# Appendix 19

## Idaho Buffers and Required Design Features

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# Appendix 19. Idaho Buffers and Required Design Features

## 19.1 Introduction

Under Idaho's state-specific circumstances, there are proposed changes to Appendix B: Buffers and Appendix C: Required Design Features of the BLM Idaho's 2015 RMP Amendment. Proposed changes include changes to which leks buffers would be applied to for BLM management and project NEPA analysis, and several modifications to lek buffer distances based on the updated plan for GRSG by the State of Idaho, i.e. the 2021 Idaho Sage-grouse Plan (State of Idaho 2021).

### 19.1.1 Lek Definitions

In the "2015 Idaho ARMPA" (Southwestern Idaho and Montana Approved Resource Management Plan Amendment [BLM and Forest Service 2015a]; Alternative 1), lek definitions were based on Idaho Department of Fish and Game's (IDFG) lek management status and described in the 2015 Idaho ARMPA (also see **Appendix 4**). No changes were made in the 2019 Idaho ARMPA (BLM Idaho 2019; Alternative 2). A lek with a five-year management status of *occupied* was a lek that had been active at least one breeding season within the prior five years. An *active* lek was an annual status and meant that the lek had been attended by more than one male GRSG during the most recent breeding season. A lek with a five-year management status of *unoccupied* was a lek that had not been active for five consecutive years.

### 19.1.2 Lek Buffer Distances

In the 2015 ARMPA ROD (Alternative 1), BLM based lek buffer distances on the USGS Report, *Conservation Buffer Distance Estimates for Greater Sage-Grouse – A Review* (Manier et al. 2014) which provided a summary of scientific literature on the influence of anthropogenic disturbance and infrastructure on GRSG. The BLM decision was to apply lek buffer distances specified as the 'lower end of the interpreted range' in the report which was based on multiple research studies.

The 2019 proposal for the Idaho management alignment alternative included reduced lek buffers. BLM Idaho's 2019 ROD (BLM Idaho 2019; Alternative 2) did not reduce lek buffers in PHMA but did reduce lek buffers in IHMA and GHMA to better align buffer distances with the Governor's three-tiered habitat approach. Lek buffer distances were most restrictive in PHMA (same as 2015 Idaho ARMPA), and slightly reduced in IHMA and further reduced in GHMA. Instead of the 'lower end of the interpreted range' (basis for the 2015 ARMPA buffer distances), buffer distances were based on the 'literature minimum' in the USGS report, i.e., the lowest effect distance reported from multiple research studies. Buffer exception criteria were possible in IHMA and GHMA. This approach encouraged development outside of the best habitat and into lesser quality or non-habitat. The proposal was also consistent with acknowledgement in the USGS report that no single buffer distance would be appropriate for all populations and habitats across the range of sage-grouse (Manier et al. 2014).

## 19.2 Alternatives 3, 4, 5, and 6

### 19.2.1 Lek Definitions

For range wide consistency and analysis of lek data, BLM will adopt the updated WAFWA lek definitions (Cook et al. 2022; **Appendix 4**). These differ from the lek definitions in the 2015 Idaho ARMPA (Alternative 1). In Idaho, BLM would apply buffers to *active* and *pending active* leks under Alternatives 3, 4, 5, and 6. An

*active* lek is a lek that has more than two or more males counted during two or more lek counts within the last 10 years. A *pending active* lek is a lek with one observation of at least two males in the last 10 years and at least one observation of at least two males more than 10 years ago. BLM will rely on the lek status determinations of the Idaho Department of Fish and Game based on their most recent lek data. The change in lek definitions and change from a five-year to a ten-year lek management status better captures fluctuations in GRSG population dynamics, which generally follow 9- to 10-year population cycles (Fedy and Aldridge 2011, Fedy and Doherty 2011). Under Alternatives 3, 4, and 6, any *active* and *pending active* leks would be evaluated whereas under Alternative 5, lek buffers would only apply to *active* and *pending active* leks within HMA.

### 19.2.2 Lek Buffer Distances

Under Alternatives 3 and 4, lek buffer distances in IHMA and GHMA would be the same as in PHMA, as in the 2015 Idaho ARMPA or Alternative 1 (**Table ID-1**). Lek buffer distances in the 2015 Idaho ARMPA were based on the 'lower end of the interpreted range' of potential effect area and potential distribution of habitat as outlined in Manier et al. (2014).

Under Alternatives 5 and 6, lek buffer distances in IHMA and GHMA are largely based on the 'literature minimum' (Manier et al. 2014), or the minimum distance where effects were documented in the scientific literature, similar to the lek buffer distances in the 2019 Idaho ARMPA (Alternative 2). Alternatives 5 and 6 also includes changes to lek buffer distances in the 2021 Idaho Sage-grouse Plan (Executive Order 2022-03; State of Idaho 2022).

The following modifications were made to the lek buffer distances under Alternatives 5 and 6:

- A decrease for minor linear features (e.g. minor roads) in PHMA from 3.1 to 1.2 miles
- An increase for major linear features in IHMA from 0.8 to 2.0 miles
- An increase for transmission line towers in IHMA from 1.2 to 1.7 miles
- A decrease for communication and meteorological towers in IHMA from 2.0 to 1.7 miles
- A decrease for other types of surface disturbance in GHMA from 2.0 to 0.6 miles

Buffer distances would remain the same in PHMA under all Alternatives, with the one exception for minor linear features noted above. Approximately 75% of all active and pending active leks are in PHMA; thus, buffer distances in PHMA would provide protection for GRSG habitat in PHMA. In areas with tripped triggers, i.e. neighborhood lek clusters for population triggers and fine-scale HAF for habitat triggers, IHMA would be treated as PHMA and PHMA buffers would be applied in NEPA analyses and any associated management decisions.

