d could allow numerous drilling pads and access roads to be constructed within 0.6 miles of GRSG leks outside of the lekking to early brood-rearing season. Producing pads also create vehicle traffic and human activity which is disruptive to sage-grouse breeding and nesting activities. Standard BLM lease terms would allow BLM to require a pad to be moved up to 200 meters from a lek, but this distance does not protect sage-grouse habitat.

The 5% disturbance cap would limit the loss of sagebrush habitat, but would not constrain the construction of roads and pads in other habitats. In GRSG populations with mixed habitats, such as the Parachute-Piceance-Roan (PPR) population, these activities could result in numerous pads being strategically located within non-sagebrush habitats but in close proximity to GRSG leks. We have tested the possibility in a GIS exercise in the PPR population in MZ 17 on BLM land and in most cases new pads could be constructed near leks (within 200m to 1000m) in non-sagebrush habitats (including, but not limited to aspen stands, gambel oak, grassland, etc.) without being constrained by the disturbance cap. This scenario provides little protection to GRSG as the close proximity of producing pads to leks and nearby sagebrush habitat will disturb lekking, nesting, and brood-rearing sage-grouse, even if direct sagebrush impacts are avoided.

To prevent or minimize this risk, this COA should be revised (or a new COA applied), to keep new pad locations on existing leases outside the 0.6 mile from leks regardless of habitat type (not just a timing restriction on pad construction/drilling, but a year-round restriction on new pad siting/construction). Keeping pad locations 0.6 mile from lek sites provides more protection for GRSG (as in the current Little Snake Field Office RMP for new leases, and strongly recommended in the 2008 Colorado Greater Sage-grouse Conservation Plan). Where the authority exists, the BLM should also apply such a COA to existing leases; it would still be far less restrictive than COA-47-51b/c, (which would preclude new pads anywhere within PPH on existing leases, or at least would maximize the distance between new pads and leks within a lease). We recommend that this COA apply to all leks as well, including those in PGH. Nearly one fourth of the area within 0.6 mile of a GRSG lek is already leased in Colorado according to GIS analyses conducted by our office.

**Comment [UF&WS27]:** Is this edit correct? I was confused on first read until I figured out that it was the verbalization of COA-47-51b/c.

**Comment [IT28]:** Yes, your edit appears fine to me and Creed.

We recommend that the 0.6 mile buffer be applied to all actions under all BLM/USFS Programs, not just energy development actions. For example, the exception criteria (p. E-11 for Right-of-Ways) could state something to this effect: "Except in rare cases, exceptions to ROW avoidance

will not be granted within 0.6 mile of any GRSG lek.” We believe that year-round protection of leks from other sources of significant surface disturbance, such as mining, should also be precluded. Additionally, we understand that more recent CPW data may indicate that a year-round buffer larger than 0.6 mile may be warranted, such as a 1-mile buffer, which would include the preponderance of GRSG nests surrounding a lek in most cases.

P. 167, Table 2.4, Fluid Minerals, NTT #59: We recommend language in Alternative B be used for identification of areas for acquisition of mineral rights or use of conservation easements that would benefit GRSG.

P. I-6. Table I.1, #38. Regarding anti-perching devices, we recommend that only those anti-perching devices be used that would not facilitate raptor or corvid nest construction. Additionally, for large transmission towers, if anti-perching devices alone would be inadequate to prevent raptor or corvid nesting, we recommend requiring that H-frame or other non-lattice towers be required in addition to anti-perching devices.

P.I-4. Add a Required/Preferred Design Feature to Appendix I to minimize effects from geophysical exploration projects in GRSG habitats, including, but not limited to minimizing vegetation loss from shot-hole drilling, crushing by off-road vehicle travel and vibroseis trucks, clearing for staging areas, etc.

P. I-2 #2: The parenthetical “>60” looks as though it’s defining ‘shallow’ as greater than 60 cm. The specific measure should be stated or the wording restructured to make the sentence more clear.

