



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Oregon Fish and Wildlife Office
2600 SE 98th Avenue, Suite 100
Portland, Oregon 97266
Phone: (503) 231-6179 FAX: (503) 231-6195

Reply To: 8181.0514B
File Name: OR BLM dEIS comments.docx
TS Number: 14-345

FEB 20 2014

Memorandum

To: Director, Oregon State Office, Bureau of Land Management, Portland, Oregon

From: State Supervisor, Oregon Fish and Wildlife Office, Portland, Oregon

Subject: Oregon Sub-Region Greater Sage-Grouse Draft Resource Management Plan and Environmental Impact Statement

Thank you for the opportunity to review your November 22, 2013, Oregon sub-region greater sage-grouse draft resource management plan (draft RMP) and draft environmental impact statement (draft EIS) regarding conservation of the greater sage-grouse (sage-grouse) (*Centrocercus urophasianus*). Our comments are provided as a Cooperating Agency pursuant to the National Environmental Policy Act (NEPA) 40 Code of Federal Regulations Part 1500-1508 and 43 C.F.R. 46.230, and as requested per the March 2012 Memorandum of Understanding among the Bureau of Land Management (BLM), U.S. Fish and Wildlife Service (Service), and U.S. Forest Service. Our comments are also pursuant to the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.), and the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.).

BLM's goal in this land management planning effort is to identify and incorporate appropriate conservation measures for sage-grouse in the RMP in order to conserve, enhance and/or restore habitat for the species. BLM's overall intent with this effort is to reduce, eliminate or minimize existing threats to the species under BLM management authority to help avoid the need to list the species under the ESA. ESA listing was determined to be "warranted but precluded" by higher priority listing actions in 2010 by the Service (75 FR 13910). A listing decision (a proposed rule to list sage-grouse as endangered or threatened, or a determination that listing is no longer warranted) is judicially-required of the Service by September 2015.

Overall, we consider the BLM's preferred alternative D to represent a meaningful improvement for conservation of sage-grouse compared to current management plans. Unlike existing RMPs, alternative D will result in crucial factors related to sage-grouse conservation being specifically incorporated into the direction, objectives, and standards underlying BLM land management in

Oregon. However, there is limited specificity regarding implementation targets and outcomes for the species. The comments that follow will elaborate on these issues and are intended to facilitate the development of a final plan that clearly provides for sage-grouse conservation on BLM lands in Oregon.

Background

The draft EIS describes and analyzes six alternatives (A through F) for managing public lands and resources in the planning area. The planning area consists of BLM administered lands and minerals in southeastern Oregon (Klamath, Lake, Harney, Malheur, Baker, Crook and Deschutes counties). The specific BLM Districts included in the planning area are: Prineville, Lakeview, Burns, and Vale Districts.

Our review of your draft EIS and the comments that follow are organized into three main sections: 1) General Comments which provide a broad overview of our findings and concerns, especially as related to several critical components/issues contained in the draft EIS; 2) Comments related to the Greater Sage-Grouse Conservation Objectives Team Final Report (COT report)(Fish and Wildlife Service 2013), which delineates range-wide conservation objectives, based on the best available scientific and commercial data available at the time of its release, for the conservation and survival of the species; our comments include a crosswalk comparison of the COT conservation objectives, measures, and options and your management decisions from all of the draft EIS Alternatives (Attached); and 3) Specific Comments developed in response to individually identified sections (e.g. pages, tables, etc.) of the draft EIS.

General Comments

We understand that there are still several notable elements of the plans that are not completed at the national level which will eventually be included in all final EISs across the range of sage-grouse. With that in mind, the draft EIS does not provide sufficient detail for us to fully evaluate the adequacy of several key components of the plan, including: habitat and disturbance monitoring, adaptive management, fire and invasive species management, and mitigation. We are participating on national interagency teams associated with these plan components and will continue to provide input on these components through our membership on these teams. It will be critical that the final EIS provide additional specificity in each of these areas. Specific areas of uncertainty include, but are not limited to:

- Details on how habitat and disturbance will be measured and monitored;
- Triggers and responses for adaptive management;
- Methods of landscape-scale prioritization and implementation of step-down assessments for addressing threats from fire and invasive species;
- Methodologies that will be used to assess impacts and associated mitigation; and,

- The relationship between BLM methods, direction, and actions considered in the draft EIS and those that will be applied to nonfederal lands under a plan developed by the state; in particular, BLM's vision for how the remainder of the NEPA process and long-term RMP implementation will attain consistency and coordination with measures that emerge from the Oregon state plan.

Finally, our review identified one additional overarching topic not yet sufficiently addressed and which should be substantially rectified in the final EIS—a description of the anticipated outcomes for sage-grouse populations and habitats in Oregon in response to implementation of the BLM alternative(s). This description should include the amount of habitat or the percent of the sage-grouse population likely to be disturbed under each alternative. In addition, we recommend providing maps to show where sage-grouse and their habitats will be protected or impacted. Given that BLM's management direction will be a key consideration in our FY 2015 listing decision, it would be helpful for the final EIS to provide reasonable insight into likely outcomes for the species and its habitats.

Disturbance Threshold (Disturbance Cap)

During our Federal family meeting (February 11-14, 2014) BLM tentatively agreed (pending review of all public comments) to adhere to a maximum 3 percent cap on all anthropogenic disturbance in biologically significant units. A conservative disturbance cap or threshold is generally supported by current technical literature, and a 3 percent disturbance cap on anthropogenic impacts is endorsed by the BLM's National Technical Team (NTT) report. Alternatives B, C, D, and F all include a 3 percent disturbance cap from anthropogenic sources, while alternative F's 3 percent disturbance cap also includes wildfire. However, most of the details on how a disturbance cap would be implemented and monitored are missing, along with any baseline of existing disturbance, making it impossible to analyze how effective it would be in addressing disturbance-related threats to sage-grouse on BLM ground in Oregon.

Alternatives B, C, D, and F could meet the COT report objectives if provisions are included to account for the influences of wildfire. For example, if an adaptive management strategy was implemented to ensure that after large wildfires, disturbance to populations from anthropogenic causes was appropriately minimized or avoided, such a strategy in conjunction with a 3 percent anthropogenic disturbance cap could meet the COT report objectives. However, further clarification on a number of issues related to disturbance caps would first be needed.

We recommend the following clarifications:

- Identification of a clearly defined scale at which a disturbance cap is applied (e.g., sage-grouse populations); analysis of the effects of capping disturbance via the various alternatives at the priority areas of conservation (PAC) scale; an adequate description of the effects of implementing the caps in the context of PAC conservation; and a description of the amount of existing disturbance from a clearly defined and explained baseline, including how the quantification of existing disturbance was calculated as part of the baseline.

- That BLM consider provisions that, regardless of the thresholds applied at the above landscape-levels, BLM should consider provisions to limit disturbance to sage-grouse habitat or leks resulting from any individual project and that prevent impacts from multiple projects from accruing rapidly on the same landscape.
- That the EIS include a description of how direct and indirect disturbance will be measured, including a description on how short and long term disturbances will be counted towards the proposed cap.

We further recommend that measurements related to the cap should rely on a consistent methodology for addressing impacts, including direct impacts (habitat removal), indirect impacts and disturbance. This methodology should be the same one utilized to assess all impacts across all ownerships in the state and be developed in close coordination with the Oregon Department of Fish and Wildlife and the Service.

Fires burn at very different severities, and burned sagebrush (*Artemisia* spp.) landscapes have highly variable recovery patterns based on many factors. The inclusion of habitat loss due to wildfire (or other natural disturbance processes) in a disturbance cap may render the practical utility of a cap moot after one or a few bad fire seasons. Thus, a flexible approach to implementing any disturbance cap is warranted. This approach should advance the concept of limiting or capping allowable and “regulatable” anthropogenic sources of disturbance to a very small portion of the landscape in a clear effort to protect remaining essential habitat. At the same time, this approach should develop a qualitative methodology which considers the loss of habitat to wildfire and evaluates that loss at a very local scale when considering whether to allow additional human-caused disturbance. Again, we recommend close coordination with the Oregon Department of Fish and Wildlife to formally adopt such an approach.

The draft EIS does not describe avoidance and minimization of impacts before implementing the cap; nor does it clearly describe how maintaining habitat suitability or ecological minimums beyond disturbance thresholds (i.e., the 70/30 concept described in Alternative E) would be considered before allowing disturbances that would contribute to the 3 percent cap. We recommend including provisions to ensure that impacts to sage-grouse habitats are first avoided, then minimized if avoidance is not feasible. If avoidance and minimization are implemented but there are still impacts, the remaining impacts could be limited through the use of a disturbance cap. The final EIS should clarify that impacts counted toward a disturbance cap would also be subject to mitigation requirements.

The implementation and administration of a disturbance cap is inherently linked to restoration and mitigation activities. For example, as invasive species (i.e. juniper [*Juniperus* spp.]) are treated in sage-grouse habitat and that habitat is effectively restored, the total amount of disturbance at the scale you are considering is decreased, thereby potentially allowing for new disturbances (subject to the limitations of the cap). The mitigation framework, in particular, will be a very critical component of ensuring that adverse impacts that might be permissible within the limits of the cap (and other proposed management constraints) are offset in a manner that yields a worthwhile and beneficial tradeoff to the species. The adequacy of any proposed disturbance cap, then, can only be assessed in conjunction with the standards and principles underlying that mitigation framework, the effectiveness, durability and additionality contained in

mitigation actions, and the amount of mitigation required for impacts. The draft EIS lacks an adequate description and analysis of a mitigation program and its relationship to the disturbance cap. (See additional comments related to mitigation, below.)

The draft EIS does not effectively describe how the disturbance cap will be monitored. *Appendix G: Greater Sage-Grouse Monitoring Framework* describes the concept of monitoring at the broad and mid scales (Appendix G, page 2), and it describes 18 “disturbance data sources” (Pages G-6 to G-7) but it does not adequately describe the specifics of the monitoring program. Also, there is no discussion of monitoring indirect effects from any of these disturbances. Further, it is mentioned at the end of Section C (Appendix G, page 7) that the 18 threats will be aggregated into three general measures, and that these will be reported annually, but it does not describe what the data will be used for, specifically in relation to the application of a disturbance cap.

