# United States Department of the Interior
## Fish and Wildlife Service

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File: M.20 FWP  December 9, 2013

Mr. Jeff Hagener
Co-Chair, Montana Greater Sage-Grouse Habitat Conservation Advisory Council
Montana Fish, Wildlife & Parks
1420 East Sixth Avenue
P.O. Box 200701
Helena, MT 59620-0701

Subject: Montana Draft Greater Sage-Grouse Habitat Conservation Strategy Comments

Dear Mr. Hagener:

Thank you for the opportunity to provide comments relative to the Montana Draft Greater Sage-Grouse Habitat Conservation Strategy (Strategy). We truly appreciate the considerable effort and commitment of the Montana Greater Sage-Grouse Habitat Conservation Advisory Council (Council) members and your staff in convening numerous meetings, soliciting input from industry, agencies, and the public, and preparing this comprehensive draft document. As you are aware, the U.S. Fish and Wildlife Service (Service) attended all but the October 8th/9th Council meetings, and submitted/presented a written summary of informal comments on a preliminary draft version of the Strategy to the Council at the September 24th, 2013 meeting.

The Strategy combines a core habitat approach, surface disturbance and development density limitations, habitat stipulations, mitigation, and funding for habitat restoration, enhancement, and acquisition on State and private lands to contribute toward sage-grouse conservation in Montana. While there are many elements of the Strategy that the Service supports, there also remain elements needing clarification or refinement in order for the Service to be able to accurately assess and determine their consistency with the Conservation Objectives Team (COT) report (U.S. Fish and Wildlife Service 2013). As we discussed during the Council meetings, Service review of all State and federal greater sage-grouse (GSG) conservation/management plans includes assessment of plan consistency with the COT Report, which provides range-wide conservation objectives for the GSG to define the degree to which threats need to be reduced or ameliorated to conserve GSG so that it is no longer in danger of extinction or likely to become in danger of extinction in the foreseeable future.
We support the Strategy's core habitat-based approach to GSG conservation. However, it is also important to point out that, given the considerations summarized in the bullets below,

conservation of general habitat (and connectivity) areas is a critical element in the effort to maintain the abundance and distribution of GSG in Montana.

- The currently proposed core areas in Montana include approximately 76% of the Montana GSG population and encompass 28% of Montana GSG habitat. Additionally, the Montana Strategy proposes Special Management Core Areas (SMCAs) within existing core (currently up to 3% of total core habitat) that would allow for projects in selected core areas to exceed Strategy stipulations. As currently proposed, it appears that coal mining projects would essentially be exempt from Strategy compliance in Montana.
- In Montana, proposed core habitat often occurs across a fragmented private / government ownership pattern, complicating landscape-scale management. Approximately 54% of proposed core habitat occurs in private ownership. This high proportion of core habitat occurring on private lands may provide limited value for sage grouse depending on the regulatory scope associated with the Montana Strategy in these areas We encourage the State to exercise all applicable regulatory authority relative to Strategy implementation.
- In order to adequately understand and predict the efficacy of the Strategy, it is extremely important for the Service to understand the regulatory scope and extent to which the Strategy will apply. We therefore request Council or State regulatory review to help establish and convey this regulatory context for the Strategy. While voluntary efforts and measures such as some of those included in the Strategy are valuable conservation tools, our certainly of Strategy conservation implementation and effectiveness is greater for measures applied through regulatory means.

Our comments are provided in the following sections: Strategy strengths; Strategy concerns and recommendations; preliminary assessment of draft Strategy consistency with conservation objectives outlined in the COT Report (Attachment 1 - Table 1); and detailed comments and recommendations, including literature cited (Attachment 2).

**Primary Strategy Strengths**

We believe that the primary Montana Strategy strengths include the following:

- The 5% disturbance cap in core habitat may be effective in combination with expanded (1-mile) No Surface Occupancy (NSO) lek buffers, core-wide seasonal restrictions, 1 disturbance per 640 acre oil and gas and mining density limitations, and other measures provided that existing land uses are included in surface disturbance calculations. We do, however, encourage the Council to continue considering a 3% disturbance cap in core habitat supported by findings in Knick et al. (2013), in order to maximize the potential conservation efficacy of the Strategy.
- The Council elected to increase the core area NSO active lek buffer to 1 mile from the originally-proposed 0.6 mile. In conjunction with other measures, we support the increase of this base core area NSO and believe it will result in GSG conservation benefit in core areas.
- We strongly encourage and support the proposed addition of the Garfield/McCone County core area as an extremely important element of the Strategy.
- We support the proposed measures to address wind energy (excluded in core), vegetation removal (4-mile lek buffer timing restriction in core), sagebrush eradication (prohibited

in core habitats), conversion to cropland agriculture (prohibited in core and general habitats), and monitoring/adaptive response (within 4 miles in core) as critical Strategy elements.

- We strongly encourage and support development of the proposed Montana Stewardship and Conservation Fund designed to conserve sagebrush habitat and grazing lands within identified GSG habitats on private lands; recommendation for the Governor to prioritize State agency conservation funding for protection, enhancement, and restoration of sage-grouse habitat in core, connectivity, and general areas; and commitment to fund at least 5.5 FTEs in conjunction with Strategy implementation. We look forward to continued dialogue regarding funding amounts and planned implementation schedules.
- We support appointment of the Montana Sage-grouse Oversight Team (MSGOT) to oversee Strategy implementation.
- We support the proposed development and application of a quantitative, repeatable surface disturbance calculation tool and process similar to Wyoming's Density and Disturbance Calculation Tool (DDCT) and process.
- We are pleased that the Strategy acknowledges the importance of connectivity areas in addition to core and general habitats, and provides a placeholder for addressing connectivity areas. In the section below, we recommend incorporation of an initial connectivity area into the Strategy.

**Primary Strategy Concerns and Recommendations**

We believe that the primary Montana Strategy areas needing to be strengthened/addressed, or for which additional detail is required, include the following:

- The Strategy currently does not, but should include clear statement/enactment of an "avoidance first" approach to proposed surface disturbance activities to GSG habitats; particularly core areas. This should include a requirement by authorizing agencies for rationale as to why a given proposed surface disturbance to GSG habitat is unavoidable, and clear, mandatory direction to adhere to (and document adherence to) the mitigation sequence in Section IX (avoid, minimize, reclaim, offset).
- We remain open to limited consideration of SMCAs; however, based on the information provided to date we are not supportive of the proposed South Phillips County, Carbon County, or Carter County SMCAs. The generally low levels of existing disturbance and unclear extent of true valid and existing rights in these areas raise substantive questions as to their appropriate inclusion as SMCAs, as well as GSG habitat loss and fragmentation concerns; particularly in the South Phillips County SMCA. It is also unclear at this time as to why the entire Cedar Creek Anticline core area is included in the SMCA. We recommend that the information/rationale requested of "new" proposed SMCAs be provided relative to all currently proposed SMCAs in order to facilitate evaluation of any proposed SMCAs carried forth in subsequent drafts of the Strategy. A description of valid and existing rights and compliance with the definition of such should also be a required element. Further, the term "valid and existing rights" needs to be much more clearly defined.
- The Strategy provides a mitigation section, but currently does not provide clear direction as to when compensatory mitigation for proposed surface disturbance activities would be required. We recommend that compensatory mitigation be required for all such projects

that would result in direct, indirect, temporary, and permanent impacts to GSG that would remain following application of avoidance, minimization, and reclamation / rectification such that neutral or positive GSG population trends and habitats would be maintained; particularly in core areas.

- In the context of this Strategy, we believe the proposed 0.25-mile NSO from active GSG leks in general habitat to be inadequate to achieve GSG lek protection. We recommend that the general habitat NSO match the core habitat NSO of 1 mile, but at a minimum extend to 0.6 mile in order to have any discernible effect.
- We disagree with the proposed exemption of proposed coal mining projects from compliance with elements of the Strategy that are more restrictive than the existing permitting program requirements under the Montana Strip and Underground Mine Reclamation Act (MSUMRA) and the Surface Mining Control and Reclamation Act (SMCRA). We recommend that proposed coal projects comply with the Strategy except for: a) existing operations, which could be allowed to continue under MSUMRA/SMCRA-authorized permit terms and conditions; and b) minimal impacts associated with modified mine plans and/or new leases under existing mine operations / plans, for which exceptions to the Strategy could be allowed.
- We do not agree that the proposed core area stipulations for Transportation and Power Lines / Communication Towers are currently adequate and we provide recommendations for improvement in Attachment 2. Also please see our "avoidance first" comment above under Bullet #1.
- Management Recommendations (non-development activities) for important issues including range management/grazing, wildfire response, and invasive plant species are depicted as 100% voluntary, even on State lands. Only such measures that are required on lands with State jurisdiction will provide a high degree of implementation certainty. We recommend that they be required where State jurisdiction allows, and applied in all GSG habitats to the extent possible, prioritizing implementation in core areas.
- Several key details are missing from Rangeland and Invasive Species sections such as: which GSG rangeland conservation standards would be applied; timetables for monitoring and standard and framework development and assessment; consequences for non-compliance; a list of invasive species; requirement for invasive species BMP compliance; lists (or reference to lists) of BMPs; etc.
- The Strategy's approach to prescribed burning is unclear. We recommend that prescribed burns be prohibited in sagebrush habitat, or allowed on a case-by-case basis if can be determined (along with specification as to how this determination would be made and a risk assessment) to be neutral or beneficial to sage-grouse. The COT Report provides additional conservation measures and conservation options relative to wildfire prevention and suppression that we recommend be considered.
- Specific list(s) of management practices for minimizing impacts in general habitat are currently not included or referenced in the Strategy. This information should be provided in appropriate sections of the Strategy in order for us to discern the potential effectiveness of these measures.
- As stated above, the Strategy provides a placeholder for, but does not currently list specific connectivity areas. We recommend that the Strategy include an initial connectivity area in Valley County (between and outside of existing core areas) based on maps and information provided in Smith et al. (2013).