P. I-4 #9: Specify conservation measure addressing “important areas and habitats” is for all seasonal habitats.

P. I-4 #12: Identify the speed (or range of appropriate speeds) limit here.

P. I-6 #39: Clarify what’s included in “GRSG-safe fences” such as “lay-down” fencing (which would be best), or simply fence marking, which would likely only be done in ‘high-risk’ areas identified in the model (Stevens et al.), or other measures.

P. I-7 #50: Add a measure to provided enforcement here and all similar measures.

**Comment [IT29]:** Agree with Creed’s comment below. Done.

**Comment [K30]:** I now recommend removing this paragraph. It has the drawback of indicating that exceptions to our recommended 0.6-mile buffer would be granted.

**Comment [IT31]:** Done for Creed’s comment below.

**Comment [K32]:** I really think it is unwise to remove the “we recommend” statement (here and elsewhere). Without it, the comment comes across as harsh and somewhat rude. It sounds more like an ultimatum than a recommendation. We don’t want to make pre-decisional ultimatums that might kind of tie our hands during the final listing decision in 2015.

**Comment [IT33]:** OK for this one. Done.

**Comment [IT34]:** After discussion Creed and I decided this is possibly outside the range of alternatives and is of minor consequence due to this measure already being commonly used.

## SAGEBRUSH REMOVAL

(BLM Programs: Range, Fuels Management)

See Grazing and Fire comments.

## GRAZING

(BLM Programs: Range)

P. 150, Table 2.4, NTT #21: We recommend description of a rotational timeline in which land health assessments will be completed, minimally in less than 10 years.

Please describe how habitat assessments will be conducted (such as using standard land health assessments) and what habitat structure guidelines will be used (such as the Habitat Assessment Framework). If the HAF is not used, reference Connelly et al. (2000) or Hagen et al. (2007) for the habitat guidelines.

We recommend addressing drought in habitat objectives and applying BLM IM No. 2013-094, and similar USFS guidance on FS lands.

P. 152, Table 2.4, NTT #25, Alternative D: Add to this conservation measure that avoidance of GRSG impacts from livestock trailing will also be addressed to assure GRSG habitat guidelines are being met.

In areas where wild ungulates are negatively impacting sage-grouse habitats the BLM/USFS should work with Colorado Parks and Wildlife, and other agencies as appropriate, to design and conduct habitat work that redistributes wild ungulates. In problematic areas where domestic ungulate grazing overlaps problems exacerbated by wild ungulate overuse, modifications to livestock grazing management should be implemented until greater sage-grouse habitat conditions are improved.

Insert a conservation measure under Range Management to evaluate, modify as necessary, and time range improvement projects to limit impacts to GRSG.

P. 151, Table 2.4, Range Management, NTT #24: Use language in Alternative B for vegetation and composition structure to emphasize GRSG habitat objectives.

P. 152, Table 2.4, Range Management, NTT #25: We recommend using Alternative D language but change the first sentence to read: (ADH) Include terms and conditions on grazing permits and leases that assure plant growth meets seasonal sage-grouse habitat requirements and residual forage remains at least at minimum recommended height for hiding cover.

P. 153, Table 2.4, Range Management, NTT #28: We recommend the use of Alternative B language but add to it that stubble height must be consistent with summer-fall habitat structure guidance in the 2008 Colorado GRSG Conservation Plan or the newest guidance.

**Comment [UF&WS35]:** Chapter 4: (p.506) A bullet should be added: "augmented distribution of populations... which in turn could have impacts to genetic structure of the population."

**Comment [IT36]:** Pat, I don't know what your comment means. Doesn't appear to match text on page 506.

**Comment [UF&WS37R36]:** Will have to defer to Lief – this is his comment. Will ask.

**Comment [IT38]:** Not sure was from consistency call. I'm just going to delete as it doesn't seem that important.

**Comment [UF&WS39]:** We should tell them what we want to see here – not the exact measures, but the impacts that need to be avoided.

**Comment [UF&WS40]:** Is there more than CPAW involved here? If so, list them.

**Comment [IT41]:** Pat, the part in parentheses didn't make sense to me so I recommend deletion unless you can clarify to me why important.

**Comment [UF&WS42R41]:** Not seeing the parentheses....?

**Comment [IT43]:** Colorado GRSG Conservation Plan

P. 153, Table 2.4 Range Management, NTT #29: Alternative D language is acceptable but include that stubble height must be consistent with summer-fall habitat structure guidance in the 2008 Colorado GRSG Conservation Plan or the newest guidance.

