United States Department of Agriculture

Forest Service

Intermountain Region

August 2019

# Greater Sage-grouse Draft Record of Decision and Land Management Plan Amendment for National Forest System Land in Nevada on the Humboldt-Toiyabe National Forest

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# FOREWORD

The landscape and culture of the Interior West are characterized by the iconic sagebrush steppe ecosystems that are valued and used by people with a long and deep connection to the land. The United States Department of Agriculture, Forest Service has identified a need and desire to create a new balance between the use and protection of this landscape to conserve its important attributes, including greater sage-grouse.

In 2010, we began a journey that involved a multi-faceted effort that included both programmatic planning and on-the-ground projects across multiple states. We have come together through working groups, task forces, councils, and meetings with the public, Tribes, state and federal agencies, counties, and associations. This landscape includes multiple jurisdictions with a diversity of authorities, responsibilities, geography, resources and needs that lead to similar but different plans and actions. Our efforts have not and could not be expected to result in one overall plan agreed to by everyone across the entire landscape. However, we've achieved an unprecedented level of collaboration to achieve a significant set of accomplishments that will benefit greater sage-grouse and the sagebrush steppe ecosystem across the landscape.

On September 16, 2015, we signed two decisions the *Greater Sage-grouse Record of Decision and Land Management Plan Amendments for Idaho, Southwest Montana, Nevada, and Utah* and the *Greater Sage-grouse Record of Decision and Land Management Plan Amendments for Northwest Colorado and Wyoming*. On October 2, 2015, the U.S. Fish and Wildlife Service (USFWS) found that listing the greater sage-grouse under the Endangered Species Act (ESA) was not warranted (80 FR 59858). The USFWS based its finding on regulatory certainty from the conservation measures in the Forest Service and Bureau of Land Management (BLM) greater sage-grouse land management plan amendments (LMPAs) and revisions, as well as on other private, state, and federal conservation efforts.

In 2017, the Secretary of the Interior issued Secretarial Order (SO) 3353 with a purpose of enhancing cooperation among 11 western states and the BLM in managing and conserving greater sage-grouse. It also directed an Interior Review Team, consisting of the BLM, the USFWS, and the US Geological Survey (USGS), to coordinate with the Sage-Grouse Task Force. A June 14, 2017 letter from the Forest Service Chief directed the Forest Service in Regions 1, 2, and 4 to cooperate in the review. On August 4, 2017, the Interior Review Team submitted its Report which recommended modifying the greater sage-grouse plans and associated policies to better align with individual state plans. On August 4, 2017, the Secretary of the Interior issued a memo to the Deputy Secretary directing the BLM to implement the recommendations found in the report and the BLM initiated their environmental analysis process.

After two years of implementation and monitoring, we believed we could incorporate new information to improve the clarity, efficiency, and implementation of the 2015 Greater Sage-Grouse Plan Amendments, including better alignment with BLM and state plans, in order to benefit greater sage-grouse conservation at the landscape scale. In November 2017, we initiated the environmental analysis process with the publication of a Notice of Intent to Prepare an Environmental Impact Statement (EIS) in the Federal Register. On June 20, 2018 a Supplemental NOI was published to continue the scoping effort by seeking comments for a proposed action to make amendments to the plans. Comments from both NOIs were considered and on October 5, 2018, we published a Draft EIS (DEIS) for public comment. We considered input from cooperating agencies, as well as comments and meetings with the public, Tribes, state and federal agencies, counties, and associations.

This Record of Decision (ROD) represents our contribution and commitment to the conservation of greater sage-grouse and the sagebrush steppe ecosystem that is vital to the survival of greater sage-grouse. Our decision was made after carefully listening and considering concerns raised by the state and federal agencies, Tribes, cooperating agencies (including the BLM), grazing permittees, industry, counties, groups, and public. The states involved in this effort have taken approaches appropriate to their situation towards this common goal; and the Forest Service has developed plans that provide a level of consistency across the federal lands that they manage, while incorporating aspects of each state's plan. The Forest Service worked closely with state partners to develop direction that will provide the habitat necessary to maintain a viable population of greater sage-grouse on the plan area while taking state plan direction into consideration.

The LMPA, as outlined in this decision, provide the overall direction and guidance for land management activities on National Forest System (NFS) lands. The actual changes on the ground, however, will occur as project-level environmental analysis and decisions occur and the resulting actions are implemented.

We fully recognize that this decision will result in changes to how National Forest System lands and uses are managed and, as actions are being implemented, they will have impacts on some users. It is incumbent upon us to continue working at the local level to find ways to achieve the goals outlined in this ROD and associated LMPA. We understand that to be successful implementation must proceed in a thoughtful way that is collaborative and transparent with our federal, state, and local partners.

The LMPA establishes a solid foundation to work from that provides a level of certainty about management of National Forest System lands. Through our experiences implementing the plan amendments, completing additional project analysis, conducting monitoring and additional research, we will continue to learn more about these landscapes, and the wildlife and uses they support. It will be incumbent upon us to embrace an attitude of continual learning and adaptation.

The large landscape that we are working on, and the associated diverse group of stakeholders affected and interested in this effort, provides an opportunity to take advantage of each other's knowledge and capacity and, using our varied strengths, work in partnership to conserve greater sage-grouse while continuing the important uses on our National Forest System lands.

To date through this effort, we've established new ways of working together that have resulted in significant accomplishments. We're committed to building on these successes and exploring additional ways to strengthen our efforts to work together.

**Nora Rasure**
Regional Forester
Intermountain Region

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## INTRODUCTION

This Record of Decision (ROD) documents my decision and rationale for approving the land management plan amendment (LMPA) and final environmental impact statement (FEIS) for National Forest System (NFS) land located in the state of Nevada. The attached LMPA will provide guidance for future project and activity decisionmaking on the Humboldt-Toiyabe National Forest (NF).

The Forest Service has developed a targeted, multi-tiered, collaborative landscape-level conservation strategy. This strategy is based on the best available scientific information that offers the highest level of protection for greater sage-grouse (GRSG) in the most important habitat areas to address the specific threats identified in the 2010 U.S. Fish and Wildlife Service (USFWS) "warranted but precluded" decision, and the USFWS 2013 Conservation Objectives Team (COT) report, and the 2017 in Response to SO 3353 written by the Interior Review Team.

The conservation measures presented in this ROD and the attached LMPA protect the greater sage-grouse and its habitat, and more than 350 other wildlife species associated with the sagebrush steppe ecosystem, which is widely recognized as one of the most endangered ecosystems in North America. Reversing the slow degradation of this valuable ecosystem will also benefit local economies and a variety of rangeland uses including sustainable livestock grazing, recreation, and continued sustainable economic development in a manner that safeguards the long-term sustainability, diversity, and productivity of these important and iconic landscapes and the Western culture.

The management direction in the LMPA is accomplished through forest plan components that limit or eliminate new surface disturbance in Priority Habitat Management Areas (PHMAs), and minimize surface disturbance in General Habitat Management Areas. The LMPA also includes a suite of other management direction, such as the establishment of disturbance limits, greater sage-grouse habitat objectives, lek buffers, mitigation requirements, monitoring protocols, adaptive management triggers and responses, and targeted restoration and habitat improvements. The cumulative effect of these measures is to conserve, enhance, and restore greater sage-grouse habitat across the remaining range of the species in the Intermountain Region and provide greater certainty that Forest Service land management plan decisions will lead to conservation of greater sage-grouse and other species associated with the sagebrush steppe ecosystem.

The greater sage-grouse conservation measures approved by this decision, in addition to other state, federal, and local partners' greater sage-grouse conservation actions, represent a collaborative, landscape-level conservation effort. Through past and future partnerships and cooperation, we intend to manage the sagebrush steppe ecosystem to achieve our common goal to conserve greater sage-grouse and its habitat.

## BACKGROUND

Greater sage-grouse is a species dependent on sagebrush steppe ecosystems. These ecosystems are managed in partnership across the range of the greater sage-grouse by federal, state, tribal and local authorities. Efforts to conserve the species and its habitat date back to the 1950s. Over the past two decades, state wildlife agencies, federal agencies, and many others in the range of the species have been collaborating to conserve greater sage-grouse and its habitats. The United States Department of Agriculture (USDA) Forest Service (FS) and the United States Department of the Interior (USDI) Bureau of

Land Management (BLM) have broad responsibilities to manage federal lands and resources for the public benefit.

The greater sage-grouse, an iconic species of the sagebrush steppe ecosystem, currently occupies only 56% of its historic range and populations have continued to decline for the past 40 years. The Forest Service manages approximately 8% of the remaining greater sage-grouse habitat. The National Forest Management Act of 1976 (NFMA) directs the FS to develop, maintain, and, as appropriate, revise land management plans (LMPs) which guide management of NFS lands (16 USC 1604(a)). The conservation measures in the LMPA fulfills this responsibility as well as our commitment to the Forest Service mission to sustain the health, diversity, and productivity of the nation's forests and grasslands to meet the needs of present and future generations.

In March 2010, the USDI Fish and Wildlife Service (USFWS) issued a 12 Month Finding for Petitions to List the greater sage-grouse (*Centrocercus urophasianus*) as Threatened or Endangered (75 Federal Register 13910, March 23, 2010). In that 12-Month Finding, the USFWS concluded that listing the greater sage-grouse as a threatened or endangered species was "warranted, but precluded by higher priority listing actions." The USFWS reviewed the status and threats to the greater sage-grouse in relation to the five Listing Factors provided in Section 4(a)(1) of the ESA (16 USC 1533(a)(1)). Of the five Listing Factors reviewed, the USFWS determined that Factor A, "the present or threatened destruction, modification, or curtailment of the habitat or range," (p. 13924) and Factor D, "inadequacy of existing regulatory mechanisms" (p. 13973) posed "a significant threat to the greater sage-grouse now and in the foreseeable future" (pp. 13962 and 13982) (75 FR 13910, March 23, 2010). The USFWS identified the land and resource management plans for the FS and BLM as mechanisms through which adequate protections for greater sage-grouse could be implemented.

The 2010 USFWS listing decision prompted a joint FS and BLM planning effort to amend FS LMPs and BLM equivalents to incorporate conservation measures to support the continued existence of the greater sage-grouse. This effort culminated in the Forest Service Greater Sage-grouse Records of Decisions (2015 RODs) that were signed on September 16, 2015. On October 2, 2015, the USFWS found that listing the greater sage-grouse under the ESA was not warranted (80 FR 59858). The USFWS based its finding on regulatory certainty from the conservation measures in the FS and BLM greater sage-grouse LMPAs and revisions, as well as on other private, state, tribal, and federal conservation efforts.

On March 29, 2017, the Secretary of the Interior issued Secretarial Order (SO) 3349. It ordered agencies to reexamine practices to better balance conservation strategies and policies with the need of creating jobs. On June 7, 2017, the Secretary issued SO 3353 with a purpose of enhancing cooperation among eleven western states and the BLM in managing and conserving greater sage-grouse. SO 3353 directed an Interior Review Team, consisting of the BLM, the USFWS, and the US Geological Survey (USGS), to coordinate with the Sage-Grouse Task Force. A June 14, 2017 letter from the Forest Service Chief directed Forest Service Regions 1, 2, and 4 to cooperate in the review. On August 4, 2017, the Interior Review Team submitted its *Report in Response to SO 3353*. In this report the team recommended modifying the greater sage-grouse plans and associated policies to better align with the individual state plans. On August 4, 2017, the Secretary issued a memo to the Deputy Secretary directing the BLM to implement the recommendations found in the report. On October 11, 2017, the BLM published the Notice of Intent to Amend Land Use Plans Regarding Greater Sage-Grouse Conservation and Prepare Associated Environment Impact Statements or Environmental Assessments (82 FR 47248).

To solicit public comment on greater sage-grouse management issues that could warrant LMPAs, the FS

published a Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) (82 FR 55346, November 21, 2017). The FS provided the public with an opportunity to identify the preliminary need for change to the 2015 amendments and encouraged the public to help identify any issues, management questions, or concerns that should be addressed. A March 2018 Executive Summary of comments can be found here: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd576258.pdf. On June 20, 2018 a Supplemental NOI was published to continue the scoping effort by seeking comments for a proposed action to make amendments to the plans (83 FR 28608). This Supplemental NOI identified the provisions in the regulations that guide the development, amendment, and revision of land management plans for all units of the NFS (36 CFR 219, referred to as the "planning rule") likely to be directly related, and so applicable, to proposed plan amendments. On July 2, 2018, a corrected Supplemental NOI was published to clarify that the FS is not proposing to amend land management plans for NFS lands in Montana (83 FR 30909). On August 1, 2018 the comment period was extended for two weeks in response to public concerns regarding the BLM Draft Environmental Impact Statement (DEIS) comment period closing the same day as the FS (83 FR 37460). A September 2018 Executive Summary of comments is located on the project page at:
https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd595810.pdf.

On October 5, 2018 a Notice of Availability (NOA) for the Greater Sage-grouse Proposed LMPAs and DEIS for the Intermountain and Rocky Mountain Regions was published in the Federal Register (83 FR 50362 and 83 FR 50331, October 5, 2018). The 90-day comment period per the 2018 NOA drew 33,192 comment letters, of which 622 contained unique and substantially different comments. The Forest Service received letters, emails, form letters, and public comment forms from Tribes, individuals, organizations, agencies, businesses, and groups. The Forest Service analyzed 2,935 comments from the 622 comment letters to identify the significant issues driving the alternatives. A February 2019 Executive Summary of comments is located on the Intermountain Region webpage at:
https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd610376.pdf. A summary of the responses to comments is included in Appendix I – Response to Comments in the FEIS. A spreadsheet containing all unique comments and response to comments is available at:
https://data.ecosystem-management.org/nepaweb/nepa_project_exp.php?project=52904.

The FS prepared this FEIS to analyze changing conservation measures for greater sage-grouse as well as to incorporate new information to improve the clarity, efficiency, and implementation of the conservation measures of the 2015 Greater Sage-Grouse Plan Amendments. The FS was also a cooperating agency with the BLM as they undertook a similar action.

## PLANNING AREA

The planning area comprises NFS lands in greater sage-grouse habitat management areas (HMAs) located in National Forests and Grasslands in the Intermountain and Rocky Mountain Regions. The NFS lands located in the planning area are managed under 19 land management plans, shown in Table 1-1. One DEIS and one FEIS was developed for the entire planning area; however, a separate ROD has been prepared for each state. See "Decision Area" and Table 1-3 below for a list of those land management plans amended in this ROD.

**Table 1-1. Forest Service LMPs proposed to be amended by GRSG planning strategy in the entire planning area.**

| Managing Forest or Grassland | LMP and Year Approved[1] | State |
|---|---|---|
| **Intermountain Region, Region 4** | | |
| Ashley National Forest | Ashley National Forest Land and Resource Management Plan (1986) | Utah, Wyoming |
| Boise National Forest | Boise National Forest Land and Resource Management Plan (2003) | Idaho |
| Bridger-Teton National Forest | Bridger-Teton Land and Resource Management Plan (1990) | Wyoming |
| Caribou-Targhee National Forest | Curlew National Grassland Plan (2002) | Idaho |
| Caribou-Targhee National Forest | Revised Forest Plan for the Caribou National Forest (2003) | Idaho |
| Caribou-Targhee National Forest | 1997 Revised Forest Plan, Targhee National Forest (1997) | Idaho |
| Dixie National Forest | Land and Resource Management Plan for the Dixie National Forest (1986) | Utah |
| Fishlake National Forest | Fishlake National Forest Land and Resource Management Plan (1986) | Utah |
| Humboldt-Toiyabe National Forest | Humboldt National Forest Land and Resource Management Plan (1986) | Nevada |
| Humboldt-Toiyabe National Forest | Land and Resource Management Plan, Toiyabe National Forest (1986) | Nevada |
| Manti-La Sal National Forest | Land and Resource Management Plan, Manti-La Sal (1986) | Utah |
| Salmon-Challis National Forest | Challis National Forest Land and Resource Management Plan (1987) | Idaho |
| Salmon-Challis National Forest | Salmon National Forest Land and Resource Management Plan (1988) | Idaho |
| Sawtooth National Forest | Sawtooth National Forest Land and Resource Management Plan (2003) | Idaho, Utah |
| Uinta-Wasatch-Cache National Forest | 2003 Land and Resource Management Plan, Uinta National Forest (2003) | Utah, Wyoming |
| Uinta-Wasatch-Cache National Forest | Revised Forest Plan, Wasatch-Cache National Forest (2003) | Utah, Wyoming |
| **Rocky Mountain Region, Region 2** | | |
| Medicine Bow-Routt National Forest | Routt National Forest Revised Land and Resource Management Plan (1997) | Colorado |
| Medicine Bow-Routt National Forest | Medicine Bow National Forest Revised Land and Resource Management Plan (2003) | Wyoming |
| Thunder Basin National Grassland | Land and Resource Management Plan for the Thunder Basin National Grassland (2001) | Wyoming |

[1]As amended

## DECISION AREA

The NFS lands included in this decision are greater sage-grouse habitat management areas and lek buffers as specified in the LMPA located on the Humboldt-Toiyabe NF. All lands included in this decision are in the Intermountain Region. Maps of the decision area are included in ROD, Attachment B.

### *HABITAT MANAGEMENT AREAS*

The planning area comprises numerous areas with greater sage-grouse habitat across the local ranges of one or more greater sage-grouse populations. These habitat areas are non-contiguous, meaning they are often separated by natural geographic features/barriers or human development. In this ROD, the planning area is further divided into HMAs. Habitat management areas are broadly mapped at a large scale and may encompass tracts of non-habitat; plan components only apply to greater sage-grouse habitat within the broad bounds of the HMAs. The HMAs are defined as follows:

- **Priority Habitat Management Areas (PHMA):** Areas that have been identified as having the highest conservation value to maintaining sustainable greater sage-grouse populations. These areas are occupied seasonally or year-round and include breeding, late brood-rearing, and winter concentration areas. The FS and BLM have identified these areas in coordination with respective state wildlife agencies.

- **General Habitat Management Area (GHMA):** Areas that are likely to be occupied seasonally or year-round outside of PHMAs and where special management would apply to sustain the greater sage-grouse population. GHMA may include active leks, seasonal habitats, and fragmented or marginal habitat. These areas have been identified by the FS and BLM in coordination with respective state wildlife agencies.

- **Other Habitat Management Area (OHMA):** Areas determined to be moderate to low habitat suitability for sage-grouse in areas of estimated low space use. This habitat management class represents areas with appropriate environmental conditions for sage-grouse, but that are less frequently used by sage-grouse. OHMA is only designated in Nevada.

As new information about greater sage-grouse habitat becomes available, including seasonal habitats, in coordination with the State wildlife agency and USFWS, and based on best available scientific information, the Forest Service may revise the greater sage-grouse habitat management area maps and associated management decisions through LMPA or forest plan revision, as appropriate.

**Table 1-2. Comparative summary of acres of GRSG habitat in the entire planning area by alternative.**

| Alternatives | Colorado | Acreage Change | Idaho | Acreage Change | Nevada | Acreage Change | Utah | Acreage Change | Wyoming | Acreage Change | Total Acreage Change |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **No Action Alternative** | | | | | | | | | | | |
| PHMA | 1,400 | - | 342,000 | - | 994,800 | - | 782,100 | - | 419,600 | - | - |
| IHMA | - | - | 416,300 | - | - | - | - | - | - | - | - |
| GHMA | 11,000 | - | 347,500 | - | 797,800 | - | 28,100 | - | 609,800 | - | - |
| OHMA | - | - | - | - | 625,600 | - | - | - | - | - | - |
| Anthro Mountain | - | - | - | - | - | - | 42,100 | - | - | - | - |
| SFA | - | - | 248,000 | - | 566,800 | - | 47,300 | - | 2,800 | - | - |
| **Total** | **12,400** | **-** | **1,105,800** | **-** | **2,418,100** | **-** | **852,300** | **-** | **1,029,400** | **-** | - |
| **Proposed Action Alternative** | | | | | | | | | | | |
| PHMA | 1,400 | - | 342,000 | - | 889,600 | -105,200 | 824,200 | 42,200 | 319,400 | -100,300 | -163,300 |
| IHMA | - | - | 416,300 | - | - | - | - | - | - | - | - |
| GHMA | 11,000 | - | 347,500 | - | 1,096,000 | 298,300 | 28,100 | - | 514,300 | -94,600 | 203,700 |
| OHMA | - | - | - | - | 426,800 | -198,800 | - | - | - | - | -198,800 |
| CHMA | - | - | - | - | - | - | - | - | 6,400 | - | - |
| Anthro Mountain | - | - | - | - | - | - | - | -42,100 | - | - | -42,100 |
| **Total** | **12,400** | **-** | **1,105,800** | **-** | **2,412,400** | **-5,700** | **852,400** | **100** | **840,100** | **-194,900** | **-200,400** |
| **State of Utah Alternative** | | | | | | | | | | | |
| PHMA | 1,400 | - | 342,000 | - | 889,600 | - | 782,100 | -42,200 | 319,400 | - | -42,200 |
| IHMA | - | - | 416,300 | - | - | - | - | - | - | - | - |
| GHMA | 11,000 | - | 347,500 | - | 1,096,000 | - | - | -28,100 | 514,300 | - | -28,100 |
| OHMA | - | - | - | - | 426,800 | - | - | - | - | - | - |
| CHMA | - | - | - | - | - | - | - | - | 6,400 | - | - |
| **Total** | **12,400** | **-** | **1,105,800** | **-** | **2,412,400** | **-** | **782,100** | **-70,300** | **840,100** | **-** | **-70,300** |

Acres rounded to the nearest hundred.

No Action Alternative - Source: FS GIS 2015; Proposed Action - Source: FS GIS 2018; State of Utah Alternative - Source: FS GIS 2018

## DECISION[1]

My decision is to approve Alternative 2, the Proposed Action Alternative from the FEIS. My decision approves the LMPA to amend the LMPs for NFS lands in Nevada (See Table 1-3).

**Table 1-3. Land management plans amended by this decision.**

| Managing Forest | LMP and Year Approved[1] | State |
|---|---|---|
| **Intermountain Region, Region 4** | | |
| Humboldt-Toiyabe National Forest | Humboldt National Forest Land and Resource Management Plan (1986) | Nevada |
| Humboldt-Toiyabe National Forest | Land and Resource Management Plan, Toiyabe National Forest (1986) | Nevada |

[1]As amended

In the DEIS and FEIS, the Forest Service analyzed effects of two action alternatives and a No Action Alternative (see FEIS, Chapter 2, Sections 2.2 and 2.3 regarding alternatives). The action alternatives are Alternative 2 - Proposed Action Alternative and Alternative 3 – State of Utah Alternative. Alternative 2 is the preferred alternative and has modifications from the DEIS. Table 1-4 shows a summary of acres of HMA in the Proposed Action Alternative.

**Table 1-4. Summary of habitat management areas in acres located on the Humboldt-Toiyabe NF in the Proposed Action Alternative.**

| National Forest | PHMA | GHMA | OHMA | Total |
|---|---|---|---|---|
| **Humboldt-Toiyabe NF** | **889,600** | **1,096,000** | **426,800** | **2,412,400** |

The proposed LMPA in the FEIS became the LMPA located in the ROD, Attachment A. The LMPA provides conservation measures to conserve, enhance, and restore greater sage-grouse and its habitat by reducing, eliminating, or minimizing threats to greater sage-grouse and its habitat. Land management plan direction is expressed as desired conditions, objectives, standards, and guidelines. These plan components are designed to provide conservation protection for greater sage-grouse and habitat sufficient for a viable population on each planning unit.

In developing the proposed LMPA for the FEIS and ROD, modifications were made to the Proposed Action Alternative in the DEIS. The clarifications and edits made between the DEIS and FEIS are shown in the FEIS, Chapter 2, Table 2-7 Nevada. The modifications were based on public comments, internal review, new information, best available scientific information, the need for clarification in the plans, and ongoing coordination with States and other stakeholders across the range of the greater sage-grouse.

The suite of desired conditions, objectives, standards, and guidelines in the LMPA have been developed to provide direction for the potential activities that can occur in greater sage-grouse habitat. In addition, management approaches, which are identified as optional content in the plan, are also included. Optional Content in the Plan is discussed at 36 CFR 219.7(f)(2): “A plan may include additional content, such as

[1] If any inconsistencies exist between the language contained in this ROD and the LMPA, the language as written in the LMPA will prevail.

potential management approaches or strategies and partnership opportunities or coordination activities." Optional content in the plan is also described in Forest Service Handbook 1909.12, Sec. 22.4 "If used, management approaches would describe the principal strategies and program priorities the Responsible Official intends to employ to carry out projects and activities developed under the plan. The management approaches can convey a sense of priority and focus among objectives and the likely management emphasis. Management approaches should relate to desired conditions and may indicate the future course or direction of change, recognizing budget trends, program demands and accomplishments. Management approaches may discuss potential processes such as analysis, assessment, inventory, project planning, or monitoring."