Mitigation

Efforts to avoid, minimize, rectify, and offset (i.e., mitigate) impacts of management actions on BLM lands will be critical to assessing the adequacy of the RMPs for conserving sage-grouse and its habitat.

A mitigation plan is a critical component for evaluating adequacy of many other components of the RMPs. The program should be robust enough to ensure that impacts are first avoided then minimized to the maximum extent practicable and that any unavoidable impacts to sage-grouse are offset in a manner that is a beneficial tradeoff to the species. Robustness is measured by providing clear mechanisms under which the program will operate with underlying mitigation principles and standards related to effectiveness, durability, and additionality of mitigation actions.

We are concerned that the draft EIS is largely silent on how mitigation, monitoring (effectiveness and implementation monitoring), and adaptive management will be integrated into a comprehensive management strategy for all the management actions and conservation measures included as part of all the action alternatives. Based on the information contained in the draft EIS, it will be difficult for us to conclude that effective, reliable, and coordinated mitigation will occur via the BLM RMPs.

- Overall, we recommend using the Service’s *Greater Sage-grouse Range-wide Mitigation Framework* (Framework - draft attached) and our comments on BLM’s *Draft MS-1794 – Regional Mitigation Manual Section* as a guide for the final EIS in addressing the elements of a mitigation program.
- We request the BLM provide a clear description of how mitigation, monitoring and adaptive management components, which are essential to assuring conservation delivery, will be integrated into the decision environment and governance structure of the selected alternative in the final EIS.

- Mitigation should be based on a complete assessment of all direct and indirect impacts associated with a proposed action and should apply to all anthropogenic disturbances (not including grazing) in all sage-grouse habitats (i.e. preliminary primary management area [PPMA] and preliminary general management area [PGMA]) regardless of any disturbance caps.

We understand that many details of an avoidance, minimization and compensatory mitigation/offset program or plan (plan) remain in-development and that such details are often not easily addressed within the draft EIS format. Additionally, we understand the State of Oregon, working through a stakeholder effort (the SageCon group), is currently developing a detailed compensatory mitigation plan. However, we are unsure based on the progress made to date and this draft EIS (in the preferred alternative) if and how such a plan coordinates with the BLM's regional mitigation policies or addresses our mitigation principles and standards as outlined in the Framework. This concern is highly significant because it directly affects the level of certainty that the final RMPs/EIS provide with regard to how impacts are to be avoided and how unavoidable impacts will be addressed.

- It is critical that BLM and the state of Oregon mitigation strategies be coordinated and compatible and follow the principles and standards outlined in our Framework. Therefore, we strongly recommend that a clear description of coordination and integration with the State's mitigation plan be included in the final EIS to provide assurance for how impacts will be avoided and unavoidable impacts will be mitigated.
 - Describe how BLM plans to align the methods, direction, and actions considered in the draft EIS with those that will be applied to nonfederal lands under a plan developed by the state—especially if the standards and/or methods that emerge from the state process differ from those proposed by BLM; in particular, BLM should note whether it will modify its methods to attain consistency with those in the state plan if the latter are determined by us and other stakeholders to be more appropriate;
 - If BLM and state mitigation methods differ, describe how BLM will analyze the impacts of and propose mitigation for projects which cross jurisdictions; and
 - We recommend that for projects that have impacts on both BLM land and non-BLM land, mitigation of all impacts and across all ownerships be a condition for approval of BLM authorization of use of the BLM lands and that BLM utilize its authority to suspend or revoke BLM land-use authorizations if agreed-upon mitigation on non-BLM-managed land is ultimately not provided. This does not imply that BLM will require all impacts to be mitigated on BLM land or that BLM has authority to force mitigation actions to occur on non-BLM land, but only that BLM authorization decisions will be premised on assessments of the impacts of the project as a whole and that all such impacts will be appropriately mitigated;
 - Describe the policies, practices, direction, and other considerations BLM will use to ensure that actions required for mitigation occur in the form of, and in locations that are, broadly recognized as priorities for sage-grouse conservation, regardless of ownership; in

particular, how such conservation priorities will guide BLM mitigation decisions in situations in which they might differ from local-level BLM objectives for federal land management.

Finally, because of the permanence (or significant uncertainty regarding persistence) of many impacts that will result from land development activities, the legally-protected status of most mitigation actions (i.e., their durability) must also be very long-term or permanent in nature. Conservation easements, deed restrictions, or other equivalent instruments are typically utilized to attain durability on non-Federal lands. However, these may not be applicable on BLM land.

- Accordingly, we recommend that the final EIS include a specific discussion of the land protection tools that would apply to BLM-managed lands (i.e., the various Legislative/statutory, Administrative Designations, Administrative Allocations, and/or Policy directives BLM will use and the relative degree of legal permanence/certainty they provide).

Noise

Noise stipulations in the draft EIS are applied only relative to lek sites for issuance of recreation use permits (within 3.2 miles of a lek during breeding and nesting season (Chapter 2, page 2-87)), energy projects (appropriate set-back distances (thresholds) regarding density (number of units per area), size (total area disturbed), and noise levels of energy developments need examination to determine what the effects are on sage-grouse (Chapter 2, page 2-92)), and mining projects (Chapter 2, various locations on pages 2-94 to 2-101). We recommend expanding noise stipulations to all sage-grouse habitat types in PPMA for permitted projects. In general, we recommend avoiding placement of structures in sage-grouse habitats that would result in noise levels of more than 10 decibels above ambient conditions (Blickley and Patricelli 2012). The noise measurement and restriction should be applied to construction and long term operation of project facilities.

Such restrictions are supported by relevant literature. There is evidence that human land use activities and noise negatively affect sage-grouse in wintering and brood rearing habitats. For example, the likelihood of winter range use can decline at 80-acre well densities (Doherty et al. 2008, Hagen et al. 2011) and brood success of sage-grouse declines closer to wind turbines (LeBeau 2012), which may be due to a combination of habitat fragmentation, human activity, and noise levels. Acoustics are important in sage-grouse mate selection—hens base mate selection choices on male vocal displays (Gibson et al. 1991). Anthropogenic noise from natural gas infrastructure can limit the ability of sage-grouse to communicate by masking their acoustic signals (Blickley and Patricelli 2012). Noise pollution may induce stress, disrupt physiological processes and behaviors, and mask other natural sounds important to survival and reproduction (Barber et al. 2010, Blickley and Patricelli 2012). Furthermore, effects from noise may extend beyond the lek, affecting nest initiation and parent-offspring communication (Lyon and Anderson 2003, Blickley and Patricelli 2012).

Wildfire/Invasives

It is currently unclear whether any of the alternatives in the draft EIS will adequately address the two primary threats affecting sage-grouse in Oregon, wildfire and invasive annual grasses. We are currently working with the interagency Fire and Invasive Species Team (FIAT) to help identify a strategic approach to addressing these threats that will provide a greater degree of specificity and reasonable certainty that these threats will be addressed.

The scale of the inventory method proposed by BLM needs to correspond better to the scale of the threat. The Habitat Assessment Framework (HAF) will accurately inventory areas that have been identified as not meeting Rangeland Health Standards. However, what it doesn't capture very well is the scale of the wildfire/invasives threat. Additionally, when applying HAF you need to identify the scale at which the inventory is to be applied and how many plots will be needed to conduct an accurate inventory.

Refinement and investment in high quality remotely sensed data may be the best tool to identify habitats over a broad range of quality gradients. It may also better identify areas that warrant the highest level of protection from increased disturbance (high quality intact habitat) or containment (annual grass monocultures) as well as identifying areas that are at highest risk of conversion to annual grassland when a disturbance (wildfire, prolonged drought) occurs. We recommend that BLM incorporate a conservation action into the final EIS that increases mapping effort and quality to better determine areas of risk due to fire, drought, invasive plant species, etc.

Livestock Grazing

Drought

The preferred alternative includes an action (D-LG/RM 10, page 2-82) to address drought conditions through the use of BLM's *Resource Management During Drought* guidance (Washington Office IM 2013-094). We recommend including additional actions in the proposed plan and in the final EIS that will increase grazing flexibility to help support temporary reductions in animal unit month's when necessary to meet drought conditions. We further recommend adding/expanding on existing actions to develop forage/grass banks throughout rangelands in southeast Oregon, either through voluntary relinquishment or a system that incentivizes for rest/forage reserves.

Research Natural Areas

The reductions proposed in Alternative D for the closure of Research Natural Areas (RNAs) / Areas of Critical Environmental Concern (ACECs) appear to be permanent closures. We believe there is an opportunity here to increase the understanding of grazing prescriptions that would be compatible with sage-grouse conservation by using applied research. During the public meetings (January 6-10 and 13, 2014), there were repeated questions about the closing of RNAs. We also have some questions concerning RNAs and would like some clarification.

As noted by BLM staff at the meetings, there are some inconsistencies between various sections discussing the approximate 118,000 acres of RNAs that would be closed. In Chapter 2, Livestock Grazing/Range Management, Action D-LG/RM 1 (page 2-79), states “*Close all RNAs that contain over 20 percent PPMA acres and/or 50 percent PGMA that are not meeting rangeland health standards and do not have a suitable habitat rating consistent with the HAF [Habitat Assessment Framework] or with values adjusted for regional conditions to maintain native plant community cells in relatively undisturbed condition to serve as a baseline for understanding the impacts of grazing and not grazing sage-grouse habitat.*” It further states “*Maintain closed RNAs as closed until attainment of rangeland health standards can be documented and a suitable habitat rating that is consistent with the HAF or with values adjusted for regional conditions is achieved.*” This information seems to indicate that only those RNAs over a certain percentage of PPMA or those not meeting rangeland health standards will be closed until meeting rangeland health standards. Please provide clarification.