- The Strategy currently does not, but should contain measures addressing the "no net conifer gain" principle per the COT Report. We recommend that such measures be incorporated for GSG habitats, and prioritized within core areas. We also recommend enactment of measures to reduce conifer cover to 0% within (minimally) 1,000 meters of leks where conifer encroachment is an issue to facilitate the preservation of lek and associated nesting activity.
- Prohibitions of wind energy development within 4 miles of leks and sagebrush eradication are presented as recommendations in general habitat, but are not clearly required; we recommend that such prohibitions be implemented in general habitats and connectivity areas.

**COT Report Consistency**

Our preliminary assessment of Strategy consistency with COT Report conservation objectives is provided in the attached Table 1. Our assessment does not compare directly with the self-assessment recently completed by the State, as that self-assessment did not include the draft Strategy. We were unable to determine consistency with the objectives for the majority of threats due to the voluntary nature of measures, absence of measures, and/or our uncertainty with measure implementation or effectiveness. At this time, the Strategy appeared to be consistent with the COT Report objectives for sagebrush removal. Consistency was unknown, but appeared to be trending positively for range management structures, agricultural conversion, ex-urban development, and fences. Consistency was unknown for fire, invasive plant species, energy development (although consistent for wind energy in core areas), improper grazing, conifer expansion, mining, and recreation. The Strategy appeared inconsistent with the conservation objectives for infrastructure. Details of our preliminary assessment are provided in Attachment 1 - Table 1.

Thank you again for the opportunity to review and comment on this document. We hope that this review is helpful, and would like to emphasize that our comments are intended to facilitate the collaborative process in which we are engaged and provide you with ongoing feedback as you continue to refine, and ultimately implement, the Montana Strategy. We look forward to our continued role and coordination with the State in this process. Please contact me or Jeff Berglund at 406/449-5225 if you require clarifications or have any questions regarding these comments.

Sincerely,

Jodi L. Bush

Jodi L. Bush
Field Supervisor

Attachments (2)

# Attachment 1

## Table 1: *Preliminary Assessment of Draft Montana Strategy Consistency with COT Report Conservation Objectives*

| Threats and Conservation Objectives per COT Report | Preliminary Assessment of Draft Strategy Consistency with COT Report Conservation Objectives |
|---|---|
| **Threat:** Fire<br>**Conservation Objective:** Retain and restore healthy native sagebrush plant communities within the range of GSG. | Unknown. Measures are voluntary on State and private lands; intentional fires in GSG habitat are not prohibited or otherwise addressed; post-fire reclamation monitoring is unspecified. |
| **Threat:** Non-native, Invasive Plant Species<br>**Conservation Objective:** Maintain and restore healthy, native sagebrush plant communities. | Unknown. Measures are voluntary on State and private lands; invasive species are not defined; BMPs for minimizing invasive species in association with surface disturbance or other activities are not required, listed, or referenced. |
| **Threat:** Energy Development<br>**Conservation Objective:** Energy development should be designed to ensure that it will not impinge upon stable or increasing GSG population trends. | Unknown. Wind Energy measures are consistent in core (not in general habitat). Oil and gas core measures include 5% surface disturbance restriction, 1 mile NSO, seasonal core-wide activity restriction, 1/640 development density restriction. "Avoidance first" requirements are absent. Mitigation requirements are unclear. SMCA implications are unclear. General habitat 0.25-mile NSO is inadequate. |
| **Threat:** Sagebrush Removal<br>**Conservation Objective:** Avoid sagebrush removal or manipulation in GSG breeding or wintering habitats. Exceptions to this can be considered where minor habitat losses are sustained while implementing other habitat improvement or maintenance efforts (e.g., juniper removal) and in areas used as late summer brood habitat. Appropriate regulatory and incentive-based mechanisms must be implemented to preclude sagebrush removal and manipulation for all other purposes. | Currently consistent. Sagebrush eradication and treatment programs aimed at reducing or eliminating sagebrush will be prohibited on State and discouraged on private lands (in core areas). We also recommend clearly enacting this provision in general habitat and connectivity areas (currently reads "…*should* be prohibited…") for general habitat. |
| **Threat:** Improper Grazing<br>**Conservation Objective:** Conduct grazing management 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 GSG (e.g. shrub cover, nesting cover). Areas which do not currently meet this standard should be managed to restore these components. Adequate monitoring of grazing strategies and their results, with necessary changes in strategies, is essential to ensuring that desired ecological conditions and GSG response are achieved. | Unknown. Measures are voluntary on State and private lands; GSG standards /objectives are not defined; timetable for GSG standard development, assessments, and monitoring are not defined; consequences for non-compliance are not defined; corrective actions process is not defined. Service also recommends measures be considered for general habitat and connectivity areas. |
| **Threat:** Range Management Structures<br>**Conservation Objective:** Avoid or reduce the impact of range management structures on GSG. | Unknown; trending toward consistency. Measures are consistent with COT Report objectives, but are considered voluntary on State and private lands. |
| **Threat:** Pinyon-juniper Expansion<br>**Conservation Objective:** Remove pinyon-juniper from areas of sagebrush that are most likely to support GSG (post-removal) at a rate that is at least equal to the rate of pinyon-juniper incursion. Treatments to remove pinyon and/or juniper trees in phase 1 (trees present but shrubs and herbs are the dominant vegetation that influence ecological processes) and phase 2 (trees are co-dominant with shrubs and herbs and all three vegetation layers influence ecological processes) state of incursion should match the rate of incursion. Removal should be prioritized by seasonal habitats, based on the habitat that is locally limiting populations. Removal techniques should not include prescribed fire in low elevation, xeric sagebrush communities. Pinyon and/or juniper removal activities should focus initially on areas within PACs, but all opportunities to remove this threat should be considered if resources are available. | Unknown. Current measure (prioritize conifer reduction in Core Areas where appropriate) is voluntary on State and private lands; no commitment to "no net gain" of conifer incursion in applicable areas on State lands is currently specified. New (post-COT Report) data have resulted in additional Service recommendation to achieve 0% conifer cover within 1,000 meters of active leks in core habitat. |
| **Threat:** Agricultural Conversion<br>**Conservation Objective:** Avoid further loss of sagebrush habitat for agricultural activities (both plant and animal production) and prioritize restoration. In areas where taking agricultural lands out of production has benefited GSG, the programs supporting these actions should be targeted and continued (e.g. CRP/SAFE). Threat amelioration activities should, at a minimum, be prioritized within PACs, but should be considered in all GSG habitats. | Unknown; trending toward consistency. The Council recommends that the Montana Board of Land Commission enact a prohibition of conversion of native range on State land in core areas and general habitat to cropland, with criteria for approved waivers. Service recommends a similar prohibition be included for connectivity areas. |