### 19.2.3 Required Design Features (RDFs)

Alternatives 3 through 6, consider Required Design Features (RDFs) the same as the 2019 Idaho ARMPA (Alternative 2). Under the Proposed RMP Amendment, RDFs would be the same as under the 2015 Idaho ARMPA (Alternative 1) and incorporate the best management practices and design features for livestock grazing management described in **Appendix 15**.

## Table ID-1. Lek Buffer Distances by Disturbance Type, Habitat Management Area (HMA), and Alternative

| Disturbance Type | HMA | Lek Buffer Distance[1] (miles) | | | | |
|---|---|---|---|---|---|---|
| | | Alts 1[2] | Alt 2[3] | Alts 3 and 4[1] | Alts 5 and 6[4] | Proposed RMP Amendment |
| Linear features (e.g. roads)[5]<br>- Major / Minor | PHMA | 3.1 | 3.1 | 3.1 | Major – 3.1<br>Minor – 1.2 | 3.1 |
| | IHMA | 3.1 | 0.8 | 3.1 | Major – 2.0<br>Minor – 0.8 | 3.1 |
| | GHMA | 3.1 | 0.25 | 3.1 | Major – 0.25<br>Minor – 0.25 | 3.1 |
| Infrastructure related to energy development | PHMA | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| | IHMA | 3.1 | 2.0 | 3.1 | 2.0 | 3.1 |
| | GHMA | 3.1 | 0.6 | 3.1 | 0.6 | 3.1 |
| Tall structures[6] | PHMA | 2.0 | 2.0 | 2.0 | 2.0 | 2 |
| - Com. or met. towers | IHMA | 2.0 | -- | 2.0 | -- | 2.0 |
| - Transmission line towers | | -- | 2.0 | -- | 1.7 | -- |
| - Distribution poles | | -- | 1.2 | -- | 1.7 | -- |
| | | -- | 0.6 | -- | 0.6 | -- |
| | GHMA | 2.0 | 0.6 | 2.0 | 0.6 | 2.0 |
| Low structures (e.g. fences, rangeland structures) | PHMA | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | IHMA | 1.2 | 0.6 | 1.2 | 0.6 | 1.2 |
| | GHMA | 1.2 | 0.12 | 1.2 | 0.12 | 1.2 |
| Surface disturbance (continuing human activities that alter or remove the natural vegetation) | PHMA | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| | IHMA | 3.1 | 2.0 | 3.1 | 2.0 | 3.1 |
| | GHMA | 3.1 | 2.0 | 3.1 | 0.6 | 3.1 |

[1] Alternatives are grouped by similar HMA extent and buffer distances, but allocations and management may differ Alts 3 vs. 4, and Alts 5 vs. 6.
[2] Based on the 'lower end of the interpreted range' from the USGS report (Manier et al. 2014) for disturbances in all HMA
[3] For disturbances in PHMA, and IHMA/GHMA, based on the 'lower end of the interpreted range', and the 'literature minimum', respectively (Manier et al. 2014)
[4] Distances from the 2021 Idaho Sage-grouse Plan. In accordance with the 2021 Idaho Sage-grouse Plan, linear features are split into major and minor linear features, and tall structures are split out for disturbances in IHMA.
[5] Roads are linear routes declared as a road by the owner, managed for use by low-clearance vehicles having four or more wheels, and maintained for regular and continuous use. Roads do not include trails, primitive roads, temporary routes, or administrative routes with maintenance intensity of 0 or 1 (2015 ARMPA ROD).
[6] Communication or meteorological towers

| Disturbance Type | HMA | Lek Buffer Distance[1] (miles) | | | | |
|---|---|---|---|---|---|---|
| | | Alts 1[2] | Alt 2[3] | Alts 3 and 4[1] | Alts 5 and 6[4] | Proposed RMP Amendment |
| Noise and related disruptive activities including those do not result in habitat loss | PHMA | ≥ 0.25 | n/a | ≥ 0.25 | n/a | ≥ 0.25 |
| | IHMA | ≥ 0.25 | n/a | ≥ 0.25 | n/a | ≥ 0.25 |
| | GHMA | ≥ 0.25 | n/a | ≥ 0.25 | n/a | ≥ 0.25 |

## 19.3 *ALTERNATIVES 3 AND 4* APPENDIX B: BUFFERS

### 19.3.1 Applying Lek Buffer-Distances When Approving Actions

***Buffer Distances and Evaluation of Impact on Leks***

Evaluate impacts from actions requiring NEPA analysis on active and pending active leks (Cook, et al. 2022; **Appendix 4**) within HMA. In addition to any other relevant information determined to be appropriate (e.g. State wildlife agency plans), the BLM will assess and address impacts from the following activities using the lek buffer-distances as identified in the USGS Report, *Conservation Buffer Distance Estimates for Greater Sage-Grouse - A Review* (Manier et al. 2014). The BLM will apply the lek buffer-distances specified as the lower end of the interpreted range in the report unless justifiable departures are determined to be appropriate (see below). The lower end of the interpreted range of the lek buffer-distances is as follows:

- Linear features (roads)[7] within 3.1 miles of leks
- Infrastructure related to energy development within 3.1 miles of leks.
- Tall structures (e.g., communication or transmission towers, transmission lines) within 2 miles of leks.
- Low structures (e.g., fences, rangeland structures) within1.2 miles of leks.
- Surface disturbance (continuing human activities that alter or remove the natural vegetation) within 3.1 miles of leks.
- Noise and related disruptive activities including those that do not result in habitat loss (e.g., motorized recreational events) at least 0.25 miles from leks.