Further into the document (Chapter 2, Special Designations - Areas of Critical Environmental Concern, Action D-SD 1 (page 2-106)) states “*In RNAs, work with grazing permit holders to voluntarily relinquish permits, and/or terminate grazing leases if necessary to protect RNA values.*” Is this the same set of RNAs that are under consideration for closing or is this additional RNAs that might be closed? In the Summary of Environmental Consequences section (Chapter 2, Livestock Grazing/Range Management (page 2-117)), states “*A slight reduction in areas open to livestock grazing would occur because some RNAs in PPMA would be closed to livestock grazing. In the specific allotments closed, permittees and lessees would need to locate alternative forage sources and may face financial impacts, . . .*” This statement indicates complete closure of some RNAs. We recommend that BLM clarify the final EIS by describing what the intent is for closing the RNAs, whether the RNAs will be closed permanently, or whether some level of grazing would be allowed to continue for other reasons.

In BLM’s Manual Supplement 1623 (October 1, 1987) *Supplemental Program Guidance for Land Resources*, section .37.C.1. notes that livestock grazing should be managed within RNAs to promote maintenance of key characteristics for which the area is recognized. We recommend using this guidance to further clarify the rationale for closing RNAs, closing and then re-opening RNAs, or allowing some level of grazing to continue. These areas are “research” areas and grazing might be used for studying appropriate grazing levels for the various ecological site locations the RNAs occur within for the conservation of sage-grouse, as well as provide opportunities to work cooperatively with producers. We recommend considering the use of existing grazing allotments in ACECs or RNAs as opportunities to conduct applied research on the compatibility of different types of grazing prescriptions with sage grouse conservation.

Conifer Encroachment

Conifer encroachment is one of the threats to populations of sage-grouse in the Oregon planning area. The COT report states that “*...Greater sage-grouse are negatively impacted by the expansion of pinyon and/or juniper in their habitats, even if the underlying sagebrush habitats remain (Freese et al. 2009). Sage-grouse avoid these areas of expansion (Casazza et al. 2010), and as the pinyon and/or juniper increases in abundance and size, the underlying habitat quality for sage-grouse diminishes.*” The report then goes on to establish a conifer-specific conservation

objective of removing conifers from areas of sage brush that are most likely to support sage grouse (post-removal) at a rate that is at least equal to the rate of conifer incursion. The COT report then recommends four specific conservation options for meeting the stated conservation objective.

In general, the draft EIS describes the threat from conifer encroachment on priority sage grouse habitat as outlined in the COT report, and it describes the areas of sagebrush and juniper interface within the planning area (specifically Table 3-9). However, throughout Chapter 2 (description of the alternatives) and Chapter 4 (Environmental Consequences) there is a fundamental lack of detailed and specific information about how this particular threat will be addressed through the various alternatives. Without adequate descriptions of what management actions will be taken, when they will be taken, and where they will be taken, we are unable to determine with any certainty that the threat from conifers will be sufficiently addressed.

Furthermore, the draft EIS states in Section 3.3.2, page 3-32, Vegetation Trends: Juniper Woodland that “...most of the current vegetation treatments are focused on reducing juniper; however, current treatment rates appear to be lower than the current expansion rate, based on field observations.” However, in section 4.2.3, page 4-20, Impacts Common to All Alternatives, Impacts from Vegetation Management, the draft EIS states that “...Under all alternatives, the BLM would continue to follow Integrated Vegetation Management Handbook (H-1740-2) policies for vegetation management. Application of these policies would control spread of invasive weeds, limit conifer expansion, restore sagebrush, and other activities which improve vegetation management in sagebrush habitat.”

Based on these contradictory statements it is unclear how any of the action alternatives would differ from current management, which based on field observations is not addressing the threat. Please explain how any alternative would address the threat of conifer encroachment, if all alternatives will continue to implement H-1740-2, but the rate of expansion is greater than the rate of treatment.

Finally, we suggests that the final EIS include actions that require follow-up juniper treatments of areas in the coming years as a one-time site-level treatment of juniper will not be adequate to manage juniper encroachment for the long-term. Additional management necessary to maintain the benefit of juniper removal for sage-grouse habitats, including long-term monitoring (greater than 30 years) with appropriate management responses should the resultant habitat decline, will be required to ensure the persistence of sage-grouse habitat. We also recommend adding additional language that incorporates a follow-up treatment 3 to 5 years after the initial treatment to deal with missed junipers or additional sprouting.

Aroga Moth

The aroga moth (*Aroga websteri*) is a sagebrush defoliator and periodic outbreaks can cause widespread damage to rangelands in the western United States. The exclusive larval host of the aroga moth is sagebrush. When in high numbers, aroga moth larvae can severely limit sagebrush growth for many years after the outbreak or even outright kill the host plant.

Large outbreaks of the aroga moth have occurred throughout lower elevation rangelands in southeast Oregon. However, very little is being done to map the outbreaks and the degree of mortality experienced by sagebrush plants in affected stands. Research conducted from 2008-2010 by Virginia Bolshakova (dissertation) may provide further insight into predicting what weather triggers may influence outbreaks as well as predicting where the impacts may be greatest.

Remote sensing in the form of near-infrared lidar and potentially certain spectrums of Landsat or multi-spectral imagery may help identify areas that have been impacted. We recommend adding additional actions (e.g. better mapping of aroga moth outbreaks and connecting these outbreaks to potential wildfire to better prepare wildfire responses) in the final EIS to address loss of sage-grouse habitat via insect outbreaks like the aroga moth.

Sage-grouse Effects Analysis

The draft EIS does not provide sufficient information for us to fully understand the impacts on sage-grouse populations or their habitats. Chapters 4 and 5 primarily focus on how BLM activities (e.g. management actions, direction, and planning) will change and vary among the alternatives. Those changes are reasonably well-described in light of the associated complexity. However, the anticipated impacts to sage grouse – the potential outcome for sage grouse populations and impacts to habitat, quality and distribution, and the relation of these impacts to the changes described for the various BLM activities – are given very minimal attention and detail. There is some tabular display and brief narrative discussion of 10-year and 50-year habitat trends at the very broad landscape level, and very brief and broad-scale discussion of the relative responses of the major threat factors (e.g. invasive species, wildfire, etc.) under each alternative. However, there is very little specific information that enables us to assess the long-term status of sage-grouse in Oregon in response to the alternatives. Given that BLM's overall management direction with respect to sage-grouse conservation will be a key consideration in the Service's listing decision, we recommend that the final EIS include a well-developed assessment of outcomes for the species under the proposed alternative, and how these outcomes will be driven by the critical components of the alternative.

We recommend that more precise target levels relevant to reducing threats to sage-grouse and their habitats be included in the final EIS to help us understand BLM's commitment and the direction BLM will be moving to meet the conservation needs of sage-grouse. Examples include: BLM will target a 5 percent invasive species reduction within PPMAs per year with the intent of reducing invasive species within PPMAs by 10 percent within 10 years; BLM will target juniper removal within one kilometer of leks to zero percent canopy cover (following Baruch-Mordo et al. (2013) suggestions) with the intent of reducing the overall juniper level near leks by 5 percent within 10 years; BLM will target completing 20 percent of their allotment reviews per year with the intent of completing reviews for all allotments at least once within 10 years, etc. Targets should be set for the boundary of the draft EIS and not District by District thereby providing additional flexibility on meeting the agreed upon targets (the targets would be minimally agreed upon by BLM, the Service, and Oregon Department of Fish and Wildlife). We also recommend that BLM describes how they would meet these targets in the final EIS.

Conservation Objectives Team Report Comments

The Service created a Conservation Objectives Team (COT) of state and Service representatives tasked with the development of range-wide conservation objectives for the sage-grouse to define the degree to which threats need to be reduced or ameliorated to conserve sage-grouse so that it is no longer in danger of extinction or likely to become in danger of extinction in the foreseeable future. We compared the BLM's draft EIS preferred alternative (Alternative D) to the resulting COT report to determine consistency (see attached matrix table).

Priority Areas for Conservation (PAC)

As described in the COT report, maintenance of the integrity of PACs (i.e., maintenance of a healthy sagebrush shrub and native perennial grass and forb community appropriate to local site ecological conditions, which conserves all essential habitat components for sage-grouse) is the essential foundation for sage-grouse conservation. The COT report provides seven objectives for PACs. We are providing comments on five objectives (1, 2, 3, 6, and 7) that are most relevant here. We believe the draft EIS, via the preferred alternative, is consistent with the intent of the COT report for objectives 4 and 5.

1. Retain sage-grouse habitats within PACs. While the draft EIS is reasonably consistent with this objective, we recommend that improving consistency could be achieved by adding further language eliminating or minimizing fuel treatments such as no prescribed burns in low elevation/big sagebrush, breeding and nesting habitat, or winter habitat. The draft EIS alternative D provides that sage-grouse habitat within PACs would be avoidance areas for new right-of-way (ROW) authorizations only and that development could occur within avoidance areas that have not exceeded the 3 percent disturbance cap. We recommend that all ROWs in PACs be exclusion zones to protect these areas.

2. If PACs are lost to catastrophic events, implement appropriate restoration efforts. The draft EIS appears consistent with this objective. However, we recommend further refinement on large wildfire restoration and the development and use of local seed sources for restoration. Our primary concerns are the use of native grass and sagebrush seed from outside the restoration area (e.g., sagebrush seed from Utah) and the criteria for the use of non-native perennial grasses in re-vegetation efforts that are at risk of non-native annual grass invasion.

We understand that the presence of non-native annual grasses (e.g., cheatgrass [*Bromus tectorum*] and medusahead [*Taeniatherum caput-medusae*]) in the system only further complicates efforts to achieve sagebrush habitat restoration and to meet management objectives set forth in multiple Resource Management Plans in Oregon that are currently being revised. However, using costly native seed from a different growing zone is unlikely to be successful on burned areas in Oregon (Shaw 2005). These Resource Management Plans emphasize the importance of using native vegetation from local sources for successful post-fire rehabilitation.