Management approaches are intended as guidance of how to meet the purpose of the amendment for situations that are outside of the decisionmaking process. Several plan components were identified as management approaches in the DEIS Proposed Action when it was determined that they did not meet the definition of a standard or guideline. In the FEIS, many remained as management approaches, but some were changed back to guidelines, when it was determined that they did more closely meet the definition of a guideline; "a constraint on project and activity decisionmaking that allows for departure from its terms, so long as the purpose of the guideline is met. Guidelines are established to help achieve or maintain a desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements." I intend to employ management approaches in the FEIS to meet the purpose of the amendment. There was no effect and no reduction in protection to greater sage-grouse or its habitat as a result of identifying a plan component that had been mislabeled and was a management approach. I am making use of all the tools the 2012 Planning Rule provides to conserve greater sage-grouse and its habitat.

Implementation of the LMPA direction within the designated greater sage-grouse habitat management areas will be consistently and systematically monitored. Management decisions will be adjusted through an adaptive management process consistent and in accordance with applicable law. Monitoring, Mitigation, and Adaptive Management details are provided below in this ROD (refer to ROD, Attachments F, G, and H).

The LMPA does not commit the Forest Service to on-the-ground, site-specific projects or actions. The LMPA provides a broad, programmatic framework that guides project-level decisions, but does not authorize, fund, or carry out any site-specific activities. Instead, the land management plan establishes limitations on what actions may be authorized and what conditions must be met during project-level decisionmaking. Upon the effective date of the LMPA, the Forest Service will carry out on-the-ground projects and activities designed to accomplish management objectives and move the project area toward desired conditions described in the LMPA. Projects and activities may require additional environmental analysis at the time of project- and activity-specific proposals and will be subject to the National Environmental Policy Act (NEPA) and other applicable laws and regulations. Project-level decisions must be consistent with the land management plan.

## DECISION RATIONALE

### *HOW THE SELECTED ALTERNATIVE RESPONDS TO THE PURPOSE AND NEED*

The LMPA that I approve by this decision meets the purpose and need to incorporate new information to improve the clarity, efficiency, and implementation of the 2015 Greater Sage-Grouse Plan

Amendments, including better alignment with BLM and state plans, to benefit greater sage-grouse conservation at the landscape scale. The FS gained new information and understanding from comments received, within-agency scoping, new science and research, and coordination with cooperating agencies and the Sage Grouse Task Force. The LMPA provides management direction through desired conditions, standards, and guidelines regarding what activities the Forest Service can and cannot approve in greater sage-grouse habitat on NFS lands in Nevada. The LMPA emphasizes moving toward desired conditions and these standards and guidelines are intended to reduce the disturbances occurring in the habitat and for the disturbances that do occur, to limit the duration, timing, and location of activities to best protect greater sage-grouse during all of its life stages. The LMPA provides for a comprehensive and effective conservation strategy to address the threats identified by the USFWS and preclude the need for additional protections under the ESA.

I base my decision on a careful and reasoned comparison of the environmental consequences of and responses to issues and concerns for each alternative. The LMPA provides the best opportunity for a balance of management activities to respond to the purpose and need and is responsive to the diverse needs, issues, concerns, and opportunities expressed by tribes, local governments, State and Federal agencies, organizations, and the public. This decision balances interests of the public at large and those with special interests in the resources located in the planning area while providing for sagebrush and associated habitats for the long-term viability of the greater sage-grouse. These interests include managing future forest and grassland activities to provide sustainable habitat conditions, while continuing to provide for recreation and access opportunities, livestock grazing, access to locatable mineral resources, development of renewable energy resources, and active habitat restoration efforts on NFS lands in accordance with the Multiple-Use Sustained-Yield Act of 1960, the NFMA, and the existing land management plans. While meeting these interests, my decision provides methods to achieve resilient and resistant ecosystems, and to improve greater sage-grouse habitat through providing plan components that will conserve, enhance, or restore sagebrush and associated habitats for the long-term viability of the greater sage-grouse.

The review of comments and internal scoping identified issues in the 2018 DEIS and 2019 FEIS including: Habitat Management Area (HMA) Designation; Elimination of Sagebrush Focal Area (SFA) Designations/Withdrawals; Changing Net Conservation Gain (Net conservation gain remains in place for Nevada, but was changed in other states) and Adjustment of Compensatory Mitigation Frameworks; Modifying Lek Buffers; Including Waivers, Exceptions, and Modifications on No Surface Occupancy (NSO) Stipulations; Modifying Desired Conditions; Changing Livestock Grazing Guidelines; Adaptive Management Review Process; Treatment of Invasive Species; and Consistency with the 2012 Planning Rule. Rationale for issues raised are discussed in the section below.

***HOW ISSUES WERE ADDRESSED AND CONSIDERED***

Some preliminary issues were identified as a result of implementation of the 2015 ROD and LMPA, new scientific information, and working with other agencies. The interdisciplinary team evaluated comments received from scoping, the DEIS and proposed LMPA comment period and from cooperating agencies to determine if they identified issues relevant to this planning process. Planning issues can drive the development of an alternative, may involve resources that are adversely affected by the proposed action, or may concern conflicts about alternative uses of available resources. These planning issues inform modifications or alternatives to the proposed action, provide focus for the analysis, or are the basis for comparing the environmental effects of the alternatives in the EIS, all of which informed my decision.

This section addresses how the issues that were carried forward for additional analysis in the DEIS and FEIS were addressed and considered. Calculating disturbance caps is a topic discussed in the EIS; however, it is not discussed in this ROD because the change is not applicable to NFS lands located in Nevada.

**Habitat Management Area Designations**

- **Issue: The process for evaluating and updating HMA boundaries is unclear.**
- **Response: Alternatives 2 and 3 include addition of management approach to clarify the process.**

The 2015 Great Basin ROD (Idaho, Montana, Nevada, and Utah) addressed updating of HMA boundaries: "As new information about greater sage-grouse habitat becomes available, including seasonal habitats, in coordination with the State wildlife agency and USFWS, and based on best available scientific information, the Forest Service may revise the greater sage-grouse habitat management area maps and associated management decisions through LMPA or forest plan revision, as appropriate" (page 22). Maps of the alternatives can be found in the FEIS, Appendix A and ROD, Attachment B. Many public and cooperating agency comments are concerned that changing an HMA boundary requires a new forest plan amendment and could be an onerous process. Other commenters are concerned and want a process to change HMAs that is open and transparent and provides an opportunity for public comment.

I consider the need for clarity to be important. HMAs, or in some instances, lek buffers, are used to identify where plan components apply. Alternatives 2 and 3 include a management approach that identifies the process for evaluating and updating HMA boundary maps, and the appropriate planning process would be applied if a change is needed.

- **Issue: The protections of the HMAs appeared similar, making the separate designations unnecessary.**
- **Response: Alternative 2 was modified to make distinguishable the protections under the different designations and focusing protection in PHMA.**

Many of the LMPAs in both the 2015 Rocky Mountain ROD and the 2015 Great Basin ROD, provided the same protections to PHMAs as GHMA and other HMA designations.

After reviewing comments, I determined that clarity to the level of protection could be provided and more focus placed on PHMA. Alternatives 2 and 3 were developed to clarify the differences between the HMAs and to focus protection in PHMAs. This focus on PHMAs will ensure that restrictions are applied in the appropriate areas, while allowing development to occur in areas that would result in few or no impacts to greater sage-grouse.

- **Issue: Concern about 2015 HMA boundaries.**
- **Response: Correction of HMA boundaries.**

The boundaries of the habitat management areas have been adjusted to correct administrative mapping errors that occurred when habitat management areas were designated in 2015. Habitat management area boundary changes also include removing some areas of non-habitat that were included in the 2015 ROD/LMPA. Alternatives 2 and 3 include adjustments to HMA boundary maps for Nevada. FEIS, Appendix A includes maps for each alternative by state and forest or grassland. I consider it important to have

maps with the best available precision and accuracy to facilitate implementation. No impact to greater sage-grouse is anticipated from the HMA boundary adjustment.

The HMA boundaries on NFS land in Nevada have been adjusted during this amendment process. PHMA decreased by 105,200 acres, GHMA increased by 298,300, and OHMA decreased by 198,800 (See FEIS, Chapter 2, Tables 2-1 and 2-2). PHMA, GHMA, and OHMA acres have been better classified based on incorporation of current science including new lek locations, improved understanding of greater sage-grouse space-use from marked birds and modelling work, and removal of areas of non-habitat including areas near town and city centers (Coates et al. 2016). No impact to greater sage-grouse is anticipated from the HMA boundary adjustment.

Differences in mapping layers between the 2015 and 2019 amendments can also be examined using a map web-tool at the following link:
https://usfs.maps.arcgis.com/apps/PublicInformation/index.html?appid=9f1cf6d8425e49949d0006a0ae574b84.

**Sagebrush Focal Area Designations/Withdrawals**

- **Issue: Sagebrush Focal Areas (SFAs) duplicate many protections that are already in place through the designation of PHMA in the absence of mineral withdrawals.**
- **Response: Alternatives 2 and 3 eliminate SFAs.**

In the 2015 ROD/LMPA, SFAs were shown as a subset of PHMA (with few exceptions) and are managed as PHMA with some additional management. Both SFA and PHMA are managed as no surface occupancy (NSO) for fluid mineral leasing, the only difference is that PHMA allows for a limited exception and the exceptions must meet a stringent series of criteria to be approved. Alternatives 2 and 3 eliminated the SFA designation to add flexibility for responsible development with stringent requirements including mitigation to achieve a no net loss to greater sage-grouse habitat in PHMA. There is virtually no overlap of active oil and gas well development with the 2015 SFA designated areas, which indicates that the potential for development of oil and gas in the areas previously designated as SFAs is very low (Chambers et al. 2017). I considered that the removal of SFA designations would have no measurable effect on the conservation of greater sage-grouse because the management direction proposed for PHMA would remain in place and continue to protect greater sage-grouse habitat, but the clarity and efficiency of implementation of the plans would increase by consolidating management area designations.

- **Issue: Concern about not pursuing Sagebrush Focal Area Mineral Withdrawal.**
- **Response: FEIS tiers to previous analysis of not moving forward with withdrawal.**

The proposed mineral withdrawal was canceled with a Notice of Cancellation published in the Federal Register on October 11, 2017, which canceled the BLM's application to withdraw SFA from locatable mineral entry (82 FR 47248, October 11, 2017). The impacts associated with not pursuing withdrawal were analyzed in the 2016 Sagebrush Focal Area DEIS which analyzed the impacts of not moving forward with a withdrawal in the No Action Alternative. Applicable analyses from the 2015 FEIS and 2016 DEIS explain the impacts from these actions, and are incorporated by reference (See FEIS, Chapter 4, Table 4-1). Withdrawal decisions are made by the BLM and outside of Forest Service decisionmaking authority. Withdrawing SFA from locatable mineral entry was determined to have a nominal benefit to greater sage-grouse, and didn't have the effect intended. I considered the prior analyses to be sufficient.

**Adjustment of Compensatory Mitigation Frameworks**

- **Issue: Need to align mitigation with state mitigation strategies**
- **Response: Alternative 2 aligns with the State of Nevada's mitigation strategy and updates the mitigation strategy.**

The decision incorporates changes to the compensatory mitigation framework in Nevada. Net conservation gain was analyzed in Alternative E in the 2015 FEIS and remains in place for the No Action Alternative and the Proposed Action on NFS lands in Nevada. Environmental analysis would occur at the project level for current or future projects. When authorizing third-party actions that would result in direct, indirect, or cumulative impacts on greater sage-grouse or their habitat, the FS would require those impacts to be quantified using the State of Nevada's Habitat Quantification Tool (HQT) to ensure consistency in tracking/reporting changes to habitat quality and quantity. Applicable analyses from the 2015 FEIS explain the impacts from these actions, and are incorporated by reference. No additional analysis is needed, I consider the prior analyses to be sufficient. For desired condition, mitigation strategy, and adaptive management see FEIS, Appendix D – Nevada or ROD, Attachments E, G, and H.

**Modifying Lek Buffers**

- **Issue: Lek terminology in 2015 needs to be clarified.**
- **Response: In Alternative 2, language was clarified to ensure the correct definition for lek activity is used.**

I consider it important to clarify terminology that may have caused confusion. The Nevada Department of Wildlife (NDOW) is the agency responsible for developing lek count protocol, collecting and coordinating lek count data, and maintaining the state lek database. NDOW classifies leks as active and/or pending. In the 2015 FEIS, the terms "active", "occupied", or an unqualified "lek" were used interchangeably, but all fit into the NDOW definition of active and/or pending. This caused confusion, so language was clarified to ensure the correct definition for lek activity is used. This clarification will not have an effect on greater sage-grouse.

**Including Waivers, Exceptions, and Modifications on No Surface Occupancy (NSO) Stipulations**

- **Issue: Changing the unanimous finding requirement from other agencies to the proper level of decisionmaking authority (i.e., authorized officer) on NFS lands.**
- **Response: Alternative 2 includes the following:**
    - **the NSO exception includes appropriate use of mitigation hierarchy.**
    - **In the selected alternative, there is a change in requirements for the USFWS to approve waivers, exceptions, or modifications.**

I considered the need for the Forest plan direction to apply only to the Forest Service. Forest Service decision authority cannot be delegated to other agencies or the state. The removal of the requirement for a unanimous finding between FS, FWS, and the State of Nevada to grant an exception for NSO in fluid minerals development would be replaced by the authorization being granted by the authorized officer (i.e., responsible official). The responsible official must disclose effects of and rationale for the decision.

The no surface occupancy (NSO) exception includes appropriate surface use and timing stipulations.

Appendix G in the FEIS contains the Management Approach for Fluid Minerals: Stipulations for Nevada:

- STIPULATION B: No Surface Occupancy Stipulation, Greater Sage-Grouse in Priority Habitat

Management Areas (GRSG-M-FMUL-ST-078)
- STIPULATION E: Timing Limitation Stipulation, Greater Sage-Grouse Breeding and Nesting Habitats (GRSG-GEN-GL-011)
- STIPULATION F: Controlled Surface Use Stipulation, Tall Structures near Greater Sage-Grouse Active or Pending Leks (GRSG-GEN-GL-013)
- STIPULATION I: Timing Limitation Stipulation, Greater Sage-Grouse – Noise Limitation (GRSG-GEN-ST-010)

**Modifying Desired Conditions**

- **Issue: Desired condition tables do not have the flexibility to reflect the latest scientific information.**
- **Response: In Alternative 2, local ecological site potential is considered, a broader description of appropriate greater sage-grouse habitat requirements is identified, and desired conditions table values are moved to FEIS, Appendix D (see ROD, Attachment E).**

The seasonal use periods and habitat preferences table is identified as a management approach and is included in the FEIS in Appendix D, and ROD, Attachment E. This will allow the table to be revised to incorporate best available scientific information in coordination with partners. The best available scientific information would be reviewed and incorporated and recommend adjustments would be based on regionally and locally derived data. Modifying seasonal use periods and habitat preferences would better align with state conservation plans and management strategies resulting in improved management of great sage-grouse.

Desired conditions are identified in the 2015 FEIS and in the Proposed Action at GRSG-GEN-DC-003-Desired Condition. The seasonal use periods and habitat preferences table would be implemented following the guidance that these are broad goals based on habitat selection that may not be achievable in all areas and should be based on sources such as ecological site descriptions and associated state-and-transition models.

I consider it important for the desired conditions to reflect the latest scientific information. I also considered that applicable analyses from the 2015 FEIS explain the impacts from these actions and are incorporated by reference. No additional analysis is needed. See ROD, Attachment E, Table E-1 or FEIS, Appendix D, Table D-1 Nevada - Seasonal use periods for greater sage-grouse, for use with specific plan components.

**Changing Livestock Grazing Guidelines**

- **Issue: The livestock grazing desired condition statement is circular.**
- **Response: Alternatives 2 and 3 remove the desired condition statement.**

I consider it important to eliminate the circular desired condition statement. The 2015 Greater Sage-Grouse Plan Amendments listed a Desired Condition for livestock grazing being "managed to maintain or move towards desired conditions" (GRSG-LG-DC-039-Desired Condition). This desired condition is being removed because it does not provide any specific direction and is a circular statement; a desired condition cannot be to maintain or move toward a desired condition. The desired conditions for breeding, nesting, upland summer, and winter habitats are defined for each state (see FEIS, Chapter 2, Table 2-7).

- **Issue: Livestock management guidelines do not allow for reflecting the latest scientific information or adjusting for local habitat conditions.**
- **Response: Alternatives 2 replaces specific grass-height guidelines with management approaches to riparian and meadow areas.**

I consider it important that plan components have the flexibility to reflect the latest scientific information and to adjust livestock management as needed if livestock grazing is limiting achievement of greater sage-grouse habitat conditions. Alternatives 2 and 3 revise livestock management guidelines to replace specific grass-height requirements with management approaches to riparian and meadow areas to better reflect current research and to align local management with local habitat conditions. Based on new research into habitat characteristics, the biological foundation for the development of the 2015 Greater Sage-Grouse Plan Amendments grazing guidelines has changed and this changed condition warrants this change to grazing guidelines, which are not necessary as conservation measures for greater sage-grouse.

*Replace specific grass-height guidelines with management approaches that would have greater sage-grouse habitat assessments conducted in allotments to determine if livestock management is a causal factor.*

Based on the new understanding of habitat characteristics, plant phenology and sampling bias (Hanser et al. 2018), the biological foundation for the development of the 2015 Greater Sage-Grouse Plan Amendments grazing guidelines has changed and this changed condition warrants removal of the grazing guidelines, which are not necessary as conservation measures for sage-grouse.

Monitoring of greater sage-grouse seasonal habitats that occurred in 2016 and 2017 showed that in the majority of the cases, nesting, breeding, upland summer, and winter habitats were in suitable condition with grazing being managed consistent with direction in existing land management plans (USDA FS 2018). Existing plan components, when compared to published scientific findings, are generally compatible with habitat requirements for sage-grouse and monitoring showed that livestock grazing is not affecting the achievement or maintenance of desired conditions described in the 2015 Greater Sage-Grouse Plan Amendments.

Monitoring associated with droop heights on grasses showed that the existing land management plan direction was also providing for perennial grass at or above the droop heights planned for in the 2015 Greater Sage-Grouse Plan Amendment grazing guidelines (see FEIS, Chapter 3, Table 3-5). While stubble height monitoring was more limited, it also showed that the existing land management plan direction was providing sufficient direction for meeting that identified in the 2015 Greater Sage-Grouse Plan Amendment grazing guidelines and that existing plan management plan direction is adequate in addressing potential grazing impacts to seasonal sage-grouse habitats (see FEIS, Chapter 3, Table 3-6, 3-7, 3-8, and 3-9). If grazing is determined to be a causal agent for less than suitable habitat conditions, the Forest Service may implement specific management changes on those respective allotments. It is more appropriate to address these issues at the forest or allotment level rather than through grazing guidelines applied at a regional scale. Monitoring data specific to the Humboldt-Toiyabe National Forest indicate that many riparian areas and mesic meadows in HMAs are not in proper functioning condition or moving toward desired conditions for sage-grouse brood-rearing habitat. Additional plan components are included in the Nevada proposed action to address this issue.

- **Issue: Interpretation of the water development standard for PHMA could preclude developments that could indirectly benefit greater sage-grouse.**

- **Response: Alternative 2 modifies the standard to avoid the misinterpretation.**

The standard addressing water developments stated that in PHMAs and GHMAs, construction was not to be approved unless beneficial to sage-grouse habitat. Limiting approval or construction of water developments only to situations that are beneficial to greater sage-grouse can preclude the use of water developments as an effective tool to help ensure proper grazing management. The original intent of this standard was to ensure that construction of water developments would not cause adverse effects to sage-grouse or cause the degradation or loss of sage-grouse habitat, however the standard as written does not communicate that intent clearly. Water developments are a tool that could improve or maintain habitat indirectly over time.

I consider it important for the plan component to be clear about water developments that could indirectly benefit greater sage-grouse. The approval and/or the construction of a water development is inherently a site-specific determination, which would be considered in a separate analysis process which would consider effects to biological resources, including greater sage-grouse. The GRSG-LG-ST-038-Standard was modified to say, "In priority and general habitat management areas, do not approve construction of water developments that would cause net adverse effects to greater sage-grouse habitat."

**Adaptive Management Review Process**

- **Issue: The adaptive management review process needs to be clarified to address reversal of management once causal factors are identified and resolved.**
- **Response: Alternative 2 provides a process for ensuring federal, state, and local partners are part of the causal factoranalysis process and to evaluate and respond to hard and soft trigger adaptive management responses.**

Adaptive management hard and soft triggers would be updated as summarized and described in FEIS, Chapter 2, Table 2-2 and Appendix D. Analysis scale, population and habitat warnings and triggers, and the response and monitoring process would be addressed in coordination with USGS, NDOW, USFWS, and others as described in Appendix D.

I considered that no appreciable additive impacts are anticipated from updating the adaptive management process as described in Alternative 2. This update would ensure that the FS is utilizing the best available scientific information and decision support tools to guide management at the appropriate spatial scale, thus improving the FS's assessment and response to changing conditions that could impact greater sage-grouse populations and/or habitat. Impacts on Greater Sage-Grouse and its habitat would be beneficial as a result of this update to adaptive management triggers, providing the ability to detect declining populations and/or habitat and change management on the ground.

**Treatment of Invasive Species**

- **Issue: Adverse effects of invasive plant species on greater sage-grouse habitat needs to be better addressed.**
- **Response: Alternative 2 adds desired conditions and management approaches to address invasive plant species in PHMA.**

I consider the need to address invasive plant species to be highly important. Alternative 2 includes the addition of desired conditions and management approaches that emphasize invasive plant treatments, with a focus on annual grasses. The impact of invasive species and the effect of treatments on greater

sage-grouse habitat was analyzed in each state's 2015 FEIS and analysis is incorporated by reference. Impacts are similar to those disclosed in the 2015 analysis. Impacts are similar to those disclosed in the 2015 analysis; however, the addition of direction to emphasize mapping and treatment of invasive species would improve efficiency for removal of this threat.

**Consistency with the 2012 Planning Rule**

- **Issue: Consistency with the 2012 Planning Rule.**
- **Response: Alternatives 2 and 3 identify management approaches to be consistent with the 2012 Planning Rule.**

The FS is required to amend plans consistent with the 2012 Planning Rule. The previous amendment was approved in 2015 and was completed using the 1982 Planning Rule as allowed by 36 CFR 219.17(b). Some procedural and substantive requirements have changed with the 2012 Planning Rule, including the definitions of plan components. Standards and guidelines must now apply as "constraint[s] on project and activity decisionmaking." (36 CFR 219.7(e)(1)) The DEIS identifies several plan components that were changed to management approaches when it was determined that they did not meet the definition of a standard or guideline under the 2012 Planning Rule. In the FEIS, some of these plan components remain management approaches, but some were changed back to a standard or guideline and reworded, if needed, to more closely meet the current definitions. Keeping some of these plan components management approaches so they are correctly labeled will have no reduction in protection to greater sage-grouse or its habitat and no effect on other resources. The definition of management approaches in this amendment as "optional content" means that it was optional for the FS to include management approaches in the plan, but I intend for management approaches to be followed when practicable.

## OTHER ELEMENTS OF MY DECISION

This section highlights other elements of my decision that are presented in the LMPA that were developed to maintain, restore, or enhance greater sage-grouse and its habitat.

### *MONITORING (See Attachment F)*

The Forest Service will monitor the implementation of the LMPA direction within the designated greater sage-grouse habitat management areas (i.e., PHMA and GHMA) consistent with the planning rule (36 CFR 219.12). This monitoring will be based on The Greater Sage-Grouse Monitoring Framework developed by the Interagency Greater Sage-Grouse Disturbance and Monitoring Sub-team, May 30, 2014 and monitored elements described in the framework have been inserted in the Monitoring Attachment F of this decision.

The Monitoring section in Attachment F is a simplified version derived directly from the Monitoring Framework. It describes how the Forest Service expects to conduct implementation monitoring (i.e., if actions taken are consistent with the plan decisions) and effectiveness monitoring (effectiveness monitoring includes monitoring disturbance in habitats, as well as landscape habitat attributes at the landscape scale).

The Monitoring Attachment F to the LMPA describes the expected management approach to implement monitoring. An annual Implementation Monitoring Report will describe the number and types of authorized actions in each of the greater sage-grouse management areas and will document whether the

authorized actions are in conformance with the applicable land management plan.