| Threats and Conservation Objectives per COT Report | Preliminary Assessment of Draft Strategy Consistency with COT Report Conservation Objectives |
|---|---|
| **Threat:** Mining<br>**Conservation Objective:** Maintain stable to increasing sage-grouse populations and no net loss of GSG habitats in areas affected by mining. Reclamation of mined lands within GSG habitats should be focused on restoring habitats usable by GSG, and the re-establishment of GSG in these areas. | Unknown. Measures (for non-coal mining) include 5% surface disturbance restriction, 1mile NSO, seasonal core-wide activity restriction, 1/640 development density restriction. "Avoidance first" requirements are absent. Mitigation requirements are unclear. SMCA implications are unclear. General habitat 0.25-mile NSO is inadequate. Strategy effectively exempts coal mining from Strategy compliance in deference to SMCRA and MSUMRA (where Strategy measures would be more restrictive). |
| **Threat:** Recreation<br>**Conservation Objective:** In areas subjected to recreational activities, maintain healthy native sagebrush communities based on local ecological conditions and with consideration of drought conditions, and manage direct and indirect human disturbance (including noise) to avoid interruption of normal GSG behavior. Threat amelioration for recreation should be implemented in PACs, but considered in all GSG habitats. | Unknown. This threat was not specifically addressed, although noise restrictions are included in the Strategy, as are core-wide seasonal activity restrictions and 2-mile lek buffer seasonal restrictions in general habitat. 5% surface disturbance cap and 1 mile NSO in core would also pertain to "new" proposed trails, facilities, etc. Language specific to recreation activities should be added to these sections for clarity. The Service also recommends addition of OHV prohibition / closure language in the Fire section during high fire risk periods in GSG habitats; important GSG use areas be closed to off-road vehicle use; and development of recreational facilities (e.g., new roads and trails, campgrounds) be avoided in GSG habitats. |
| **Threat:** Ex-Urban Development<br>**Conservation Objective:** Limit urban and exurban development in GSG habitats and maintain intact native sagebrush plant communities. | Unknown; trending toward consistency. Not specifically addressed, but may be addressed with other "threat" measures, including 5% surface disturbance cap and Montana Stewardship and Conservation Fund. "Avoidance first" requirements are absent. The Service recommends consolidation of infrastructure that supports urban and exurban development; not allowing landfills in or within 5 km of GSG habitats; and not relinquishing public lands for the purpose of urban development in GSG habitat. |
| **Threat:** Infrastructure<br>**Conservation Objective:** Avoid development of infrastructure within PACs. | Inconsistent. Transportation (2 mi main haul road NSO / 1 mile access road NSO) and power lines / communication tower measures (1 mi NSO) are not yet adequate. Measures also include 5% surface disturbance restriction and seasonal core-wide activity restriction. No additional measures are required; some voluntary measures are referenced. "Avoidance first" requirements in core habitat are absent. Mitigation requirements are unclear. Pending APLIC BMPs for power lines are referenced but not yet developed; adherence is not required. General habitat 0.25-mile NSO is inadequate. Additional measures, including road density limitations, are recommended by the Service. |
| **Threat:** Fences<br>**Conservation Objective:** Minimize the impact of fences on GSG populations. | Unknown, but trending toward consistency. Measures are generally consistent with COT Report objectives, but are considered voluntary on State and private lands. |

**Attachment 2**

**Detailed Draft Montana Strategy Comments and Recommendations** (in order of appearance in the Strategy)

1). II. Goal Statement, p. 6: This section requires the State to adopt a GSG population objective based on the number of displaying males, use displaying males as an index to GSG abundance and distribution trends over time, and use the index to quantify success or failure of the Strategy. The Strategy states: "*This index to sage-grouse populations will be estimated regularly using a consistent protocol and will serve as a primary metric for quantifying the success or failure of this…Strategy*". To provide specificity to and increase utility of this performance standard, we recommend that the index estimate interval, evaluation protocol, and thresholds for success be specified in the Strategy. We agree with using a multi-year benchmark period, similar to that proposed, as it would account for the natural, cyclical trend and provide a more accurate assessment of conservation efficacy by taking out single year fluctuations. We also recommend that, if applied, such a standard be considered at a stepped down ecological scale within Montana (e.g., population, Management Zone, etc.) such that adaptive management could be targeted as appropriate.

2). III. General Provisions, p. 7: As indicated in the Strategy, sagebrush habitat loss and fragmentation and lack of regulatory mechanisms to conserve GSG and their habitats were identified as primary threats leading to the Service's warranted but precluded finding in 2010. However, the "secondary" threats as listed in the Strategy (Lines 5-8) are inconsistent with threat designations assigned in the 2013 COT Report, which classifies threats by GSG population as: present and widespread; or present but localized; or not known to be present. To avoid confusion and more clearly establish the setting for the Strategy, we recommend that the COT Report threat terminology be applied or referenced in the Strategy. We provided a summary table of COT Report threat characterizations for individual Montana GSG populations to the Council that could be used to assist with this effort.

3). III. General Provisions, #2, p. 7: This references valid and existing rights, which are defined on page 41 as "*any valid, legal right that someone may hold*". This definition is unspecific and inadequate. We recommend that the Bureau of Land Management (BLM) definition (or similar) for this term be applied in the Strategy: "*legal 'rights' or interest that are associated with land or mineral estate and that cannot be divested from the estate until that interest expires, is relinquished, or acquired*". This definition is from the 2013 Draft *Billings and Pompeys Pillar National Monument Resource Management Plan and Environmental Impact Statement*.

4). III. General Provisions, #3, p. 7: We encourage and strongly support development of the proposed Montana Stewardship and Conservation Fund (Fund) designed to conserve sagebrush habitat and grazing lands within identified GSG core, connectivity, and general habitat areas on private lands. Please see below (Comments 12-14) for additional comments relative to the proposed Fund.

5). III. General Provisions, #4, p. 8: States that "*the Governor shall direct an appropriate amount of all State funds available for conservation of habitats*…". We encourage and strongly support this measure. We recommend that additional specificity be provided as possible in terms of a

funding amount, percentage, or procedure / prioritization criteria to be applied in determining such funding. The proposed funding cycle should also be stated (e.g., annual verses one-time).

6). III. General Provisions, #5, p. 8: States "*it is assumed that uses and rights existing prior to January 31, 2014 will not be managed under the stipulations found in this strategy*". This is inconsistent with core area-specific stipulation #15 on page 20, which states that "*existing operations may not initiate activities resulting in new surface occupancy within 1.0 mile of an active sage-grouse lek*" and section VIII – Exempt Activities starting on page 28, which conditions existing activities in order to be considered exempt (e.g., requires no conversion to agriculture and that grazing operations meet rangeland health standards, etc.). General Provision #5 should be re-written to reference and accommodate these other sections to provide consistency and clarity. It is also unclear to us what is intended by the phrase "*recognizing that all applicable State and federal actions shall continue*" at the end of this section. We recommend that this be clarified.

7). III. General Provisions, #7, p. 8: States "*Activities that exceed recommended stipulations may require compensatory mitigation*". This implies that proposed activities are not necessarily required to comply with the stipulations, and in that case compensatory mitigation only "may" be required. The Strategy should clearly convey that activities proposing to exceed the stipulations should, in the normal course of business, first be modified such that they meet the stipulations, or disallowed. Compensatory mitigation should be required for impacts remaining following application of avoidance, minimization, and rectification/reclamation measures. For projects that may be allowed to exceed stipulations on a case-by-case, site-specific basis, compensatory mitigation commensurate with the impacts should be required and subject to review by the MSGOT.

8). III. General Provisions, #10, p. 9: The Strategy should ensure and require that any incentives to accelerate or enhance reclamation in GSG habitat would result in net benefit to and not cause declines in GSG populations.

9). III. General Provisions, #13, p. 9: We strongly encourage the inclusion of GSG scientists/biologists on the proposed MSGOT and that it be administered/coordinated by Montana Fish, Wildlife & Parks (FWP).

10). IV. Sage-Grouse Conservation Areas, p. 10: We strongly encourage and support the proposed addition of the Garfield/McCone County core area as an extremely important element of the Strategy. This raises the percentage of GSG population encapsulated in core areas, which is important in light of proposed SMCA designations.

11). IV. Sage-Grouse Conservation Areas, C. Connectivity Areas, p. 11: We agree that connectivity areas are an important component of GSG conservation in Montana, and recommend that the Strategy consider and include an initial connectivity area in Valley County (between and outside of existing core areas) based on maps and information in *Conserving Montana's Sagebrush Highway: Long Distance Migration In Sage-Grouse* (Smith et al. 2013). Conservation measures/stipulations should also be provided relative to connectivity areas,

including preservation of existing native sagebrush and grasslands. Please also see Comment 51 below.

12). V. Montana Stewardship and Conservation Fund, #6 and second #4, p. 12: States that the Fund would promote and support mitigation. It is important to clarify in this section that the Fund could not and would not be used directly for compensatory mitigation, but could be used to fund projects that would augment/leverage proposed or existing compensatory mitigation projects in order to maximize GSG conservation benefit.

13). V. Montana Stewardship and Conservation Fund, second #2, p. 12: We strongly encourage the inclusion of GSG scientists/biologists on the proposed citizens' board.

14). V. Montana Stewardship and Conservation Fund, second #5, p. 12: Subsequent versions of the Strategy should include the proposed annual funding amount.

15). VI. Stipulations for Development, p. 13: States that "*New development projects in sage-grouse Core Areas that require any State or federal permits will be required to follow the permitting process and stipulations*…" We are concerned that, where federal permits may be subject to more restrictive GSG conservation requirements than are included in the Strategy (e.g., some BLM actions), requiring their compliance with the Strategy may reduce GSG conservation benefit. A mechanism for addressing this concern (e.g., allowing the more restrictive conditions to prevail where conflicts arise) should be included in the Strategy.