We recommend the use of the 2012 "Sage-Grouse Specific Criteria for Post-fire Restoration" developed by Oregon's Technical Sage-grouse Team. This document contains Best Management Practices to assist in Emergency Stabilization and Rehabilitation development in

sagebrush habitat. The document's recommendations include appropriate native seed mixes, seeding rates and densities, timing and application of seeds, deferred grazing, and controlled access to sensitive burned areas that are highly erosive and unstable. Additionally, it contains recommendations for both short and long term monitoring strategies. We are concerned with the quantity of non-native perennial grass seed used in combination with native perennial grass and sagebrush seed in past practices. BLM seed-mix ratios often exceed those recommended by seeding guides. We understand the need to re-establish perennial grasses to stabilize the soil and provide forage. However, we recommend that agreed upon criteria be developed to identify the circumstances for the use of non-native seed mixes.

3. Restore and rehabilitate degraded sage-grouse habitats in PACs. We agree that alternative D is generally consistent with this objective from the COT report but recommend a further refinement. Meeting HAF indicators for grazing is an appropriate method to document sage-grouse habitat conditions. We recommend additional language describing the process and outcome when the indicators are not met.

6. Actively pursue opportunities to increase occupancy and connectivity between PACs. We recommend that more proactive management in PGMA be included in the final EIS to increase consistency with this COT objective. We recommend that BLM builds upon the focal area approach (Chapter 2, page 2-21) to strengthen connectivity between PACs.

7. Maintain or improve existing habitat conditions in areas adjacent to burned habitat. While Alternative D in the draft EIS provides several conservation measures to meet this objective, we recommend that further direction be included to provide additional protection in unburned areas adjacent to burned areas. This could include the establishment of a protected buffer area around burns and a prohibition of certain development within a burn buffer area.

Fire

The conservation objective for fire is to retain and restore healthy native sagebrush plant communities within the range of sage-grouse. Alternative D of the draft EIS was reviewed for consistency with the fire objective and the five related conservation measures.

Conservation measure number 1 states that fire should be restricted or contained within the normal range of fire activity. We understand that due to invasive annual grasses, keeping fires in their normal range of activity will be difficult. We recommend working in combination with vegetation management objectives for sage-grouse habitat and quick responses to wild fire ignitions to increase the chances of restricting fire activity.

While conservation measure number 2 in the COT report states that intentional fires should be eliminated in sagebrush habitats, including prescribed burning of breeding and winter habitats, Alternative D of the draft EIS clearly states that fire is one method that can be used to treat sagebrush (D-VG 13, page 2-61) or invasive species (D-VG 33, page 2-66). We recommend eliminating or minimizing fuel treatments in low elevation/big sagebrush, sage-grouse breeding and nesting habitat, or winter habitat. If prescribed fire is considered for vegetation treatments in

sagebrush, we recommend BLM require that the burn plan clearly indicate how the COT objectives will be addressed by its use, and why alternative techniques were not selected.

We believe the draft EIS, via the preferred alternative, is generally consistent with the intent of the COT report for conservation measure number 3.

Another conservation measure for fire in the COT report (number 4) is to implement a monitoring program for restoration activities. Alternative D of the draft EIS does mention that fuels, restoration, and rehabilitation activities will be monitored to ensure long-term success (including persistence of seeded species and other treatment components (D-WFM 22, 40, pages 2-74 and 2-77). BLM's Burned Area Emergency Stabilization and Rehabilitation Handbook (BLM Handbook H-1742-1) (Bureau of Land Management 2007) states that monitoring of treatments and activities will be for up to three years from date of fire containment. In the sagebrush plant community, recovery can take 10, 20, and even over 30 years to recover from habitat disturbances such as fire. While we recognize that monitoring restoration activities every year for each project is probably not feasible, we recommend a monitoring program that adequately monitors restoration activities until restoration has been achieved (e.g., first three years and then every third year thereafter until restoration has been achieved).

With respect to conservation measure number 5 (immediately suppress fire in all sagebrush habitats), we recommend the following actions be included in the final EIS to increase the effectiveness of firefighter response times:

- The BLM should work with local fire-fighting groups as potential first responders from local communities. Whereas BLM offices are somewhat centralized in their respective districts, the local communities are scattered across eastern Oregon and may be able to more quickly respond to wildfires.
- BLM should stage fire-fighting staff in areas prone to potential wildfire (non-native annual grass areas) during the fire season to enable quicker responses.

Non-native, Invasive Plant Species

The conservation objective for non-native and invasive plant species is to maintain and restore healthy, native sagebrush plant communities. As relevant to this objective and the first recommended conservation measure in the COT report, alternative D of the draft EIS does not explicitly state that all remaining large intact sagebrush patches should be retained (particularly at low elevations). We recommend adding this statement to Goal D-VG 1 (page 2-43) and Action D-VG 12 (page 2-61) to make it clear that the "maintain or enhance sage-grouse habitat" includes retaining large intact blocks and that treatments for non-native invasive plant species should not further diminish large, intact blocks of sage-grouse habitat.

To improve meeting the last conservation measure under invasive species in the COT report (restore altered ecosystems such that non-native invasive plants are reduced to levels that do not put the area at risk of conversion if a catastrophic event were to occur), we recommend adding

“sites at risk of conversion to non-native species if a catastrophic event were to occur” as another bullet under the draft EIS Action D-VG 1 (page 2-58). This would then add sites at risk of conversion to non-native species as a restoration priority for sagebrush conservation. As mentioned above, in regards to use of native seed, adding the use of native seeds to conservation measures like Action D-VG 12 (page 2-61) would strengthen meeting the COT objectives. We also recommend adding best management practices for construction projects in and adjacent to sagebrush habitats to prevent invasion as described in conservation measure number 4 in the invasive species section of the COT report.

Energy Development

As stated in the COT report, energy development should be designed to ensure that it will not impinge upon stable or increasing sage-grouse population trends. The COT report states that energy development should be avoided within PACs. If it cannot be avoided within PACs, then development should only occur in non-habitat within PACs. Lastly, if development must occur in sage-grouse habitat, then development should occur in the least suitable habitat and be designed to ensure at a minimum that there are no detectable declines in sage-grouse population trends. The draft EIS Alternative D would allow energy development to occur in PACs in areas not currently managed as exclusion areas (Action D-LR 1 [page 2-90]). The areas within PACs not managed as exclusion areas would be avoided. Alternative D in the draft EIS states that avoid development first; if not able to avoid, use non-habitat; if must use habitat, use least suitable habitat. Alternative D also allows development to occur in a PAC if the disturbance cap of 3 percent has not been reached. However, there is no language within the draft EIS that excludes development in good sage-grouse habitat within PACs. We recommend that additional language be added (e.g. current moderate to high quality sage-grouse habitat will be withdrawn from development within PACs) to protect essential habitat from development within important sage-grouse habitat.

Sagebrush Removal/Elimination

The conservation objective for sagebrush removal and/or elimination is to avoid sagebrush removal or manipulation in sage-grouse breeding or wintering habitats. Action D-WFM 8 (page 2-72) prioritizes protection of nesting habitat within three miles of a lek, sage-grouse winter range, and preliminary priority management area (PPMA) in the event of wildfire. But alternative D in the draft EIS does not specifically address avoiding sagebrush removal or manipulation in sage-grouse breeding or wintering habitats. Action D-VG 4 (page 2-59) directs avoiding “conducting vegetation management activities during nesting and early brood-rearing where sage-grouse are present.” Once sage-grouse breeding season is over, vegetation management activities may proceed. Action D-VG 15 (page 2-62) provides information on what sagebrush treatments should look like but again, no mention of protecting the key habitat types. Alternative D is not consistent with the COT report with respect to sagebrush removal and therefore we recommend providing an expanded explanation on how protecting both breeding and wintering habitats will occur.

The preferred alternative in the draft EIS also allows the removal of sagebrush to protect overall sagebrush community health in large contiguous areas of sagebrush (Action D-VG 12). Extreme

care should be taken, however, to not allow invasive species a foothold in large, intact blocks of habitat where they do not currently exist or where they exist only at low levels. The idea of removing sagebrush to protect the overall sagebrush community should be closely reviewed to ensure sage-grouse conservation including retention of all seasonal habitats. The further reduction of sagebrush from large intact blocks should be a rare occurrence. We recommend that a protocol be developed that would coordinate a review such projects with the Service and the Oregon Department of Fish and Wildlife.

Grazing

In the COT report, grazing management is to be conducted for all ungulates in a manner consistent with local ecological conditions that maintains or restores healthy sagebrush shrub and native perennial grass and forb communities and conserves the essential habitat components for sage-grouse (e.g. shrub cover, nesting cover). Action D-LG/RM 6 (page 2-80) states that when conducting rangeland health assessments, use habitat indicators and associated values that are consistent with the HAF or with values adjusted for regional conditions to determine the suitability of PPMA. We recommend that additional information be provided on how HAF will be used in evaluating grazing permits. We further recommend that information be provided on how values will be adjusted for regional conditions (local ecological conditions), drought, wildfire, and other disturbances.

Free-roaming Equid Management

Protection of sage-grouse from the negative influences of grazing by free roaming equids is the only conservation objective listed for this threat in the COT report. The draft EIS Action D-WHB 1 and 2 (page 2-68) allow for the incorporation of sage-grouse habitat objectives into Herd Management Area plans and the evaluation of Appropriate Management Levels based on indicators that address structure, condition, and composition of vegetation and measurements specific to achieving sage-grouse habitat objectives that attain suitable Habitat Assessment Framework rating. However, monitoring is not mentioned nor how BLM will respond to situations where Appropriate Management Levels are not met. This action could be consistent with the COT report if it included measures to consistently monitor habitat, monitor horse/burro numbers, and to manage within Appropriate Management Levels. BLM has full authority to manage the horse/burro populations and has management plans in place with population objectives. However, for various reasons, a number of herd management area populations remain above recommended levels. We recommend that this issue be raised to the national level and a new plan be developed to meet the commitment of managing horse/burro numbers at an appropriate level. We also recommend BLM establish Appropriate Management Levels for horses/burros that would be implemented during drought conditions that would be consistent with requirements for livestock grazing.