Justifiable departures to decrease or increase from these distances, based on local data, best available science, landscape features, and other existing protections (e.g., land use allocations, state regulations) may be appropriate for determining activity impacts. The USGS report recognized "that because of variation in populations, habitats, development patterns, social context, and other factors, for a particular disturbance type, there is no single distance that is an appropriate buffer for all populations and habitats across the sage-grouse range". The USGS report also states that "various protection measures have been developed and implemented… [which have] the ability (alone or in concert with others) to protect important habitats, sustain populations, and support multiple-use demands for public lands". All variations in lek buffer-distances will require appropriate analysis and disclosure as part of activity authorization.

In determining lek locations, the BLM will use the most recent lek determination available from the state wildlife agency.

***For Actions in GHMA***

- The BLM will apply the lek buffer-distances identified above as required conservation measures to fully address the impacts to leks as identified in the NEPA analysis. Impacts should first be avoided by locating the action outside of the applicable lek buffer – distance(s) identified above.
- The BLM may approve actions in GHMA that are within the applicable lek buffer distance identified above only if:
  - Impacts should first be avoided by locating the action outside of the applicable lek buffer-distance(s) identified above.

[7] Roads are linear routes declared as a road by the owner, managed for use by low-clearance vehicles having four or more wheels, and maintained for regular and continuous use. Roads do not include trails, primitive roads, temporary routes, or administrative routes with maintenance intensity of 0 or 1 (2015 ARMPA ROD).

- If it is not possible to relocate the project outside of the applicable lek buffer-distance(s) identified above, the BLM may approve the project only if:
  - Based on best available science, landscape features, and other existing protections, (e.g., land use allocations, state regulations), the BLM determines that a lek buffer-distance other than the applicable distance identified above offers the same or a greater level of protection to GRSG and its habitat, including conservation of seasonal habitat outside of the analyzed buffer area; **or**
  - The BLM determines that impacts to GRSG and its habitat are minimized such that the project will cause minor or no new disturbance (ex. co-location with existing authorizations); **and**
  - Any residual impacts within the lek buffer-distances are addressed through compensatory mitigation measures sufficient to ensure a net conservation gain, as outlined in the Mitigation Strategy (Appendix J).

***For Actions in PHMA and IHMA***

- The BLM will apply the lek buffer-distances identified above as required conservation measures to fully address the impacts to leks as identified in the NEPA analysis. Impacts should be avoided by locating the action outside of the applicable lek buffer-distance(s) identified above.
- The BLM may approve actions in PHMA and IMHA that are within the applicable lek buffer distance identified above only if with input from state fish and wildlife agency, it determines, based on best available science, landscape features, and other existing protections, that a buffer distance other than identified above offers the same or greater level of protection for GRSG and its habitat, including conservation of seasonal habitat outside of the analyzed buffer area.
- Range improvements which do not impact GRSG, or range improvements which provide a conservation benefit to GRSG such as fences for protecting important seasonal habitats, meet the lek buffer requirement.

The BLM will explain its justification for determining the approved buffer distances meet these conditions in its project decision.

## 19.4 *ALTERNATIVES 5 AND 6* APPENDIX B: BUFFERS

### 19.4.1 Applying Lek Buffer-Distances When Approving Actions

***Buffer Distances and Evaluation of Impact on Leks***

Evaluate impacts from actions requiring NEPA analysis on active and pending active leks (Cook, et al. 2022; **Appendix 4**) within HMA. In addition to any other relevant information determined to be appropriate (e.g., state wildlife agency plans), the BLM will apply the lek buffer-distances described below, unless justifiable departures are determined to be appropriate or buffer exception criteria for GHMA. Buffers do not apply to vegetation treatments specifically designed to improve or protect Greater Sage-Grouse habitat.

The BLM will apply lek buffer-distances as specified in the USGS Report, *Conservation Buffer Distance Estimates for Greater Sage-Grouse - A Review* (Manier et al. 2014). In general, buffer distances would be the 'lower end of the interpreted range' in the USGS report for disturbances in PHMA, the 'literature minimum' for disturbances in IHMA or GHMA, or as specified in the 2021 Idaho Sage-grouse Plan.