P. 154, Table 2.4, Range Management, NTT #31: Use Alternative D language but apply to ADH.

P. 156, Table 2.4, Range Management, NTT #33, second part: Specific language about establishment and monitoring of grazing exclosures should be included in the monitoring appendix (J).

P. 157, Table 2.4, Range Management, NTT #35: Preferred and required design features to avoid or minimize potential for spread of West Nile virus should be applied to ADH.

P. 158, Table 2.4, Range Management, NTT #36: Changes to structural range improvements and placement of mineral and salt supplements to enhance GRSG habitat and populations should be applied to ADH.

P. 159, Table 2.4, Range Management, NTT #39: We recommend Alternative D language with the modification of inserting that at least minimum habitat requirements for sage-grouse should be maintained if used as a grass bank. Discussion of establishment and monitoring of exclosures for GRSG habitat in grass bank should also be included in Appendix J.

#### RANGE MANAGEMENT STRUCTURES

(BLM Programs: Range)

To be consistent with the COT report objective for range management structures, we recommend insertion of the following conservation measures: 1. New range management structures are to be placed to be neutral or beneficial to GRSG; 2. Existing structures that are impacting GRSG should be removed or modified.

#### FREE-ROAMING EQUID MANAGEMENT

(BLM Programs: Wild Horse Management)

We recommend linking the Colorado monitoring framework to the rangewide monitoring framework (HAF) currently under development and/or to Connelly et al. (2000) or Hagen et al. (2007).

Comment [IT44]: Repeated below.

Appropriate Management Levels need to be established for drought conditions.

#### PINYON-JUNIPER EXPANSION

(BLM Programs: Fuels Management, Habitat Restoration)

A conservation measure should be added to the Habitat Restoration Program that commits to a 0% PJ incursion within 1000 m of leks (Baruch-Mordo et al. 2013). A caveat to the conservation measure may be included that if the lek is within 1000m of an old growth PJ stand 120 years old

or older (stand established in 1894 or earlier) that the PJ within the old growth area does not need to be removed.

**Comment [UF&WS45]:** You'd best put a time frame on this – historical to my kid is 10 years ago!

A conservation measure should be added stating there will be no net increase in PJ (in phase 1 and 2 state of incursion) in other seasonal habitats with a target of removing all PJ incursion.

PJ removal in limited seasonal habitats (in CO or a CO management zone) should be given high priority.

Mechanical removal of PJ should be prioritized as the preferred method.

As stated on P. 186, line 96, please reiterate that PJ removal projects that allow for re-establishment of sage and desirable understory herbaceous vegetation will be an objective. This may be accomplished naturally (solely from act of PJ removal) or through seedings as appropriate, given existing condition of sage and herbaceous vegetation.

### AGRICULTURAL CONVERSION

(BLM Programs: Lands and Realty, Range Management)

[No comments but might be based on needed follow-up from previous questions for BLM.]

1. There is irrigated meadow acreage identified on both BLM and USFS, why?
2. There is cropland acreage identified on BLM (not USFS), why?

**Comment [UF&WS46]:** Add appropriate text as per your discussions with BLM/FS

**Comment [IT47]:** Still need to ask Bridget this.

### MINING

(BLM Programs: Solid Minerals – Coal (SMC), Locatable Minerals (LM), Non-energy Leasable Minerals (NELM), Salable Minerals (SM), Split Estate Minerals (MSE))

Provide measures that ensure that for any proposed or existing mine (under any mining category) reclamation is conducted to meet GRSG habitat objectives.

Insert a statement/conservation measure under each of the mining categories that reclamation of an existing mine does not replace off-site compensatory mitigation for mine disturbance.

P. 170, Table 2.4, Solid Minerals – Coal, NTT #64: Alternative D says measure applies to ADH but the associated text says only priority habitat. Please correct this anomaly to ADH.

P. 174, Table 2.4, Locatable Minerals, NTT #65: We recommend using language in Alternative B but with slight modification that withdrawal of mineral leasing be conducted where there is a clear threat to persistence of the GRSG in the CO management zone.