***MITIGATION (See Attachment G)***

The Forest Service will require mitigation that provides habitat equivalency (e.g., net conservation gain), aligned with state-based compensatory mitigation programs and strategies, for the greater sage-grouse when undertaking Forest Service management actions, and consistent with existing rights and applicable law, in authorizing third party actions that result in greater sage-grouse habitat loss and degradation. This will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions. Mitigation will follow the regulations from the White House Council on Environmental Quality (CEQ) (40 CFR 1508.20) and the steps of avoid, minimize, and compensate, hereafter referred to as the mitigation hierarchy. If impacts from Forest Service management actions and authorized third party actions, which result in habitat loss and degradation that would otherwise not be allowed, remain after applying avoidance and minimization measures (i.e., residual impacts), then compensatory mitigation will be used to provide a net conservation gain to the greater sage-grouse. Mitigation actions should account for any uncertainty associated with the effectiveness of such mitigation. Any compensatory mitigation will be durable, timely, and in addition to that which would have resulted without the compensatory mitigation. Forest Service mitigation policy and CEQ regulations will serve as a framework for developing and implementing the compensatory mitigation. The Mitigation Strategy, Attachment G to the LMPA describes the expected management approach to implement these standards.

***ADAPTIVE MANAGEMENT (See Attachment H)***

Adaptive management triggers are used for identifying when potential management changes are needed to continue meeting greater sage-grouse conservation objectives. The Forest Service may adjust management decisions through an adaptive management process consistent and in accordance with applicable law. The adaptive management strategy includes soft and hard triggers and responses. These triggers are not specific to any particular project, but identify habitat and population thresholds outside of natural fluctuations or variations. Triggers are based on the key metrics that are being monitored, which habitat loss and population declines on biological scales. Adaptive management with specific triggers provides additional certainty that the regulatory mechanisms included in the LMPA are robust and able to respond to a variety of conditions and circumstances quickly and effectively to conserve greater sage-grouse habitat.

Soft triggers represent an intermediate threshold indicating that management changes are needed at the implementation level to address habitat or population losses. If a soft trigger is tripped, the Forest Service response aims for reprioritization or activities and measures to mitigate for the causal factors identified in the decline of any of the key metrics, with consideration of local knowledge and conditions. During implementation of this LMPA, inter-agency teams led by state agencies in Nevada may evaluate the key metrics for populations and habitat on an annual basis. These evaluations are intended to be used to assess the need for adjustments in management activities and provide recommendations for change to Forest Service line officers. Working groups would recommend to the appropriate Forest Service line officer any adjustment to management activities actions as a result of tripping a soft trigger. These adjustments will be made to preclude tripping a “hard” trigger, which signals more severe habitat loss or population declines.

Hard triggers represent a threshold indicating that immediate action is necessary to stop a severe deviation from greater sage-grouse conservation objectives set forth in the LMPA. Hard triggers and

responses to hard triggers are discussed in the adaptive management section in Attachment H. In the event that new scientific information becomes available demonstrating that the hard trigger response would be insufficient to stop a severe deviation from greater sage-grouse conservation objectives as set forth in the LMPA, the Forest Service may determine what further actions may be needed to protect greater sage-grouse and its habitat and ensure that conservation options are not foreclosed.

## ALTERNATIVES CONSIDERED

Three alternatives were analyzed in detail in the DEIS and FEIS. The alternatives were developed to incorporate new information to improve the clarity, efficiency, and implementation of the 2015 Greater Sage-Grouse Plan Amendments and to align better with BLM and state plans, to benefit greater sage-grouse conservation at the landscape scale. All alternatives comply with Federal laws, rules, regulations, and policies.

Each action alternative, Alternatives 2 and 3, emphasized an altered combination of resource uses, allocations, and restoration measures to address issues and resolve conflicts among uses so that greater sage-grouse desired conditions and objectives would be met in varying degrees across the alternatives. The action alternatives offered a range of possible approaches for responding to planning issues and concerns identified through public scoping to maintain or increase greater sage-grouse abundance and distribution in the planning area. While the purpose and need was the same across the action alternatives, each contained a discrete set of plan content. The purpose and need were met in varying degrees, with the potential for different long-range outcomes and conditions for greater sage-grouse and its habitat.

The relative emphasis given to particular resources and resource uses differed as well, including allowable uses, restoration measures, and specific direction pertaining to individual resource programs. When resources or resource uses are mandated by law or are not tied to planning issues, there are typically few or no distinctions between alternatives.

### *ALTERNATIVE 1 – NO ACTION ALTERNATIVE*

Alternative 1 meets the Council on Environmental Quality requirement that a No Action Alternative be considered. This alternative continues current management direction and is derived from the existing land management plans, as amended. Desired condition and objectives for resources and resource uses are based on the most recent land management plan decisions, along with associated amendments and other management decision documents. Laws, regulations, and Forest Service policies that supersede land management plan decisions would apply.

Under the No Action Alternative, the Forest Service would not amend land management plans (for a complete list see ROD Table 1-1 and FEIS, Chapter 1, Table 1-1). Greater sage-grouse habitat would continue to be managed under current land management plan direction, including the 2015 *LMPA*.

Desired conditions and objectives for Forest Service administered lands and federal mineral estate would not change. Allowable uses and restrictions would also remain the same, as they pertain to such activities as mineral leasing and development, recreation, lands and realty, and livestock grazing. This alternative also maintains the designation of sagebrush focal areas (SFAs), although the BLM has cancelled the proposal withdrawal of SFAs from locatable mineral entry (Notice of Cancellation, 82 *Federal Register*

195, October 11, 2017, p. 47248). See FEIS, Section 2.3.3 for a complete description of the No Action Alternative.

Because the purpose of the proposed action is to "incorporate new information to improve the clarity, efficiency, and implementation of the 2015 Greater Sage-Grouse Plan Amendments," the No Action Alternative was not chosen. It would not incorporate new information for clarity and efficiency of implementation. It would not incorporate additional collaboration efforts between the Forest Service, BLM, and State Agencies that has been done since the 2015 decision.

***ALTERNATIVE 2 – PROPOSED ACTION ALTERNATIVE***

This Proposed Action Alternative changes the No Action Alternative to improve the clarity, efficiency, and implementation of greater sage-grouse plans, including better alignment with BLM and state plans, to benefit greater sage-grouse conservation on the landscape scale.

This alternative was developed to promote continued collaboration with the BLM, states, and stakeholders to improve management, compatibility, and consistency between federal management plans and other plans and programs at the state level, and to continue to provide protection of greater sage-grouse habitat. This enhanced collaboration is expected to improve management and coordination with states and thus improve greater sage-grouse habitat across the range of greater sage-grouse.

The changes made under this alternative include updating and making adjustments to habitat management area boundaries; removing SFA designations; removing the Anthro Mountain habitat designation and replacing it with PHMA designation; incorporating causal factor review and response processes into the adaptive management strategies; reviewing net conservation gain to align better with states' mitigation strategies; modifying lek buffers; revising livestock management guidelines to replace grass height requirements with standardized evaluation methods; clarifying the restriction on water developments within habitat management areas; emphasizing treatment of invasive plants in PHMAs; and providing consistency with the 2012 Planning Rule. These modifications are shown in the FEIS Section 2.5, which describes the Proposed Action in detail. The issues identified in the FEIS in column four of Table 2-7 correspond with issues identified in FEIS Chapter 1, Table 1-2.

Under this alternative, the habitat management areas would be identified as "management areas," as defined in 36 CFR 219.19. A footnote in the 2015 RODs explained that the habitat management areas were treated as "overlays" instead of replacing existing management areas, because each amended plan had management areas that did not overlap and which would have required extensive adjustments of management area allocations with no meaning for greater sage-grouse habitat or conservation (page 17 of the 2015 ROD). This amendment is being developed under the current planning rule, which allows management areas to overlap existing ones. The identification of habitat management areas as "management areas" under the current planning rule definition will facilitate implementation while not changing boundaries of other management areas that are identified in the land management plans.

Consistent with the Notice of Cancellation of the BLM's application to withdraw SFAs from locatable mineral entry (82 *Federal Register* 195, October 11, 2017, p. 47248), this alternative would also remove the recommendation for withdrawal. The effects of such action are included in Chapter 4.

To be consistent with the planning rule, those plan components of the 2015 Greater Sage-Grouse Plan Amendments that do not meet the definitions for plan components in 36 CFR 219.7(e)(1) were changed

to management approaches.

The planning rule also states that “Plans should not repeat laws, regulations, or program management policies, practices, and procedures that are in the Forest Service Directive System.” 36 CFR 219.2(b)(2). To be consistent with the planning rule, redundant plan components of the 2015 Greater Sage-Grouse Plan Amendments would be removed.

Alternative 2 is the selected alternative – rationale has been provided under Decision Rationale.

### *ALTERNATIVE 3 – STATE OF UTAH ALTERNATIVE*

This alternative incorporates all aspects of Alternative 2, except for two differences, specifically removal of the GHMA designation from NFS lands in Utah, including no designation of the Anthro Mountain management area on the Ashley National Forest. See Section 2.5, Table 2-8a, which describes the State of Utah alternative in detail.

### *ENVIRONMENTALLY PREFERRED ALTERNATIVE*

Alternative 2 the Proposed Action Alternative is the environmentally preferred alternative, as defined in 36 CFR 220.3. Question 6A of CEQ’s 40 most-asked questions regarding CEQ’s National Environmental Policy Act (NEPA) regulations defines that term to ordinarily mean the alternative which best protects, preserves, and enhances historic, cultural, and natural resources. Alternative 2 the Proposed Action Alternative, as presented in the FEIS and LMPA is the most environmentally preferable because this alternative emphasizes improvement and protection of habitat for greater sage-grouse and was applied to all occupied greater sage-grouse habitat.

Since the 2015 ROD was signed, the Forest Service has continued to work with the State of Nevada and other agencies to look at local actions and conditions on the ground. New scientific information and research has been reviewed and incorporated into Alternative 2. Monitoring data and site-specific information has been gathered from implementation of projects on the ground. By reclassifying Anthro Mountain Management Area as PHMA, it assures continued protection for that area. Research and data gathered helped the Forest Service develop Alternative 2 the Proposed Action Alternative to benefit greater sage-grouse conservation on the landscape scale. Finally, clarifications of plan component and other plan content will likely increase efficiency of implementation, making the chosen alternative the environmentally preferred alternative. NEPA expresses a continuing policy of the Federal government to "use all practicable means and measures . . . to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans" (Section 101 of NEPA).

### *ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL*

Federal agencies are required by NEPA to rigorously explore and objectively evaluate all reasonable alternatives and to briefly discuss the reasons for eliminating any alternatives that were not developed in detail (40 CFR 1502.14). Public comments received in response to the proposed action provided suggestions for alternative methods for achieving the purpose and need.

Alternatives not analyzed in detail, may have been dismissed from detailed consideration for some of the

following reasons:

- They did not meet the purpose and need.
- They were outside the scope to conserve, enhance, and/or restore habitat for greater sage-grouse.
- They would not meet the requirements of NFMA or other existing laws and regulations.
- They were duplicative of the alternatives considered in detail or already captured within the range of alternatives analyzed in the FEISs.
- They were determined to be components that would cause unnecessary environmental harm.
- They were already part of an existing plan, policy, or administrative function.
- They did not fall within the limits of the planning criteria.

During scoping, some commenters asked the Forest Service to consider additional constraints on land uses and ground-disturbing development activities to protect greater sage-grouse habitat. Such constraints would be beyond those in the current land management plans. Other commenters, in contrast, asked the Forest Service to consider eliminating or reducing constraints on land uses, or incorporating other flexibilities into the land management plan components. Some commenters wanted the Forest Service to change the land management plans back to how they were prior to the 2015 ROD/LMPA (In 2015, this was Alternative A in each state, see FEIS, Section 2.2.1). Other commenters wanted the provisions of the 2015 RODs left in place. The Forest Service considered public scoping comments, including comments from States and cooperating agencies, in developing the Alternatives.

As the responsible official, I set the scope of the amendment based on the purpose and need, as described above. As such, this planning process does not revisit every issue that the Forest Service and the BLM evaluated in the 2015 planning process. The FEIS has its foundation in the comprehensive 2015 FEIS and ROD/LMPA and incorporates those documents in the administrative record by reference, including the entire range of alternatives evaluated through the 2015 planning process. An alternative to remove the 2015 amendment would be equivalent to the No Action alternative in the 2015 FEIS. A description of those alternatives by state can be found in the FEIS in Section 2.2.1.

## PUBLIC INVOLVEMENT

On June 7, 2017, the Secretary of the Interior issued Secretarial Order 3353 with a purpose of enhancing cooperation among eleven western states and the BLM in managing and conserving GRSG. It also directed an Interior Review Team, consisting of the BLM, the USFWS, and the US Geological Survey (USGS), to coordinate with the Sage-Grouse Task Force. A June 14, 2017 letter from the Forest Service Chief directed Forest Service Regions 1, 2, and 4 to cooperate in the review. On August 4, 2017, the Interior Review Team submitted its Report in Response to SO 3353. In this report the team recommended modifying the GRSG plans and associated policies to better align with the individual state plans. The Forest Service identified preliminary issues and the need to change the plan. (See FEIS, Chapter 1, Section 1.1 for additional background information).

To solicit public comment on greater sage-grouse management issues that could warrant LMPAs, the FS published a Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) (82 FR 55346, (November 21, 2017) and 83 FR 654 (January 5, 2018)). The notice initiated a scoping process that provided the public with an opportunity to provide feedback on the preliminary issues and need for change to the 2015 amendments, and encouraged the public to help identify any issues, management questions, or concerns that should be addressed. The Forest Service received 55,000 comments as a

result of the 2017 NOI. A March 2018, Executive Summary of comments can be found here: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd576258.pdf.

As the proposed action was further refined, the Forest Service issued a Supplemental Notice of Intent inviting further comment for a proposed action to make amendments to the plans (83 FR 28608 (June 20, 2018)). This Supplemental NOI identified the planning rule provisions of 36 CFR 219.8 through 219.11 likely to be directly related, and so applicable, within the scope and scale of the approved plan amendments. On July 2, 2018, a corrected Supplemental NOI was published to clarify that the FS is not proposing to amend land management plans for NFS lands in Montana (83 FR 30909 (July 2, 2018)). On August 1, 2018 the comment period was extended for two weeks in response to public concerns and cooperating agencies regarding the ability to provide comments on the BLM Draft Environmental Impact Statement (DEIS) and Forest Service comment period, which ended the same day (83 FR 37460 (August 2, 2018)). The Forest Service received 7,300 comments. A September 2018, Executive Summary of comments is located on the project page at:
https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd595810.pdf.

In addition to soliciting input from the public through scoping, the Forest Service also has been heavily engaged with the states with NFS lands with land management plans amended by the 2015 greater sage-grouse amendments. Government-to-government consultation between the Forest Service with interested or affected federally recognized Indian Tribes is occurring. Indian Tribes were invited to consult on the proposed changes. Gaining and acknowledging Tribal expertise and perspective is important to the success of the EIS planning effort. A Tribe's participation as a cooperating agency does not replace our Federal agency obligation to consult on a government-to-government basis. Therefore, regardless of the Tribe's decision to participate or not as a cooperating agency, government-to-government consultation will continue throughout the process.

On October 5, 2018 a Notice of Availability (NOA) for the Greater Sage-grouse Proposed LMPAs and DEIS for the Intermountain and Rocky Mountain Regions was published in the Federal Register (83 FR 50362 and 83 FR 50331 (October 5, 2018)). In addition, a news release was published in the Newspapers of Record for the Intermountain Region and Rocky Mountain Regions.

During the 90-day public comment period, a series of open house meetings were held to provide an opportunity for the public to learn more about the proposed amendments to Forest Service land management plans for greater sage-grouse and to ask questions and provide comments on the actions being considered. Public Open Houses were held in Nevada on the following dates (see Table 1-5 below for a list of additional meetings):

- November 7, 2018, *Sparks*, Humboldt-Toiyabe National Forest Supervisor's Office
- November 8, 2018, *Elko*, Elko Convention Center

The 90-day comment period for the proposed amendment and DEIS drew 33,192 comment letters. The Forest Service received letters, emails, form letters, and public comment forms from individuals, organizations, agencies, businesses, and groups. The Forest Service analyzed 2,935 comments of which 622 contained unique and substantially different comments. Additional comments came from: within-agency scoping, 11 public open-house meetings, monitoring activities, cooperating agencies, and from coordination with the Western Governors' Association Sage Grouse Task Force (with members from state agencies, BLM, USFWS, and the Natural Resources Conservation Service). The comments provided new information that could improve the clarity, efficiency, and implementation of GRSG plans, including better alignment with BLM and state plans. The comment letters were used to identify the significant

issues driving the alternatives. Public comments resulted in the addition of clarifying text, but did not significantly change the proposed LMPAs. A February 2019 Executive Summary of comments is located on the Intermountain Region webpage at: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd610376.pdf. A summary of the responses to comments is included in Appendix I – Response to Comments in the FEIS. A spreadsheet containing all unique comments and response to comments is available at: https://data.ecosystem-management.org/nepaweb/nepa_project_exp.php?project=52904.

## INTERAGENCY COORDINATION

During development of the DEIS, FEIS, and the LMPAs, the Forest Service coordinated with the BLM and the USFWS and collaborated with the States in the analysis of particular resources and in establishing direction to protect and/or restore greater sage-grouse habitat. In the NOI announcing the development of the DEIS, the FS invited agencies and tribes with interests within the planning area to request Cooperating Agency status. A list of cooperating agencies can be found in the FEIS, Chapter 1, Section 1.8.

**Table 1-5. Public open houses and interagency and cooperating agency meetings held.**

| Date | Meeting Location | Meeting Type and Purpose | Summary of Attendees *Sign in sheet in Record |
|---|---|---|---|
| June 6, 2018 | WGFD – Cheyenne, WY | Cooperator Meeting to solicit feedback on proposed action in advance of June 21 NOI | USFWS, BLM, WCCA, WDA, WGFD, Governor's Office, USFS* |
| July 12, 2018 | WGFD – Cheyenne, WY | Cooperating Agency Meeting to review proposed actions and provide updates on NOI and NEPA timelines | USFWS, BLM, WCCA, WDA, WGFD, Governor's Office, USFS, Conservation Districts* |
| September 6, 2018 | Salt Lake City, UT | Shivik, UT Sage-grouse plan for Plan Implementation Committee, Salt Lake City | Led by John Shivik |
| Sept 11, 2018 | Tampa, FL | Shivik, Harper, FS Update to the WAFWA Sagebrush Executive Oversight Committee | |
| Sept 11, 2018 | WGFD – Cheyenne, WY | Cooperator Meeting to review proposed actions prior to release of DEIS | USFWS, BLM, WCCA, WDA, WGFD, Governor's Office, USFS, Conservation Districts* |
| September 12-13, 2018 | Denver, CO | Buchannan and Shivik, WGA FS update for Sage-grouse Task Force, Denver | |
| September 14, 2018 | Carson City, NV | Nelson, Shivik, Sage-grouse plan for Nevada Counties and Cooperating Agencies/Carson City | |
| September 14, 2018 | OSC – Boise, ID | Rob Mickelsen and Andy Brunelle, Cooperator Meeting to solicit feedback on proposed action in advance of DEIS | Office of Species Conservation (OSC), Idaho Fish and Game, Idaho Dept of Agriculture, Governor's office of Minerals and Energy Resources, USFWS, BLM |

| Date | Meeting Location | Meeting Type and Purpose | Summary of Attendees *Sign in sheet in Record |
|---|---|---|---|
| September 20, 2018 | Virtual Webinar | Shivik webinar, Sage-grouse plan for Utah Counties and Cooperating Agencies, Webinar | |
| October 22, 2018 | Cheyenne, WY | Open House | Public, various agencies |
| October 23, 2018 | Pinedale, WY | Open House | Public, various agencies |
| November 7, 2018 | Sparks, NV | Open House | Public, various agencies |
| November 8, 2018 | Elko, NV | Open House | Public, various agencies |
| November 15, 2018 | St. George, UT | Annual Convention – Shivik presentation to UT Association of Counties | UT Association of Counties |
| November 26, 2018 | Boise, ID | Shivik/Mickelsen briefing for ID Task Force, OSC, Fish and Game, Cattleman | ID Task Force, OSC, Fish and Game, Cattleman |
| November 26, 2018 | Boise, ID | Open House | Public, various agencies |
| November 29, 2018 | Jerome, ID | Open House | Public, various agencies |
| December 6, 2018 | WGFD – Cheyenne, WY | Cooperator Meeting to review proposed actions prior to end of 90-day comment period | USFWS, BLM, WCCA, WDA, WGFD, Governor's Office, USFS, Conservation Districts* |
| December 11, 2018 | Cedar City, UT | Open House | Public, various agencies |
| December 12, 2018 | Vernal, UT | Open House | Public, various agencies |
| December 13, 2018 | Tooele, UT | Open House | Public, various agencies |
| December 17, 2018 | Challis, ID | Open House | Public, various agencies |
| December 18, 2018 | Idaho Falls, ID | Open House | Public, various agencies |
| April 3, 2019 (Scheduled) | WGFD Cheyenne, WY | Cooperating Agency Meeting for final review of Draft ROD/FEIS in advance of April publication | USFWS, BLM, WCCA, WDA, WGFD, Governor's Office, USFS, Conservation Districts* |

***BUREAU OF LAND MANAGEMENT***

In 2017, the BLM began their environmental analysis process that culminated with decisions in March 2019. The Forest Service worked in partnership with the BLM to align with their plans in order to provide a landscape-level greater sage-grouse conservation strategy and to incorporate conservation measures to protect, restore, and enhance greater sage-grouse and its habitat.

***STATE GOVERNMENTS***

Representatives from the Forest Service met frequently with the States and cooperating agencies

throughout the planning process. State conservation plans were reviewed to see how the components could better align with those plans. Components of these State conservation plans and comments from the States were used to develop the LMPAs, where applicable.

In addition, the Western Governors Association Sage Grouse Task Force was established in 2011 to identify and implement high priority conservation actions and integrate ongoing actions necessary to preclude the need for the greater sage-grouse to be listed under the ESA. This group, which includes designees from the 11 Western States where greater sage-grouse is found as well as representatives from USFWS, BLM, Natural Resources Conservation Service, Forest Service, US Geological Survey, and the Department of the Interior, played an integral role throughout this land use planning process.

### *CONSULTATION WITH AMERICAN INDIAN TRIBES*

In accordance with the National Historic Preservation Act and several other legal authorities and in recognition of the government-to-government relationship between individual tribes and the Federal government, the Forest Service conducted tribal consultation when preparing the DEIS and FEIS and proposed LMPAs. Coordination with tribes occurred throughout the planning process. In June 2018, Regional Foresters in the Intermountain, Rocky Mountain, and Northern Regions sent letters of contact and information for 67 tribal governments, providing initial notification of the planning effort, background information on the project, an invitation to be a cooperating agency, and notification of subsequent consultation efforts related to the planning process. The FS welcomes comments and coordination with tribal governments.

### *ENDANGERED SPECIES ACT SECTION 7 CONSULTATION*

Consultation with USFWS is required under Section 7 (a)(2) of the ESA before the start of any Forest Service action that may affect any federally listed, threatened, or endangered species or its designated critical habitat. For this planning process, the Forest Service built on its close work with the USFWS during the 2015 amendment process.

In 2015, before the release of the Proposed LMPAs/FEISs, the Forest Service submitted the biological assessments to the USFWS. With this submission, the Forest Service requested concurrence for the 13 species that may be affected by the action, but were not likely to be adversely affected and formal consultation for the one species (Utah prairie dog) that may be affected and was likely to be adversely affected by the action. The 13 species included Canada lynx, Utah prairie dog, California condor, Mexican spotted owl, autumn buttercup, clay phacelia, clay reed-mustard, last chance townsendia, shrubby reed-mustard, Uinta Basin hookless cactus, and Ute ladies'-tresses for the Utah FEIS; grizzly bear and Ute ladies'-tresses for the Idaho/SW Montana FEIS, and Webber's ivesia for the Nevada/California FEIS.

Across the three planning sub-regions the USFWS concurred with our "not likely to adversely affect" determination for the 13 species listed above and provided a biological opinion for the Utah prairie dog. In the biological opinion, conservation measures for Utah prairie dog were outlined to ensure the protection of this species. In consideration of a potential vegetation/habitat management conflict, the Forest Service developed an LMPA standard for the areas that greater sage-grouse priority habitat and identified Utah prairie dog habitat overlapped. Specifically, GRSG-GRSGH-ST-025-Standard, "On the Dixie and Fishlake National Forests, where greater sage-grouse priority habitat management areas overlap with identified Utah prairie dog habitat, the most current version of conservation measures developed by the U.S. Fish and Wildlife Service will be used during implementation of recovery actions," has been

retained, unaltered, within this decision.