16). VI. Stipulations for Development, a) Core Area Stipulations, i. Core Area – Disturbance Stipulations, p. 13: States that "…*stipulations in this section apply to all new activities in Core Areas with the exception of…where specific applicable regulations are already in place (e.g., SMCRA*)". This lacks specificity and we recommend that it be deleted, or that any such "specific applicable regulations" that would essentially result in exemption from compliance with the Strategy on lands over which the Strategy has authority should be explicitly defined and listed, along with supporting rationale. As we have stated during Council meetings and in our September 24, 2013 informal written comments, we do not agree that compliance with SMCRA should exempt projects from compliance with the Strategy. Please see Comment 25 below under VI. Stipulations for Development, a) Core Area Stipulations, ii. Core Area – Specific Stipulations, #6 – Coal Mining.

17). VI. Stipulations for Development, a) Core Area Stipulations, i. Core Area – Disturbance Stipulations, #1 – Surface Occupancy Active Leks, p. 14: In response to our previous informal written comments requesting that the overall NSO be increased from the originally-proposed 0.6 mile, the Council elected to increase the NSO buffer to 1 mile in core areas. In combination with other proposed measures including a 5% disturbance cap in core habitat, core-wide seasonal restrictions, and 1 disturbance per 640 acre oil and gas and mining density limitations, we support the increase of this base NSO and believe it will result in GSG conservation benefit.

18). VI. Stipulations for Development, a) Core Area Stipulations, i. Core Area – Disturbance Stipulations, #2 – Surface Disturbance, p. 14: Limiting surface disturbance of suitable GSG habitat to an average of 5% within a specified project area (as calculated using a method similar

to Wyoming's DDCT process) is consistent with the Wyoming Executive Order (EO). There is early evidence based on a 40% reduction in leased hectares within core areas that Wyoming policy is reducing potential for future fragmentation inside core areas (Copeland et al. 2013). However, the Copeland et al. (2013) information also suggests that, given conservation measures (including a 0.6-mile NSO) in the Wyoming policy, a 5% anthropogenic disturbance cap may still lead to some GSG decline in core areas. A 5% disturbance cap in core habitat may be effective in combination with expanded (1-mile) NSOs, core-wide seasonal restrictions, 1 disturbance per 640 acre oil and gas and mining density limitations, and other measures provided that existing land uses are included in surface disturbance calculations (see Comment 75 under Definitions below). We do, however, encourage the Council to continue considering a 3% disturbance cap in core habitat supported by findings in Knick et al. (2013), in order to maximize the potential conservation efficacy of the Strategy.

We recommend the following clarifications (underlined) to the language in this section: "*…but will not include areas that are* naturally *unsuitable for sage-grouse (e.g. bodies of water). A definition of unsuitable habitat is provided in Appendix A. Distribution of* proposed *disturbance may be considered and approved on a case-by-case basis with a goal of consolidating disturbance. Unsuitable* and disturbed *habitat should be identified in a seasonal and landscape context, on a case-by-case basis, outside the NSO buffer around leks. This will incentivize proponents to locate projects, where technically feasible, in unsuitable* and disturbed *habitat to avoid creating additional disturbance acres. Acres of development in unsuitable habitat are not considered disturbance acres. The primary focus should be on protection of* undisturbed *suitable habitats and protecting from habitat fragmentation*."

19). VI. Stipulations for Development, a) Core Area Stipulations, ii. Core Area – Specific Stipulations, p. 15: We recommend that the following overall concepts should apply to subsections 1-7:

1) Clear statement / enactment of an "avoidance first" approach to proposed surface disturbance activities to GSG habitat in core areas. The COT Report conservation objective for infrastructure, a widespread threat to most Montana GSG populations, is to avoid development of infrastructure within PACS (core areas). We recommend that such an "avoidance first" approach be enacted, and rationale be required by authorizing agencies as to why a given proposed surface disturbance to GSG habitat in core habitat is unavoidable. Clear, mandatory direction to adhere to (and document adherence to) the mitigation sequence in Section IX (avoid, minimize, reclaim, offset) should be provided.

2) Clear direction as to when compensatory mitigation for proposed surface disturbance activities would be required. We recommend that compensatory mitigation be required for all such projects that would result in direct, indirect, temporary, and permanent impacts to GSG that would remain following application of avoidance, minimization, and reclamation / rectification such that neutral or positive GSG population trends and habitats would be maintained. In the absence of a project-level effects analysis, approved projects that do not comply with Strategy stipulations should be subject to compensatory mitigation. We generally recommend mitigation implementation in advance of impacts; advance (functionality demonstrated by GSG use) compensatory mitigation to offset any approved proposed disturbance to suitable habitat in core areas that would exceed the 5% disturbance threshold should be required in all cases. All

proposed compensatory mitigation should be subject to MSGOT review. Please also see Comments 55 and 56 regarding mitigation.

20). VI. Stipulations for Development, a) Core Area Stipulations, ii. Core Area – Specific Stipulations, #1 - Transportation, p. 15: The proposed 2-mile lek NSO buffer for main haul roads is consistent with the findings in Holloran (2005), who found that the number of males occupying leks within 1.9 miles of a main haul road in Wyoming declined relative to leks >3.8 miles from a main haul road. However, numerous recent studies (please refer to the July 29, 2013 technical literature summary handout provided to the Council by FWP) document a large percent of nesting, as well as adverse effects of development, out to approximately 4 miles from leks. For example, Tack (2009) found that females placed nests an average of 3.68 miles from the lek of capture in Valley County, Montana and Saskatchewan. Seventy five and 95% of nests were within approximately 4.3 and 7.7 miles of the lek of capture, respectively.

Where placement in core areas is demonstrated to be necessary and unavoidable, we recommend that, per the original pre-draft version of the Strategy, new main haul roads and new major roads with similar disruptive potential be located a minimum of 4 miles from active leks where possible to protect nesting habitat and minimize indirect fragmentation / avoidance impacts. Restrictions limiting the use of haul roads should also be specified and enforced. We support the proposed 1-mile NSO for all other proposed roads (any road other than a main haul road or similarly disruptive road) at a minimum, if placement in core areas is demonstrated to be necessary and unavoidable. Outside of the NSO buffers, road placement in GSG habitat, or within 400 m (0.25 mile) of nesting habitat (based on Wisdom et al. [2011]), should be avoided where possible. Based on findings in Knick et al. (2013), we also recommend that the following road density limitations be applied within 5 km (3.1 miles) of active leks in core habitat: <1.0 $km/km^2$ (1.61 $mi/mi^2$) of secondary roads, 0.05 $km/km^2$ (0.08 $mi/mi^2$) of highways, and 0.01 $km/km^2$ (0.02 $mi/mi^2$) of interstate highways. Compensatory mitigation should be required for surface disturbance projects as discussed in Comment 19 above.

21). VI. Stipulations for Development, a) Core Area Stipulations, ii. Core Area – Specific Stipulations, #2 - Pipelines, p. 15: States: "*Compensatory mitigation for temporary loss of habitat will be required by the applicable permitting agency*." Compensatory mitigation should be required for surface disturbance projects as discussed in Comment 19 above. We also recommend that installation of compressor stations be avoided in core areas where GSG would be affected by noise and operation activities. Pipeline reclamation should include current and future suppression of non-native invasive plant species.

22). VI. Stipulations for Development, a) Core Area Stipulations, ii. Core Area – Specific Stipulations, #3 – Overhead Power Lines and Communication Towers, p. 16: Placement of these features in core habitat outside of established corridors (see below) should be avoided. Numerous recent studies (again, please refer to the July 29, 2013 technical literature summary handout provided to the Council by FWP) document a large percent of nesting, as well as adverse effects of development, out to approximately 4 miles from leks. Where placement of power lines and communication towers in core areas is documented to be unavoidable, we recommend adherence to the 4-mile buffer proposed in the original draft version of the Strategy to protect nesting habitat and minimize indirect fragmentation / avoidance impacts. As an

alternative, we recommend the following **sequential approach** (including required compensatory mitigation as discussed in Comment 19 above).

Where placement of power lines and communication towers in core areas is demonstrated to be unavoidable:

1) power lines and communication towers should be located a minimum of 4 miles from active leks (per the original draft version of the Strategy); if not possible then
2) overhead power lines within 4 miles of active leks should be buried (if technically feasible); if not feasible then
3) power lines and communication towers should be consolidated / co-located with existing features outside of the 1 mile base active lek NSO (for power lines, resulting in a cumulative corridor width < 200 meters and with anti-collision measures / perch inhibitors installed); if not possible then
4) power lines and communication towers should be located in non-GSG habitat as far as possible from leks and outside of the 1 mile general active lek NSO, provided it is clearly demonstrated that the development would not result in indirect impacts such as habitat fragmentation or avoidance of nesting habitat.