P. 177, Table 2.4, Mineral Split Estate, NTT #73: Apply conservation measures to lessees of mineral estate to ADH.

### **Comment [UF&WS48]:**

Some of the conservation measures mention establishing speed limits...

We should recommend an actual speed limit (or range of limits) placed here, as well as traffic volumes on each road.

Because enforcement is difficult in these areas, more and more energy companies are monitoring their vehicle with GPS-monitored speed.

I'm not sure how this information would inform a comment or measure (can't require them to purchase these devices), but it is a way for energy companies to enforce and police themselves. This also reduces the potential of vehicle-related mortalities, especially during the brood rearing seasons.

### RECREATION

(BLM Programs: Travel, Recreation)

The following parameters should be included under a new conservation measure or under Alternative D conservation measure NTT #5 (P. 144): Limit roads to less than 0.09 kilometers/kilometer<sup>2</sup> and recommend high use paved or maintained gravel roads s be placed at least 8 kilometers from leks (Johnson et al. 2011, Wisdom et al. 2011). Limit secondary roads (low-use gravel or two-tracks) within 400 meters of a lek (Wisdom et al. 2011) [Is leks correct or just occupied area? In PPH, ADH for entirety of CO, or per CO mgmt zone? Are these correct metrics? Is 300-400 meters in Knick et al. the minimum distance for secondary roads, i.e. not highway or interstate? Johnson et al. indicates that secondary roads may not influence GRSG distribution/presence.] This density and distance should apply to new and existing roads and if existing road density is above the recommended limits the existing roads should be closed or rerouted to the extent possible.

P. 143, Table 2.4, Travel, NTT #2: Alternative D language needs to be modified to include the provision to evaluate permanent road closures in addition to seasonal closures.

P. 145, Table 2.4, Recreation, NTT #9: Define how “adversely affect” in the Alternative D conservation measure will be measured (e.g. any habitat loss, any potential disruption to individual GRSG, downward population trend in a GRSG population or CO mgmt. zone, etc.).

EX-URBAN DEVELOPMENT  
(BLM Programs: Lands and Realty)

P. 148, Table 2.4, Lands and Realty - Land Tenure Adjustment, Alternative B, first row: States, “Retain public ownership of GRSG PPH.” Alternative D states, “Same as Alternative B.” However, on p. 585 the EIS states, “Compared to the other action alternatives, Alternative D allows the most flexibility in acres available for acquisition, disposal, or exchange because there is no management action proposed to retain public ownership of PPH.” This is an apparent discrepancy. We recommend that the proposed plan include direction to retain PPH as stated in Table 2.4 for Alternative D.

P. 149, Table 2.4, Land Tenure Adjustment, NTT #16: Modify language in Alternative D by inserting language from Alternative C so that the conservation measure states: “(ADH) The BLM/USFS will identify and strive to acquire non-federal lands important for GRSG.” Also include the rest of the language under Alternative D that starts with “For example:...”

INFRASTRUCTURE  
(BLM Programs: Nearly all)

P. 146, Table 2.4, Lands and Realty, NTT #10: We recommend that all PPH be an avoidance area for any kind of infrastructure. If infrastructure projects cannot be avoided then project impacts must be neutral or beneficial to GRSG, which must be demonstrated by the land management agency prior to construction. For example, fences maybe placed in PPH if impacts to GRSG habitat from construction and placement will be neutral or if benefits to GRSG habitat will be gained by the fence for management of livestock or wild ungulates.

**Comment [UF&WS49]:** We have to go with leks because of the literature. I modified the road description as its unlikely there is a new highway in the works that we haven't heard about. But the road type inserted is similar.

**Comment [UF&WS50]:** yes

**Comment [IT51]:** Pat, this is in Wisdom et al. Knick gives the 1 km, 0.05 km and 0.01 km distances. What should we go with?????

**Comment [UF&WS52R51]:** Confused – where did the 300 – 400 come from?

**Comment [UF&WS53]:** It depends on traffic volume.

**Comment [IT54]:** Yes, I believe addressed under energy and may put under general section since will be for all actions.