***PHMA***

- Major linear features (roads)[8] within 3.1 miles of leks
- Minor linear features (e.g. minor roads) or low structures (e.g., fences and rangeland structures) within 1.2 miles of leks
- Tall structures (e.g., communication or transmission towers and transmission lines) within 2 miles of leks
- Infrastructure related to energy development within 3.1 miles of leks
- Surface disturbance (continuing human activities that alter or remove the natural vegetation) within 3.1 miles of leks

***IHMA***

- Major linear features (e.g., roads) within 2 miles of leks
- Minor linear features within 0.8 miles or low structures within 0.6 miles of leks
- Tall structures (e.g., electrical, communication, and meteorological) within 1.7 miles of leks
- Transmission lines/towers within 1.2 miles of leks[2]
- Distribution lines/poles within 0.6 miles of leks[1]
- Infrastructure related to energy development (e.g., oil, gas, wind, and solar) within 2 miles of leks
- Surface disturbance (continuing human activities that alter or remove the natural vegetation) within 2 miles of leks

***GHMA***

- Major linear features (e.g., roads) within 0.25 miles of leks
- Minor linear features within 0.25 miles of leks; low structures within 0.12 miles of leks
- Tall structures (e.g., electrical, communication, and meteorological) within 0.6 miles of leks

[8] Roads are linear routes declared as a road by the owner, managed for use by low-clearance vehicles having four or more wheels, and maintained for regular and continuous use. Roads do not include trails, primitive roads, temporary routes, or administrative routes with maintenance intensity of 0 or 1 (2015 ARMPA ROD).

- Infrastructure related to energy development (e.g., oil, gas, wind, and solar) within 0.6 miles of leks; 2-mile feasibility/practicality conditions
- Surface disturbance (continuing human activities that alter or remove the natural vegetation) within 0.6 miles of leks

**Justifiable Departures**—Justifiable departures to decrease or increase from these distances, based on local data, best available science, landscape features, and other existing protections (e.g., land use allocations and state regulations) may be appropriate for determining activity impacts. The USGS report recognized "that because of variation in populations, habitats, development patterns, social context, and other factors, for a particular disturbance type, there is no single distance that is an appropriate buffer for all populations and habitats across the sage- grouse range." The USGS report also states that "various protection measures have been developed and implemented…[which have] the ability (alone or in concert with others) to protect important habitats, sustain populations, and support multiple-use demands for public lands." All variations in lek buffer-distances will require appropriate analysis and disclosure as part of activity authorization.

In determining lek locations, the BLM will use the most recent lek determination available from the state wildlife agency.

***For Actions in PHMA and IHMA***

- The BLM will apply the lek buffer-distances identified above as required conservation measures to fully address the impacts on leks, as identified in the NEPA analysis. Impacts should be avoided by locating the action outside the applicable lek buffer-distances identified above.
- The BLM may approve actions in PHMA and IHMA that are within the applicable lek buffer- distance identified above, only if, with input from the state fish and wildlife agency, it determines, based on best available science, landscape features, and other existing protections, that a buffer-distance other than that identified above offers the same or greater level of protection to Greater Sage-Grouse and its habitat, including conservation of seasonal habitat outside of the analyzed buffer area.
- Range improvements that do not affect Greater Sage-Grouse, or range improvements that provide a conservation benefit to Greater Sage-Grouse, such as fences for protecting important seasonal habitats, meet the lek buffer requirement.

The BLM will explain its justification for determining if the approved buffer-distances meet these conditions in its project decision.

**Buffer Exception Criteria for IHMA and GHMA**—If it is impracticable, technically, or economically, to locate the project outside of the buffer area and impacts are avoided through project siting and design, to the extent reasonable, BLM may approve actions within buffers in IHMA and GHMA.

## 19.5 *PROPOSED RMP AMENDMENT* UPDATE 2015 IDAHO GRSG RMP AMENDMENT, APPENDIX B: BUFFERS

Under the Proposed RMP Amendment, BLM is proposing the following management direction relative to lek buffers:

- Management direction would apply the buffer distances as defined under the 2015 RMPA as analyzed in Alternatives 1, 3 and 4 of the DEIS;
- Buffers would apply to *pending active* as well as *active* leks instead of *occupied* leks as analyzed in Alternative 5 of the DEIS

Lek buffer distances would be the same as under Alternatives 1, 3 and 4, based on the lower end of the interpreted range from Manier et al. (2014). In addition, the buffer exception criteria would only apply to GHMA, as described under Alternative 4. Please refer to **Appendix 2**, **Table 2.1** for a summary of the 2015 and 2019 buffer management direction and please refer to MD SSS 35 and Alternatives 1 and 2 of the DEIS for the complete set of direction from these two amendments.

Following is the proposed management direction:

## 19.6 APPLYING LEK BUFFER-DISTANCES WHEN APPROVING ACTIONS

### 19.6.1 Buffer Distances and Evaluation of Impact on Leks

Evaluate impacts from actions requiring NEPA analysis on active and pending active leks (Cook, et al. 2022; **Appendix 4**) within HMA. In addition to any other relevant information determined to be appropriate (e.g. State wildlife agency plans), the BLM will assess and address impacts from the following activities using the lek buffer-distances as identified in the USGS Report, *Conservation Buffer Distance Estimates for Greater Sage-Grouse - A Review* (Manier et al. 2014).