Per the COT Report, transmission line towers in GSG habitat should be constructed to severely reduce or eliminate nesting and perching by avian predators, most notably ravens, thereby reducing anthropogenic subsidies to those species. However, it should be noted that precluding construction of such facilities in proximity to GSG habitat is the most effective means of addressing predator concerns associated with those facilities. The Strategy correctly acknowledges this in the Predator section under measure c: "*Provide adequate buffers (4 miles from leks) between placement of new tall structures and nesting and brood-rearing habitat to minimize influence of predators*."

In addition to the above measures, communication tower projects should adhere to the 2013 Service *Revised Voluntary Guidelines for Communication Tower Design, Siting, Construction, Operation, Retrofitting, and Decommissioning*. At this time we are unable to evaluate the proposed future incorporation of the referenced in-process Avian Power Line Interaction Committee (APLIC) GSG guidance document as it is not finalized. We look forward to continued review of that document. However, the Strategy should indicate how potential conflicts between the Strategy and APLIC document would be addressed.

23). VI. Stipulations for Development, a) Core Area Stipulations, ii. Core Area – Specific Stipulations, #4 – Oil and Gas Development, p. 16: We strongly support the proposed average oil and gas well pad density limitation of 1 pad per square mile as a critical Strategy element.

24). VI. Stipulations for Development, a) Core Area Stipulations, ii. Core Area – Specific Stipulations, #5 - Mining, p. 17: We support the proposed average active mining development area density limitation of 1 active mining development area per square mile as a critical Strategy element. Please see Comments 19, 55, and 56 regarding compensatory mitigation.

25). VI. Stipulations for Development, a) Core Area Stipulations, ii. Core Area – Specific Stipulations, #6 – Coal Mining, p. 17/18: States: "*Incorporation of new leases into new and*

*existing mining operations is considered allowable by the State without the imposition of regulatory obligations otherwise required under this strategy, that would go beyond the current requirements under MSUMRA/SMCRA permitting and regulatory programs*." We strongly disagree with the proposed exemption of proposed coal mining projects from compliance with elements of the Strategy that are more restrictive than the existing permitting program requirements. This approach does not advance GSG conservation over existing conditions in Montana with respect to the identified threat.

We recommend that proposed coal projects comply with the Strategy except for: a) existing operations, which could be allowed to continue under MSUMRA/SMCRA-authorized permit terms and conditions; and b) minimal impacts associated with modified mine plans and/or new leases under existing mine operations / plans, for which exceptions to the Strategy could be allowed.

26). VI. Stipulations for Development, a) Core Area Stipulations, ii. Core Area – Specific Stipulations, #7 – Wind Energy, p. 18: We support the proposed exclusion of wind energy development in core areas as an important Strategy element. This approach is consistent with both the COT Report and the March 2012 *U.S. Fish and Wildlife Service Land-Based Wind Energy Guidelines* (U.S. Fish and Wildlife Service 2012).

27). VI. Stipulations for Development, a) Core Area Stipulations, ii. Core Area – Specific Stipulations, #8 – Vegetation Removal, p. 18: We support this measure; however, revising the proposed work window of June 16 - February 29 to July 16 - March 14 should be considered in order to be consistent with other restrictive periods specified in the Strategy.

28). VI. Stipulations for Development, a) Core Area Stipulations, ii. Core Area – Specific Stipulations, #9 – Sagebrush Treatments, p. 18: We strongly support the prohibition of sagebrush eradication and treatment programs aimed at reducing or eliminating sagebrush on State lands, and discouragement of such on private lands if there are no mechanisms for prohibitions on private lands in association with State permits or authorizations. Where (or if) such mechanisms exist on private lands in association with State permits or authorizations, the prohibitions should be applied. This should be clarified in the Strategy as necessary.

29). VI. Stipulations for Development, a) Core Area Stipulations, ii. Core Area – Specific Stipulations, #10 – Conversion to Cropland Agriculture, p. 19: We encourage and strongly support the Council's recommendation that the Montana Board of Land Commission enact a prohibition of native range conversion on State land in Core Areas to cropland. The mechanism (e.g., addendum, etc.) by which such a prohibition would be incorporated into the Strategy should be specified as would any proposed criteria for approved waivers from this prohibition. We are pleased that this prohibition would also pertain to general habitats, and recommend that it also pertain to connectivity areas.

30). VI. Stipulations for Development, a) Core Area Stipulations, ii. Core Area – Specific Stipulations, #11 – Range Management, p. 19: It should be explained / specified in the Strategy how existing management practices of the lessee on surrounding non-State lands would be taken into consideration, as indicated in this section. It is important that State agencies be required,

rather than encouraged, to collaborate with federal agencies and private landowners to craft grazing management plans that adhere to the concepts included in the Strategy.

31). VI. Stipulations for Development, a) Core Area Stipulations, ii. Core Area – Specific Stipulations, #12 - Wildfire, p. 19: This section should reference measures in Section X.b, and should indicate that such measures will be required on State lands and jurisdictions, not voluntarily implemented as currently indicated. The COT Report provides additional conservation measures and conservation options relative to wildfire prevention and suppression that should be considered, included in Section X.b, and referenced in this section. We recommend the following revision (or similar): "*Following wildfire, lands shall be treated as disturbed pending ~~an~~ implementation* of a restoration *management plan with* at least 3 years of *trend data showing the area returning to functional sage-grouse habitat".* Please also see Comments 61-65 below under X. Management Recommendations (non-development activities), b) Wildfire Response.

32). VI. Stipulations for Development, a) Core Area Stipulations, ii. Core Area – Specific Stipulations, #13 – Monitoring / Adaptive Response, p. 19: We support this element and recommend the following (or similar) revision (underlined): "*…excluding underground utilities such as pipelines and buried utility lines* unless above-ground elements (e.g., compressor stations, substations, etc.) are constructed."

33). VI. Stipulations for Development, a) Core Area Stipulations, ii. Core Area – Specific Stipulations, #14 - Reclamation, p. 20: We recommend that a distinction be made in this section that reclamation is only one aspect of mitigation, and a reference to the Mitigation section (IX) be added here. The last sentence on Line 14 states, "*The operator is required to control noxious and invasive plant species, including cheatgrass…*" To provide specificity and increase clarity, definitions for noxious and invasive plant species should be provided, along with references to or actual lists of such species. It should also be specified what is meant by "control". Standards for control or eradication (e.g., percent cover of such species for a specified number of years) should be provided or referenced.

34). VI. Stipulations for Development, a) Core Area Stipulations, ii. Core Area – Specific Stipulations, #15 – Existing Activities, p. 20, Line 19: We recommend the following revision: "*Any existing* or approved, but as-yet unimplemented *disturbance will be counted toward the calculated disturbance cap for a new proposed activity.*" Also, please see our previous consistency comment (Comment 6) regarding General Provision #5.

35). VI. Stipulations for Development, a) Core Area Stipulations, ii. Core Area – Specific Stipulations, #16 - Exceptions, p. 20: We recommend that compensatory mitigation be required for any approved exceptions (please see Comments 19, 55, and 56).

36). VI. Stipulations for Development, b) Special Management Core Areas, p. 21: We have several substantive concerns with this element of the Strategy.

The definition and purpose of SMCAs, as stated in the Strategy, are not entirely clear to us. SMCAs are defined as "*…a subset of Core Areas in which special consideration has been given*

*to valid existing rights and the fact that it is recognized that existing and planned development in these areas cannot be implemented within the constraints outlined in this document*." Existing development has, by definition, already been implemented. Existing uses and rights are addressed under General Provision #5 and Core Area-Specific Stipulation #15. The SMCA section therefore seems to primarily address desired or planned, but as yet unpermitted / unapproved, development in core areas that would not be able to meet Strategy stipulations, and also elements of pre-Strategy approved but unimplemented actions in core areas that would violate the 1 mile NSO stipulation (#15). This should be clarified.

It was our understanding from the Council meetings that SMCAs might be proposed within discrete portions of a few specific core areas that: 1) were already substantively developed / industrialized; and 2) for which clearly defined valid and existing development rights (please see Comment 3 regarding this definition) were possessed; and 3) for which GSG conservation benefit could be derived through preparation of an individual conservation plan that includes compensatory mitigation. We remain open to limited consideration of this concept; however, based on the information provided to date we are not supportive of the proposed South Phillips County, Carbon County, or Carter County SMCAs. The generally low levels of existing disturbance and unclear extent of true valid and existing rights in these areas raise substantive questions as to their appropriate inclusion as SMCAs, as well as GSG habitat loss and fragmentation concerns; particularly in the South Phillips County SMCA. It is also unclear as to why the entire Cedar Creek Anticline core area is now included in the SMCA; previous iterations of this SMCA included a portion of this core area.