The FS has concluded that no additional effects beyond the 2015 decision are anticipated to occur. The Forest Service contacted the USFWS regarding Section 7 consultation in letters sent the week of April 15, 2019 requesting concurrence on the species which would require consideration during consultation. The USFWS offices in Wyoming and Nevada acknowledged the FS conclusion that this LMPA will not trigger the requirement to reinitiate ESA consultation on May 15, 2019 and May 15, 2019, respectively. The USFWS offices in Idaho and Utah on May 31, 2019, and July 8, 2019, respectively, acknowledged and agreed with the FS conclusion that reinitiation is not needed.

For additional information, refer to the 2015 *Nevada and Northeastern California Greater Sage-Grouse Proposed LUPA/Final EIS,* Appendix W - Biological Assessment for the Nevada and Northeastern California Greater Sage-Grouse Land Use Plan Amendment and Final Environmental Impact Statement.

## FINDINGS REQUIRED BY LAWS AND REGULATIONS

The Forest Service manages the National Forests and Grasslands in conformance with many laws and regulations. This decision is consistent with national laws and regulations: specifically, NEPA, NFMA, ESA, the Clean Air Act of 1970 (CAA), the Clean Water Act of 1972 (CWA), and the National Historic Preservation Act (NHPA). It would not affect civil rights or environmental justice. The LMPA is strategic and programmatic in nature, providing guidance and direction to future site-specific projects and activities. Following are summaries of how the LMPA addresses compliance with some of the more prominent applicable laws and regulations.

My decision is consistent with all laws, regulations, and agency policy. I considered the potential direct, indirect, and cumulative effects and reasonably foreseeable activities. I also considered the potential impacts identified in the FEIS and the potential for irreversible and irretrievable commitment of resources in the project area. My decision is based on the documentation in the FEIS and the associated project record, public comments, and the DEIS.

### *NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)*

NEPA requires public involvement and consideration of potential environmental effects of new projects and programs. The environmental analysis and public involvement process complies with the major elements of the requirements set forth by the Council on Environmental Quality's (CEQs) regulations for implementing NEPA (40 CFR 1500-1508). These include: 1) considering a broad range of reasonable alternatives; 2) disclosing cumulative effects; 3) using high quality and accurate scientific information; 4) consideration of long-term and short-term effects; and 5) disclosure of unavoidable adverse effects. CEQ's implementing regulations for NEPA were followed in preparing the FEIS.

This planning process did not revisit every issue that the Forest Service and the BLM evaluated in the 2015 planning process. Instead, the Forest Service included changes and clarifications to the 2015 Greater Sage-Grouse Plan Amendments, consistent with the purpose and need for action. Accordingly, this FEIS has its foundation in the comprehensive 2015 GRSG FEIS and ROD/LMPA and incorporates those documents in the administrative record by reference, including the entire range of alternatives evaluated through the 2015 planning process. Thus, the range of alternatives was adequate to understand and analyze issues. This decision adopts all practical means to avoid or minimize environmental harm. These

means include provisions for providing the ecological conditions needed to support biological diversity and standards and guidelines to mitigate adverse environmental effects that may result from implementing various management practices.

The LMPA does not represent an irreversible or irretrievable commitment of resources (see FEIS, Chapter 4, Section 4.8). The LMPA is a programmatic level planning effort and does not directly authorize any ground disturbing activities or projects. Future ground disturbing activities and projects will be made consistent with the LMPA and will be subject to additional site-specific environmental analysis. Because none of the proposed changes identified in the 2019 FEIS identify additional irreversible or irretrievable commitments of resources, there is no expectation that impacts additional to or different from those identified in the 2015 FEISs would occur.

***CIVIL RIGHTS AND ENVIRONMENTAL JUSTICE***

The Forest Service considered information on the presence of minority and low-income populations to assess the potential for disproportionately high and adverse impacts on minority or low-income populations. Consideration of impacts includes existence of high and adverse human health and environmental effects and the degree to which low-income populations are more likely to be exposed or vulnerable to those effects.

Conservation measures to protect, restore, and enhance and other requirements under this action would be implemented consistently across all identified habitat, with no discrimination over particular populations.

Several counties in some of the states have minority presence, and/or concentrations of low income populations considerably above that of State averages, and the Forest Service considered the possibility that potential adverse impacts resulting from the action could be concentrated in a few counties of minority or low-income concern. However, based on available information about the nature and geographic incidence of impacts, specific minority populations, tribal populations, or low-income populations are not expected to be exposed to disproportionately high and adverse impacts under any of the alternatives considered. See 2015 NV/CA FEIS, Chapter 4, 4.21 which has been incorporated by reference.

***NATIONAL HISTORIC PRESERVATION ACT***

The National Historic Preservation Act and subsequent amendments require Federal agencies to consider the effects of their undertakings on historic properties. As required under the Act, site-specific project areas are subject to requirements for survey, identification of resources, determination of eligibility, evaluation of effect, consultation and resolution of adverse effects, if any. This decision is programmatic and does not authorize site-specific activities. Projects will comply fully with the laws and regulations that ensure protection of cultural resources. This decision complies with the Act and other statues that pertain to the protection of cultural resources.

***NATIONAL FOREST MANAGEMENT ACT (NFMA) AND THE PLANNING RULE***

Consistency with the NFMA is based on consistency with the planning rule. The planning rule provides requirements for amending and revising plans (36 CFR 219; 16 USC 1600 *et seq.*).

Because this amendment was analyzed in an environmental impact statement, it is considered a significant change in the plan for the purposes of the NFMA; therefore, a 90-day public comment period was required and provided for the proposed plan amendment and draft environmental impact statement (§36 CFR 219.16(a)(2), 36 CFR 219.13(b)(3)), as described under "Public Involvement."

***COMPLIANCE WITH THE PROCEDURAL REQUIREMENTS OF THE PLANNING RULE***

As explained below, this amendment complies with the procedural provisions of the planning rule (36 CFR Part 219.13(b)).

**Using the best available scientific information to inform the planning process (§ 219.3)**

The planning rule requires the responsible official to use the best available scientific information to inform the planning process for developing, amending, or revising a forest plan, including plan components (36 CFR 219.3 and 219.14(a)(3)). The LMPA was based on the best available scientific information and analyses therein. The determination and use of best available scientific information is discussed in the FEIS, Chapter 4, Section 4.2.

**Amend the plan consistent with NEPA procedures (§219.13 (b)(3))**

The planning rule requires the Forest Service to amend plans consistent with Forest Service NEPA procedures. The DEIS and FEIS were prepared to disclose the reasonably foreseeable effects of the proposed amendment and alternatives. Consistency with the NEPA is described above in Findings Required by Laws and Regulations, National Environmental Policy Act.

**Applying the planning rule's format requirements for plan components (§ 219.13 (b)(4))**

In order to comply with the requirement that plan components must be written in accordance with the definitions set out in 219.7(e), 2015 amendment plan components that were retained or modified were reworded or recategorized. The plan content now meets the format required by the planning rule.

**Base the amendment on the preliminary identification of the need to change the plan (§219.13 (b)(1))**

The section "How the Selected Alternative Responds to the Purpose and Need" of my Decision Rationale, above, explains how the amendment responds to the identified need to change the plan.

**Providing opportunities for public participation (§ 219.4) and providing public notice (§ 219.16; § 219.13(b)(2)):**

The requirements for providing opportunities for public participation and providing public notice were met through the actions described above in the Public Involvement section. See Chapter 1 in the FEIS for extensive discussion of the Forest Service's efforts to engage with the public, states, and Tribes.

***COMPLIANCE WITH THE PLANNING RULE'S APPLICABLE SUBSTANTIVE PROVISIONS***

The planning rule requires that those substantive rule provisions within 36 CFR 219.8 through 219.11 that are directly related to the amendment are applicable to this amendment. The applicable substantive provisions apply only within the scope and scale of the amendment (36 CFR 219.13(b)(5)).

As explained in the discussion that follows, both the purpose and the effects of the amendment are such that provisions in § 219.8(b) - social and economic sustainability; § 219.9 - diversity of plant and animal species; § 219.10(a) - integrated resource management; § 219.10(4), specifically, opportunities to coordinate with neighboring landowners are directly related to the amendment (see rationale and Table 1-6 below). I have applied those provisions within the scope and scale of the amendment.

**Scope and Scale of the Amendment**

The scope and scale of the amendment is based on the need to change the plan. As described above, the need to change the plan is to include new information to improve the clarity, efficiency, and implementation of the 2015 amendment, including better alignment with BLM and state plans, to benefit GRSG conservation on the landscape scale.

For each land management plan, I am setting the scope of the amendment based on the need is the greater sage-grouse habitat and greater sage grouse. I also include in the scope the uses or activities specified in the amendment.

The scale of the amendment for each land management plan is the occupied habitat of the designated greater sage-grouse habitat management areas of each plan area. Although conservation at the landscape scale is part of the need, the plan amendment would not apply beyond the plan area.

**Planning rule provisions that are directly related to the amendment**

The planning rule requires that substantive rule provisions (§ 219.8 through 219.11) that are directly related to the amendment must be applied to the amendment, within the scope and scale of the amendment. A determination that a planning rule provision is directly related to the amendment is based on any one or more of the following criteria:

1. The purpose of the amendment (§ 219.13(b)(5)(i));
2. Beneficial effects of the amendment (§ 219.13(b)(5)(i));
3. Substantial adverse effects associated with a rule requirement (§ 219.13(b)(5)(ii)(A));
4. Substantial lessening of protections for a specific resource or use (§ 219.13(b)(5)(ii)(A));
5. Substantial impacts to a species or substantially lessening protections for a species (36 CFR 219.13(b)(6).

Because the FEIS, Chapter 4, identifies no significant adverse effects from the selected LMPA to any resource or use, no substantial adverse effect or lessening of protections for a specific resource is expected; therefore, criteria 3, 4, and 5 do not apply to the selected LMPA. Criteria 1 and 2 apply, as described below.

*Provisions directly related to the purpose of the amendment:* The purpose of the LMPA is to include new information to improve the clarity, efficiency, and implementation of greater sage-grouse plans, including better alignment with the BLM and state plans, in order to benefit greater sage-grouse conservation on the landscape scale. In determining which provisions are directly related to the purpose of the amendment, I considered the purposes of improving greater sage-grouse conservation, aligning better with the BLM and States, and needing to change plan components for specific resources and uses.

*Purpose relating to greater sage-grouse conservation*: The plan components provide the ecological

conditions for greater sage-grouse. As such, the directly related provisions are 219.9 – diversity of plant and animal species as they pertain to greater sage-grouse and greater sage-grouse habitat within greater sage-grouse habitat management areas. See Viable Population Determination below in ROD

The LMPA emphasizes moving toward desired conditions, and these standards and guidelines are intended to reduce the disturbances occurring in the habitat and, for the disturbances that do occur, to limit the duration, timing, and location of activities to best protect GRSG during all of its life stages. To do this, the LMPA also needed to change plan components for resources and uses, identified and categorized in Table 2.8 of the FEIS. The directly related provisions are 219.8(b), social and economic sustainability, and 219.10(a), integrated resource management. Of those provisions, I applied the specific subsections of each pertaining to the amended plan components to the extent of the scope and scale of the amendment.

Having applied those rule provisions to the scope and scale of the amendment, as described above, I find that the amendment would meet those requirements. Refer to Decision Rationale.

*Purpose as it relates to aligning with BLM and State management*: Part of the purpose and need was to align with neighboring public land owners. (See FEIS, Chapter 2, Comparison of Alternatives Table 2-7 which identifies these plan components). As such, the directly related rule provision is 219.10(4), specifically, oopportunities to coordinate with neighboring landowners . . . and take into account joint management objectives where feasible and appropriate.

Having applied the rule provision to the scope and scale of the amendment, as described above, I find that the amendment would meet the requirement. While the LMPA applies only to NFS lands, it was developed in conjunction with the BLM and States to facilitate coordinated management across the agencies, including for the overall management objective of improving greater sage-grouse habitat across the species range. See Public Involvement section, also refer to the FEIS, Chapter 1, Section 1.8.

*Purpose as it relates to the need to change plan components for specific resources and uses*: The topics and associated specific subsections of 219.8(b) and 219.10(a) that are directly related provisions are listed in Table 1-6. For recreation, the table also includes the applicable subsection of 219.10(b), because it is the multiple use complement to the identified subsection of 219.8(b).

**Table 1-6. Topics and associated specific subsections of 219.8(b) and 219.10(a) that are directly related provisions.**

| Resource or Use | Subsection of Directly Related Planning Rule Provision 219.10(a) |
|---|---|
| Lands and realty – special use authorizations | 219.10(a)(3) Appropriate placement and sustainable management of infrastructure, such as . . . utility corridors 219.10(a)(6) . . . use |
| Lands and realty - land ownership adjustments | 219.10(a)(6) Land status and ownership |
| Land withdrawal | 219.10(a)(6) Land status and ownership |
| Wind and solar | 219.10(a)(2) Renewable. . . energy |
| Livestock grazing | 219.10(a)(1) . . . grazing and rangelands |
| Fire management | 219.10(a)(8) System drivers, . . . [specifically] wildland fire |
| Recreation | 219.8(b)(2) sustainable recreation. . . [specifically |

| Resource or Use | Subsection of Directly Related Planning Rule Provision 219.10(a) |
|---|---|
| | opportunities, and access<br>219.10(a)(1) . . . recreational opportunities<br>219.10(b)(1) sustainable recreation. . . [specifically] opportunities and access |
| Roads/transportation | 219.10(a)(1) . . . trails<br>219.10(a)(3) Appropriate placement and sustainable management of infrastructure, such as . . . [specifically] transportation |
| Fluid - unleased | 219.10(a)(2) . . . nonrenewable . . . mineral resources |
| Fluid - leased | 219.10(a)(2) . . . nonrenewable . . . mineral resources |
| Fluid operations | 219.10(a)(2) . . . nonrenewable . . . mineral resources |
| Coal mines – unleased | 219.10(a)(2) . . . nonrenewable . . . mineral resources |
| Coal mines - leased | 219.10(a)(2) . . . nonrenewable . . . mineral resources |
| Locatable minerals | 219.10(a)(2) . . . nonrenewable . . . mineral resources |
| Non-energy leasable minerals | 219.10(a)(2) . . . nonrenewable . . . mineral resources |
| Mineral materials | 219.10(a)(2) . . . nonrenewable . . . mineral resources |

In that all of the above resources and uses provide human benefit, provision 219.10(a)(1) ecosystem services also applies.

Having applied those rule provisions to the scope and scale of the amendment, as described above, I find that the amendment would meet those requirements. The listed resources and uses were analyzed in the 2015 FEIS. The LMPA would not substantially alter management direction or result in different outcomes for the resources or uses. Because of this, no additional analysis was completed; therefore, no new information on affected environment is provided. The 2015 analysis was incorporated by reference and references to the page numbers can be found in Chapter 4, Tables 4-1 and 4-12 Environmental consequences and Cumulative effects analysis for the No Action Alternative incorporated by reference. Refer to Chapter 3, Section 3.3 Resources Not Carried Forward for Analysis and Table 3-11 Resources and resource uses not carried forward for analysis. Based on the FEIS, including analysis in the incorporated 2015 FEIS, the LMPA does not eliminate any of the identified resources or uses from NFS lands to which the LMPA applies. It provides for the continuation of those resources and uses while also managing for greater sage-grouse conservation.

*Provisions directly related to beneficial effects of the amendment:* The FEIS, through incorporation of the 2015 Nevada and Northeastern California Greater Sage-Grouse Proposed Land Use Plan Amendment and FEIS, identifies beneficial effects for resources and uses that are in addition to those identified under criterion 1. These additional resources and uses and their directly related provisions are in Table 1-7.

**Table 1-7. Resources and uses with beneficial effects from the amendment and the associated directly related rule provision.**

| Resource or Use | 2015 FEIS* | Substantive provision |
|---|---|---|
| Vegetation (other upland) | Chapter 4, Section 4.5 | 219.10(a)(1) . . . vegetation |
| Soil resources | Chapter 4, Section 4.5 | 219.8(a)(2)(ii) |
| Riparian | Chapter 4, Section 4.6 | 219.8(a)(3) |

| Resource or Use | 2015 FEIS* | Substantive provision |
|---|---|---|
| Special status species | Chapter 4, Section 4.7 | 219.9 |
| Wild horse and burro | Chapter 4, Section 4.8 | 219.10(a)(1) . . .forage |
| Water resources | Chapter 4, Section 4.18 | 219.8(a)(2)(iii) and (iv) |

**2015 Nevada and Northeastern California Greater Sage-Grouse Proposed Land Use Plan Amendment and FEIS*

My finding for rule provisions related to the purpose and need include those relating to resources or uses beneficially affected by the LMPA.

Having applied those rule provisions to the scope and scale of the amendment, as described above, I find that the amendment would meet those requirements. The FEIS, in the sections identified in Table 1-7, indicate beneficial effects; therefore, the amendment would provide for the identified rule provisions within the scope and scale of the amendment.

*Provisions directly related because of substantial adverse effects:* The analysis in the FEIS indicated that the changes proposed in the action alternative would not substantially alter management direction or result in different outcomes for any resource or use. Based on this and the incorporated 2015 FEIS and the 2016 DEIS by the BLM that found mineral withdrawals on SFAs would be of little to no effect, no significant negative impacts on any resources or uses would be expected from managing under the LMPA either directly or through lessening of protections. See 2019 FEIS, Chapter 4, Environmental Consequences, including Tables 4-1, 4-2, and 4-13. As such, the LMPA would have neither substantial adverse effect on resources or uses nor result in substantial lessening of protections for any resource or use. Criteria 3, 4, and 5 do not apply.

***In applying 36 CFR 219.8(a)(1), the Forest Service took into account the relevant aspects of the list at 36 CFR 219.8(a)(1)*:**

**(i) Interdependence of terrestrial and aquatic ecosystems in the plan area.**

**(ii) Contributions of the plan area to ecological conditions within the broader landscape influenced by the plan area.**

*How relevant aspects of 219.8(a)(i)(ii) were taken into account: Monitoring data, Biological Assessments (BAs), and the Biological Evaluations (BEs) for each state were reviewed and new information was updated in the DEIS and FEIS. Population data from the State was incorporated in Chapter 3, Table 3-2. Greater sage-grouse counts by state. As the FEIS's discussion of effects shows, the amendments' effects will be minor, and far from substantially adverse (see FEIS, Chapter 4 for effects and Chapter 3, Section 3.2.3 Riparian Areas and Wetlands and Water Resources). Monitoring reports, 2015 BAs, and BEs are located in the project record.*

**(iii) Conditions in the broader landscape that may influence the sustainability of resources and ecosystems within the plan area.**

**(iv) System drivers, including dominant ecological processes, disturbance regimes, and stressors, such as natural succession, wildland fire, invasive species, and climate change; and the ability of terrestrial and aquatic ecosystems on the plan area to adapt to change.**

**(v) Wildland fire and opportunities to restore fire adapted ecosystems.**

*How relevant aspects of 219.8(a)(iii)(iv)(v) were taken into account: The FEIS discussed plan components and analysis for Fire Management and Invasive Species (See FEIS, Tables 2-5 through 2-9, 3.2.7 Wildland Fire, 4.5.9 Treatment of Invasive Species, 4.7.4 Cumulative Effects - Wildland Fire, 4.7.13 Cumulative Effects - Treatment of Invasive Species). Climate Change was analyzed in*

*the 2015 FEIS and analysis reviewed to determine if it could have potentially significant effects based on the actions considered in Chapter 2. The changes proposed in the action alternative would not substantially alter management direction or result in different outcomes for the resource. Because of this, no additional analysis was completed; therefore, no new information on affected environment is provided. The 2015 analysis was incorporated by reference and references to the page numbers can be found in the FEIS, Chapter 4, Tables 4-1 and 4-12 Environmental consequences and cumulative effects analysis for the No Action Alternative incorporated by reference.*

***In applying 36 CFR 219.8(b), the Forest Service took into account the relevant aspects of the list at 36 CFR 219.8(b)*:**

**(1) Social, cultural, and economic conditions relevant to the area influenced by the plan;**

*How relevant aspects of* 219.8*(b)(1) were taken into account: Social and Economic Conditions and Environmental Justice was analyzed in the 2015 FEIS. The analysis was reviewed to determine if the actions considered in Chapter 2 could have potentially significant effects. The scope of the amendments is narrow and the changes proposed in the action alternatives would not substantially alter management direction or result in different outcomes to social, cultural, or economic conditions. Because of this, no additional analysis was completed and no new information on affected environment is provided. The 2015 analysis was incorporated by reference and references to the page numbers can be found in the FEIS, Chapter 4, Tables 4-1 and 4-12 Environmental consequences and cumulative effects analysis for the No Action Alternative incorporated by reference.*

*It is noted in the FEIS, Chapter 4, Section 4.7.3 Past, Present, and Reasonably Foreseeable Actions that State GRSG plans establish the management actions necessary for the States to continue to enhance and conserve the GRSG while still allowing for economic opportunities. Closely aligning with state plans, including using their mitigation and adaptive management strategies where applicable, will provide an opportunity for economic development to occur while offsetting the impacts to GRSG and its habitat. (See FEIS, Appendices B-F and ROD Attachments G and H).*

*The increased flexibility in these amendments is not expected to result in a large increase in development proposals on public land. Similarly, the increased protections from the 2015 FEISs have not resulted in a large decrease in ROW applications or an increase in rejected applications; therefore, the changes proposed under the Proposed Action and the State of Utah Alternative are not expected to result in large changes to the rate of development in the five states or in their economy.*

**(2) Sustainable recreation; including recreation settings, opportunities, and access; and scenic character;**

*How relevant aspects of* 219.8*(b)(2) were taken into account: See FEIS Chapter 3, Section 3.2.8 Recreation for additional information. The existing condition of recreation in the planning area and the program's impacts on greater sage-grouse remains as described in the 2015 FEISs. Within the planning area authorized recreation uses included outfitter and guide permits, recreation site infrastructure, and special recreation use permits (such as races). Since 2015, authorized recreation uses were consistent with the state-specific 2015 ROD direction (USDA FS 2017b and USDA FS 2018d). The FS continues to manage the recreation programs following the management direction in the 2015 RODs. The 2015 analysis was incorporated by reference and references to the page numbers can be found in the FEIS, Chapter 4, Tables 4-1 and 4-12 Environmental*

*consequences and cumulative effects analysis for the No Action Alternative incorporated by reference.*

**(3) Multiple uses that contribute to local, regional, and national economies in a sustainable manner;**

*How relevant aspects of* 219.8*(b)(3) were taken into account: All alternatives represent, to varying degrees, the principles of multiple-use, and ecological and economic sustainability. The alternatives provide protection of greater sage-grouse and its habitat and comply fully with applicable laws, regulations, and policies. See response to* 219.8*(b)(1).*

**(4) Ecosystem services;**

*How relevant aspects of* 219.8*(b)(4) were taken into account: See response to 219.8(a)(i)(ii) and* 219.8*(b)(1). To address social and economic sustainability, the amendments and effects to reasonably foreseeable projects will continue to provide people and communities with a range of social and economic benefits for present and future generations (See FEIS, Chapter 4, Section 4.7.3 Past, Present, And Reasonably Foreseeable Actions). The benefit to people (i.e., the goods and services provided) are the "ecosystem services" from the ecosystem.*

**(5) Cultural and historic resources and uses; and**

*How relevant aspects of* 219.8*(b)(5) were taken into account: Cultural and historic resources were analyzed in the 2015 FEIS and analysis reviewed to determine if it could have potentially significant effects based on the actions considered in Chapter 2. The changes proposed in the action alternative would not substantially alter management direction or result in different outcomes for the resource. Because of this, no additional analysis was completed; therefore, no new information on affected environment is provided. The 2015 analysis was incorporated by reference and references to the page numbers can be found in the FEIS, Chapter 4, Tables 4-1 and 4-12 Environmental consequences and cumulative effects analysis for the No Action Alternative incorporated by reference.*

**(6) Opportunities to connect people with nature.** 219.8*(b)(6) is not relevant to the amendments.*

***36 CFR 219.9***

The relevant provision in 36 CFR 219.9 is the requirement for sustainability and diversity of plant and animal communities within the scope and scale of the amendment. With respect to the requirements of the rule at 219.9, regarding the diversity of plan and animal communities, the rule requires that we consider whether an amendment would have substantial adverse effects to, or substantially lessen protections for, a species. If so, there must be further analysis, to determine whether the species is a potential species of conservation concern, and apply the rule as if the species were in fact a species of conservation concern. 36 CFR 219.13 (b)(6). The analysis in the FEIS does not show substantial adverse effects to or substantial lessoning of protections for greater sage-grouse or any other species; therefore, the Forest Service does not have to apply the requirement of 219.9. Nevertheless, the Forest Service took the very conservative approach of applying the requirements of 219.9 to the greater sage-grouse as if it were a species of conservation concern (SCC) in the plan areas for all the land management plans. On the Ashley and Salmon-Challis National Forests, where revision of the land management plans is underway, the greater sage-grouse has been identified as SCC. The analysis in the FEIS shows that the amendments meet the requirements of 219.9; they maintain ecological conditions necessary for a viable population of greater sage-grouse in all the plan areas to which the amendments would apply. See the

FEIS at Chapter 4, and the BAs and BEs located in the project record.