Conifer Encroachment

The conservation objective for pinyon-juniper expansion is to “remove pinyon-juniper from areas of sagebrush that are most likely to support sage-grouse (post-removal) at a rate that is *at least equal to the rate of pinyon-juniper incursion*” [emphasis added]. Alternative D in the draft

EIS prioritizes juniper removal for phase I and II juniper within PPMA first, phase I and II juniper within PGMA second, phase III juniper in PPMA and phase III juniper in PGMA with a grass-forb understory as third and fourth respectively. It also includes actions for restoration in areas with more than minimal invasive plant species presences, removing all branches from downed trees greater than four feet above the ground, and jackpot burning during winter. However, Alternative D does not address how it will achieve a “no net gain of juniper” per the latter part of the objective. In order to meet the COT objective, we recommend providing additional details on how BLM will meet a “no net gain of pinyon-juniper.”

A conservation option, listed under pinyon-juniper expansion, recommends the prioritized use of mechanical treatments for removing juniper. Unlike sagebrush treatments (Action D-VG 13, page 2-61), Alternative D in the draft EIS does not indicate methods to treat juniper. The use of fire for juniper control is noted in action D-WFM 1 (page 2-69)(fuel management to limit juniper encroachment) and Action D-WFM 14 (page 2-73)(use of naturally ignited wildfires to meet resource management objectives such as reducing juniper encroachment). We recommend that an additional action be inserted to describe appropriate methods to treat juniper and emphasizing that mechanical treatment is the preferred method. As noted in the COT report, this technique allows for more selective removal of invading plants, and more importantly allows understory habitats to remain intact. We also recommend the inclusion of *Guidelines for Juniper Management: Oregon-Washington* (Bureau of Land Management 2013) as guidance on treating juniper.

Another COT conservation option recommends the reduction of juniper cover in sage-grouse habitats to less than 5 percent (but preferably eliminate entirely). A further refinement to this from recent research indicates that, within one kilometer of a lek, juniper canopy cover should be reduced to less than 1 percent to allow for a 60 percent probability of lek activity (5 percent canopy cover within one kilometer of a lek has a 10 percent probability of activity) (Baruch-Mordo et al. 2013). While only an option in the COT report, we recommend setting a goal of zero percent canopy cover within one kilometer of a lek. An old growth exception to the conservation measure should be included, however, that is, if the lek is within 1 kilometer of an old growth juniper stand, the old growth should be retained for its value to the ecosystem and other species. Please include a management decision that describes the factors that will be used to determine what constitutes old growth juniper.

Agricultural Conversion

It is our understanding the conversion of lands to agriculture is not allowed on BLM lands within the planning area. The final EIS should clarify this point and cite to the policies or regulatory mechanisms that prevent such conversions.

Mining

The conservation objective, as stated in the COT report, is to maintain stable to increasing sage-grouse populations and no net loss of sage-grouse habitats in areas affected by mining. Discussions on mining occur under four categories in alternative D: Fluid Leasable Minerals, Locatable Minerals, Salable Minerals, and Non-energy Leasable Minerals.

Under alternative D for Fluid Leasable Minerals, all BLM-administered surface lands within PPMAs not already managed as ROW exclusions would be managed as ROW avoidance. As a result, 5,964,800 acres (47 percent) of BLM-administered surface in the decision area would be managed as ROW avoidance, and 857,600 acres (7 percent) would be managed as ROW exclusion. The BLM would apply a buffer system to manage fluid mineral development in and next to occupied habitat. Under this system, leks would be surrounded by buffers of varying sizes, in which No Surface Occupancy (NSO) stipulations would apply. In addition, controlled surface use and timing limitation stipulations would apply to all areas within occupied habitat that are outside a lek buffer.

Locatable Minerals would remain open to entry under Alternative D with the following exceptions: new and existing claims, operations, and notices in PPMAs would be requested to change mining operations and practices to limit surface disturbance of 3 percent of PPMAs and to mitigate impacts on sage-grouse.

As for Salable Minerals, all PPMAs would be closed to new salable minerals disposal under Alternative D. Approximately 7,105,500 acres of federal mineral estate in PPMAs (47 percent of the federal mineral estate decision area) would therefore be closed to salable mineral disposal.

Under Alternative D, similar to its treatment of Fluid Leasable Minerals, all BLM-administered surface within PPMAs not already managed as ROW exclusions would be managed as ROW avoidance for Non-energy Leasable Minerals. As a result, 5,964,800 acres (47 percent) of BLM-administered surface in the decision area would be managed as ROW avoidance, and 857,600 acres (7 percent) would be managed as ROW exclusion. ROWs in PGMA would be subject to site-specific restrictions to protect sage-grouse, which would add restrictions to non-energy leasable mineral operations in PGMA. Under Alternative D, the BLM would also apply NSO stipulations to 4,756,900 acres (31 percent) of the federal mineral estate decision area, including all acres within PPMAs. Applying NSO stipulations would restrict the ability of non-energy leasable mineral resources to be developed or extracted.

BLM's draft EIS Alternative D fails to ameliorate mining as a threat due to the reliance on discretionary actions for avoiding impacts to sage-grouse from mining activities. It does not 1) close PPMA to fluid mineral mining (allowing disturbance of breeding/nesting sage-grouse and further fragmentation of sage-grouse habitat); 2) recommend PPMA for withdrawal for locatable mineral mining; 3) maintain current stipulations for PPMA (allowing disturbance of breeding/nesting sage-grouse and further fragmentation of sage-grouse habitat); and 4) disallow new disturbance as long as within 3 percent cap. However, scale (which is very important) at which this percentage cap will be established and measured is not discussed.

While each of the four mining categories has some direction to maintaining sage-grouse populations, we recommend the following for all categories of mining:

- Avoid new mining activities and/or associated facilities within occupied habitats, including seasonal habitats.

- Implement a 3-mile lek buffer exclusion area for all four mining categories to provide assurance that mines will not be placed in seasonally-important habitats near leks.
- Add noise restrictions for important sage-grouse habitats (leks, nesting, brood-rearing, and wintering). In general, we recommend avoiding placement of mining activities in sage-grouse habitats; but if avoidance is not possible, minimizing impacts by limiting noise levels to no more than 10 decibels above ambient conditions (Blickely and Patricelli 2012). Noise restrictions should apply to initial construction and long-term operation of project facilities.
- Provide additional language committing to restore habitats disturbed by mining and associated facilities prior to additional leasing in sage-grouse habitats. The latter part of the conservation objective stresses no net loss of sage-grouse habitats in areas affected by mining.

Recreation

Recreation is mentioned as a major threat facing the Baker and Central Oregon sage-grouse populations in the COT Report. In order for the proposed plan to be consistent with the COT report we recommend:

- setting limits on road construction in PPMA;
 - seasonally close roads;
 - prioritize completing travel management plans for Baker and Central Oregon;
 - establishing a framework and/or sideboards for protections to sage-grouse for development of travel management plans;
 - provide non-discretionary actions to avoid impacts to sage-grouse from recreation; and
 - change passive wording such as evaluate, consider, and discuss to active wording such as implement.
- Additionally, BLM's draft EIS states that Alternative D is not the most effective Alternative for avoiding impacts to sage-grouse and their habitat from recreational activities (page 2-142, Table 2-8).

Ex-Urban Development

The conservation objective for ex-urban development is to limit urban and ex-urban development in sage-grouse habitats and maintain intact native sagebrush plant communities. The section for this threat in the COT report mainly focuses on private lands. However, alternative D in the draft EIS addresses conservation option number two (i.e., acquire and maintain sage-grouse habitat to maintain intact ecosystems). It states that public ownership will be retained in PPMA as Z-1 lands and sales of BLM-administered lands in PPMA would not be allowed (Z-1 - Lands

identified for retention based on resource values and overall management objectives. Lands allocated for retention identified as having high public resource values.). We recommend extending the retention and exchange to all sage-grouse habitat. While the PPMA encloses the primary habitat for sage-grouse, lands outside the PPMA are important for connectivity between PPMA's and act as buffers around PPMAs.

Specific Comments

Disturbance Threshold (Disturbance Cap)

- While the sources of natural and anthropogenic disturbances are described, there is no description or quantification of existing disturbance in PPMA or PGMA anywhere in Chapter 3: Affected environment. For example, on page 3-13, the description of the Prineville District says “...*Juniper encroachment (320,000 acres) is a significant concern for approximately 30 percent of this habitat area. Human impacts from anthropogenic structures (e.g., power lines, OHV [off highway vehicles] trails, and residential developments) and recreational activities (e.g., mountain biking, bird watching, horseback riding) are also a concern. Hagen (2011) postulated that the cumulative effects of these disturbances are among the main factors limiting this population. Slightly more than 1,000 acres of high viability habitat in the Prineville District area have been impacted by wildfire since 2004.*” This outlines some of the kinds of disturbances known to occur on the Prineville district and that they are of concern, but they are not all quantified. Without a description of the extent and severity of the current disturbances we have no way of measuring how effective the various alternatives will be in addressing the threat, and the effectiveness of any disturbance cap cannot be evaluated without a baseline. We suggest that the final EIS include a graphic showing the methodology for calculating disturbance at the appropriate scale, so that the current distribution and extent of anthropogenic disturbances can be clearly understood.
- We suggest that referencing the US Geological Survey Baseline Environmental Report (BER) report (Manier, D.J. et al. 2013) for the Oregon-specific WAFWA Management Zones (IV and V) and the populations and subpopulations within those. The BER report provides best known quantification of both natural and anthropogenic disturbances for both PPMA and PGMA for each disturbance type by management zone. Preliminary review of tables 4 through 18 in the BER report indicate that in Management Zone IV, existing direct footprint anthropogenic disturbance on BLM PPMA is 6.66 percent and in PGMA is 8.23 percent; for Management Zone 5 the same direct footprint of anthropogenic disturbance on BLM PPMA is 3.63 percent and in PGMA is 3.83 percent. This would suggest that all proposed 3 percent disturbance caps have already been exceeded, and this does not include indirect impacts (i.e. noise) nor does it include wildfire (which is also reported in BER [table 18, page 82]).
- Infrastructure (Chapter 4, page 17-18) – “*Sage-grouse have been observed avoiding brood-rearing habitats within three miles of power lines (LeBeau 2012). Higher densities of power lines within four miles of a lek negatively influence lek attendance (Walker et al. 2007). ROW exclusion areas would prohibit all development of ROWs; in ROW avoidance areas, ROWs would be considered on a case-by-case basis. This flexibility may be advantageous*

where federal and private landownership areas are mixed and where exclusion areas may result in more widespread development on private lands. The 3 percent disturbance cap under certain action alternatives would protect sage-grouse habitat from excessive disturbance in ROW avoidance areas.” Please explain how, exactly, this would be achieved, and what methodology would be used to achieve this. Further, please explain what this means for the birds in that PAC. Also, please describe what criteria (e.g., lek attendance, existing disturbance) is used to determine whether a ROW avoidance area is warranted.