The information/rationale requested of "new" proposed SMCAs under #1, #2, and #3 on pages 22 and 23 is generally appropriate, but has not been provided relative to any of the currently proposed SMCAs. We request that this information be provided in order to facilitate evaluation of any proposed SMCAs carried forth in subsequent drafts of the Strategy. A description of valid and existing rights and compliance with the definition of such should also be a required element under #1.

Proposing SMCAs in the Strategy prior to the development of SMCA population thresholds, as indicated under #2 on page 23, provides no assurance that such proposed SMCAs would comply with the future threshold, or that the Service would agree with that threshold. We recommend that the Council consider proposing a biologically defensible threshold in the Strategy, or deferring on proposing SMCAs until a threshold is developed and the candidate SMCAs have been evaluated according to the process outlined in the Strategy. Such a threshold should be quite low, as by definition candidate SMCAs should only be proposed in a few, highly disturbed areas. Further, we recommend that any such threshold be based on the given population metric present in and within a minimum of 4 miles of a candidate area, rather than basing the threshold on the more general "GSG population impacted". The method for determining what constitutes an "impact" at a population scale is undefined in the Strategy and such determinations would likely be subject to dispute.

We recommend that one conservation plan, not multiple plans, be developed for each approved SMCA to assure that complimentary, landscape-level GSG conservation planning is enacted. Please note that we will only be able to fully evaluate the potential effects of any proposed

SMCAs, including important elements such as compensatory mitigation, monitoring, and adaptive response, once conservation plans are finalized and approved.

37). VI. Stipulations for Development, c) General Habitat Stipulations, p. 23: We agree that the health of general habitat areas is a critical element in the effort to maintain the abundance and distribution of GSG in Montana. Again, discussion on Page 2 of our comment letter provides support for the currently larger proposed NSOs in core habitat and highlights the importance of and requirement for general habitat protection, including NSOs, in the Montana Strategy.

Similar to our comments on core area stipulations, overall concepts missing from this section are:

1) Clear statement an "avoidance first" preference to proposed surface disturbance activities to GSG habitat in general habitat. We recommend that such an "avoidance first" preference be articulated, and rationale be required by authorizing agencies as to why a given proposed surface disturbance to GSG general habitat is unavoidable (with deference first to avoidance of core habitat). Clear direction to adhere to the mitigation sequence in Section IX (avoid, minimize, reclaim, offset) should be provided.

2) Clear direction as to when compensatory mitigation for proposed surface disturbance activities in general habitat would be required. Offset mitigation is currently mentioned under Oil, Gas, and Mining, but not explicitly required. We recommend that compensatory mitigation be required for all such projects that would result in direct, indirect, temporary, and permanent impacts to GSG that would remain following application of avoidance, minimization, and reclamation / rectification such that neutral or positive GSG population trends and habitats would be maintained. In the absence of a project-level effects analysis, approved projects that do not comply with Strategy stipulations for general habitat should be subject to compensatory mitigation. All proposed compensatory mitigation should be subject to MSGOT review. Please also see mitigation Comments 55 and 56.

38). VI. Stipulations for Development, c) General Habitat Stipulations, #1 – Surface Occupancy, p. 24: In the context of this Strategy, the proposed 0.25-mile NSO from active GSG leks in general habitat is inadequate to achieve GSG lek protection. This measure was decreased from the originally proposed 0.6 mile NSO in the pre-draft Strategy. Studies demonstrating the inadequacy of this measure include Holloran (2005), who found that development stipulations including a 0.25-mile NSO were inadequate to maintain GSG breeding populations in natural gas fields. Walker et al. (2007) found that lease stipulations that prohibit development within 0.4 km (0.25 mi) of GSG leks on federal lands were inadequate to ensure lek persistence and may result in impacts to breeding populations over larger areas. Harju et al. (2010) found that leks with ≥1 oil or gas well within a 0.4-km (0.25-mile) radius encircling the lek had 35–91% fewer attending males than leks with no well within this radius.

As we conveyed in our September 24, 2013 informal written comments, numerous recent studies (please again refer to the July 29, 2013 technical literature summary handout provided to the Council by FWP) document a large percent of nesting, as well as adverse effects of development, out to approximately 4 miles from leks. We recommend that the general habitat NSO be increased from 0.25 mile to the extent possible to minimize potential impacts to nesting habitat and breeding activities in general habitat and add conservation benefit to the Strategy. We

recommend that the general habitat NSO match the core habitat NSO of 1 mile, but at a minimum extend to 0.6 mile in order to have any discernible effect. The increased NSO should apply consistently throughout the plan where referenced.

39). VI. Stipulations for Development, c) General Habitat Stipulations, #2 – Surface Disturbance, p. 24: We recommend the following revision (or similar) "…*management practices ~~will be employed~~* shall be required *to minimize surface disturbance, such as co-locating new and existing structures*." It is highly important that list(s) of such practices be included or referenced in appropriate sections of the Strategy in order for us to discern their potential effectiveness.

40). VI. Stipulations for Development, c) General Habitat Stipulations, #3 – Seasonal Use, p. 24: We recommend the following revision (or similar) "*Activities may be allowed during seasonal closure periods as determined on a case-by-case basis* where greater sage-grouse would not be adversely affected."

41). VI. Stipulations for Development, c) General Habitat Stipulations, #4 - Noise, p. 24: We recommend the following revision (or similar) "*New noise levels, at the perimeter of a lek, ~~should~~* shall *not exceed 10 dBA*…"

42). VI. Stipulations for Development, c) General Habitat Stipulations, #5 - Pipelines, p. 24: We recommend that installation of compressor stations be avoided where GSG would be affected by noise and operation activities. Pipeline reclamation should include current and future suppression of non-native invasive plant species.

43). VI. Stipulations for Development, c) General Habitat Stipulations, #6 – Overhead Power Lines and Communication Towers, p. 25: Again, we recommend a clear "avoidance first" preference be applied to these types of developments in general habitat (please see Comment 37), with deference to core habitat. The NSO should be referenced in this section. Where unavoidable, transmission line towers in general habitat should be constructed to severely reduce or eliminate nesting and perching by avian predators, most notably ravens, thereby reducing anthropogenic subsidies to those species. Again, it should be noted that precluding construction of such facilities in proximity to GSG habitat is the most effective means of addressing predator concerns associated with those facilities. The Strategy correctly acknowledges this in the Predator section under measure c: "*Provide adequate buffers (4 miles from leks) between placement of new tall structures and nesting and brood-rearing habitat to minimize influence of predators*."

Communication tower projects should adhere to the 2013 Service *Revised Voluntary Guidelines for Communication Tower Design, Siting, Construction, Operation, Retrofitting, and Decommissioning*. The in-process APLIC GSG guidance document should be clearly referenced in this section, as should the APLIC 2013 avian anti-collision measures guidance document. At this time we are unable to evaluate future incorporation of the in-process APLIC GSG guidance document as it is not finalized. However, as previously stated, the Strategy should indicate how potential conflicts between the Strategy and APLIC document would be addressed.

44). VI. Stipulations for Development, c) General Habitat Stipulations, #7 – Oil and Gas, Mining, p. 25: Please see Comments 37 and 39 regarding avoidance, mitigation, and best management practices above under VI. Stipulations for Development, c) General Habitat Stipulations, p. 23.

45). VI. Stipulations for Development, c) General Habitat Stipulations, #8 – Coal Mining, p. 25: Please see our coal mining Comment 25 above under VI. Stipulations for Development, a) Core Area Stipulations, ii. Core Area – Specific Stipulations, #6 – Coal Mining, p.17/18. The same comments apply to this section. Also please see Comments 37 and 39 regarding avoidance, mitigation, and best management practices above under VI. Stipulations for Development, c) General Habitat Stipulations, p. 23.

46). VI. Stipulations for Development, c) General Habitat Stipulations, #9 – Wind Energy, p. 26: New wind facilities should not be located within 4 miles of active GSG leks or other important habitats. The current Strategy recommendation is insufficient to ensure this protection. We appreciate and support reference to the March 2012 Service guidelines. We recommend adherence to the guidelines, and that the date and title (*U.S. Fish and Wildlife Service Land-Based Wind Energy Guidelines*) be used in the reference. Locating new wind facilities 4 miles or further from active GSG leks would be consistent with both the COT Report and the March 2012 Service guidelines, under which GSG would be considered a "species of habitat fragmentation concern" in Montana.

47). VI. Stipulations for Development, c) General Habitat Stipulations, #10 – Sagebrush Treatments, p. 26: We strongly support this element pending the following revision (or similar) "*…as determined by FWP using best-available science, ~~should~~* <u>shall</u> *be prohibited on State and federal lands…*"

48). VI. Stipulations for Development, c) General Habitat Stipulations, #11 – Conversion to Agricultural Cropland, p. 26: Please see Comment 29 above under VI. Stipulations for Development, a) Core Area Stipulations, ii. Core Area – Specific Stipulations, #10, p. 19. The same comments apply to this section.