***36 CFR 219.10***

The relevant provision in section 219.10 is the requirement to include plan components for integrated resource management to provide for ecosystem services and multiple uses in the plan area, 36 CFR 219.10 (a)(1). With respect to the requirement of the rule at 219.10, the analysis in the FEIS shows that the minor adjustments that loosen some of the restrictions in the 2015 amendments should improve the capability of the plan areas to provide for ecosystem services and multiple uses.

**In applying 36 CFR 219.10, the Forest Service took into account the relevant aspects of the list at 36 CFR 219.10:**

**(1) Aesthetic values, air quality, cultural and heritage resources, ecosystem services, fish and wildlife species, forage, geologic features, grazing and rangelands, habitat and habitat connectivity, recreation settings and opportunities, riparian areas, scenery, soil, surface and subsurface water quality, timber, trails, vegetation, viewsheds, wilderness, and other relevant resources and uses.**

*How relevant aspects of 219.10(a)(1) were taken into account: Many of the resources listed were analyzed in the 2015 FEIS. The analysis was reviewed to determine if it could have potentially significant effects based on the actions considered in the FEIS, Chapter 2. The changes proposed in the action alternative would not substantially alter management direction or result in different outcomes for the resource. Because of this, no additional analysis was completed; therefore, no new information on affected environment is provided. The 2015 analysis was incorporated by reference and references to the page numbers can be found in Chapter 4, Tables 4-1 and 4-12 Environmental consequences and Cumulative effects analysis for the No Action Alternative incorporated by reference. Refer to the FEIS, Chapter 3, Section 3.3 Resources Not Carried Forward for Analysis and Table 3-11 Resources and resource uses not carried forward for analysis.*

*Relevant resources and uses from 219.10(a)(1) considered in the plan components and anlyzed include: GRSG General, GRSG Habitat, Livestock Grazing, and Wild Horse and Burro. In addition, the Biological Evaluation and Biological Assessments evaluated the effects to wildlife and plant species. (See FEIS, Chapter 2, Comparison of Alternatives Tables 2-5 through 2-9 which identify plan components by state, see Biological Evaluation by State).*

**(2) Renewable and nonrenewable energy and mineral resources.**

*How relevant aspects of 219.10(a)(2) were taken into account: Depending on availability of the energy and mineral resources in the planning area, plan components were considered for Wind and Solar, Fluid Minerals (Unleased, Leased, Operations), Coal Mines (Unleased and Leased), Locatable Minerals, Non-energy Leasable Minerals, Mineral Materials (See FEIS, Chapter 2, Comparison of Alternatives Tables 2-5 through 2-9 which identify these plan components by state; Appendix G identified Fluid Mineral Stipulations).*

**(3) Appropriate placement and sustainable management of infrastructure, such as recreational facilities and transportation and utility corridors.**

*How relevant aspects of 219.10(a)(3) were taken into account: Plan components were considered for the appropriate placement and sustainable management of infrastructure in Lands and Realty - Special-use Authorizations (non-recreation), Recreation, and Roads/Transportation sections (See FEIS, Chapter 2, Comparison of Alternatives Tables 2-5 through 2-9 which identify these plan*

*components by state).*

**(4) Opportunities to coordinate with neighboring landowners to link open spaces and take into account joint management objectives where feasible and appropriate.**

*How relevant aspects of 219.10(a)(4) were taken into account: There are some plan components for Land Ownership Adjustments. While this decision only applies to NFS lands within the planning area, it was developed in conjunction with the BLM and States. Part of the purpose and need was to align with neighboring public land owners. (See FEIS, Chapter 2, Comparison of Alternatives Tables 2-5 through 2-9 which identify these plan components by state).*

**(5) Habitat conditions, subject to the requirements of §219.9, for wildlife, fish, and plants commonly enjoyed and used by the public; for hunting, fishing, trapping, gathering, observing, subsistence, and other activities (in collaboration with federally recognized Tribes, Alaska Native Corporations, other Federal agencies, and State and local governments).**

*How relevant aspects of 219.10(a)(5) were taken into account:* The FS previously evaluated hunting, but did not include it in the 2015 FEIS. Hunting is not carried forward for detailed analysis in the 2019 FEIS for the same reasons they were dismissed in the 2015 FEIS.

**(6) Land status and ownership, use, and access patterns relevant to the plan area.**

*How relevant aspects of 219.10(a)(6) were taken into account: Some forest plan components address Land Ownership Adjustments. (See FEIS, Chapter 2, Comparison of Alternatives Tables 2-5 through 2-9 which identify these plan components by state).*

**(7) Reasonably foreseeable risks to ecological, social, and economic sustainability.**

*How relevant aspects of 219.10(a)(7) were taken into account: Social and Economic Conditions and Environmental Justice was analyzed in the 2015 FEIS and reviewed to determine if they could have potentially significant effects based on the actions considered in Chapter 2. The changes proposed in the action alternative would not substantially alter management direction or result in different outcomes for the resource. Because of this, no additional analysis was completed, below; therefore, no new information on affected environment is provided. The 2015 analysis was incorporated by reference and references to the page numbers can be found in Chapter 4, Tables 4-1 and 4-12 Environmental consequences and Cumulative effects analysis for the No Action Alternative incorporated by reference.*

**(8) System drivers, including dominant ecological processes, disturbance regimes, and stressors, such as natural succession, wildland fire, invasive species, and climate change; and the ability of the terrestrial and aquatic ecosystems on the plan area to adapt to change (§219.10(a)(8));**

*See response to 219.8(a)(iii)(iv)(v).*

**(9) Public water supplies and associated water quality.**

*How relevant aspects of 219.10(a)(9) were taken into account: Riparian Areas, Wetlands, and Water Resources were analyzed in the 2015 FEIS and reviewed to determine if they could have potentially significant effects based on the actions considered in Chapter 2. The changes proposed in the action alternative would not substantially alter management direction or result in different outcomes for the resource. Because of this, no additional analysis was completed, below; therefore, no new information on affected environment is provided. The 2015 analysis was incorporated by reference and references to the page numbers can be found in Chapter 4, Tables 4-1 and 4-12 Environmental consequences and Cumulative effects analysis for the No Action*

*Alternative incorporated by reference.*

**(10) Opportunities to connect people with nature. §219.10(a)(10)**
*See response to 219.8(b)(6).*

***VIABLE POPULATION DETERMINATION***

The 2012 Planning Rule requires the responsible official to determine whether ecosystem plan components "provide the ecological conditions necessary to . . . maintain a viable population of a species of conservation concern within the plan area" and if that is not the case, "then additional, species-specific plan components, including standards or guidelines, must be included in the plan to provide such ecological conditions in the plan area" (36 CFR, § 219.9(b)(1)). Greater sage-grouse are potential species of conservation concern in the plan area, so we are treating them as a species of conservation concern for purposes of this decision. Therefore, we included species-specific plan components that will help maintain a viable population of greater sage-grouse in the plan area.

Each plan component and other plan content in the amendments are specifically designed to provide conservation protection for greater sage-grouse and habitat sufficient for a viable population on each planning unit. We developed plan components based on the best available scientific information, including new research published since the 2015 RODs. The impacts associated with these new changes, such as elimination of Sagebrush Focal Areas, modifications to lek buffers, and new grazing guidelines would have minimal impacts across the range of greater sage-grouse. Biological Evaluations prepared for the FEIS identified and evaluated the contribution of habitat within the plan area to the maintenance of greater sage-grouse and concluded that implementation of these amendments will provide habitat to support viable populations on each involved planning unit.

Collaborative land management is essential to effectively conserve a species or habitat; therefore, the Forest Service works in partnership with States when developing NFS LMPs. However, Forest Service LMPs may differ from State plans to meet our viable population requirement within each national forest. When this is the case, the Forest Service works with our State partners to develop direction that meets our viable population requirement, while considering State plan direction.

***ENDANGERED SPECIES ACT***

The purpose of the Endangered Species Act of 1973 (ESA) is for the conservation of threatened and endangered plants and animals and their habitats. By its very nature, the LMPA seeks to conserve wildlife and plant habitats. In 2015, the Forest Service, BLM, and USFWS coordinated closely on potential impacts to threatened, endangered, and proposed species through the ESA section 7 consultation process. Throughout the process, in conjunction with the USFWS, the Forest Service has ensured compliance with the ESA. A summary of the results of ESA, section 7 consultation is found above under the section titled Endangered Species Act Section 7 Consultation. Therefore, this decision is compliant with this Act.

***CLEAN AIR ACT***

The Forest Service is tasked through the Federal Clean Air Act of 1970 to provide particular protection to Air Quality Related Values. This decision is consistent with the Clean Air Act. The LMPA does not create, authorize, or execute any activities with the potential to alter air quality. There are no emissions related to implementation of this decision. This decision will result in additional restrictions on activities that

emit air pollutants; none of the direction in the LMPA will produce adverse impacts to air quality. Implementation of the LMPA direction will not result in exceedance of Nevada Ambient Air Quality regulations. Therefore, this decision is compliant with this Act.

***CLEAN WATER ACT***

The Federal Water Pollution Control Act of 1948, expanded and reorganized in 1972 (Federal Water Pollution Control Amendments of 1972), is commonly known as the Clean Water Act (CWA). The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Nothing in this decision will change or modify standards, guidelines, and direction contained in the LMPA, best management practices, applicable Forest Service manual and handbook direction, or the existing land management plans. Ongoing and future site-specific projects will adhere to these standards, guidelines, and direction, and by doing so will continue to be consistent with the Clean Water Act and amendments. Therefore, this decision is compliant with this Act.

## TRANSITION TO AMENDED PLAN DIRECTION

Application to future projects and authorizations: Projects with decisions made on or after the effective date of the LMPA must be consistent with the forest plan as amended at the time of such decision. Projects with decisions made before the effective date of the LMPA may proceed unchanged; however, any related authorization for such a project that was not made with the project decision would need to be consistent with the forest plan as amended at the time of the authorization.

*Application to existing authorizations and approved projects or activities*

The FEIS and LMPA were developed with the understanding that when a plan is amended, existing permits must be made consistent with the LMPA "as soon as practicable" (16 USC 1604(i)). It is my decision that the direction in the LMPA will be implemented over several years. This will allow time for close, careful, and considered consultation, cooperation, and coordination with all involved parties. Making existing permits consistent with the LMPA will be subject to valid existing rights.

How existing permits will be made consistent the LMPA is described below.

***LANDS AND REALTY TRANSITION***

During renewal, amendment, or reissuance of existing authorizations, the authorization must be consistent with the forest plan at the time of the authorization. Consistency with the LMPA, for example, plan components relating to noise, tall structures, guy wire removal, and perch deterrent installation would be required for authorizations renewed, amended, or reissued authorizations after the effective date of the LMPA.

***GREATER SAGE-GROUSE PLAN AMENDMENT DIRECTION***

This LMPA replaces the 2015 greater sage-grouse ROD/LMPA. This supersedes other greater sage-grouse direction in existing land management plans inside HMAs. The applicable components (e.g., restrictions based on lek buffers) supersede greater sage-grouse direction outside HMAs, unless existing direction provide equal or greater protection for greater sage-grouse or its habitat.

## EFFECTIVE DATE OF THE AMENDMENT

The effective date of the LMPA will be 30 days after the notice of its approval.

## PRE-DECISIONAL ADMINISTRATIVE REVIEW PROCESS (OBJECTION PROCESS)

This decision is subject to objection pursuant to the 36 CFR Part 219. Objections must be filed by way of regular mail, fax, e-mail, hand-delivery, or express delivery with the Objection Reviewing Officer, USDA Forest Service.

1. Electronic objections must be submitted to the Objection Reviewing Officer- Chris French via the Comment and Analysis Response Application (CARA) objection web form https://cara.ecosystem-management.org/Public/CommentInput?project=52904, with a subject line stating: "Objection regarding the Greater Sage-grouse Draft ROD and LMPA for NFS Land in Nevada." Electronic submissions must be submitted in a format (Word, PDF, or Rich Text) that is readable and searchable with optical character recognition software.

2. Faxed objections must be sent and addressed to "Objection Reviewing Officer- Chris French" and must include a subject line stating: "Objection regarding the Greater Sage-grouse Draft ROD and LMPA for NFS Land in Nevada." The fax coversheet should specify the number of pages being submitted. The fax number is 801-625-5277.

3. Hardcopy submissions must include a subject line on page one stating: "Objection regarding the Greater Sage-grouse Draft ROD and LMPA for NFS Land in Nevada." Hardcopy objections may be submitted by regular mail to the following address:

USDA Forest Service
Attn: Objection Reviewing Officer- Chris French
1400 Independence Ave., SW
EMC-PEEARS, Mailstop 1104
Washington, DC 20250

4. Hardcopy objections also may be submitted by carrier or hand deliveries to the following address:

USDA Forest Service
Attn: Objection Reviewing Officer- Chris French
210 14th Street, SW,
EMC-PEEARS, Mailstop 1104
Washington, DC 20250

Office hours are Monday through Friday, 8:00am to 5:00pm, excluding Federal holidays. Carrier deliveries may call 202-791-8488 during regular business days and hours, above, to coordinate delivery of objections. Hardcopy submissions must include a subject line on page one stating: "Objection regarding the Greater Sage-grouse Draft ROD and LMPA for NFS Land in Nevada."

5. Individuals who need to use telecommunication devices for the deaf (TDD) to transmit objections may call the Federal Information Relay Service (FIRS) at 1-800-877-8339 between 8:00 a.m. and 8:00 p.m., Eastern Standard Time, Monday through Friday.

Objections, including attachments, must be filed within 60 days following the day after publication of the notice of the opportunity to object in the Salt Lake Tribune, the newspaper of record. The objection

period begins the first day after the publication date of the notice. Objections or attachments received after the 60-day objection period will not be considered. The publication date in the newspaper of record is the exclusive means for calculating the time to file an objection. Those wishing to object to this land management plan revision should not rely upon dates or timeframe information provided by any other source.

Individuals and entities who have submitted substantive formal comments related to land management plan revision during the opportunities for public comment (as provided in subpart A of 36 CFR part 219) during the planning process for that decision may file an objection. Objections must be based on previously submitted substantive formal comments attributed to the objector unless the objection concerns an issue that arose after the opportunities for formal comment. Objections received in response to the notice, including names and addresses of those who object, will be considered part of the public record and will be available for public inspection.

Prior to the issuance of the reviewing officer's written response, either the reviewing officer or the objector may request to meet to discuss issues raised in the objection and their potential resolution. Interested persons who wish to participate in meetings to discuss issues raised by objectors must have previously submitted substantive formal comments related to the objection issues. Interested persons must file a request to participate as an interested person within 10 days after a legal notice of objections received has been published. Requests must be sent to the same email or address identified for filing objections, above, and the interested person must identify the specific issues they have interest in discussing. During the objection meeting, interested persons will be able to participate in discussions related to issues on the agenda that they have listed in their request to be an interested person.

## CONTACT PERSON

For additional information concerning this decision, contact:

John Shivik, National Sage-grouse Coordinator
USDA Forest Service, Intermountain Region, Federal Building,
324 25th Street, Ogden, UT 84401
801-625-5667

# ATTACHMENT A –
# LAND MANAGEMENT PLAN AMENDMENT FOR NFS LANDS IN NEVADA ON THE HUMBOLDT-TOIYABE NATIONAL FOREST

## ATTACHMENT A – LAND MANAGEMENT PLAN AMENDMENT FOR NFS LANDS IN NEVADA ON THE HUMBOLDT-TOIYABE NATIONAL FOREST

### FOREST SERVICE PLAN COMPONENTS AND OPTIONAL CONTENT IN THE PLAN

On National Forest System (NFS) lands, land management plans (LMP) guide management activities and contain desired conditions and objectives as well as standards and guidelines that provide direction for project planning and design. Forest Service plan component definitions are in the planning rule at 36 CFR 219.7(e)(1). The following terms and definitions are used throughout this LMPA:

- **Desired Condition (DC)** - A description of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed. Desired conditions must be described in terms that are specific enough to allow progress toward their achievement to be determined, but do not include completion dates.
- **Objective (O)** - A concise, measurable, and time-specific statement of a desired rate of progress toward a desired condition or conditions. Objectives should be based on reasonably foreseeable budgets.
- **Standard (ST)** - A mandatory constraint on project and activity decisionmaking, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.
- **Guideline (GL)** - A constraint on project and activity decisionmaking that allows for departure from its terms, so long as the purpose of the guideline is met. Guidelines are established to help achieve or maintain a desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.

The planning rule also provides for inclusion of optional content in the plan, such as potential management approaches or strategies and partnership opportunities or coordination activities (36 CFR 219.7(f)(2)). The planning rule does not require project consistency with optional content in the plan (36 CFR 219.15(d)). Optional content in the plan can be changed after public notification under the planning rule provision for administrative changes (36 CFR 219.13(c)). This plan amendment includes the optional content of "management approaches":

- **Management Approach (MA) -** A management approach is a statement of the principal strategies and program priorities the Responsible Official intends to employ to carry out projects and activities in the plan area. A management approach is optional content in a land management plan, is not a plan component, and can be changed, or added to or removed from a land management plan, following notice to the public. 36 CFR §219.7(e)(2), and 219.13(c).

Optional content in the plan could facilitate transparency and give the public and governmental entities a clear understanding of the plan and how outcomes would likely be delivered. The definition of management approaches in this amendment as "optional content" means that it was optional for the FS to include them in the plan, but management approaches should be followed when practicable.

If used, management approaches would describe the principal strategies and program priorities the Responsible Official intends to employ to carry out projects and activities developed under the plan. The management approaches can convey a sense of priority and focus among objectives and the likely management emphasis. Management approaches should relate to desired conditions and may indicate the future course or direction of change, recognizing budget trends, program demands and

accomplishments. Management approaches may discuss potential processes such as analysis, assessment, inventory, project planning, or monitoring. (FSH 1909.20 section 22.4).

Priority, general, and other habitat management areas may contain non-habitat. Management direction would not apply to non-habitat unless the proposed activity would result in direct, indirect, or cumulative effects to sage-grouse and/or its use of adjacent habitats. For a comparison of alternatives and description of what changed between the DEIS and FEIS, see FEIS, Chapter 2, Tables 2-7.

**Greater Sage-grouse General**

**GRSG-GEN-DC-001-Desired Condition -** The landscape for greater sage-grouse encompasses large contiguous areas of native vegetation, approximately 6 to 62 square miles in area, to provide for multiple aspects of species life requirements. Within these landscapes, a variety of sagebrush-community compositions exist without dominance by invasive species, and with variations in subspecies composition, co-dominant vegetation, shrub cover, herbaceous cover, and stand structure, to meet seasonal requirements for food, cover, and nesting for greater sage-grouse. Sagebrush vegetation communities provide contiguous habitat for greater sage-grouse, which is resistant and resilient to disturbances such as fire and invasive plants.

**GRSG-GEN-DC-002-Desired Condition -** Anthropogenic disturbance is rare in PHMA and GHMA.

**GRSG-GEN-DC-003-Desired Condition -** At the landscape scale, in greater sage-grouse habitats, including all seasonal habitats, 70% or more of lands capable of producing sagebrush have 10 to 30% sagebrush canopy cover and less than 4% conifer canopy cover. In addition, within breeding and nesting habitat, sufficient herbaceous vegetation structure and height provides overhead and lateral concealment for nesting and early brood rearing life stages. Within brood rearing habitat, mesic meadows and riparian areas sustain a rich diversity of perennial grass and forb species relative to site potential, and adjacent sagebrush provides cover and security. Within winter habitat, sufficient sagebrush height and density provides food and cover for greater sage-grouse during this seasonal period. When and where breeding and nesting habitat overlaps with other seasonal habitats, the desired conditions are those for breeding and nesting habitat. These desired conditions would be based on Ecological Site Descriptions and/or state and transitions models where available.

**GRSG-GEN-MA-004-Management Approach -** The values for greater sage-grouse seasonal habitat preferences and seasonal use periods in ROD, Attachment E, Tables E-1, E-3, and E-4 (or FEIS, Appendix D, Tables D-1, D-3, D-4) are initial references based on range-wide habitat selection by greater sage-grouse. These initial references should be refined collaboratively to fit local habitats used by greater sage-grouse, ecological site capability, and limitations of habitat distribution. Not all areas will be capable of achieving the seasonal habitat preference values, due to inherent variation in vegetation communities and ecological site potential.

**GRSG-GEN-ST-005-Standard -** In PHMA, do not issue new discretionary written authorizations unless all existing discrete anthropogenic disturbances cover less than 3% of the total greater sage-grouse habitat within the Biologically Significant Unit (BSU) (see Attachment C - Glossary and ROD, Attachment H, Figure H-2 or FEIS, Appendix D, Figure D-2) and the proposed project area, regardless of ownership, and the new use will not cause exceedance of the 3% cap. Discretionary activities that might result in disturbance above 3% at the BSU and proposed project area would be prohibited unless approved by

the forest supervisor with concurrence from the regional forester after review of new or site- specific information that indicates the project would result in a net conservation gain at the BSU and proposed project area scale (Appendix D, Disturbance Cap Management Approach). Within existing designated utility corridors, the 3% disturbance cap may be exceeded at the project scale if the site specific NEPA analysis indicates that a net conservation gain to the species will be achieved. This exception is limited to projects that fulfill the use for which the corridors were designated (e.g., transmission lines, pipelines) and the designated width of a corridor will not be exceeded as a result of any project co-location.

**GRSG-GEN-MA-006-Management Approach -** The Forest Service will conduct a NEPA sufficiency review (FSH 1909.15, Section 18.1) to update the habitat management area maps as new data (e.g., additional greater sage-grouse telemetry data, improved vegetation community data) are incorporated into the model described in "Spatially Explicit Modelling of Greater Sage-Grouse Habitat in Nevada and Northeastern California" (Coates et al. 2016, as adopted by the State of Nevada). The appropriate NEPA and forest planning process will be followed before updating the map.

**GRSG-GEN-ST-007-Standard -** In PHMA and GHMA, only allow new authorized land uses, if after avoiding and minimizing impacts, any remaining residual impacts to greater sage-grouse or their habitats are fully offset by compensatory mitigation projects that provide a net conservation gain to the species, subject to existing rights, by applying beneficial mitigation actions. Any compensatory mitigation will be durable, timely, and in addition to what would have resulted without the compensatory mitigation as addressed in the Mitigation Framework (FEIS Appendix D and ROD Attachment G).

**GRSG-GEN-MA-008-Management Approach -** Use the State of Nevada's Habitat Quantification Tool, or other standardized method, to quantify the residual impacts from anthropogenic project activities and any pursuant compensatory mitigation projects.

**GRSG-GEN-ST-009-Standard -** Do not authorize new surface disturbing and disruptive activities that create detrimental noise levels at the perimeter of an active or pending lek during lekking (ROD, Attachment E, Table E-1, generally March 1 to May 15) from 6 pm to 9 am. Detrimental noise is considered to be 10 dBa above ambient baseline noise. Do not include noise resulting from human activities that have been authorized and initiated within the 10 years prior September 16, 2015 in the ambient baseline measurement.

**GRSG-GEN-MA-010-Management Approach -** Consider new science related to the effects of noise and to overall noise thresholds, above which negative effects may render habitat unsuitable. Follow appropriate environmental analysis and planning process to determine the need for change in plan direction and when determining if an activity would create detrimental noise levels.

Consider new science and state wildlife agency protocols in the determination of methods used to measure and establish ambient baseline noise, including using an ambient baseline value as provided by State wildlife agency if it is impractical to collect pre-project measurements.

**GRSG-GEN-GL-011-Guideline -** During breeding and nesting seasonal use period (ROD, Attachment E, Table E-1, generally March 1 to June 30), surface disturbing and disruptive activities should be avoided

within 4 miles of an active or pending lek, as determined by local conditions (e.g. vegetation or topography), to minimize impacts to breeding and nesting birds.

**GRSG-GEN-GL-012-Guideline -** Construction of tall structures within 3 miles of active or pending leks, as determined by local conditions (e.g. vegetation or topography), with the potential to disrupt breeding or nesting by creating new perching/nesting opportunities for avian predators or by decreasing the use of an area, should be restricted within nesting habitat.