The BLM will apply the lek buffer-distances specified as the lower end of the interpreted range in the report unless justifiable departures are determined to be appropriate (see below). The lower end of the interpreted range of the lek buffer-distances is as follows:

- Linear features (roads)[9] within 3.1 miles of leks
- Infrastructure related to energy development within 3.1 miles of leks.
- Tall structures (e.g., communication or transmission towers, transmission lines) within 2 miles of leks.
- Low structures (e.g., fences, rangeland structures) within1.2 miles of leks.
- Surface disturbance (continuing human activities that alter or remove the natural vegetation) within 3.1 miles of leks.
- Noise and related disruptive activities including those that do not result in habitat loss (e.g., motorized recreational events) at least 0.25 miles from leks.

Justifiable departures to decrease or increase from these distances, based on local data, best available science, landscape features, and other existing protections (e.g., land use allocations, state regulations) may be appropriate for determining activity impacts. The USGS report recognized "that because of variation in populations, habitats, development patterns, social context, and other factors, for a particular disturbance

[9] Roads are linear routes declared as a road by the owner, managed for use by low-clearance vehicles having four or more wheels, and maintained for regular and continuous use. Roads do not include trails, primitive roads, temporary routes, or administrative routes with maintenance intensity of 0 or 1 (2015 ARMPA ROD).

type, there is no single distance that is an appropriate buffer for all populations and habitats across the sage-grouse range". The USGS report also states that "various protection measures have been developed and implemented… [which have] the ability (alone or in concert with others) to protect important habitats, sustain populations, and support multiple-use demands for public lands". All variations in lek buffer-distances will require appropriate analysis and disclosure as part of activity authorization.

In determining lek locations, the BLM will use the most recent lek data available from the state wildlife agency.

***For Actions in GHMA***

- The BLM will apply the lek buffer-distances identified above as required conservation measures to fully address the impacts to leks as identified in the NEPA analysis. Impacts should first be avoided by locating the action outside of the applicable lek buffer – distance(s) identified above.
- The BLM may approve actions in GHMA that are within the applicable lek buffer distance identified above only if:
  - Impacts should first be avoided by locating the action outside of the applicable lek buffer-distance(s) identified above.
  - If it is not possible to relocate the project outside of the applicable lek buffer-distance(s) identified above, the BLM may approve the project only if:
    - Based on best available science, landscape features, and other existing protections, (e.g., land use allocations, state regulations), the BLM determines that a lek buffer-distance other than the applicable distance identified above offers the same or a greater level of protection to GRSG and its habitat, including conservation of seasonal habitat outside of the analyzed buffer area; **or**
    - The BLM determines that impacts to GRSG and its habitat are minimized such that the project will cause minor or no new disturbance (ex. co-location with existing authorizations); **and**
    - Any residual impacts within the lek buffer-distances are addressed through compensatory mitigation measures sufficient to ensure a net conservation gain, as outlined in the Mitigation Strategy (Appendix J).

***For Actions in PHMA and IHMA***

- The BLM will apply the lek buffer-distances identified above as required conservation measures to fully address the impacts to leks as identified in the NEPA analysis. Impacts should be avoided by locating the action outside of the applicable lek buffer-distance(s) identified above.
- The BLM may approve actions in PHMA and IMHA that are within the applicable lek buffer distance identified above only if with input from state fish and wildlife agency, it determines, based on best available science, landscape features, and other existing protections, that a buffer distance other than identified above offers the same or greater level of protection for GRSG and its habitat, including conservation of seasonal habitat outside of the analyzed buffer area.
- Range improvements which do not impact GRSG, or range improvements which provide a conservation benefit to GRSG such as fences for protecting important seasonal habitats, meet the lek buffer requirement.

The BLM will explain its justification for determining the approved buffer distances meet these conditions in its project decision.

## 19.7 *PROPOSED RMP AMENDMENT*
## ADOPT 2015 IDAHO GRSG RMP AMENDMENT, APPENDIX C: REQUIRED DESIGN FEATURES

For consistency with the Proposed RMP Amendment's goal to "conserve, enhance, restore, and manage GRSG habitats to support persistent, healthy populations", the Proposed RMP Amendment is proposing to adopt the 2015 Idaho GRSG RMP Amendment Appendix C: Required Design Features (RDFs) from the 2015 Idaho RMPA and incorporate the BMPs and Design Features for livestock grazing management described in **Appendix 15** of this RMP Amendment. The BLM Idaho is currently implementing RDFs from the 2019 Idaho GRSG RMP Amendment under Alternative 2 (No Action). Please refer to **Appendix 2**, **Table 2** for a summary of the 2015 and 2019 RDF management direction.

## 19.8 AFFECTED ENVIRONMENT

In September 2023, IDFG adopted the new WAFWA lek definitions (Cook et al. 2022; **Appendix 4**). Since current management is the 2015 Idaho ARMPA, BLM uses 2015 Idaho ARMPA definitions for implementation decisions. BLM Idaho applied these definitions to 2023 lek data to determine management status of leks as *occupied* or *unoccupied* (BLM Idaho IM 2024-003). There were 1104 leks in 2023 that would be considered *occupied* under Alternatives 1 and 2; **Table ID-2**). Under the proposed action, there would be 1093 *active* and 161 *pending active* leks (Alternatives 3, 4, 5, and 6).