- Throughout Chapter 4 (Environmental Consequences) there are repeated descriptions of the disturbance cap such as this, from page 4-213: *“Applying the 3 percent disturbance cap would directly impact non-energy leasable minerals by limiting the amount of disturbance from various activities, including non-energy leasable mineral development. If total disturbance in sage-grouse habitat reached 3 percent, no additional disturbance from non-energy leasable mineral activities would be permitted. Because non-energy leasable mineral development involves surface disturbance, new development would essentially be shut down once the 3 percent cap was reached.”* What is missing from this description and discussion are what this means for the conservation of sage-grouse, on these specific populations. Please describe how this is measured, and under what protocol the measurements take place. Further, please describe how the decision would be made between imposing an NSO buffer around leks and/or a 3 percent surface disturbance cap.
- Energy Development and Mining (Chapter 4, Alternative B, pages 36-37) – Percent of the populations affected by closures to salable minerals: *“In areas that cannot be completely closed to leasable mineral development or withdrawn from locatable mineral entry, the BLM could impose a NSO buffer around leks and/or a 3 percent surface disturbance threshold in PPMA to the extent allowed by law. Once the 3 percent disturbance cap is met, no new surface disturbance would be allowed in PPMA until restoration has occurred.”* Please describe how this is measured, and under what protocol the measurements take place. Further, please describe how the decision would be made between imposing an NSO buffer around leks and/or a 3 percent surface disturbance cap.
- Infrastructure (Chapter 4, Alternative D, page 52) – Please explain the following sentence from the first paragraph: *“ROWs would be allowed in avoidance areas if the disturbance would be either under the three percent disturbance cap.”* It appears that the rest of the sentence is missing.
- Infrastructure (Chapter 4, Alternative D, page 52) – The information describes the ROW avoidance areas and the Exclusion areas, and how they are different. It also describes in Table 4-31 the percent of the populations that would be effected by the avoidance areas. What is not clear is exactly what the “percent of the population” actually represents – is this total actual population based on lek counts, or is this an estimation of the actual population based on the acres of habitat excluded? This same question applies to many other tables, including 4-32.
- Energy Development and Mining (Chapter 4, page 66) – *“For leasable and salable minerals, Alternatives B, C, and F would close all PPMA to new mineral leases. With Alternative E,*

new leases in suitable sage-grouse habitat within Core Area habitat would be avoided. Leasing in sage-grouse habitat would not be avoided in Alternative A. While Alternative D also would not avoid leasing in sage-grouse habitat, new leases would be subject to NSO or CSU stipulations and a total surface disturbance cap of three percent applied. Disturbed areas would be restored to habitats used by sage-grouse before additional disturbance would be allowed. While stipulations would be available to the BLM in Alternatives B, C, D, and F, they can be imposed with leased fluid minerals only to the extent allowed by law. Thus, the alternatives that close sage-grouse to new leases (Alternatives B, C, and F) provide a greater degree of habitat protection on BLM-administered land, but may push development onto private lands that lack BLM land use controls.” This speaks to the differences between the alternatives and possible effects, but it does not describe how this relates to the conservation of the bird, specifically on BLM ground. Please describe what “...provide a greater degree of habitat protection on BLM administered land...” means. If these lands are critically important, please describe how and why, and further how this relates to addressing this particular threat.

- Fluid Minerals (Chapter 5, page 53) – *“Applying a three percent cumulative disturbance cap would cause land uses on private, state, or other surface lands to have a cumulative impact on non-energy solid leasable minerals [used interchangeably with other threats throughout chapter 5, including salable minerals, fluid minerals, etc.] in the planning area. If activities on private, state, or other surface lands were to disturb the full three percent of the sage-grouse habitat in the planning area, no further activities, including non-energy solid leasable mineral development, would be allowed on BLM-administered surface or on federal mineral estate.”* Here, cumulative impacts from non-energy solid leasable minerals in the planning area are mentioned, and the draft EIS states that once the disturbance cap is met, no further activities would be allowed. However, there is no further discussion about how that would be administered (not accept new ROW or lease applications?), and more importantly it does not describe what that means in terms of conservation of the sage-grouse. A description of what meeting the 3 percent disturbance cap means for the conservation of the bird is essential, and missing.
- The scale at which avoidance standards and any disturbance thresholds will be applied should be more clearly described. Limits should apply to multiple scales such that the overall integrity of sage-grouse populations, including those which may overlap areas outside the geographic scope of the draft EIS, is sound. BLM should consider provisions that limit additional (above baseline or threshold) disturbance to sage-grouse habitat or leks resulting from any individual project and that prevent impacts from multiple projects from accruing rapidly on the same landscape. See specific comments on *Disturbance Threshold*.
- In Appendix G, page 7, at the end of Section C, it states “...however, for some threats, the data were for federal lands only. Most of the data used in the BER were from external data sources; therefore, the BLM will use the most currently available versions to evaluate changes (additional footprints) from the baseline dataset.” Further, the BER report summarizes disturbance impacts from a wide variety of sources and breaks down the results

not only by private, state or federal land, it summarizes most of the results by ownership including BLM specific results.

- Please explain why the point about federal land data is relevant to the data source or quality, since the draft EIS covers a range of alternatives to management on federal land. Please describe what the “most currently available versions to evaluate change” means.
- Summary (Chapter 4, Alternative D, page 53) – It is useful to describe how the different alternatives describe ROW exclusion areas, NSO buffers, etc. and that, for example from page 4-53 “...*Less sage-grouse habitat would be protected from mineral development than under Alternatives B or C, but Alternative D does place lands under stipulations restricting use.*” However, exactly how this is achieved is not clear. There are differences between the action alternatives but what the implementation of one alternative compared to another actually means for the conservation of the bird is unclear.

Mitigation

The following comments and recommendations are derived from the draft USFWS Framework with specific reference to the alternatives where illustrative. Comments are divided into the mitigation hierarchy components (avoidance, minimization/rectification, and compensatory mitigation/offset).

Avoidance

The focus on impact avoidance and minimization described in the draft EIS is both promising and important. The standards by which these hierarchical requirements are measured, associated permitting decisions are made (including related to any exceptions), and the mechanisms for enforcing them will be critical.

We recommend the following general avoidance-related measures be addressed:

- Elaborate on the mechanism(s) by which avoidance will be assessed and on the conditions for avoidance for PPMA, PGMA, and leks specific to noise stipulations, seasonal disturbance avoidance stipulations, NSOs, and lek exclusion/avoidance buffers.

Alternative D: Does not describe a mechanism to provide for avoidance in PPMA. Also, NSO rules are unclear.

- Clarify the conditions for avoidance for which NSO rules are applied.

Alternative E: The relationship to the state’s 70/30 habitat goals is unclear. There is no description of the relationship between PGMA, Low Density, and Habitat Category 2. This alternative contains no recommendations to withdraw habitat from locatable mineral entry (which would assure avoidance), thus avoidance mechanisms are based solely on avoidance of impacts in PPMA/Core. The recommendation to avoid impacts in PGMA is not strong

enough to assure that no impacts will occur. There are no NSOs or protections for leks (outside of PGMA/PPMA designations) described.

- Clarify the conditions for which avoidance would be applied.
- RMPs should include supplementary standards so that any impacts within PPMA, PGMA, or to leks should be allowed only as absolutely necessary, only if accompanied by tradeoffs/mitigation that maintain the integrity of the habitat and yield overall net benefit, and only when satisfaction of these criteria are clearly demonstrated.
- Calculations of both the baseline and future changes should be based on anthropogenic and should take into consideration “natural” disturbances, such as fire. The scale at which these measurements are taken should be clearly identified and appropriate. We recognize that the starting point for these measurements is subject to debate. BLM should acknowledge, discuss, and possibly propose a position with respect to baseline determination.

Minimization/Rectification

BLM’s mitigation program should provide clear, consistent required design features (RDFs) and best management practices (BMPs) and minimization criteria for projects, including seasonal timing and noise restrictions for each potential impact type. For example, while Alternative D states that “motorized travel limited to existing routes,” it does not specify to what degree the amount of travel (which could increase disturbance) is limited or if existing small roads could be improved without travel limitations.

All of the alternatives state that full reclamation of lands to the condition it was found in prior to disturbance is required for all future actions. The reclamation criteria do not appear to be specific to sage-grouse. We recommend that a minimum threshold of reclamation success based on functional sage-grouse habitat be identified in the Final EIS to clearly define reclamation successful specific to sage-grouse.

Success criteria for restoration or mitigation sites should include a requirement that sage-grouse populations occupy the area. This criterion is particularly important when the reclaimed area is being considered in disturbance cap calculations, and would be a mechanism to ensure the retention of the species redundancy and representation across the landscape.

Offsets/Mitigation

BLM’s mitigation program should be described to the extent that the following compensatory mitigation standards, based on and further described in the Service’s Framework, are addressed:

- The mitigation program should be developed in coordination with other stakeholders and in conjunction with, or guided by, a landscape-level conservation plan.
 - Mitigation actions should be sited in locations that have been identified in credible conservation strategies to most benefit sage-grouse. The rules surrounding service areas

(the geographic area within which impacts to species habitat can be offset), the type of mitigation allowed (in kind habitat or out of kind for habitat) and appropriate location for mitigation (on site or offsite) should be spelled out for various scenarios.