49). Range Management in general habitat is an important component of GSG conservation in Montana, but is not included as a Strategy element within general habitat. We recommend that this element be considered.

50). VI. Stipulations for Development, c) General Habitat Stipulations, #12 - Reclamation, p. 27: Please see Comment 33 above under VI. Stipulations for Development, a) Core Area Stipulations, ii. Core Area – Specific Stipulations, #14, p. 20. The same comments apply to this section.

51). VI. Stipulations for Development, d) Connectivity Stipulations, p. 27: We encourage and support the inclusion of important connectivity areas as a Strategy component, and understand that GSG genetic studies are underway in an effort to identify important connectivity considerations in Montana. However, information is currently available on which to base at least one connectivity area. Smith et al. (2013) studied a GSG population with the longest-known

annual migration (240 km between summer range in north central Montana/Saskatchewan and winter range north of the Missouri River) and identified a diffuse annual (spring and fall) GSG migration area in Valley and extreme southeast Phillips counties. GPS tracking showed that migrating grouse frequented stopovers along multiple routes that coalesced to form an integrated pathway. We recommend that the portion of this area (as mapped in Smith et al. 2013) occurring between the existing core areas in north and south Valley County be included as an initial connectivity area in the Strategy, with accompanying stipulations.

We recommend that stipulations include measures such as preservation of native sagebrush rangeland, preclusion of agricultural sagebrush conversion and sagebrush eradication, sustainable grazing management, oil and gas and mining stipulations similar to those for core areas, wind energy exclusion, and avoidance of new overhead powerlines and communications towers outside of existing corridors/clusters (see Smith et al. 2013).

52). VI. Stipulations for Development, d) Connectivity Stipulations, p. 27: This section currently indicates that "*A public review process on proposed stipulations for connectivity habitat is required before the stipulations can be adopted by the State"*. We are unsure how this applies to other, as-yet unresolved Strategy components, including the APLIC GSG guidance incorporation, Fund considerations, Montana Board of Land Commission decisions, final mitigation framework, MSGOT formation, SMCA review, etc. The Strategy should clarify which unresolved elements would ultimately require additional public review prior to adoption.

53). VII. Permitting Process, Process Deviation, p. 28: We recommend the following revision (or similar): "*Master development plans* proposing ~~*for implementing*~~ *alternatives to the* ~~*following*~~ *core area,* connectivity area, or general habitat *stipulations and* corresponding *plans for offset mitigation should be* evaluated by the MSGOT and approving agency ~~*established*~~ *on a case-by-case basis*."

54). VIII. Exempt Activities, D and E: Exempting construction of reservoirs and aquatic habitat improvements up to 10 surface acres within the NSO if seasonal restrictions are imposed under D could still result in significant, unmitigated GSG habitat loss. We recommend that such allowances only be made for construction in unsuitable/ disturbed habitat. A definition for "aquatic habitat improvements" should be provided to add specificity. Distances specified from leks under D and E should be consistent with NSOs specified in core / general habitat.

Raptor perch deterrent language in E for residential/agricultural powerlines within the NSO should be consistent with such language in the COT Report (see Comment 22) and that under core area and general habitat stipulations for powerlines. Habitat avoidance, screening, avian anti-collision measures, corridor consolidation, potential line burying, and other practices (see Comment 39 regarding the need for a list of management practices) should be considered and applied for these projects to the extent possible and appropriate. Routine power line maintenance is conditioned seasonally under E, conflicting with maintenance exemptions under K, which should be clarified.

55). IX. Mitigation Framework, p30: The mitigation framework, and its sequence of component consideration (avoid, minimize, rectify/reclaim, and compensate) should apply to core areas,

connectivity areas, and general habitat (currently only indicated for core in this section). It may apply differently in each of these three areas (e.g., compensatory mitigation extent, amount [ratios], timing, etc.) but it is important that the sequence apply to all projects subject to Strategy stipulations. We understand that this element of the Strategy is to be fleshed out by the MSGOT or similar group per some of the guidance documents listed in the Strategy, including the Service's forthcoming GSG compensatory mitigation guidance. However, it is important for the Strategy to clearly convey, to the extent possible, under what circumstances compensatory mitigation would apply.

As stated in previous comments, we recommend that compensatory mitigation be required for all projects that would result in direct, indirect, temporary, and permanent impacts to GSG that would remain following application of avoidance, minimization, and reclamation / rectification such that neutral or positive GSG population trends and habitats would be maintained. This particularly applies to core areas, but to connectivity and general habitats also. In the absence of a project-level effects analysis, approved projects that do not comply with Strategy stipulations should be subject to compensatory mitigation. We generally recommend mitigation implementation in advance of impacts, and acknowledge that the Strategy specifies this approach. Advance (functionality demonstrated by GSG use) compensatory mitigation to offset any approved proposed disturbance to suitable habitat in core areas that would exceed the 5% disturbance threshold should be required in all cases. All proposed compensatory mitigation should be subject to MSGOT review.

We recommend that the Strategy also specify at least the minimum components of a compensatory mitigation plan, which should include:

- Effects assessment (determination of what impacts are being mitigated, or offset)
- Description, location, specifications, timing, duration of proposed mitigation action
- Additionality determination (actions proposed as compensatory mitigation must provide benefits beyond [additional to] those that would be achieved anyway under applicable regulations and/or land-use management plans)
- Assessment of how mitigation would offset impacts ("credits" verses "debits")
- Financial assurances description
- Performance standard description
- Monitoring and adaptive management (contingency) description

56). IX. Mitigation Framework, #4 – Off-Set Mitigation, p 30: We recommend the following revision (or similar): "*When temporary or permanent impacts will occur, despite implementation of stipulations identified in Section VI* <u>and sequential mitigation framework components 1, 2, and 3 above</u>*, protect, restore*…"

57). X. Management Recommendations (non-development activities), p 31: This section states: "*The following recommendations outline voluntary management practices*…" and "*Whenever possible, adherence to these recommendations is encouraged*." A clear distinction should be made between which recommendations are voluntary and apply to unregulated private lands, and which are mandatory and apply to lands under State jurisdiction. We recommend that these measures be required on lands under State jurisdiction. Only such measures that are required on

lands with State jurisdiction will provide a high degree of implementation certainty. Also, it is unspecified as to which types of GSG habitat categories (core, general, or connectivity) these measures apply. We recommend that they be applied in all three categories to the extent possible.

58). X. Management Recommendations (non-development activities), a) Range Management, a. Grazing management, p 32: It is unclear whether the intent is for the State to develop the evaluation framework, and collaborate with federal agencies in doing so, or whether the State is expecting the federal agencies to develop the framework while collaborating with the State. In either case, timelines for framework development should be provided.

GSG conservation objectives are generally referenced throughout this Section a); however, they are not explicitly cited, stated, or listed. It should be clarified as to whether the State intends to develop GSG habitat objectives/standards, or adopt / comply with Rangeland Health Standards and achieve Proper Functioning Conditions, or comply with other established GSG habitat standards / recommendations published in technical literature (e.g., Connelly et al. 2000, Hagen et al. 2007).

States, "*The State of Montana will also collaborate with appropriate federal agencies on appropriate site-based actions to achieve sage-grouse conservation objectives within the framework*." Given that the immediately preceding discussion pertained only to federal lands, it should be clarified that this (and subsequent discussion) includes State lands. Again, the specific rangeland conservation objectives/standards should be cited. The monitoring and habitat assessment discussion should also reference specific objectives/standards, and specify a monitoring timeline and frequency for State lands. It should be stated that adjustments shall be made to practices as necessary to achieve compliance with the specified rangeland standards.

59). X. Management Recommendations (non-development activities), a) Range Management, b., p 32: A timeline for the development and application of field guidelines should be specified. Again, specific rangeland conservation objectives/standards should be cited. It should also be stated as to what actions would be taken (e.g., lease termination, application of additional measures, etc.) should a lease fail to achieve the standards, despite the application of corrective measures.

60). X. Management Recommendations (non-development activities), a) Range Management, c. Range Structures, and d. Fences p 32: The specified measures closely follow those from the COT Report and we support their inclusion here. We do recommend citing Stevens et al. (2012) with respect to determining high risk fence collision areas.

61). X. Management Recommendations (non-development activities), b) Wildfire Response, p 33: States "*The following recommendations are designed*…" Again, it is important to distinguish between which recommendations are voluntary and apply to unregulated private lands, and which are mandatory and apply to lands with State jurisdiction. The COT Report provides conservation measures and conservation options relative to wildfire prevention and suppression in addition to those in this section that should be considered for inclusion as discussed below.