**Adaptive Management**

**GRSG-AM-ST-013-Standard -** If a hard or soft trigger is identified based on either population monitoring or habitat monitoring, identify and implement appropriate management responses for the specific casual factor in the decline of populations and/or habitats.

**GRSG-AM-MA-014-Management Approach -** Apply the Adaptive Management Plan for Nevada (Appendix D) to determine causal factors related to population and habitat hard and soft triggers and to identify appropriate management responses.

**Lands and Realty**
**Special Use Authorizations**

**GRSG-LR-SUA-ST-015-Standard** - In PHMA and GHMA, do not authorize new or amended lands special uses for infrastructure, such as transmission lines, pipelines, distribution lines, and communication tower sites, outside of existing designated corridors and rights-of-way of similar types. Exceptions may be made if any of the following apply:

i. The location of the proposed authorization is determined to be unsuitable habitat or non-habitat; lacks the ecological potential to become suitable habitat; and would not result in direct, indirect, or cumulative impacts on greater sage-grouse or its habitat.

ii. Impacts from the proposed action could be offset through use of the mitigation hierarchy (avoid (e.g., co-locate, relocate, bury), minimize, mitigate) to achieve a net conservation gain and demonstrate that the direct, indirect, and cumulative impacts of the project would not result in habitat fragmentation or other impacts that would cause greater sage-grouse populations to decline.

iii. The proposed action is needed to address public health and safety concerns, specifically as they relate to local, state, and national priorities.

iv. Renewals or re-authorizations of existing infrastructure in previously disturbed sites or expansions of existing infrastructure that do not result in direct, indirect, or cumulative impacts on greater sage-grouse or its habitat.

v. The proposed action would be determined a routine administrative function conducted by State or local governments, including existing authorized uses, existing rights and existing infrastructure that serve a public purpose.

Refer to standards GRSG-GEN-ST-005 and GRSG-GEN-ST-007 for disturbance caps and compensatory mitigation for residual impacts.

**GRSG-LR-SUA-ST-016-Standard -** In PHMA and GHMA, do not authorize temporary lands special uses (i.e., facilities or activities) that result in loss of habitat or would have long-term (i.e., greater than 5 years) negative impact on greater sage-grouse or their habitats. Exceptions would comply with GRSG-LR-SUA-ST-015-Standard.

**GRSG-LR-SUA-ST-017-Standard -** In PHMA and GHMA, require protective stipulations (e.g., noise, tall structure and guy wire marking, perch deterrent installation) when issuing new authorizations or during renewal, amendment, or reissuance of existing authorizations that authorize infrastructure (e.g., transmission lines, pipelines, roads, distribution lines, and communication tower sites). Refer to standards GRSG-GEN-ST-005 and GRSG-GEN-ST-007 for disturbance caps and compensatory mitigation for residual impacts.

**GRSG-LR-SUA-GL-018-Guideline -** In PHMA and GHMA, locate upgrades to existing transmission lines within the existing designated corridors or right-of-way unless an alternate route would benefit greater sage-grouse or their habitats.

**GRSG-LR-SUA-ST-019-Standard -** In PHMA and GHMA, when a lands special use authorization is revoked or terminated and no future use is contemplated, require the authorization holder to remove overhead lines and other surface infrastructure in compliance with 36 CFR 251.60(i).

**Land Ownership Adjustments**

**GRSG-LR-LOA-ST-020-Standard -** In PHMA and GHMA, do not approve landownership adjustments, including land exchanges, unless the action results in a net conservation gain to greater sage-grouse or it will not have direct, indirect, or cumulative impacts on greater sage-grouse or its habitat.

**GRSG-LR-LOA-GL-021-Guideline -** In PHMA and GHMA, consider landownership adjustments to achieve a landownership pattern that consolidates and reduces fragmentation to sage-grouse habitat.

**Wind and Solar**

**GRSG-WS-ST-022-Standard -** In PHMA and GHMA, do not authorize new solar utility-scale and/or commercial energy development except for on-site power generation associated with existing industrial infrastructure (e.g., mine site).

**GRSG-WS-ST-023-Standard -** In PHMA, do not authorize new wind energy utility-scale and/or commercial development.

**GRSG-WS-GL-024- Guideline -** In GHMA, new wind energy utility- scale and/or commercial development should be restricted. If development cannot be restricted due to existing authorized use, adjacent developments, or split estate issues, then ensure that stipulations are incorporated into the authorization to protect greater sage-grouse and their habitats. Refer to GRSG-GEN-ST-005, GRSG-GEN-ST-007, GRSG-GEN-GL-011, GRSG-GEN-GL-012, and GRSG-LR-SUA-ST-015-Standard for disturbance caps, compensatory mitigation for residual impacts, and exceptions process.

## Greater Sage-grouse Habitat

**GRSG-GRSGH-DC-025-Desired Condition** - Invasive annual grasses are either not present or in low abundance in sage-grouse habitat.

**GRSG-GRSGH-O-026-Objective -** Every 10 years, improve greater sage-grouse habitat by removing conifers and treating areas invaded by and/or dominated by invasive annual grasses within the number of acres shown in FEIS Appendix D, Table D-2 and ROD, Attachment E, Table E-2.

**GRSG-GRSGH-GL-027-Guideline -** When removing conifers that are encroaching into greater sage-grouse habitat, avoid persistent woodland. The determination of a persistent woodland would be informed by Ecological Site Descriptions where available.

**GRSG-GRSGH-GL-028-Guideline -** In PHMA and GHMA, actions and authorizations should include design features to limit the spread and effect of non-native invasive plant species.

**GRSG-GRSGH-GL-029-Guideline -** To facilitate safe and effective fire management actions, in priority and general habitat management areas, fuel treatments in high- risk areas (i.e., areas likely to experience wildfire at an intensity level that might result in movement away from the greater sage-grouse desired conditions) should be designed to reduce the spread and/or intensity of wildfire or the susceptibility of greater sage-grouse habitat attributes to move away from desired conditions (GRSG-GEN-DC-001-Desired Condition and GRSG-GEN-DC-003-Desired Condition).

**GRSG-GRSGH-GL-030-Guideline -** In PHMA and GHMA, native plant species should be used, when possible, to maintain, restore, or enhance desired habitat conditions (GRSG-GEN-DC-001-Desired Condition and GRSG-GEN-DC-003-Desired Condition).

**GRSG-GRSGH-GL-031-Guideline -** In PHMA, vegetation treatment projects should only be conducted if they maintain, restore, or enhance desired habitat conditions (GRSG-GEN-DC-003-Desired Condition).

**GRSG-GRSGH-GL-032-Guideline -** Vegetation treatment activities in lentic riparian areas (i.e., seeps, springs, and wet meadows) in PHMA and GHMA, should only be authorized if they maintain or improve conditions to meet greater sage-grouse desired conditions (GRSG-GEN-DC-003-Desired Condition).

**GRSG-GRSGH-GL-033-Guideline -** When authorizing vegetation management treatments in PHMA and GHMA, priority should be given to treatments in Phase I and Phase II pinyon and/or juniper stands in areas with a sagebrush, native shrub, and/or perennial understory component.

Treatments in pinyon and/or juniper stands in Phase III condition should only be authorized to create movement corridors, connect habitats, or reduce the potential for catastrophic fire (ROD, Attachment E, Table E-2 or FEIS Appendix D, Table D-2).

**GRSG-GRSGH-MA-034-Management Approach -** When treating areas invaded by and/or dominated by annual invasive grasses in PHMA and GHMA, priority should be given to treating satellite populations, and where state and transition models, ecological site descriptions, or disturbance response groups indicate the likelihood of successful and effective treatment (ROD, Attachment E, Table E-2 or FEIS Appendix D, Table D-2).

**GRSG-GRSGH-ST-035-Standard -** In PHMA and GHMA, do not authorize vegetation treatment methods, including for post-wildfire restoration, unless based on project objectives and the treatment areas' resistance to annual invasive grasses, the resilience of native vegetation to respond after disturbance, ecological site descriptions, disturbance response groups, and/or state and transition models.

**GRSG-GRSGH-MA-036-Management Approach -** Within the broader context of Early Detection and Rapid Response management strategies, prioritize treatments for invasive annual and noxious plant populations that have the potential to impact sage-grouse habitat in PHMA.

**Livestock Grazing**

**GRSG-LG-DC-037-Desired Condition -** Managed livestock grazing contributes to maintaining sustainable riparian communities needed for proper functioning condition in riparian areas and mesic meadows in PHMA, GHMA, and OHMA.

**GRSG-LG-ST-038-Standard -** In PHMA and GHMA, do not approve construction of water developments that would cause net adverse effects to greater sage-grouse habitat.

**GRSG-LG-ST-039-Standard -** Wildlife escape ramps shall be installed and maintained in water troughs or open water facilities with vertical embankments that pose a drowning risk to wildlife.

**GRSG-LG-GL-040-Guideline -** In PHMA, GHMA, and OHMA, if livestock grazing is found to be a limiting factor in achievement of desired habitat conditions, adjust livestock management, as appropriate, to address greater sage-grouse habitat requirements.

**GRSG-LG-GL-041-Guideline -** In PHMA, GHMA, and OHMA, manage grazing utilization in riparian areas and mesic meadows to promote cover, diversity, and health of important/key plant species to support sage-grouse during brood-rearing season. During the growing season, manage grazing in riparian areas and mesic meadows to allow recovery of riparian vegetation (e.g. using riparian pastures, water developments, stockmanship, rotational grazing).

**GRSG-LG-GL-042-Guideline -** Bedding sheep and placing camps within 2.0 miles from an active or pending lek during lekking (ROD, Attachment E, Table E-1, generally March 1 to May 15) should be restricted to prevent disturbance to breeding and nesting greater sage-grouse.

**GRSG-LG-GL-043-Guideline -** During the breeding and nesting season (ROD, Attachment E, Table E-1, generally March 1 to June 30), trailing livestock through breeding and nesting habitat should be avoided to prevent disturbance to breeding and nesting greater sage-grouse. Specific routes should be identified, existing trails should be used, and avoid stopovers on active or pending leks.

**GRSG-LG-GL-044-Guideline -** Fences should not be constructed or reconstructed within 1.2 miles from the perimeter of active or pending leks, unless the collision risk can be mitigated through design features or markings (e.g., mark, laydown fences, or other design features).

**GRSG-LG-GL-045-Guideline -** To prevent predation from perching raptors, new livestock facilities that pose a perching risk (e.g., windmills, water tanks, corrals, etc.) should not be authorized within 1.2 miles from the perimeter of active or pending leks, considering local conditions.

## Fire and Fuels Management

**GRSG-FM-DC-046-Desired Condition -** In PHMA and GHMA, sage-grouse habitat will be prioritized as a high value resource along with other high value resources and assets after firefighter and public health and safety.

**GRSG-FM-ST-047-Standard -** In PHMA and GHMA, do not authorize treatment methods for fuel reduction (e.g., mastication, broadcast burning, pile burning) unless based on project objectives and the treatment areas' resistance to annual invasive grasses, the resilience of native vegetation to respond after disturbance, ecological site descriptions, and/or state and transition models.

**GRSG-FM-GL-048-Guideline -** In order to maintain sagebrush in wintering or breeding and nesting habitat, sagebrush removal or manipulation, including prescribed fire, should be restricted unless the removal strategically reduces the potential impacts from wildfire or supports the attainment of desired conditions (GRSG-GEN-DC-003-Desired Condition).

**GRSG-FM-GL-049-Guideline -** In PHMA and GHMA, when reseeding in fuel breaks, fire resistant native plant species should be used if available. Persistent, non-native, non-invasive fire resistant plant materials should only be used when timely reestablishment with the use of native plant materials is not likely to occur. The use of fire resistant native plants species should be a high priority but not at the expense of creating effective fuel breaks

**GRSG-FM-GL-050-Guideline -** Wildfire suppression facilities (i.e., base camps, spike camps, drop points, staging areas, helibases, etc.) should be located in areas where adverse effects to greater sage-grouse and its habitat can be minimized. These include native grasslands, near roads/trails, or in other disturbed areas where there is minimal sagebrush cover and/or or minimal invasive plant species.

**GRSG-FM-GL-051-Guideline -** In PHMA and GHMA, cross-country vehicle travel during fire operations should be restricted. When needed to best provide for firefighter or public safety or to minimize fire size in sage grouse habitat, impacts to sage grouse should be considered and removal of sagebrush should be limited to the extent practicable.

**GRSG-FM-GL-052-Guideline -** In PHMA and GHMA, use fire management tactics and strategies that seek to minimize loss of existing sagebrush habitat. The safest and most practical means to do so will be determined by fireline leadership and incident commanders.

**GRSG-FM-GL-053-Guideline -** In PHMA and GHMA, GRSG habitat desired conditions will be incorporated into prescribed fire prescriptions. Prescribed fire prescriptions should not result in undesirable effects on vegetation and/or soils (e.g., minimize mortality of desirable perennial plant species and reduce risk of hydrophobicity) that would prevent movement towards or maintenance of desired conditions.

**GRSG-FM-GL-054-Guideline -** In PHMA and GHMA, planned fuel breaks should incorporate roads and natural fuel breaks to improve effectiveness and minimize loss of existing sagebrush habitat.

**GRSG-FM-ST-055-Standard -** In PHMA and GHMA, where practical and available, all fire-associated vehicles and equipment are to be inspected and cleaned using standardized protocols before entering

and exiting the area after initial attack activities to minimize the introduction of invasive plant species and noxious weeds.

**GRSG-FM-MA-056-Management Approach -** Include unit-specific greater sage-grouse fire management related information in the wildland fire decision support systems (currently, the Wildland Fire Decision Support System); use local operating plans and resource advisor plans during fire situations to inform management decision, aid in development of strategies and tactics and for the prioritization of resources.

**GRSG-FM-MA-057-Management Approach -** In or near PHMA and GHMA, a resource advisor should be assigned to all extended attack fires.

**GRSG-FM-GL-058-Guideline -** On critical fire weather days, when allocation of suppression/prevention resource positioning is being decided, protection of greater sage-grouse habitat should receive high consideration, along with other high values.

**GRSG-FM-MA-059-Management Approach -** Line officers should be involved in setting pre-season wildfire response priorities and, prioritizing protection of PHMA and GHMA, along with other high values. During periods of multiple fires or limited resource availability fire management organizational structure (local, regional, national) will prioritize fires and allocation of resources in which sage grouse habitat is a consideration along with other high values.

**GRSG-FM-GL-060-Guideline -** In PHMA and GHMA, fire retardant and mechanized equipment should be used only if it is likely to result in minimizing burned acreage, preventing the loss of other high value resources, or increasing the effectiveness of other tactical strategies. Agency administrators, or their designee, or fireline leadership should consider fire suppression effects while determining suppression strategy and tactics; the use of fire retardant and mechanized equipment may be approved by agency administrators, or their designee, or fireline leadership.

**GRSG-FM-GL-061-Guideline -** In PHMA and GHMA, the full range of suppression techniques should be used to protect unburned islands, doglegs, and other greater sage-grouse habitat features that may exist within the perimeter of wildfires to retain as much greater sage-grouse habitat as possible.

**Wild Horse and Burro**

**GRSG-HB-DC-062-Desired Condition -** In PHMA and GHMA, wild horse and burro populations are within established appropriate management levels.

**GRSG-HB-ST-063-Standard -** In PHMA, GHMA, and OHMA, appropriate management levels in wild horse and burro territory management plans shall be based on the structure, condition, and composition of vegetation needed to achieve desired habitat conditions for sage-grouse.

**GRSG-HB-ST-064-Standard -** In PHMA and GHMA, remove wild horses and burros outside of a wild horse and burro territory consistent with FSM 2260.31.

**GRSG-HB-MA-065-Management Approach - I**n PHMA and GHMA, herd gathering should be prioritized when wild horse and burro populations exceed the upper limit of the established appropriate management level.

**GRSG-HB-MA-066-Management Approach -** In PHMA and GHMA, consider exclusion of wild horse or burros immediately following emergency situation (e.g., fire, floods).

**Recreation**

**GRSG-R-ST-067-Standard -** In PHMA and GHMA, do not authorize temporary recreation uses (i.e., facilities or activities) that result in loss of habitat or would have long-term (i.e., greater than 5 years) negative impacts on greater sage-grouse or their habitats.

**GRSG-R-GL-068-Guideline -** In PHMA and GHMA, when authorizing new recreation special-use authorizations, terms and conditions that protect and/or restore greater sage-grouse habitat within the permit area should be included. During renewal, amendment, or reauthorization, terms and conditions in existing permits and operating plans should be modified to protect and/or restore greater sage-grouse habitat.

**GRSG-R-GL-069-Guideline -** In PHMA and GHMA, new recreational facilities or expansion of existing recreational facilities (e.g., roads, trailheads, campgrounds), including special use authorizations for facilities and activities, should not be approved unless the development results in a net conservation gain to greater sage-grouse or their habitats or the development is required for visitor safety.

**GRSG-R-ST-070-Standard -** During breeding and nesting (ROD, Attachment E, Table E-1 or FEIS, Table D-1, generally March 1 to June 30), outfitter-guide activities within 0.25 mile from active or pending leks shall not be authorized.

**Roads/Transportation**

**GRSG-RT-DC-071-Desired Condition -** In PHMA and GHMA, within the forest transportation system and on roads and trails authorized under a special use authorization, greater sage-grouse experience minimal disturbance and mortality.

**GRSG-RT-GL-072-Guideline -** In PHMA and GHMA, do not conduct or allow new road or trail construction (does not apply to realignments for resource protection) except when necessary for administrative access to existing and authorized uses, public safety, or to access existing rights. If necessary to construct new roads and trails for one of these purposes, construct them to the minimum standard, length, and number and avoid, minimize, and mitigate impacts to greater sage-grouse and its habitat.

**GRSG-RT-ST-073-Standard -** Do not construct or allow road and trail maintenance activities within 2 miles from the perimeter of active or pending leks during lekking (ROD, Attachment E, Table E-1, generally March 1 to May 15) from 6 pm to 9 am.

**GRSG-RT-GL-074-Guideline -** In PHMA and GHMA, dust abatement terms and conditions should be included in road-use authorizations when dust has the potential to impact greater sage-grouse.

**GRSG-RT-GL-075-Guideline -** In PHMA and GHMA, road and road-way maintenance activities should be designed and implemented to reduce the risk of vehicle or human-caused wildfires and the spread of invasive annual and noxious plants.

**GRSG-RT-MA-076-Management Approach -** In PHMA and GHMA, during breeding and nesting season (ROD, Attachment E, Table E-1, generally March 1 to June 30), consider seasonal road closures or other methods to protect sage-grouse from disturbance and mortality on motorized travel routes with high traffic volume, speeds, or noise levels.

**GRSG-RT-MA-077-Management Approach -** In PHMA and GHMA, during winter seasonal use periods (ROD, Attachment E, Table E-1, generally November 1 to February 28), consider limiting over-snow motorized vehicles in wintering areas.

**Minerals**
**Fluid- Unleased**

**GRSG-M-FMUL-ST-078-Standard -** In PHMA, any new oil and gas leases or geothermal leases must include a no surface occupancy stipulation. There will be no waivers or modifications. An exception could be granted by the authorized officer if one of the following applies:

- The location of the proposed authorization is determined to be unsuitable habitat or non-habitat; lacks the ecological potential to become suitable habitat; or would not result in direct, indirect, or cumulative impacts on greater sage-grouse or its habitat.
- Impacts from the proposed action could be offset through use of the mitigation hierarchy (avoid (e.g. co-locate, relocate, bury), minimize, mitigate) to achieve a net conservation gain and demonstrate that the direct, indirect, and cumulative impacts of the project would not result in habitat fragmentation or other impacts that would cause greater sage-grouse populations to decline.

**GRSG-M-FMUL-ST-079-Standard -** In GHMA, any new leases must include appropriate controlled surface use and timing limitation stipulations to protect sage-grouse and their habitat.

**GRSG-M-FMUL-ST-080-Standard -** In PHMA and GHMA, include appropriate restrictions (e.g. limit drilling during breeding and nesting season) based on seasonal use periods (ROD, Attachment E, Table E-1) when authorizing geophysical exploration or similar type of exploratory operations.

**GRSG-M-FMUL-MA-081-Management Approach -** Appendix G has stipulations developed for when standards and guidelines call for specific restrictions on fluid minerals activities.

**Fluid Minerals-Leased**

**GRSG-M-FML-ST-082-Standard -** In PHMA, the Surface Use Plan of Operation portion of the Application for Permit to Drill on existing leases that are not yet developed, will require Conditions of Approval (COA) that will avoid and minimize surface disturbing and disruptive activities consistent with the rights granted in the lease.

**GRSG-M-FML-ST-083-Standard -** In PHMA and GHMA, when facilities are no longer needed or leases are relinquished, reclamation plans must include terms and conditions to restore habitat to desired conditions (GRSG-GEN-DC-003-Desired Condition).

**GRSG-M-FML-ST-084-Standard -** In PHMA and GHMA, authorize new transmission line corridors, transmission line right-of- ways, transmission line construction, or transmission line-facility

construction associated with fluid mineral leases with stipulations necessary to protect greater sage-grouse and their habitats, consistent with the terms and conditions of the permit.

**GRSG-M-FML-GL-085-Guideline -** Compressor stations should be located on portions of a lease that are non-habitat and are not used by the greater sage-grouse and if there would be no direct, indirect, or cumulative effects on the greater sage-grouse or its habitat.

**GRSG-M-FML-MA-086-Management Approach -** If locating compressor stations in non-habitat or areas that would have no impact on greater sage-grouse is not possible, work with the operator to use mufflers, sound insulation, or other features to reduce noise consistent with GRSG-GEN-ST-009-Standard.

**GRSG-M-FML-GL-087-Guideline -** In PHMA and GHMA, when authorizing development of fluid mineral resources, work with the operator to minimize impacts to greater sage-grouse and their habitat, such as locating facilities in non-habitat areas first and then in the least suitable habitat.

**GRSG-M-FML-GL-088-Guideline -** In PHMA and GHMA, at the time of approval, the Surface Use Plan of Operation portion of the Application for Permit to Drill will include terms and conditions to reduce disturbance to greater sage-grouse habitat where appropriate, feasible, and consistent with the rights granted to the lessee.

**GRSG-M-FML-GL-089-Guideline -** On existing Federal leases in PHMA and GHMA, when surface occupancy cannot be restricted due to existing rights or development requirements, disturbance and surface occupancy should be limited to areas least harmful to greater sage-grouse based on vegetation, topography, or other habitat features.

**GRSG-M-FML-GL-090-Guideline -** In PHMA and GHMA, where the Federal government owns the surface and the mineral estate is in non-Federal ownership, apply appropriate stipulations, conditions of approval, conservation measures, and required design features to the appropriate surface management instruments to the maximum extent permissible under existing authorities.

**Fluid Minerals- Operations**

**GRSG-M-FMO-ST-091-Standard -** In PHMA and GHMA, do not authorize employee camps.

**GRSG-M-FMO-GL-092-Guideline -** In PHMA and GHMA, when feasible, do not locate tanks or other structures that may be used as raptor perches. If this is not feasible, use perch deterrents.

**GRSG-M-FMO-GL-093-Guideline -** In PHMA and GHMA, closed-loop systems should be used for drilling operations with no reserve pits, where feasible.

**GRSG-M-FMO-GL-094-Guideline -** In PHMA and GHMA, during drilling operations, soil compaction should be minimized and soil structure should be maintained using the best available techniques to improve vegetation reestablishment.

**GRSG-M-FMO-GL-095-Guideline -** In PHMA and GHMA, dams, impoundments and ponds for mineral development should be constructed in a manner that reduces potential for West Nile virus.

**GRSG-M-FMO-GL-096-Guideline -** In PHMA and GHMA, to keep habitat disturbance at a minimum, a phased development approach should be applied to fluid mineral operations, wherever possible, consistent with the rights granted under the lease. Disturbed areas should be reclaimed as soon as they are no longer needed for mineral operations.

**Locatable Minerals**

**GRSG-M-LM-ST-097-Standard -** In PHMA and GHMA, only approve Plans of Operation if they include mitigation (avoid and minimize) to protect greater sage-grouse and their habitats, consistent with the rights of the mining claimant as granted by the General Mining Act of 1872, as amended.

**GRSG-M-LM-GL-098-Guideline -** In PHMA and GHMA, to keep habitat disturbance at a minimum, a phased development approach should be applied to operations consistent with the rights granted under the General Mining Act of 1872, as amended. Disturbed areas should be reclaimed as soon as they are no longer needed for mineral operations.

**GRSG-M-LM-GL-099-Guideline -** In PHMA and GHMA, when closing abandoned mine sites remove tall structures that could provide nesting opportunities and perching sites for predators to reduce predation of greater sage-grouse, consistent with the National Historic Preservation Act.