**Table ID-2. Number of Leks by Management Status, Habitat Management Area (HMA), and Alternatives**

| Lek Management Status | HMA | Alt 1 | Alt 2 | Alts 3 and 4 | Alts 5 and 6 |
|---|---|---|---|---|---|
| **Number of leks where buffers would apply** | | | | | |
| Occupied | n/a | 1104 | 1104 | n/a | n/a |
| Active | n/a | n/a | n/a | 1093 | 1093 |
| Pending Active | n/a | n/a | n/a | 161 | 159 |
| Total Leks | n/a | 1104 | 1104 | 1254 | 1252 |
| **Percent of leks where buffers would apply by HMA type** | | | | | |
| Occupied | PHMA<br>IHMA<br>GHMA<br>Non | 68<br>25<br>5<br>2 | 67<br>26<br>5<br>2 | n/a | n/a |
| Active | PHMA<br>IHMA<br>GHMA<br>Non | n/a | n/a | 78<br>19<br>3<br>0 | 73<br>22<br>4<br>0 |
| Pending Active | PHMA<br>IHMA<br>GHMA<br>Non | n/a | n/a | 67<br>22<br>10<br>0 | 67<br>21<br>11<br>0 |

## 19.9 ENVIRONMENTAL CONSEQUENCES

### 19.9.1 Analytical Assumptions

Methods for analyzing impacts are described in **Section 4.1.1**, General Methodology for Analyzing Impacts, and include definitions for 'type of impact', 'context', 'duration', 'intensity', and 'direct, indirect, and cumulative impacts'.

BLM analyzed:

- Changes in lek definitions and number of leks where buffers would be applied, and
- Changes in lek buffer distances

For analytical purposes and comparisons of lek buffer distances among alternatives, buffer distances were considered potential 'protection' or non-development areas, and, thus, percent of HMA closed for development (i.e. areas within HMA and lek buffers) were compared among alternatives. Effects under Alternatives 3 and 4 were assumed to be the similar since buffer distances are the same among these alternatives. Buffer distances for Alternatives 3 and 4 are also the same as buffer distances under Alternative 1 but would apply to *pending active* as well as *active* leks instead of *occupied* leks. Buffer distances under Alternatives 5 and 6 are most similar to Alternative 2 but with some additional modifications.

The analysis focused on differences between:

- Alternatives 1 and 4 (changes in lek definitions),
- Alternatives 2 and 5 (changes in lek buffer distances), and
- Alternatives 4 and 5 (changes in lek buffer distances)

Comparisons between lek buffer distances under Alternatives 1 and 2 were made in the 2018 FEIS (BLM Idaho 2018) and 2020 FSEIS (BLM Idaho 2020). Comparisons of HMA acres and percent of HMA were made on BLM lands only, i.e. 8.7 to 8.8 million acres depending on Alternative (**Table 2-3**).

***Changes in Lek Definitions***

Adopting range wide lek definitions (Cook et al. 2022; **Appendix 4**) changes both the number of leks evaluated for BLM management leks where buffers would apply from the 2015 Idaho ARMPA lek definitions. This change would result in a 1% change from *occupied* leks under Alternatives 1 and 2 to *active* leks under Alternatives 3 through 6. It would also be a 5 to 10% increase from the number of *occupied* leks in PHMA to the number of *active* leks in PHMA (**Table ID-2**). With the proposed action, there would be a slight increase in the number of active leks in PHMA and IHMA combined and a decrease in the number of leks outside of HMA.

Based on recommendations from the State of Idaho, in addition to *active leks,* the proposed action also considers management for *pending active* leks. This change in 161 *pending active* leks would result in a 15% increase in the number of leks considered for BLM management (**Table ID-2**).

Changing which leks buffers apply to, i.e. *active* and *pending active* leks, could provide protection to additional BLM lands from new disturbances with Alternative 4's lek buffers when compared with Alternative 1. Since two thirds of the pending active leks are in PHMA and PHMA is closed or excluded for multiple disturbance types, such as renewable energy or non-energy leasable minerals, or salable minerals, effects of the proposed action to consider *pending active* leks would be realized more in IHMA and GHMA. However, these changes would be minimal in IHMA and GHMA, with only 6% additional BLM lands in IHMA and 1% in GHMA that would be protected under Alternative 4 compared with Alternative 1.

***Resources Potentially Affected by Modifying Lek Buffer Distances***

- GRSG
- Mineral Resource Management
- Lands and Realty
- Renewable Energy
- Livestock Grazing
- Travel and Transportation
- Cumulative Effects – Social and Economic Conditions

***General Effects of Lek Buffers***

Known effects of anthropogenic disturbance on GRSG are described in **Section 4.2.1**. Effects of various anthropogenic disturbances and lek buffer distances were analyzed in the USGS report (Manier et al. 2014) and in 2015 FEIS (BLM and Forest Service 2015), 2018 FEIS (BLM Idaho 2018), and 2020 FSEIS (BLM Idaho 2020). The lek buffer distances from the 2015 Idaho ARMPA (Alternative 1) were based on the lower end of the interpreted range from the USGS Report (Manier et al. 2014) for various types of anthropogenic disturbances, with the major types of anthropogenic disturbance such as energy development with a 3.1-mile buffer. The recommended 3.1-mile buffer was based on disturbance effects reported in the literature and that the majority of nesting birds from a given lek would be protected by that buffer distance. For example, in Nevada and California, 95% of all nests are within 3.1 miles of leks (Coates et al. 2013), and in Wyoming, 64% of nests within 3.1 miles of leks (Holloran and Anderson 2005). In some populations, hens may nest further from leks and a 3.1-mile buffer would protect fewer nesting birds from a given lek. In Idaho, less than 50% of GRSG hens nest within 1.9 miles and 80% within 6 miles from leks where they were captured (Connelly et al. 2013). However, effects of anthropogenic disturbance do not depend solely on where hens are nesting. In some areas, depending on existing disturbance, habitat conditions, and topography, smaller buffers may suffice to protect leks from development. The interpreted range in the USGS report is based on a "typical response" but "there is no single distance that is an appropriate buffer for all populations and habitats across the sage-grouse range" (Manier et al. 2014).