62). X. Management Recommendations (non-development activities), b) Wildfire Response, a.iii, p 33: States "*Oppose prescribed fire in sagebrush habitat*." We are uncertain how this measure would be implemented or effective. We recommend that prescribed burns be prohibited in sagebrush habitat, or only allowed on a case-by-case basis if can be determined (along with specification as to how this determination would be made and a risk assessment) to be neutral or beneficial to sage-grouse. Measures from the COT Report addressing intentional fires in sagebrush habitats include: 1) (prevention) *Eliminate intentional fires in sagebrush habitats, including prescribed burning of breeding and winter habitats*; and 2) (suppression) *Carefully consider the use of backfires within PACs to minimize the potential for escape and further damage to sage-grouse and sagebrush habitats*. The second of these was included in the Strategy, which we support; however, we also recommend including the first measure.

We also recommend inclusion of the following measure (or similar) from the COT Report: *Reduce risk of human-caused fires by limiting activities that may result in fire (e.g., fire bans for campers, limit OHV use to roads) during high risk fire seasons*.

63). X. Management Recommendations (non-development activities), b) Wildfire Response, c.iii, p 34: States "…*develop handbook of methods for most appropriate restoration strategies*." A timeline should be specified for this development. Additionally, the Western Association of Fish and Wildlife Agencies (WAFWA) is engaged in a similar effort. The Service has funded WAFWA to compile and coordinate existing information and management efforts to ascertain work currently being performed to address this threat. WAFWA will develop a report documenting the current work and develop a set of concise, prioritized and integrated actions land managers and policy makers can take to effectively preclude the dominance of invasive species and reduce their influence on the fire cycle in sagebrush ecosystems. We will transmit products to the Council for consideration/incorporation into the Strategy when available.

64). X. Management Recommendations (non-development activities), b) Wildfire Response, c.viii, p 35: States "…*Establish seed bank managed by State, if viability of seeds can be maintained*…" We recommend that a timeframe be specified for establishment of the seed bank.

65). X. Management Recommendations (non-development activities), b) Wildfire Response, c.ix, p 35: States "…*Ensure post-fire monitoring for successful reestablishment of sagebrush community*." We recommend that a monitoring timeframe be specified sufficient to ensure restoration success. Measures from the COT Report addressing post-fire restoration monitoring include: 1) *Implement monitoring programs for restoration activities. To ensure success, monitoring must continue until restoration is complete (establishment of mature, healthy native sagebrush plant communities), with sufficient commitments to make adequate corrections to management efforts if needed*; and 2) *Monitor and control invasive vegetation post-wildfire for at least three years*. We recommend that these (or similar) measures be incorporated.

We also recommend inclusion of the following measure (or similar) from the COT Report: *Ensure sage-grouse habitat needs are considered in restoration efforts including managing for the range of variation, as appropriate for the local area*.

66). X. Management Recommendations (non-development activities), c) Invasive Plant Species, p 35: Absent from this section are any required (for lands subject to State jurisdiction) or recommended (for private lands) adherence to best management practices for noxious / invasive plant species in association with surface disturbance projects. As invasive plant species was identified in the COT Report as a widespread threat in four out of the six Montana GSG populations, and a localized threat in the remaining two populations, this is should be an important element of the Strategy. The following measure (or similar) from the COT Report should be used to develop a measure for the Strategy: *Require best management practices for construction projects in and adjacent to sagebrush habitats to prevent (non-native invasive plant species) invasion*. A list of such practices (and species) should be included or referenced in the Strategy.

We also recommend that (1) control, or stopping the spread of invasive annual grasses, and (2) reduction or elimination of established invasive annual grasses be prioritized in all sagebrush habitats, both within and outside of core areas because once established, invasive annual grasses are extremely difficult to control.

67). X. Management Recommendations (non-development activities), c) Invasive Plant Species, f, p 36: Conifer encroachment was identified in the COT Report as a localized threat in five of the six Montana GSG populations. The COT Report objective for this threat 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*. While we understand that this is a localized threat, we recommend that a measure or measures addressing this "no net conifer gain" principle be incorporated, with prioritization in core areas.

Removal should be prioritized by seasonal habitats, based on the habitat that is locally limiting populations, and techniques should not include prescribed fire in low elevation, xeric sagebrush communities. The use of mechanical treatments should be prioritized, as these techniques allow for more selective removal of invading plants, and more importantly allow understory habitats to remain intact.

In a study published subsequent to the COT Report, Baruch-Mordo et al. (2013) found that no leks were active when conifer cover exceeded 4% within 1,000 meters of those leks, and data suggest that even at 1% cover there was still an approximate 45% loss of lek activity. We therefore also recommend enactment of measures to reduce conifer cover to 0% within (minimally) 1,000 meters of leks where conifer encroachment is an issue in order to facilitate the preservation of lek activity. This could also potentially be employed as a restoration measure where leks may have been lost.

68). X. Management Recommendations (non-development activities), d) Predators, p 36: The Line 12 reference to the Service's 2011 decision should be revised to 2010. We believe that items a, b, c, d, and e, all of which pertain to management of anthropogenic inroads for predators in GSG habitat, would prove the most globally effective means for addressing long-term GSG predator concerns in Montana. The Strategy appropriately considers predator control on a local, site-specific basis where needed and based on biological assessment.

69). X. Management Recommendations (non-development activities), e) Disease (West Nile Virus), p 37: We recommend that specific design/management practices be listed or referenced in the Strategy that address the construction and management (items a and b) of necessary ponds to reduce the potential for production of mosquitoes that transmit West Nile virus.

70). XI Implementation, a) Authority of Executive Order, p. 38: States "*It is this Council's recommendation that the Governor of the State of Montana issue an Executive Order that requires full compliance with this strategy by all State agencies*." We fully agree with this recommendation; however, this appears to directly conflict with the core area and general habitat stipulations for coal mining, which we understand to exempt the Department of Environmental Quality from requiring coal project compliance with any elements of the Strategy that are more stringent than those required under SMCRA and MSUMRA. We disagree with the proposed exemption as we understand it (please see Comment 25) and would prefer to see full compliance with this strategy by all State agencies, *including* the Department of Environmental Quality.

71). XI Implementation, b) Existing Regulatory Mechanisms, p. 39: States "*The stipulations in this strategy apply to all activities within sage grouse habitat that require a State permit or lease. Permits affected might include*…" As stated during the Council meetings and in informal written comments, in order to adequately understand and predict the efficacy of the Strategy, it is extremely important for the Service to understand the regulatory scope and extent to which the Strategy will apply. We recommend that a review of this regulatory scope be provided to help establish context for the Strategy.

72). XI Implementation, d) Montana Sage-grouse Oversight Team (MSGOT), p. 39: We support the formation and oversight of such a group, and again strongly encourage that it include GSG scientists / biologists and be administered/coordinated by FWP.

73). XI Implementation, f) Staffing Required for Implementation, p. 40: We acknowledge, appreciate, and strongly support the considerable State funding commitment necessary to support at least 5.5 FTEs in conjunction with Strategy implementation.

74). Appendix D: Definitions, Suitable Habitat, p. 49: This revised definition appears to incorporate areas with less than 5% cover of silver sagebrush (*Artemisia cana*), but with 5% or greater aggregate shrub cover. Such areas provide important GSG habitat in some areas of Montana (particularly in the North Montana population), and we support this inclusion.

75). Appendix D: Definitions, Surface Disturbance, p. 49: States "*Existing uses such as farming and grazing operations, irrigation, county maintenance, and emergency response are not included in surface disturbance calculations*." We strongly disagree that existing uses should be excluded from surface disturbance calculations, as those that have resulted in GSG habitat conversion (loss) are fundamental to the calculation of existing and proposed future disturbance percentages. If this sentence is intended to mean that such existing disturbances would not be subject to surface disturbance limitations, then we agree, and this intent should be clarified in the Strategy. If not, then we recommend that this sentence be deleted as it would have a substantive negative effect on the efficacy of the proposed 5% surface disturbance limitation measure.

76). The Strategy does not directly address recreation; a (primarily) localized to widespread threat in Montana GSG populations. We recommend that the following measures (or similar) from the COT Report be incorporated into the Strategy in order to address this issue: 1) *Close important sage-grouse use areas to off-road vehicle use*; and 2) *Avoid development of recreational facilities (e.g., new roads and trails, campgrounds) in sage-grouse habitats*.

77). The Strategy does not directly address ex-urban development; a localized threat in 4 of 6 Montana GSG populations. However, the proposed Fund, when implemented, would facilitate achieving consistency with the conservation objective for this threat. In addition, we recommend that the following measures from the COT Report be incorporated into the Strategy in order to address this issue: 1) *Consolidate infrastructure that supports urban and exurban development*; 2) *Do not allow landfills in sage-grouse habitats, or within 5 km of sage-grouse habitats*; and 3) *Do not relinquish public lands for the purpose of urban development in sage-grouse habitat*.

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