- Intra- and interstate coordination, to promote a landscape-scale effort, should also be outlined. Specifically, a clear description of coordination/overlap with the State's mitigation plan should be included in the final EIS to provide assurance for how impacts will be avoided and unavoidable impacts will be mitigated to achieve no net loss/net benefit to sage-grouse. The program administrator(s) - the entity(s) with enforcing authority for the establishment, operation, and management of compensatory mitigation projects - should be clearly defined.

Alternative D states that priority will be given to mitigation at sites near impact areas, that BLM will collaborate with Oregon Department of Fish and Wildlife and the Service in selecting off-site mitigation measures, and that off-site mitigation will be directed to sage-grouse focal areas (which will be assessed every 10 years).

- Clearly describe the process by which this collaboration will occur and which entity has the final say in the location and type of mitigation actions. Priority should not be given to mitigation sites "near" the impact area due to indirect and cumulative effects and potential issues with durability (see below). Sites chosen far outside the impacted population may also not be adequate.
- Clearly describe the geographic and population-based limits (i.e. service area) for location of compensatory mitigation.
- The final EIS should also describe how durability will be supported consistent with the use of focal areas identified by BLM in alternative D. The suggestion that mitigation will be concentrated in these areas and that these areas might be subject to boundary revisions or movement/replacement over time leads to substantial uncertainty as to the durability of associated mitigation actions. As described in the draft EIS, it seems possible that the mitigation site/action itself might be removed along with changes to focal area boundaries, or that such boundary changes—even if the mitigation site itself is left intact – might then allow for management on surrounding lands that reduce the value and effectiveness of the mitigation site.
- The mitigation program should yield a net conservation benefit. The total outcome of any project when viewed in consideration of its compensatory mitigation actions should result in "no net loss and with a net benefit" to sage-grouse. This should be measured directly in terms of sage-grouse habitat quality and quantity, and indirectly in terms of the overall net conservation status of the species following the project. Compensatory mitigation goals should be clearly stated for each habitat type (e.g. PPMA, PGMA). Mechanisms to measure these goals should be clear.

Alternative D: The offsite mitigation goal is stated as no net loss plus a net gain for impacts to PPMA. The mechanism for how to measure whether something is a no net loss is not

described. It is unclear if mitigation is required for impacts to leks that are not within PPMA or PGMA.

- Mitigation actions should provide additionality or uplift. Actions that do not result in new contributions to conservation (compared to current conditions and/or conditions reasonably expected to exist in the future absent the mitigation) should not be prioritized for mitigation.
- Mitigation must be effective. Actions should be reasonably likely to deliver expected conservation benefits. Effectiveness should be demonstrated prior to receiving credit for mitigating losses. This will generally require that mitigation proposals avoid actions with outcomes that have proven unreliable or unpredictable, are unproven or untested, or that are not readily measurable. Mitigation sites should have a reasonable probability of attaining and maintaining the required conservation attributes in light of the management actions that will be implemented in combination with the other biological, climatic, and management factors that influence the site.
- Mitigation should achieve targeted biological conditions in a timeframe that benefits the species. Because most impacts typically begin to occur in the very early stages of projects (i.e., construction and initial operations), the benefits of proposed mitigation actions should also begin to accrue as early in the life of the project as possible. Implementation of mitigation actions should be heavily “front-loaded” to facilitate this.
- Mitigation outcomes must be made durable.
 - Actions proposed as mitigation should be accompanied by land management instruments that legally secure and protect the conservation status of the mitigation site for at least as long as the associated impacts. Because of the permanence (or significant uncertainty regarding persistence) of most impacts, the legally-protected status of most mitigation actions must also be very long-term or permanent in nature.
 - Mitigation actions should be accompanied by secured finances. The amount of financing provided to deliver the mitigation should be determined by an appropriate cost-analysis for all elements of the mitigation, including acquisition or easement, restoration or enhancement, and long-term maintenance.
 - Lands used as mitigation should comply with a long-term management plan that includes goals and objectives specific to maintaining habitat for the continued use of sage-grouse. Management plans should be tied to any land management instruments and financial assurances. Specific performance standards, monitoring, and adaptive management processes should be included.
 - Aggregation of mitigation areas or placement near sage-grouse protected and managed areas is preferred.
- The methodologies, or metrics, used to determine the expected impacts of actions (debits) and the measures necessary to avoid, minimize, rectify and/or offset those impacts (credits)

must be based solely on biological conditions and upon reliable and repeatable methods and result in a common “currency” between credits and debits. A formal, consistent, rigorous but relatively simple methodology should be used and applied to all land development activities that impact sage-grouse. The methodology should address direct impacts (habitat removal), indirect impacts and disturbance, and ecological site conditions. A robust compensatory mitigation program will provide an accounting system whereby credits and debits can be tracked. The accounting system should foster transparency, accountability, and credibility and should be housed within a governance structure that is also transparent.

- The general approach of distance-based disturbance bands (including sound propagation), habitat weighting, and ratios previously described by Oregon Department of Fish and Wildlife for some energy infrastructure projects could form a credible basis for this methodology, but with additional development to address broader applicability, to more consistently attain net conservation benefit standards, and to define thresholds of allowable impacts.

Vegetation

The following bullets pertain to chapter 2:

- Chapter 2, Action D-VG 6 (pages 2-59 to 2-60). States “*Nonnative plant materials can be used as necessary to: Limit or control invasive plant spread or dominance and to create fuel breaks along roads and rights-of-way.*”
 - Dominance of invasives is mentioned in several places throughout the document. However, it is not clearly defined and could be interpreted differently by each reader. Please provide a clear definition of dominance in the above context and how implementation success, or failure, will be measured.
 - We recommend that the draft EIS provide direction to the BLM Districts to set standards for when non-native perennial seeds may be applied.
 - We recommend that the BLM develop a framework similar to what was developed for the Harney Soil and Water Conservation District Candidate Conservation Agreement with Assurances to define dominance of invasive annual grasses. These “Phases” were developed to correspond to the states in the “state and transition” models that were developed for the Candidate Conservation Agreements with Assurance. The phases are as follows:
 - **Phase I:** Interspaces primarily bare ground (> 90 percent interspaces bare ground) and multiple bunchgrass age classes represented; generally associated with Ecological States A & B.
 - **Phase II:** Exotic annual grasses present at intermediate levels in interspaces (< 50 percent interspaces occupied by exotic annual grasses) and multiple bunchgrass age

classes represented; generally associated with Ecological States A & B that are at risk of conversion to Ecological States C & D.

- **Phase III:** Interspaces primarily occupied by exotic annual grasses (> 50 percent interspaces occupied by exotic annual grasses) and < 1 bunchgrass age class represented; generally associated with Ecological States C & D.
- Standards for invasive “dominance” need to be more clearly defined with the understanding that localized differences will occur based on site potential and history.
- Chapter 2, Action D-VG 6 (page 2-60). Also states “*Seed mixes that include more than 2 pounds per acre of crested/desert wheatgrass shall not be considered “native” even when native plant materials are a majority of the mix.*”
 - We are concerned with using expensive, limited native seeds in mixes containing more than 1-2 pounds of crested or other wheatgrasses. If conditions warrant planting high levels (> 2 pounds per acre) of crested wheatgrass or other non-native perennials post-fire or other restoration efforts, we recommend that you only use crested due to the following guidance from the crested wheatgrass plant guide: “Crested and Siberian wheatgrasses establish quickly, with Hycrest and Vavilov” noted for their seedling vigor. They should not be seeded with native species, unless seeding rates are very low (< 2 pounds per acre).” This comment also relates to D-VG 9 (page 2-60).
- Chapter 2, Action E-VG 7 (page 2-60). Consider incorporating Action E-VG 7 into the preferred alternative. We recommend not converting further sagebrush habitat to crested wheatgrass seedings.
- Chapter 2, Action D-VG 12 (page 2-61) and D-VG-15 (page 2-62). Sagebrush (removal) treatment should only occur if the patch being treated will still provide adequate cover for the life stage requirements of sage-grouse.
- Chapter 2, Action D-VG 21 (page 2-64). Include not only areas with annual grass understory but areas that have depauperate understories (e.g. Wyoming Big Sagebrush (*Artemisia tridentata* ssp. *wyomingensis*) overstory with a Sandberg bluegrass understory, *Poa secunda*).
- Chapter 2, Action D-VG 22 (page 2-64). For juniper treatments, add further prioritization to treatments to incorporate information presented in Baruch-Mordo 2013 that identifies juniper canopy cover values that preclude lek activity. Use remote sensing to identify leks that are at high risk of being abandoned in the near future and focus treatments on these areas. Consider whether or not complete treatment of the area (private, state or other federal lands) will be completed, providing a long term benefit to sage-grouse populations.
- Chapter 2 (pages 2-58 to 2-68). Consider adding an Action in the Vegetation section that prioritizes better mapping of sage-grouse habitats (nesting, brood rearing, wintering, etc.), as well as mapping threats to grouse at the scale at which the threats occur. For example the threat of large scale wildfire is closely linked to annual grass dominance in the system. To

better address this threat maps of heavily infested habitats need to be identified, as well as the most intact habitats and their spatial relationship to one another to better protect large blocks of habitat.

- Chapter 2, Action E-VG 34 (page 2-66). Consider adding Action E-VG 34 to the preferred alternative. Weed prevention areas could serve as important outreach mechanisms to help prevent further weed establishment.

Chapter 4, Impacts from Vegetation Management, Alternative D, section 4.4.7 (page 4-108). The draft EIS states that “...*Under Alternative D, vegetation management actions would prioritize Restoration Opportunity Areas (Section 2.5.6, Alternative D), throughout all occupied habitat that have a high probability for success. These actions would increase special status wildlife habitat quality and protection relative to the no action alternative.*” Please explain what “...have a high probability for success...” means.