Reducing lek buffers could impact GRSG, including avoidance behavior, reduced productivity, declines in lek attendance, and extirpation of leks. However, the type of impacts and intensity would vary depending on several factors, including habitat conditions, breeding bird density in the area and proximity to other leks, home range size for that particular population, existing anthropogenic disturbance, and whether the potentially impacted area provides unique seasonal habitats or connectivity among other habitat patches. Project-level impacts would be analyzed during NEPA.

***Effects of Modified Lek Buffers under Alternatives 3 and 4***

Under Alternatives 3, and 4, lek buffer distances would remain the same as in the 2015 Idaho ARMPA (Alternative 1). Therefore, there would be no effects to GRSG under these Alternatives.

***Effects of Modified Lek Buffers under Alternatives 5 and 6***

The proposed changes to lek buffer distances under Alternatives 5 and 6 would result in the following changes compared with the 2019 Idaho ARMPA (Alternative 2):

- Increase in lek buffers in IHMA—For major linear features, e.g. major roads, in IHMA, the buffer distance would increase from 0.8 to 2.0 miles (**Table ID-1**). This would increase the portions of IHMA protected from major linear features from 6% (0.8-mile buffer) to 24% (2.0-mile buffer), or an increase of 18% in the portion of IHMA protected from major linear features. For transmission

line towers in IHMA, the buffer distance would increase from 1.2 to 1.7 miles. This would increase the portions of IHMA protected from transmission line towers from 12% (1.2-mile buffer) to 19% (1.7-mile buffer), or an increase of 7% in the portion of IHMA protected from transmission line towers.

- Decrease in lek buffers in PHMA—For minor linear features, e.g. minor roads, in PHMA, the buffer distance would decrease from 3.1 to 1.2 miles. This would decrease the portions of PHMA protected from minor linear features from 72% (3.1-mile buffer) to 28% (1.2-mile buffer) or a 44% decrease in the portion of PHMA protected from minor linear features.
- Decrease in lek buffers in IHMA—For communication and meteorological towers in IHMA, the buffer distance would decrease from 2.0 miles to 1.7 miles. This change is due to more recent literature on the effects of tall structures (Kohl et al. 2019a, b). This would decrease the portions of IHMA protected from communication and meteorological towers from 25% (2.0-mile buffer) to 19% (1.7-mile buffer), or a 6% decrease in the portion of IHMA protected from communication and meteorological towers.
- Decrease in lek buffers in GHMA—For surface disturbances due to continuing human activities that alter or remove the natural vegetation, other than infrastructure related to energy development, major and minor linear features, tall structures, and low structures, the buffer distance would decrease from 2.0 miles to 0.6 miles. This change would make the buffer distance consistent with buffer distances for other anthropogenic disturbance in GHMA, such as infrastructure related to energy development also 0.6 miles. This would decrease the portions of GHMA protected from other surface disturbance from 5% (2.0-mile buffer) to 1% (0.6-mile buffer), or a 4% decrease in the portion of GHMA protected from surface disturbance.

The proposed changes to lek buffer distances under Alternative 5 would result in the following changes compared with Alternative 4:

- PHMA—Lek buffers would remain the same in PHMA for all disturbance types across all Alternatives, except for the modification for minor linear features noted above. Under Alternative 5, the buffer distance for minor linear features, e.g. minor roads, would decrease from 3.1 to 1.2 miles (**Table ID-3**). This would decrease the portions of PHMA protected from minor linear features from 93% (3.1-mile buffer) to 28% (1.2-mile buffer) or a 65% decrease in the portion of PHMA protected from minor linear features. Buffer distances for all other types of disturbance would remain the same and provide protection for approximately 76% of all *active* and *pending active* leks that are in PHMA (Alternatives 3 through 6; **Table ID-2**).
- IHMA—Under Alternative 5, reduced buffer distances for disturbances, such as infrastructure related to energy development, other surface disturbance, and linear features, would result in 23% less IHMA protected compared with Alternative 4 (i.e., 47% for a 3.1-mile buffer to 24% for a 2-mile buffer; **Table ID-3**). Buffer distances would be reduced for other types of disturbances compared with Alternative 4 and also result in less IHMA protected, i.e. tall structures 7% less; low structures 5% less; and noise and disruptive activities 1% less.
- GHMA—Under Alternative 5, buffer distances for disturbances would result in 1 to 13% less GHMA protected, where the largest difference would be for infrastructure related to energy development, other types of surface disturbance, and linear features (i.e. 3.1-mile buffer reduced to 0.6- or 0.25-mile buffer; **Table ID-3**). Impacts on GRSG would vary widely since only 5% of all *active* and *pending active* leks are in GHMA and scattered across nearly 2 million acres of BLM lands. On a project-specific basis, BLM would continue to avoid and minimize impacts to the extent practicable within GHMA.