**Non-energy Leasable Minerals**

**GRSG-M-NEL-GL-100-Guideline -** In PHMA and GHMA, include measures to restrict surface use, occupancy and seasonal activities for exploration with either recommendations or consent (as applicable) to the BLM regarding issuance of prospecting permits and exploration licenses.

In PHMA and GHMA, where development would be by surface mining methods, consider potential impacts to sage-grouse habitat and appropriate measures (see standards, guidelines, and management approaches 005012), and/or applying appropriate compensatory mitigation (as described in the Mitigation Framework) when assessing whether or not to consent to, or recommend leasing.

In PHMA and GHMA, where development would be by underground mining methods, include measures that restrict surface use, occupancy and seasonal activities with either recommendations or consent (where applicable) to the BLM regarding issuance of new leases and lease modifications.

At lease readjustment or lease renewal, evaluate measures to provide to the BLM to restrict surface use, occupancy and seasonal activities PHMA and GHMA. Where existing leases either are, or will be, developed by surface mining methods, include stipulations to reclaim disturbed lands to applicable greater sage-grouse habitat.

**GRSG-M-NEL-GL-101-Guideline -** In PHMA and GHMA, include in recommendations to the BLM regarding exploration plan or mining plans conditions to reduce invasive species, prevent fire, limit permanent tall structures and new permanent roads, and to design reclamation of surface disturbance to restore applicable greater sage-grouse habitat.

**Mineral Materials**

**GRSG-M-MM-ST-102-Standard -** In PHMA, do not authorize new mineral material disposal or development.

**GRSG-M-MM-ST-103-Standard -** Do not allow free-use mineral material collection during lekking season (ROD, Attachment E, Table E-1, generally March 1 to May 15) between 6 p.m. and 9 a.m. within 2 miles from the perimeter of active and pending leks.

**GRSG-M-MM-ST-104-Standard -** Management of new pits in general habitat management areas and management or expansion of existing pits in PHMA and GHMA will include appropriate requirements for operation and reclamation of the site to maintain, restore, or enhance desired habitat conditions (ROD, Attachment E, Table E-3 and E-4 or FEIS, Appendix D, Table D-3 and D-4).

**Predation**

**GRSG-P-DC-105-Desired Condition -** Anthropogenic uses on public lands are managed to reduce the effects of predation on greater sage-grouse.

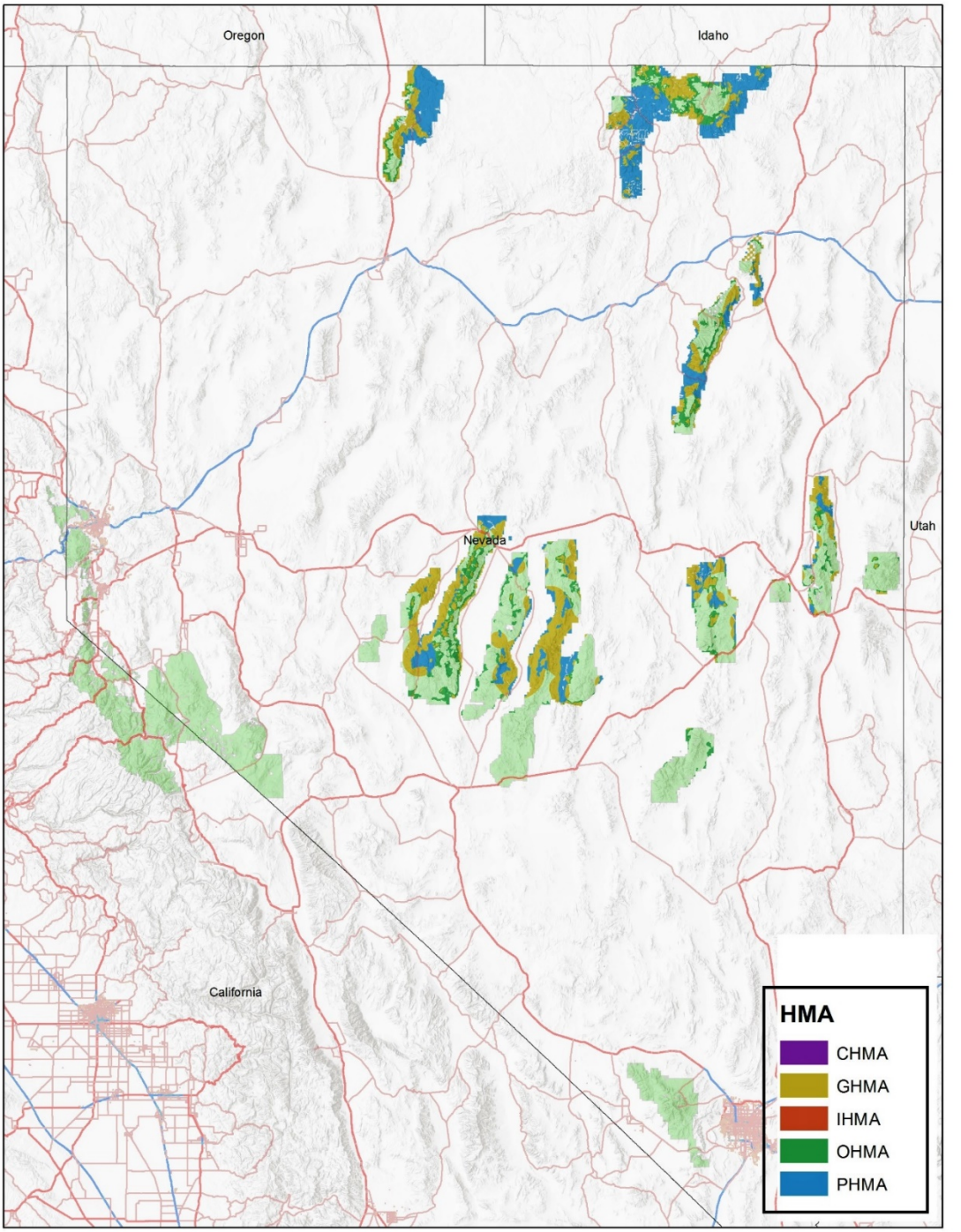
**GRSG-P-MA-106-Management Approach -** Efforts by other agencies to minimize impacts from predators on the greater sage-grouse should be supported and encouraged where needs have been documented.

# ATTACHMENT B –
# MAP OF HMAS ALTERNATIVE 2

# ATTACHMENT B – MAP OF HMAS ALTERNATIVE 2

Differences in mapping layers between the 2015 and 2019 amendments can also be examined using a map web-tool at the following link: https://usfs.maps.arcgis.com/apps/PublicInformation/index.html?appid=9f1cf6d8425e49949d0006a0ae574b84

**Map 1 - GRSG Habitat Management Areas on the Humboldt-Toiyabe National Forest in Nevada.**



# ATTACHMENT C –
# GLOSSARY OF TERMS USED
# IN THE FEIS, ROD, AND LMPA

# ATTACHMENT C - GLOSSARY OF TERMS USED IN THE FEIS, ROD, AND LMPA

**Active lek** – Any lek that has had two or more males observed at least twice in the last five years.

**Additionality (Additive)** – In the context of compensatory mitigation, the conservation benefits of compensatory mitigation are a demonstrably new replacement for a loss of habitat that would not have resulted without the compensatory mitigation project.

**Adjacent** – Installation of a new project or improvement parallel, near, or next to existing linear projects or improvements.

**Administrative access** – Access for resource management and administrative purposes such as wildfire suppression, cadastral surveys, permit compliance, law enforcement, and military in the performance of their official duty, or other access needed to manage National Forest System lands or uses.

**Allotment** – A designated area of land in which one or more livestock operators graze their livestock. An allotment may include one or more separate pastures. Livestock numbers and periods of use are specified for each allotment.

**Ambient (noise level)** – Sometimes called background noise level, reference sound level, or room noise level; the background sound pressure level at a given location, normally specified as a reference level to study a new intrusive sound source.

**Anthropogenic disturbances** – Human-created features including but not limited to paved highways, graded gravel roads, transmission lines, substations, wind turbines, oil and gas wells and associated facilities, geothermal wells and associated facilities, pipelines, landfills, agricultural conversion, homes, and mines.

**Appurtenant (minerals)** – A piece of equipment (e.g., pump jack, separator, storage tank, compressor station, metering equipment, etc.) necessary for production.

**Authorized (Forest) officer** – The Forest Service employee delegated the authority to perform a duty described in 36 CFR §228.104. Generally, a Regional Forester, Forest Supervisor, District Ranger, or Minerals Staff Officer, depending on the scope and level of the duty to be performed.

**Authorized use** – An activity (i.e., resource use) occurring on public lands that is either explicitly or implicitly recognized or legalized by law or regulation. The term may refer to activities occurring on public lands for which the Forest Service has issued a formal authorization document (e.g., livestock grazing permit, special-use authorization, approved plan of operation, etc.). Formal authorized uses can involve both commercial and non-commercial activity, facility placement, or event. These authorized uses are often spatially or temporally limited. Unless constrained or bounded by statute, regulation, or an approved forest plan decision, legal activities involving public enjoyment and use of the public lands (e.g., hiking, camping, hunting, etc.) require no formal Forest Service authorization.

**Avoidance mitigation** – Avoiding the impact altogether by not taking a certain action or parts of an action. (40 CFR §1508.20(a)) (e.g., may also include avoiding the impact by moving the proposed action to a different time or location.)

**Baseline condition** – The pre-existing condition of a defined area and/or resource that can be quantified by an appropriate metric(s). During environmental reviews, the baseline is considered the affected environment that exists at the time of the review's initiation and is used to compare predictions of the effects of the proposed action or a reasonable range of alternatives.

**Biologically Significant Unit** – A geographical/spatial area within greater sage-grouse habitat that contains relevant and important habitat that is used as the basis for comparative calculations to support evaluation of changes to habitat. A Biologically Significant Unit or subset of the unit is used in the calculation of the anthropogenic disturbance threshold and in the adaptive management habitat trigger. Specifically:

- *NW Colorado*- A geographical/spatial area within greater sage-grouse habitat that contains relevant and important habitat that is used as the basis for comparative calculations to support evaluation of changes to habitat. A Biologically Significant Unit or subset of the unit is used in the calculation of the anthropogenic disturbance threshold and in the adaptive management habitat trigger.
- *Idaho*- All of the modeled nesting and delineated winter habitat, based on 2011 data, within priority and/or important habitat management areas within a Conservation Area.
- *Utah*- The total priority habitat management area associated with a greater sage-grouse population area.
- *Nevada*- Represents nested lek clusters with similar climate and vegetation conditions. A BSU boundary is defined by similar environmental conditions where GRSG population dynamics are likely driven by larger scale variations (e.g., climate). BSUs are defined by the USGS (Coates et al. 2017) and are also used for anthropogenic disturbance calculations.

**Causal factor** – A resource use or activity (e.g., livestock grazing or oil and gas development) or other factor (e.g., wildfire or drought) contributing to the decline of GRSG habitat and/or populations as identified under Adaptive Management**,** resulting in a soft or hard trigger being tripped. A causal factor can occur singly or in combination with one another.

**Co-location** – Installation of new projects or improvements (i.e., communication towers, electrical lines, other rights-of-way, or designated corridors) in, on, or adjacent to existing projects or improvements.

**Communication tower site** – Sites that include broadcast types of uses (e.g., television, AM/FM radio, cable television, broadcast translator) and non-broadcast uses (e.g., commercial or private mobile radio service, cellular telephone, microwave, local exchange network, or passive reflector).

**Compensatory mitigation** – Compensating for the residual impact of a certain action or parts of an action by replacing or providing substitute resources or environments(s). (40 CFR §1508.20)

**Compensatory mitigation projects** – The restoration, creation, enhancement, and/or preservation of impacted resources (adopted and modified from 33 CFR §332), such as on-the-ground actions to improve and/or protect habitat (e.g., chemical vegetation treatments, land acquisitions, conservation easements, etc.).

**Compensatory mitigation sites** – The durable areas where compensatory mitigation projects will occur.

**Connectivity Habitat Management Area (CHMA)** – Management areas whose boundaries match Wyoming State designated Connectivity areas. They are identified as important to maintain transmission

of genetic material between core area populations. CHMA may or may not include breeding, late brood-rearing, and winter habitats. Connectivity Habitat Management Areas are only in Wyoming.

**Conservation Area (Idaho and Utah as administered by the Sawtooth NF)** – Areas determined to be necessary to monitor population objectives to evaluate the disturbance density and adaptive regulatory triggers and engage adaptive management responses. Conservation Areas may contain priority, important, and general habitat management areas. Specifically, these areas are Mountain Valleys, Desert, and West Owyhee.

**Controlled surface use** – A category of moderate constraint stipulations that allows some use and occupancy of public land while protecting identified resources or values and is applicable to fluid mineral leasing and all activities associated with fluid mineral leasing (e.g., truck-mounted drilling and geophysical exploration equipment off designated routes, construction of wells and/or pads, etc.).

**Core Habitat** – Core habitats are areas designated in the State of Wyoming's Sage-grouse Executive Order as the most important for Greater Sage-Grouse and include breeding, late brood-rearing, and winter habitats. They do not include known migration or connectivity corridors or winter concentration areas. In Wyoming, PHMA boundaries match Core Habitat boundaries identified in the Wyoming Sage-grouse Executive Order, Version 4 maps.

**Corridor** – A tract of land varying in width forming passageway through which various commodities such as oil, gas, and electricity are transported.

**Desired Condition (DC)** – A description of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed. Desired conditions must be described in terms that are specific enough to allow progress toward their achievement to be determined, but do not include completion dates.

**Disruptive activities** – Land resource uses/activities that are likely to alter the behavior, displace, or cause excessive stress to the greater sage-grouse population occurring at a specific location and/or time. Actions that alter behavior or cause the displacement of individuals such that reproductive success is negatively affected or an individual's physiological ability to cope with environmental stress is compromised.

**Distribution line** – An electrical utility line with a capacity of less than 100kV or a natural gas, hydrogen, or water pipeline less than 24" in diameter.

**Diversity (biological)** – The number and distribution of plant and animal species within a specified geographic area. For purpose of the National Forest Management Act, the geographic area is a national forest or grassland unit.

**Durable (protective and ecological)** – The administrative, legal, and financial assurances that secure and protect the conservation status of a compensatory mitigation site and the ecological benefits of a compensatory mitigation project, for at least as long as the associated impacts persist.

**Enhance** – The improvement of habitat by increasing missing or modifying unsatisfactory components and/or attributes of the habitat (e.g., road commissioning) to meet greater sage-grouse objectives.

**Exception (minerals)** – A case-by-case exemption from a lease stipulation. The stipulation continues to apply to all other sites within the leasehold to which the restrictive criteria apply. The authorized officer (any employee of the Forest Service to whom has been delegated the authority to perform the duties described in the applicable Forest Service manual or handbook) may grant an exception if an environmental record of review determines that the action, as proposed or conditioned, would not impair the function or utility of the site for the current or subsequent seasonal habitat, life-history, or behavioral needs of the greater sage-grouse.

**Existing rights** – Documented legal rights or interests in the land that allow a person or entity to use said land for a specific purpose and that are still in effect. Such rights include but are not limited to fee title ownership, mineral rights, and easements. Such rights may have been reserved, acquired, granted, permitted, or otherwise authorized under various statutes of law over time.

**Feasible** – See technically/economically feasible.

**Fluid minerals** – Oil, gas, coal bed natural gas, and geothermal resources.

**Forage reserve** – Designation for allotments on which there is no current term permit obligation for some or all of the estimated livestock grazing capacity and where there has been a determination made to use the available forage on the allotment to enhance management flexibility for authorized livestock use (FSH id_2209.13-2007-1).

**Forest transportation system** – Roads, trails, and areas designated for motor vehicle use that provide access to National Forest System lands for both motorized and non-motorized uses in a manner that is socially, environmentally, and economically sustainable over the long-term; enhances public enjoyment of National Forest System roads; and maintains other important values and uses.

**General Habitat Management Area (GHMA)** – Management areas that are likely to be occupied seasonally or year-round outside of PHMAs or other defined management areas where GHMA management would apply to sustain the GRSG population. GHMA may include active leks, seasonal habitats, and fragmented or marginal habitat. These areas have been identified by the FS and BLM in coordination with respective state wildlife agencies. Idaho, Nevada, Utah, Wyoming, and Colorado have GHMA.

**Guideline (GL)** – A constraint on project and activity decisionmaking that allows for departure from its terms, so long as the purpose of the guideline is met. Guidelines are established to help achieve or maintain a desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.

**Habitat** – An environment that meets a specific set of physical, biological, temporal, or spatial characteristics that satisfy the requirements of a plant or animal species or group of species for part or all of its life cycle.

**Hard trigger** – A threshold indicating that immediate action is necessary to stop a severe deviation from greater sage-grouse conservation objectives set forth in the land and RMP.

**High-voltage transmission line** – An electrical power line that is 100 kilovolts or larger.

**High elevation** – High elevation covers mid to high elevation areas comprised primarily of basin (mid-elevation) and mountain big sagebrush (high-elevation), as well as other mesic and higher elevation vegetation communities. (Previously the Mesic precipitation zone).

**Holder** – An individual or entity that holds a special-use authorization.

**Impact** – The effect, influence, alteration, or imprint caused by an action.

**Important Habitat Management Areas (IHMA)** – Areas that contain additional habitat and populations that provide a management buffer for PHMA and to connect patches of PHMA. IHMAs are typically adjacent to PHMAs but generally reflect somewhat lower GRSG population status and/or reduced habitat value due to disturbance, habitat fragmentation or other factors. IHMAs are only in Idaho.

**Indicators** – Factors that describe resource condition and change and can help the BLM and the Forest Service determine trends over time.

**Invasive species (invasive plant species, invasives)** – An alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health. The species must cause or be likely to cause harm and be exotic to the ecosystem it has infested before considered invasive.

**Isolated parcel** – An individual parcel of land that may share a corner but does not have a common border with another parcel.

**Key habitat** – Key habitat includes areas of generally intact sagebrush that provide sage-grouse habitat during some portion of the year. The Key Habitat Map in Idaho is intended to be updated annually and tracks effective habitat, effects to that habitat from fire, restoration efforts and use by GRSG.

**Landownership adjustment** – Land adjustments to National Forest System lands by purchase, exchange, interchange, or conveyance under authority delegated by law to the Secretary of Agriculture.

**Landscape** – A distinct association of land types that exhibit a unique combination of local climate, landform, topography, geomorphic process, surficial geology, soil, biota, and human influences. Landscapes are generally of a size that the eye can comprehend in a single view.

**Landscape scale** – At a scale that allows for bird dispersal and migration movements within the population and subpopulation area (Stiver et al 2015).

**Lease** – A contract granting use or occupation of property during a specified period in exchange for a specified rent or other form of payment; a type of special-use authorization (usually granted for uses other than linear rights-of-way) that is used when substantial capital investment is required and when conveyance of a conditional and transferable interest in National Forest System lands is necessary or desirable to serve or facilitate authorized long-term uses and that may be revocable and compensable according to the terms.

**Leasable minerals** – Those minerals or materials designated as leasable under the Mineral Leasing Act of 1920, as amended, and the Mineral Leasing Act for Acquired Lands of 1947. These include energy-related mineral resources such as oil, natural gas, coal, and geothermal and some non- energy minerals, such as phosphate, sodium, potassium, and sulfur. Geothermal resources are also leasable under the Geothermal

Steam Act of 1970**.**

**Lek** – A courtship display area attended by the male greater sage-grouse in or adjacent to sagebrush-dominated habitat.

**Lek Buffer** – An area, identified using state-based or disturbance-based distances from the center or perimeter of a lek, where restrictions on permitted activities may be implemented.

**Lek cluster –** A group of leks in the same vicinity, among which GRSG may interchange over time and representing a group of closely related individuals. A lek cluster boundary is defined by minimal GRSG movement between clusters, so demographic rates are influenced by birth/death rates rather than immigration/emigration. Lek clusters are defined by the USGS (Coates et al. 2017).

**Lek Perimeter** – The outer perimeter of a lek and associated satellite leks (if present). Perimeters of all leks should be mapped by experienced observers using accepted protocols, by state. Perimeters may vary over time as population levels or habitat and weather conditions fluctuate. However, mapped perimeters should not be adjusted unless grouse use consistently (2+ years) demonstrates the existing perimeter is inaccurate. The lek location must be identified and recorded as a specific point within the lek perimeter. This point may be the geographic center of the perimeter polygon calculated though a GIS exercise, or a GPS waypoint recorded in the field, which represents the center of breeding activity typically observed on the lek (WDFG 2012).

**Lessee** – A person or entity holding record title in a lease issued by the United States; a person or entity authorized to use and occupy National Forest System lands under a specific instrument identified as a lease.

**Livestock conversion** – To change the kind of livestock authorized to graze on National Forest System lands (e.g., a change from sheep to cows).

**Locatable minerals** – Mineral disposable under the General Mining Act of 1872, as amended, that was not excepted in later legislation. These include hardrock, placer, and industrial minerals and uncommon varieties of rock found on public domain lands.

**Low Elevation** – Low elevation areas in the state, comprised primarily of Wyoming big sagebrush communities, with some basin big sagebrush included. (Previously the Arid precipitation zone).

**Major pipeline** – A pipeline that is 24 inches or more in outside-pipe diameter (Mineral Leasing Act of 1920, as amended, 30 U.S.C. § 181; 36 CFR §251.54(f)(1)).

**Management Approach** – A management approach is a statement of the principal strategies and program priorities the Responsible Official intends to employ to carry out projects and activities in the plan area. A management approach is optional content in a land management plan, is not a plan component, and can be changed, or added to or removed from a land management plan, following notice to the public. 36 CFR §219.7(e)(2), and §219.13(c).

**Marginal habitat** – An area that supports the species but has generally lower survival rates and reproductive success by comparison and may or may not have the potential to become suitable in the future (Stiver et al. 2015).

**Mineral** – Any naturally formed inorganic material; solid or fluid inorganic substance that can be extracted from the earth; any of various naturally occurring homogeneous substances (e.g., stone, coal, salt, sulfur, sand, petroleum, water, or natural gas) obtained usually from the ground. Under federal laws, considered as locatable (subject to the general mining laws), leasable (subject to the Mineral Leasing Act of 1920, as amended), and salable (subject to the Materials Act of 1947).

**Mineral materials** – Common varieties of mineral materials such as soil, sand and gravel, stone, pumice, pumicite, and clay that are not obtainable under the mining or leasing laws but that can be acquired under the Materials Act of 1947, as amended.

**Minimization mitigation** – Minimizing impacts by limiting the degree or magnitude of the action and its implementation (40 CFR §1508.20 (b)).

**Mitigation** –Mitigation, as described in the White House Council on Environmental Quality's (CEQ's) NEPA regulations at 40 CFR 1508.20, is the hierarchy of avoiding environmental impacts, minimizing impacts, and/or compensating for residual impacts. Thus, mitigation can include avoiding the impact altogether by not taking a certain action or parts of an action, minimizing the impact by limiting the degree of magnitude of the action and its implementation, rectifying the impact by repairing, rehabilitating, or restoring the affected environment, reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action, and compensating for the impact by replacing or providing substitute resources or environments.

**Modification (oil and gas)** – A fundamental change to the provisions of a lease stipulation either temporarily or for the term of the lease. A modification may include an exemption from or alteration to a stipulated requirement. Depending on the specific modification, the stipulation may or may not apply to all other sites within the leasehold to which the restrictive criteria applied.

**Native plant species** – A plant species that occurs naturally in a particular region, state, ecosystem, and habitat without direct or indirect human actions.

**Net conservation gain** – The actual benefit or gain realized after compensating for a proposed action that degrades greater sage-grouse habitat; it may be shown by a net increase in sage-grouse habitat above the baseline conditions that existed before a proposed action.

**No surface occupancy** – A major constraint where use or occupancy of the land surface for fluid mineral exploration or development and all activities associated with fluid mineral leasing (e.g., truck-mounted drilling and geophysical exploration equipment off designated routes, construction of wells and/or pads) are prohibited to protect identified resource values. Areas identified as No Surface Occupancy are open to fluid mineral leasing, but surface occupancy or surface-disturbing activities associated with fluid mineral leasing cannot be conducted on the surface of the land. Access to fluid mineral deposits would require horizontal drilling from outside the boundaries of the No Surface Occupancy area.

**No net habitat Loss** – Retaining an equivalent amount of sage-grouse habitat after a proposed action that is equal to or above baseline conditions that existed before the proposed action.

**Non-habitat** – An area within the historical distribution of sage-grouse that is unoccupied, does not currently provide habitat, and does not have the potential to provide habitat in the foreseeable future

(<100 years) (Stiver et al. 2015).