**Comment [UF&WS55]:** In cluding fences for managing live stock or wild ungulates to improve habitat? You may want to qualify slightly.

**Comment [UF&WS56]:** I don't think we can dictate who does this – BLM/FS is responsible, but they can use project proponent data.

**Comment [UF&WS57]:** Lets not offer until they request.

P. 587, Section 4.5.4, Summary of Impacts on Lands and Realty: States, “Alternative D would limit development and surface disturbance in areas capable of supporting sagebrush from identifying ROW avoidance areas on approximately 53 percent of GRS habitat.” However, Table 2.4 (p.146, NTT Item 10) states that all PPH would be classified as a ROW avoidance area, not just ecological sites capable of supporting sagebrush. Please resolve this apparent inconsistency. We recommend that the proposed plan designate all PPH as an avoidance area, as in Table 2.4 for Alternative D.

**Comment [1T58]:** Agree with Creed’s comment below. Done.

FENCES  
(BLM Programs: Range Management)

Follow the COT objective to minimize impact of fences on GRS.

Insert a conservation measure in Range Program to place new fences no closer than 1 km from leks.

P. 158, Table 2.4, Range, NTT #37: We recommend choosing Alternative C language for ADH. Alternative C language is the most flexible and allows for the possibility of any of the three options; removal, modification, or marking of fences, as feasible or warranted without prioritizing which option should be conducted first.

Add to or replace the Stevens (2011) citation for fence collision information to Stevens et al. 2012 (Journal of Wildlife Management article). [There’s a Stevens 2013 as well, is it relevant to fence and other livestock management structure placement and distance from lek?]

**Comment [UF&WS59]:** Not sure the substance between these two are different .

**Comment [1T60]:** Pat, so what are telling me here?

**Comment [UF&WS61R60]:** The publication is a derivation of the thesis (Stevens 2011).

**Comment [1T62]:** I think it’s ok as is since it mentions steep shorelines in last sentence.

Literature Cited

Baruch Mordo, S., Evans, J.S., Severson, J.P., Naugle, D.E., Maestas, J.D., Kiesecker, J.M. Falkowski, M.J., Hagen, C.A., and Reese, K.P. 2013. Saving sage-grouse from the trees: A proactive solution to reducing a key threat to a candidate species. Biological Conservation 167:233-241.

Connelly, John W., Schroeder, Michael A., Sands, Alan R., and Braun, Clait E. 2000. Guidelines to manage sage grouse populations and their habitats. Wildlife Society Bulletin, 28:967-985.

Hagen et al. 2007.

**Comment [1T63]:** Pat, I do not have this reference and am not positive the one Hagen 2007 I see in the literature database (from Lara/Jesse) is the right one. Can you please provide the citation? (Another missing thing resulting from the upload of Windows 7. My entire Adobe Professional is gone and so are the citations I had under it. Although I would think Adobe Reader would still have them all so may they just didn’t all get copied over).

Johnson, D.H., Holloran, J.W., Connelly, J.W., Hanser, S.E., Amundson, C.L., and Knick, S.T. 2011. Influences of environmental and anthropogenic features on greater sage-grouse populations, 1997-2007. Pp. 407-450 in S.T. Knick and J.W. Connelly (editors). Greater sage-grouse: ecology and conservation of a landscape species and its habitats. Studies in Avian Biology (vol. 38) University of California Press, Berkeley, CA.

Knick et al. 2013. Ecological minimums....?

**Comment [1T64]:** Not sure if we are going to use this or not put in as a placeholder.

Stevens, Bryan S., Connelly, John W., and Reese, Kerry P. 2012. Multi-scale assessment of greater sage-grouse fence collision as a function of site and broad scale factors. The Journal of Wildlife Management 76:1370-1380.

Wisdom, M.J., Meinke, C.W., Knick, S.T., and Schroeder, M.A. 2011. Factors associated with extirpation of sage-grouse. Pp. 451-472 *in* S.T. Knick and J.W. Connelly (editors). Greater sage-grouse: ecology and conservation of a landscape species and its habitats. Studies in Avian Biology (vol. 38) University of California Press, Berkeley, CA.