**Table ID-3. Habitat Protected by Lek Buffers under Alternatives 4 and 5**

| Action | PHMA (4,472,499 acres) | | IHMA (2,410,920 acres) | | GHMA (1,908,361 acres) | |
|---|---|---|---|---|---|---|
| | Buffer | Percent Protected | Buffer | Percent Protected | Buffer | Percent Protected |
| **Alternative 4** | | | | | | |
| Linear Features (roads) | 3.1 Miles | 93 | 3.1 Miles | 47 | 3.1 Miles | 13 |
| Infrastructure Related to Energy Development | 3.1 Miles | 93 | 3.1 Miles | 47 | 3.1 Miles | 13 |
| Tall Structures | 2 Miles | 58 | 2 Miles | 26 | 2 Miles | 6 |
| Low Structures | 1.2 Miles | 29 | 1.2 Miles | 11 | 1.2 Miles | 2 |
| Surface Disturbance | 3.1 Miles | 93 | 3.1 Miles | 47 | 3.1 Miles | 13 |
| Noise and Related Disruptive Activities | 0.25 Miles | 1 | 0.25 Miles | 1 | 0.25 Miles | 0 |
| **Action** | **PHMA (4,452,947 acres)** | | **IHMA (2,440,288 acres)** | | **GHMA (1,717,050 acres)** | |
| | **Buffer** | **Percent Protected** | **Buffer** | **Percent Protected** | **Buffer** | **Percent Protected** |
| **Alternative 5** | | | | | | |
| Linear Features: major<br>minor | 3.1 Miles<br>1.2 Miles | 92<br>28 | 2 Miles<br>0.8 Miles | 24<br>6 | 0.25 Miles<br>0.25 Miles | 0<br>0 |
| Infrastructure Related to Energy Development | 3.1 Miles | 92 | 2 Miles | 24 | 0.6 Miles | 1 |
| Tall Structures<br>Distribution poles *only* | 2 Miles | 49 | 1.7 Miles<br>0.6 Miles | 19<br>6 | 0.6 Miles | 1 |
| Low Structures | 1.2 Miles | 28 | 0.6 Miles | 6 | 0.12 Miles | 0 |
| Surface Disturbance | 3.1 Miles | 92 | 2 Miles | 24 | 0.6 Miles | 1 |
| Noise and Related Disruptive Activities | -- | -- | -- | -- | -- | -- |

Besides differences to Alternatives 2 and 4 described above, Alternative 5 would not include any buffers for noise and related disruptive activities that do no result in habitat loss. Also, Alternative 5 would include 'Buffer Exception Criteria', where BLM may approve actions within IHMA and GHMA, if it is impracticable, technically or economically, to locate the project outside of the buffer and impacts are avoided through project siting and design, to the extent reasonable. The Buffer Exception Criteria and reduced buffers in GHMA and IHMA should encourage development outside of PHMA.

The reduced buffer distances, primarily in IHMA and GHMA, along with the Buffer Exception Criteria in IHMA and GHMA would improve alignment with the Governor's Plan by having the most restrictive management in PHMA and reducing those restrictions in IHMA and further reducing restrictions in GHMA. Other restrictions in IHMA such as RDFs, Mitigation, Disturbance cap, and NSO with limited exception would serve to ensure responsible development. However, infrastructure and development could be allowed closer to leks, subject to the before mentioned restrictions. As described above, the amount of GRSG habitat and HMA that could be protected with lek buffers under Alternative 5 would be lower compared to protections under Alternative 4. As a result, under Alternative 5 development could occur closer to some leks (smaller buffer) than under Alternative 4 and result in increased impacts to GRSG. Project-level impacts would be analyzed during NEPA and consider other measures to ensure responsible development.

***Effects of Required Design Features under Alternatives 3 through 6***

The RDFs from the 2019 Idaho ARMPA (Alternative 2, No Action) mostly differ from the 2015 Idaho ARMPA in treating RDFs for actions in GHMA as BMPs. Therefore, applying RDFs from the 2019 ARMPA would result in less protection for all GRSG leks and habitat in GHMA than under the 2015 Idaho ARMPA, (Alternative 1).

***Effects of Buffers and Required Design Features under the Proposed RMP Amendment***

The proposed changes to lek buffer distances under the Proposed RMP Amendment would offer a similar level of protection to GRSG leks in IHMA and GHMA as with Alternatives 1 and 4, and a greater level of protection for GRSG leks in IHMA and GHMA than under Alterative 5. Furthermore, under the Proposed RMP Amendment, there would be additional protection of leks in IHMA compared with Alternative 5, since the buffer exception criteria would only apply to GHMA, not IHMA, as under Alternatives 1 and 4. Compared with Alternative 4, the Proposed RMP Amendment would have negligible impacts on GRSG leks outside of HMA since there are only five leks of the 1252 active and pending leks. These five leks were not included in the HMA mapping since they are small, declining leks and/or on private lands.

The proposed changes to RDFs under the Proposed RMP Amendment would offer similar protection to GRSG in GHMA as in IHMA and PHMA, similar to protections under Alternative 1. In addition, the new BMPs and RDFs for livestock grazing management would be incorporated, consistent with the rangewide Proposed RMP Amendment.

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