In Chapter 5, page 5-18, the draft IES states... “*There are a number of Candidate Conservation Agreements and Candidate Conservation Agreements with Assurances in Oregon. Though none have been implemented, assuming they are signed, these are voluntary agreements whereby landowners agree to manage their lands to remove or reduce threats to sage-grouse. In Candidate Conservation Agreements with Assurances, landowners receive assurances against additional regulatory requirements should sage-grouse ever be listed under the Endangered Species Act. These agreements are expected to enhance conditions for sage-grouse and improve habitat connectivity.*” A Candidate Conservation Agreement, covering more than 10 million acres of BLM ground, was signed in May of 2013 in partnership with the Oregon Cattlemen’s Association, the BLM and the Service. We recommend acknowledging this agreement in the final EIS as part of the current effort to conserve sage-grouse and their habitats. The agreement outlines many conservation measures that are directly applicable to addressing the threat to sage grouse from grazing, including appropriate adaptive management, inventory and monitoring, etc. We note that appropriate Candidate Conservation Agreements that adequately address the threat to sage-grouse from grazing, if implemented, are likely to adequately address the threat to sage grouse from grazing through the implementation of conservation measures described therein.

Conifer Encroachment

- Several alternatives described in the draft EIS propose conifer treatments. For example, in table 2-7, Summary of Environmental Consequences, pages 2-109 to 110, it states “...*Alternatives A, B, D and F provide similar guidance with respect to juniper expansion. Whether these alternatives’ actions would treat conifer expansion at an adequate rate to control juniper at its rate of expansion and maintain existing sage-grouse habitat would depend on funding.*” Without any reasonable description of how funding has been able to support juniper control up to this point, we are unable to understand how any future funding scenarios will affect conifer expansion under any of these alternatives in the reasonably foreseeable future, especially in light of the discussion above. Please describe the funding needed to achieve measurable and meaningful conifer control in prioritized areas so that reasonable conclusions of the likelihood of the BLM addressing this threat can be made.

- Chapter 2, Summary of Environmental Consequences, Alternative D (page 2-110, table 2-7). It states this alternative “...has the most explicit treatment priorities for conifer expansion...” Objective D-VG-22 (page 2-64) establishes priorities for juniper treatments; Goal D-VG-1 (page 2-43) suggests providing priorities for sagebrush treatments and juniper treatments based on ecological and management characteristics; and Action D-VG-24 (page 2-64) describes some specific juniper BMPs (which are not contained in Appendix D: Best Management Practices for Alternatives B, C, D and F). However, in Chapter 4, Environmental Consequences, the description of the *Impacts from Vegetation Management* (Section 4.2.7, page 4-49) appears as follows: “*Habitat restoration and vegetation management under Alternative D has essentially the same provisions as Alternative B though Alternative D provides specific guidance and the clearest priorities for juniper treatment to reduce disturbance to sage-grouse and loss of sagebrush or sagebrush understory vegetation. This guidance would improve the likelihood for successful sagebrush restoration and sage-grouse habitat enhancement over the long term, compared to current management or the other action alternatives.*” These statements lack the specific details from which any reasonable conclusions may be drawn, especially if the impacts common to all alternatives are to be believed, and that all future treatments are dependent on funding. Sufficient details and specific descriptions are also missing from Table 2-4. Due to the lack of specificity and adequate description, we are unable to determine if any of these priorities or treatments would in fact “improve the likelihood for successful sagebrush restoration” or even if the rate of conifer control would balance the rate of conifer expansion. We recommend setting targets for juniper removal (e.g., BLM will target juniper removal within one kilometer of leks to zero percent canopy cover (following Baruch-Mordo et al. (2013) suggestions) with the intent of reducing the overall juniper level near leks by 5 percent within 10 years).

Grazing

- Rest from livestock grazing when conducting vegetation treatments is not mentioned in the preferred alternative Vegetation or Livestock/Range section. Such rest is recommended throughout the literature, though the recommended length of rest varies:
 - According to Stevens & Monsen (2004) and Shaw et al. (2005), two or more years of rest is recommended. Stevens (2004) recommends a basetime rest of 2 to 4 years for mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*). Wyoming big sagebrush an additional 1 to 6 years depending on type of restoration project and environmental conditions before and after project implementation.
 - In Lambert et al. (2005), it is recommended that after seeding, the restored sites should be rested, or protected, from grazing for at least 3 to 5 years to allow time for the shrubs, forbs and grasses to become fully established for wildlife habitat.
 - Stevens (2004) provides some guidelines for increasing the time of protection depending on the ecosystem and precipitation after seeding. Uses should aim to minimize defoliation and trampling during the most active growing period (from just before reproduction until after seed dispersal).”

- An Action identifying rest from livestock grazing should be added to the vegetation section, including the conditions under which rest might occur and the goals of grazing rest intervals.
- Controls should be added to all vegetation treatments to better understand all the factors that contribute to success or failure of vegetation treatments. This should be incorporated into numerous vegetation actions.
- Chapter 2, Action D-LG/RM 1 and 2 (page 2-79) and Action D-SD1 (page 2-105). There is conflicting guidance on closing RNAs under three actions. Please clarify.
- Chapter 2, Action D-LG/RM 10 (page 2-82). What is the timeframe for determining if it is a drought year? Precipitation patterns are highly varied and last minute grazing closures are not usually something a permittee can easily absorb. In this action, it would be helpful if timeframes were developed to begin early conversations with permittees so they can arrange for a back-up plan or sell livestock to assist sage-grouse conservation during drought periods.

Mining/Minerals

- Mining/Minerals are mentioned as a major threat facing the Northern Great Basin (Oregon population) in the COT report. However, BLM's draft EIS Alternative D fails to ameliorate this threat due to the following:
 - Relies on discretionary actions for avoiding impacts to sage-grouse from mining activities; does not close PPMA to fluid mineral mining (allowing disturbance of breeding/nesting sage-grouse and further fragmentation of sage-grouse habitat); does not recommend PPMA for withdrawal for locatable mineral mining; maintains current stipulations for PPMA (allowing disturbance of breeding/nesting sage-grouse and further fragmentation of sage-grouse habitat); and allows new disturbance as long as within 3 percent cap; however, scale (which is very important) at which this percentage cap will be established and measured is not discussed.
 - We recommend the following: close PPMA to fluid mineral mining and withdrawal PPMA for locatable mineral mining (do not allow disturbance of breeding/nesting sage-grouse and further fragmentation of sage-grouse habitat in PPMA); establish scale at which the 3 percent disturbance cap will be set and measured; and the Alternative D should be replaced by Alternatives C and F for mining/minerals.
- The only change from the current situation on BLM lands proposed in Alternative D is the change to PPMA designated as 'NSO' (no surface occupancy) for fluid minerals. There is no change from the current condition on BLM lands for locatable minerals (i.e. gold) from Alternative D. This is currently a much larger threat to sage-grouse in Oregon than fluid mineral mining. Additionally, BLM's draft EIS states that Alternative D (and Alternative A-No Action) are the least effective in avoiding impacts to sage-grouse and their habitat from mining activities (page 2-140, Table 2-8).
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Infrastructure

- Infrastructure is mentioned as a threat facing the Northern Great Basin (Oregon population), Baker, and Central Oregon sage-grouse populations in the COT report. To increase consistency with the COT report, we recommend:
 - develop non-discretionary siting criteria and design requirements to avoid impacts to sage-grouse from infrastructure and development;
- The only changes from the current situation on BLM lands proposed in the Preferred Alternative (Alternative D) are:
 - Change from areas in PPMA designated as ‘open’ to all areas in PPMA designated as ‘avoidance.’ Avoidance designation allows for ROWs and other development, but also allow for special stipulations (discretionary siting criteria and design requirements).
 - The establishment of a 3 percent disturbance cap in PPMA. This allows development within avoidance areas as long as the new disturbance doesn’t exceed the 3 percent disturbance cap. However, the scale at which this percentage cap will be established and measured is not discussed.

Conclusion

We recognize that it has been a difficult and arduous process incorporating conservation measures into a draft EIS covering eight RMPs in Oregon. We acknowledge the hard work and considerable effort that the BLM staff in Oregon have provided in the development of the draft EIS for the conservation of sage-grouse. We appreciate the close working relationship the BLM Core team and managers have maintained with the Service as a cooperating agency in the development of the draft EIS and look forward to continuing this relationship.

In summary, BLM administers 70 percent of the currently occupied sage-grouse habitat in Oregon (Oregon Department of Fish and Wildlife 2011). Therefore, in order to conserve the species and ensure its survival, it is especially important for BLM in Oregon to commit to long-term conservation of sage-grouse and to adequately manage threats to the species and its habitat across landscapes and jurisdictional boundaries. We recognize that there are differences between the planning efforts between the different BLM sub-regions, including those which share Oregon’s planning boundaries. We encourage the BLM to resolve any inconsistencies across planning boundaries where these differences do not have a clear basis. Where differences in management are warranted across planning boundaries, the rationale for divergent management approaches should be fully explained. Additionally, finalization of a strategy that embraces broad stakeholder collaboration across ownership boundaries and is supported by a robust monitoring and adaptive management strategy is critical.

Again, we consider the BLM’s preferred alternative D to represent a meaningful improvement for conservation of sage-grouse compared to current management plans. Unlike existing RMPs

in the planning area, sage-grouse conservation will be specifically incorporated into the direction, objectives, and standards underlying BLM land management in Oregon. We hope the comments we have provided help elaborate on these issues and facilitate the development of a final proposed alternative that provides for sage-grouse conservation on BLM lands in Oregon. We believe that effective action by the BLM to reduce or remove threats to sage-grouse will help promote a persistent population of sage-grouse in Oregon and surrounding states and could assist in providing redundancy, representation, and resiliency across the state and range-wide.

We look forward to further coordination with you as you finalize the EIS and RMPs so that we can ensure that the final versions meet the needs for long-term conservation of sage-grouse. Identification of a final decision that is consistent with the objectives of the COT is likely to be very important to the Service's listing decision in 2015. Again, thank you for the opportunity to review and provide comments on the draft EIS. If you need further clarification or have any further questions regarding our review, please contact me or Jeff Dillon at 503-231-6179.

cc: USFWS, Region 1, Regional Office, Portland, OR (J. Delia)
USFWS, National Sage-grouse Coordinator, Cheyenne, WY (P. Deibert)
USFWS, State Supervisor, Boise, ID (M. Carrier)
USFWS, State Supervisor, Reno, NV (T. Koch)

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