**Objective (O)** – A concise, measurable, and time-specific statement of a desired rate of progress toward a desired condition or conditions. Objectives should be based on reasonably foreseeable budgets.

**Occupied lek** – A lek that has been active during at least one strutting season within the prior 10 years.

**Other Habitat Management Area (OHMA)** – Areas determined to be moderate to low habitat suitability for greater sage-grouse in areas of estimated low space use. This habitat management class represents areas with appropriate environmental conditions for greater sage-grouse, but that are less frequently used by greater sage-grouse. OHMA is only designated in Nevada.

**Pending lek** – Any lek that has two or more males observed only once in the last five years.

**Permit** – A special-use authorization that provides permission, without conveying an interest in land, to occupy and use National Forest System lands or facilities for specified purposes and which is both revocable and terminable.

**Permit cancellation** – Action taken to permanently invalidate a term grazing permit in whole or part.

**Persistent woodlands** – Long-lived pinyon-juniper woodlands that typically have sparse understories and occur on poor substrates in the assessment area.

**Plan of operation** – A Plan of Operation is required for all mining activity conducted under the General Mining Act of 1872, as amended, if the proposed operations will likely cause significant disturbance of surface resources. The Plan of Operation describes the type of operations proposed and how they would be conducted; the type and standard of existing and proposed roads or access routes; the means of transportation to be used; the period during which the proposed activity will take place; and measures to be taken to meet the requirements for environmental protection (36 CR 228.4).

**Practicable** -- Useful for the intended purpose and able to be done or put into practice successfully.

**Prescribed fire** – Any fire ignited by management actions to meet specific objectives. A written, approved prescribed fire plan must exist, and National Environmental Policy Act requirements, where applicable, must be met before ignition.

**Priority Habitat Management Areas (PHMA)** – Management areas that have been identified as having the highest conservation value to maintaining sustainable GRSG populations. These areas are occupied seasonally or year-round and include breeding, late brood-rearing, and winter habitat. The FS and BLM have identified these areas in coordination with respective state wildlife agencies. Idaho, Nevada, Utah, Wyoming, and Colorado have PHMA. In Wyoming, PHMA boundaries match Core Areas identified in the Wyoming Sage-grouse Executive Order, Version 4 maps.

**Prohibit** – To forbid (something) by law, rule, or other authority; no authorizations will be issued, meaning no authorization will be granted.

**Proper Functioning Condition** – Ecosystems at any temporal or spatial scale are in a properly functioning condition when they are dynamic and resilient to perturbations to structure, composition, and processes

of their biological or physical components. For riparian-wetlands: an area in which adequate vegetation or other structure components are present to dissipate energy, reduce erosion and improve water quality, filter sediment and aid in floodplain development, improve flood-water retention and ground-water recharge, stabilize streambanks and shorelines, develop diverse ponding and channel characteristics for fish and wildlife habitat among other things, and support greater biodiversity.

**Reclamation plans** – Plans that guide the suite of actions taken within an area affected by human disturbance, the outcome of which is intended to change the condition of the disturbed area to meet pre-determined objectives and/or make it acceptable for certain defined resources (e.g., wildlife habitat, grazing, ecosystem function, etc.).

**Residual impacts** – Impacts from an implementation-level decision that remain after applying avoidance and minimization mitigation; also referred to as unavoidable impacts.

**Responsible official** – The Agency employee who has the authority to make and implement a decision on a proposed action (36 CFR 220.3).

**Restoration** – Implementation of a set of actions that promotes plant community diversity and structure that allows plant communities to be more resilient to disturbance and invasive species over the long-term. The long-term goal is to create functional, high quality habitat that is occupied by the greater sage-grouse. The short-term goal may be to restore the landform, soils, and hydrology and increase the percentage of preferred vegetation, seeding of desired species, or treatment of undesired species.

**Restriction/restrict** – A limitation or constraint, not a prohibition, on public land uses and operations. Restrictions can be of any kind but most commonly apply to certain types of vehicle use, temporal and/or spatial constraints, or certain authorizations.

**Right-of-way** – Land authorized to be used or occupied for the construction, operation, maintenance, and termination of a project or facility passing over, upon, under, or through such land.

**Road or trail** – A road or trail wholly or partly within or adjacent to and serving the National Forest System that the Forest Service determines is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources.

**Sagebrush Focal Areas** – Areas identified by the U.S. Fish and Wildlife Service that represent recognized "strongholds" for the greater sage-grouse that have been noted and referenced as having the highest densities of greater sage-grouse and other criteria important for the persistence of the species.

**Satellite lek** – A relatively small lek (usually less than 15 males) within about 500 meters of a large lek often documented during years of relatively high grouse numbers. Locations of satellite leks should be encompassed within lek perimeter boundaries.

**Soft triggers** – An intermediate threshold indicating that management changes are needed at the implementation level to address habitat or population losses.

**Special-use authorization** – A written permit, term permit, lease, or easement that authorizes use or occupancy of National Forest System lands and specifies the terms and conditions under which the use

or occupancy may occur.

**Standard (ST)** – A mandatory constraint on project and activity decisionmaking, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.

**Stipulation (general)** – A term or condition in an agreement, contract, or written authorization.

**Stipulation (oil and gas)** – A provision that modifies standard lease rights and is attached to and made a part of the lease. Lease stipulations include No Surface Occupancy, Timing Limitations, and Controlled Surface Use.

**Suitable habitat** – An area that provides environmental conditions necessary for successful survival and reproduction to sustain stable populations (Stiver et al. 2015).

**Surface disturbing activities** – Actions that alter the vegetation, surface/near surface soil resources, and/or surface geologic features beyond natural site conditions and on a scale that affects other public land values. Examples of surface disturbing activities may include operation of heavy equipment to construct well pads, roads, pits, and reservoirs; installation of pipelines and power lines; maintenance activities; and several types of vegetation treatments (e.g., prescribed fire, etc.). Surface disturbing activities may be restricted, not allowed, or not authorized.

**Surface occupancy** – Placement or construction on the land surface of semi-permanent or permanent facilities requiring continual service or maintenance. Casual use is not included.

**Surface use** – Activities that may be present on the surface or near-surface (e.g., pipelines) of public lands. When administered as a use restriction (e.g., No Surface Occupancy), this phrase prohibits all but specified resource uses and activities in a certain area to protect particular sensitive resource values and property. This designation typically applies to small acreage sensitive resource sites (e.g., plant community study exclosure, etc.) and/or administrative sites (e.g., government ware-yard, etc.) where only authorized agency personnel are admitted.

**Tall structures** – A wide array of infrastructures (e.g., poles that support lights, telephone, and electrical distribution; communication towers; meteorological towers; high-tension transmission towers; and wind turbines) that have the potential to disrupt lekking or nesting birds by creating new perching/nesting opportunities and/or decreasing the use of an area. A determination as to whether something is considered a tall structure would be based on local conditions such as vegetation or topography.

**Technically/economically feasible** – Actions that are practical or feasible from the technical and economic standpoint and using common sense rather than simply desirable from the standpoint of the applicant. It is the Forest Service's responsibility to determine what actions are technically and economically feasible based on a review of the applicant's rationale and the available best science. The Forest Service will consider whether implementation of the proposed action is likely given past and current practice and technology; this consideration does not necessarily require a cost-benefit analysis or speculation about an applicant's costs and profit.

**Temporary special-use permit** – A type of permit that terminates within 1 year or less after the approval date. All other provisions applicable to permits apply fully to temporary permits.

Temporary special-use permits are issued for seasonal or short-duration uses involving minimal improvement and investment.

**Term permit** – An authorization to occupy and use National Forest System lands other than rights- of-way for a specified period that is both revocable and compensable according to its terms.

**Timeliness** – The lack of a time lag between impacts and the achievement of compensatory mitigation goals and objectives.

**Timely** – The conservation benefits from compensatory mitigation accruing as early as possible or before impacts have begun.

**Timing limitations** – A moderate constraint, applicable to fluid mineral leasing, on all activities associated with fluid mineral leasing (e.g., truck-mounted drilling and geophysical exploration equipment off designated routes; construction of wells and/or pads); and other surface disturbing activities (i.e., those not related to fluid mineral leasing). Areas identified for Timing Limitations are closed to fluid mineral exploration and development; surface-disturbing activities; and intensive human activity during identified timeframes. This stipulation does not apply to operation and basic maintenance activities, including associated vehicle travel, unless otherwise specified. Construction, drilling, completions, and other operations considered to be intensive in nature are not allowed. Intensive maintenance, such as workovers on wells, is not permitted. Timing Limitations can overlap spatially with No Surface Occupancy and Controlled Surface Use, as well as with areas that have no other restrictions.

**Transmission line** – An electrical utility line with a capacity greater than or equal to 100kV or a natural gas, hydrogen, or water pipeline greater than or equal to 24" in diameter.

**Unsuitable habitat** – An area that does not currently provide one or more of the life requisites and therefore does not provide habitat, but it may provide habitat sometime in the foreseeable future (<100 years) through succession or restoration (Stiver et al. 2015).

**Utility-scale and/or commercial energy development** – A project that is capable of producing 20 or more megawatts of electricity for distribution to customers through the electricity-transmission- grid system.

**Vegetation treatments** – Management practices that are designed to maintain current vegetation structure or change the vegetation structure to a different stage of development. Vegetation treatment methods may include managed fire, prescribed fire, chemical, mechanical, and seeding.

**Waived without preference** – A permittee waives a term grazing permit to the United States without identifying a preferred applicant (i.e., a third party that has purchased either permitted livestock, base property, or both).

**Waiver (oil and gas)** – Permanent exemption from a lease stipulation. The stipulation no longer applies anywhere within the leasehold.

**West Nile virus** – A virus that is found in temperate and tropical regions of the world and most commonly transmitted by mosquitoes. West Nile virus can cause flu-like symptoms in humans and can be lethal to birds, including the greater sage-grouse.

**Wildfire suppression** – An appropriate management response to wildfire or prescribed fire that results in curtailment of fire spread and eliminates all identified threats from the particular fire.

**Winter Concentration Areas** – Areas that are a habitat feature exclusively designated by the State of Wyoming and mapped by the Wyoming Game and Fish Department (WGFD). Winter Concentration Areas are designated and mapped areas where biologically significant numbers of core habitat birds persistently congregate in an area outside of PHMA between December 1 to March 14. No Winter Concentration Areas are currently mapped on NFS lands in Wyoming. If Winter Concentration Areas are designated by the State of Wyoming and mapped by WGFD, the appropriate plan components would be applied. Winter Concentration Areas are only in Wyoming.

**Withdrawal (land)** – Withholding an area of federal land from settlement, sale, location, or entry under some or all of the general land laws, including the mining and mineral leasing laws, for the purpose of limiting activities under those laws to maintain other public values in the area or for reserving the area for a particular public purpose or program.

# ATTACHMENT D – MANAGEMENT APPROACH FOR FLUID MINERALS: STIPULATIONS

## ATTACHMENT D – MANAGEMENT APPROACH FOR FLUID MINERALS: STIPULATIONS

Appendix G in the FEIS contains Fluid Minerals: Stipulations for all five states located in the planning area. Attachment D is a modified version of Appendix G and only contains stipulations that are applicable to National Forest System land in Nevada. The stipulations have been developed as management strategies for when standards and guidelines call for specific restrictions on fluid minerals activities.

**Summary of Forest Plan Component Reference and Applicable Stipulation**

| Stipulation | Component |
|---|---|
| A | Stipulation A refers to Colorado. See FEIS, Appendix G. |
| **B** | **GRSG-M-FMUL-ST-078 (NV)** |
| C | Stipulation c refers to Utah. See FEIS, Appendix G. |
| D | Stipulation D refers to Idaho. See FEIS, Appendix G. |
| **E** | **GRSG-GEN-GL-011 (NV)** |
| **F** | **GRSG-GEN-GL-012 (NV)** |
| G | Stipulation G refers to Colorado and Utah. See FEIS, Appendix G. |
| H | Stipulation H refers to Idaho. See FEIS, Appendix G. |
| I | Stipulation I refers to Colorado and Utah. See FEIS, Appendix G. |
| **J** | **GRSG-GEN-ST-009 (NV)** |

**STIPULATION B: NO SURFACE OCCUPANCY STIPULATION**

**Greater Sage-Grouse in Priority Habitat Management Areas**
GRSG-M-FMUL-ST-078 (NV)

**No surface occupancy or use is allowed on the lands described below (legal subdivision or other description).**

Insert applicable legal land description here.

**For the purpose of:**

Protecting greater sage-grouse (GRSG) habitat.

**Exceptions:** An exception could be granted by the authorized officer if one of the following applies:

- The location of the proposed authorization is determined to be unsuitable habitat or non-habitat; lacks the ecological potential to become marginal or suitable habitat; and would not result in direct, indirect, or cumulative impacts on greater sage-grouse and its habitat.
- Impacts from the proposed action could be offset through use of the mitigation hierarchy (avoid (e.g. co-locate, relocate, bury), minimize, mitigate) to achieve a net conservation gain and demonstrate that the individual and cumulative impacts of the project would not result in habitat fragmentation or other impacts that would cause greater sage-grouse populations to decline.

**Modifications:** None.

**Waiver:** None.

**Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)**

**STIPULATION E: TIMING LIMITATION STIPULATION**
**Greater Sage-Grouse Breeding & Nesting Habitats**
GRSG-GEN-GL-011 (NV)

**No surface use is allowed during the following time period(s). This stipulation does not apply to operation and maintenance of production facilities.**

Breeding and nesting seasonal use periods:
March 1 to June 30 (NV)

**On the lands described below:**

Insert applicable legal land description here.

**For the purpose of:**

Protecting greater sage-grouse (GRSG) and its habitat from surface disturbing and disruptive activities during breeding and nesting.

**Exceptions:** The authorized officer may grant an exception if an environmental record of review determines that the action, as proposed or conditioned, will not affect reproductive displays, nest attendance, egg or chick survival, or early brood-rearing success. Actions designed to enhance the long-term utility or availability of suitable GRSG habitat may be exempted from this timing limitation. The FS can and does grant exceptions to seasonal restrictions if the FS, in coordination with the state agency, determines that granting an exception would not adversely impact the population being protected.

**Modifications:** The authorized officer may modify the size and shape of the area or the criteria if an environmental record of review indicates the actual habitat suitability for seasonal GRSG activities is greater or less than the stipulated area, or it is identified through scientific research or monitoring that the existing criteria are inadequate or overly protective for maintaining the function or utility of the site for the seasonal habitat, life-history, or behavioral needs of the GRSG, including (but not limited to) reproductive display, daytime loafing/staging activities, and nesting.

**Waiver:** A waiver may be granted if the deciding official determines through coordination with the state agency, that new habitat studies demonstrate the entire lease area affected by this stipulation no longer contains nesting habitat.

**Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)**

## STIPULATION F: CONTROLLED SURFACE USE STIPULATION

### Tall Structures near Greater Sage-Grouse Active or Pending Leks

GRSG-GEN-GL-012 (NV)

**Surface occupancy or use is subject to the following special operating constraints.**

Construction of tall structures within 3 miles from active or pending leks, as determined by local conditions (e.g. vegetation or topography), with the potential to disrupt breeding or nesting by creating new perching/nesting opportunities for avian predators or by decreasing the use of an area, should be restricted within nesting habitat.

**On the lands described below:**

Insert applicable legal land description here.

**For the purpose of:**

Protecting greater sage-grouse (GSRG) and its habitat by limiting (not prohibiting) the placement of structures that introduce new perching and/or nesting opportunities for avian predators or by decreasing the use of an area.

**Exceptions:** The authorized officer may approve actions that are within the applicable lek buffer distance identified above only if:

- it is not possible to relocate the project outside of the applicable lek buffer distance(s) identified above; and
- the FS 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, based on best available science, landscape features, and other existing protections, (e.g. land use allocations, state regulations); or
- the FS 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).

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. All variations in lek buffer distances will require appropriate analysis and disclosure as part of activity authorization.

**Modifications:** A modification may be granted if the authorized officer determines through coordination with the state agency, that new habitat studies demonstrate a portion of the lease area affected by this stipulation no longer contains nesting habitat.

**Waiver**: A waiver may be granted if the determines through coordination with the state agency, that new habitat studies demonstrate the entire lease area affected by this stipulation no longer contains nesting habitat.

**Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)**

**STIPULATION J: TIMING LIMITATION STIPULATION**
**Greater Sage-Grouse – Noise Limitation**
GRSG-GEN-ST-009 (NV)

**Surface occupancy or use is subject to the following special operating constraints.**

New surface disturbing and disruptive activities that create detrimental noise levels at the perimeter of an active or pending lek during lekking will not be authorized from March 1 to May 15 from 6 p.m. to 9 a.m. Detrimental noise is considered to be 10 dBa above ambient baseline noise. Do not include noise resulting from human activities that have been authorized and initiated within the 10 years prior September 16, 2015 in the ambient baseline measurement.

**On the lands described below:**

Insert applicable legal land description here.

**For the purpose of:**

Limiting disturbances to greater sage-grouse (GRSG) during lekking.

**Exceptions:** The authorized officer may grant an exception if an environmental record of review determines that the action, as proposed or conditioned, would not impair the function or utility of the site for the current or subsequent seasonal habitat, life-history, or behavioral needs of GRSG. Actions designed to enhance the long-term utility or availability of suitable GRSG habitat may be exempted from this timing limitation. The FS can and does grant exceptions to seasonal restrictions if the FS, in coordination with the state agency, determines that granting an exception would not adversely impact the population being protected.

**Modifications:** The authorized officer may modify the size and shape of the area or the criteria if an environmental record of review finds that a portion of the area is non-habitat and disturbance there does not preclude effective sage-grouse use of adjacent habitats, or if it is identified through scientific research or monitoring that the existing criteria are inadequate or overly protective for maintaining the function or utility of the site for habitat, life-history, or behavioral needs of the GRSG, including (but not limited to) reproductive display, daytime loafing/staging activities, and nesting.

**Waiver:** This stipulation may be waived over the entire lease if it is determined that the GRSG lek that would be disturbed by the noise has been classified as unoccupied (not active in the prior 10 years) as determined by the state wildlife agency.

**Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.**

# ATTACHMENT E –
# DESIRED CONDITIONS AND SEASONAL HABITAT PREFERENCES FOR NFS LANDS IN NEVADA

# ATTACHMENT E - DESIRED CONDITIONS FOR NFS LANDS IN NEVADA

Attachment E is Appendix D in the FEIS.

**Table E-1. Nevada - Seasonal use periods for greater sage-grouse, for use with specific plan components.**

| Seasonal Use Period* | Dates |
|---|---|
| Breeding and Nesting | March 1 – June 30 |
| • Lekking | • March 1 – May 15 |
| • Nesting | • April 1 – June 30 |
| Brood-Rearing/Summer | May 15 – September 15 |
| Fall | September 16 – October 31 |
| Winter | November 1 – February 28 |

* Seasonal dates may be adjusted (i.e., start and end dates may be shifted earlier or later), but the amount of days cannot be shortened by the local unit.

**Table E-2. Nevada - Treatment acres per decade.[1]**
**(GRSG-GRSGH-O-026-Objective)**

| Forest | Vegetation Treatments[2] | Annual Invasive Grass Treatment [3] |
|---|---|---|
| Humboldt-Toiyabe NF Total | 202,000 Acres | 43,000 Acres |

[1]These are estimates of treatments required to achieve and/or maintain desired habitat conditions over a period of 10 years.

[2]Prioritize the removal of conifers in Phase I and early Phase II pinyon and/or juniper stands in areas with a sagebrush component (see GRSG-GRSGH-GL-033-Guideline). Also includes reducing sagebrush cover in areas over 30% canopy cover.

[3]Acres presently invaded by and/or dominated by annual invasive grasses (see GRSG-GRSGH-GL-034-Guideline) that could be improved with methods such as herbicide application, mechanical removal, biological agents, and seeding of native vegetation.

# NEVADA – SEASONAL HABITAT PREFERENCES

Tables E-3 and E-4 present sage-grouse local seasonal habitat preferences in Nevada. Because habitat preferences vary, for example among ecological sites and along latitudinal, topographic, or precipitation gradients, two tables are presented with values most closely associated with local conditions. The values for greater sage-grouse seasonal habitat preferences are initial references based on range-wide habitat selection by greater sage-grouse. These initial references should be refined collaboratively to fit local habitats used by greater sage-grouse, ecological site capability, and limitations of habitat distribution. Not all areas will be capable of achieving the seasonal habitat preference values, due to inherent variation in vegetation communities and ecological site potential. Tables and values should be used as a basis for comparison when completing seasonal habitat assessments, as described in Stiver et al. 2015. Tables may be added and updated with administrative changes based on the best available scientific information.

**Table E-3. Seasonal habitat preferences for greater sage-grouse.**

(Generally applies in Ecoregion 342[1], although may be applied outside of Ecoregion 342[1] based on local ecological site conditions.)

| ATTRIBUTE | INDICATORS | DESIRED VALUES |
|---|---|---|
| **BREEDING AND NESTING [2,3,4] (Seasonal Use Period March 1 to June 30) (Within the Breeding and Nesting Period - Lekking Period: March 1 to May 15; Nesting Period: April 1 to June 30) Apply 4.0 miles from active leks.[5]** | | |
| **Lek Security** | Proximity of trees [6] | Trees or other tall structures are absent to uncommon within 3 miles (5 km) leks [7,8,16] |
| | Proximity of sagebrush to leks [7] | Adjacent protective sagebrush cover within 328 feet of lek [7] |
| | Seasonal habitat extent [8] (Percent of seasonal habitat meeting desired conditions.) | >80% of the breeding and nesting habitat |
| | Sagebrush canopy cover [7,8,9] | >15% |
| | Sagebrush height [8]<br>Arid sites [7,8,10]<br>Mesic sites [7,8,11] | <br>>12 inches<br>>16 inches |
| | Predominant sagebrush shape [7] | >50% in spreading [12] |
| | Perennial grass cover [7,8]<br>Arid sites [8,10]<br>Mesic sites [8,11] | <br>>10%<br>>15% |
| | Perennial grass height [7,8,9] | Provide overhead and lateral concealment from predators [8,16] |
| | Perennial forb canopy cover [7,8,9]<br>Arid sites [10]<br>Mesic sites [11] | <br>>5% [7,8]<br>>10% [7,8] |
| **BROOD-REARING/SUMMER[2] (Seasonal Use Period May 15 to September 15)** | | |
| **Cover** | Seasonal habitat extent [8](Percent of seasonal habitat meeting desired conditions.) | >40% of the brood-rearing/summer habitat |
| | Sagebrush canopy cover [7,8,9] | 10 to 25% |
| | Sagebrush height [8,9] | >16 inches |
| | Perennial grass and forb canopy cover [7,8] | >15% |
| | Riparian areas/mesic meadows | Proper Functioning Condition [13, 17] |
| | Upland and riparian perennial forb availability [6,7] | Preferred forbs are common with several preferred species present [14] |
| | Sagebrush cover adjacent to riparian areas/mesic meadows [7] | Within 328 feet (100 meters) |
| **Security** | Riparian Area/Meadow Interspersion with adjacent sagebrush | Has adjacent sagebrush cover [6,7] |

| ATTRIBUTE | INDICATORS | DESIRED VALUES |
|---|---|---|
| **FALL/WINTER[2] (Seasonal Use Period September 16 to February 28) (Fall: September 16 to October 31; Winter: November 1 to February 28)** | | |
| **Cover and Food** | Seasonal habitat extent [7,8,9] (Percent of seasonal habitat meeting desired conditions.) | >80% of the winter habitat |
| | Sagebrush canopy cover above snow [7,8,9] | >10% |
| | Sagebrush height above snow [7,8,9] | >10 inches [15] |

[1] Bailey et al. 1994.

[2] Seasonal dates can be adjusted; that is, start and end dates may be shifted either earlier or later, but the amount of days cannot be shortened by the local unit. Seasonal dates are based on dates used by Nevada Department of Wildlife (NDOW) to designate sage-grouse seasonal use. These dates overlap to allow for localized variation across the state.

[3] Doherty 2008.

[4] Holloran and Anderson 2005.

[5] Buffer distance may be changed only if 3 out of 5 years of peer reviewed and published telemetry studies indicate the 4 miles is not appropriate.

[6] Baruch-Mordo et al. 2013

[7] Stiver et al. 2015

[8] Connelly et al. 2000.

[9] Connelly et al. 2003.

[10] 10–12 inch precipitation zone; *Artemisia tridentata wyomingensis* is a common big sagebrush sub-species for this type site (HAF 2014).

[11] >12 inch precipitation zone; *Artemisia tridentata vaseyana* is a common big sagebrush sub-species for this type site (HAF 2014).

[12] Sagebrush plants with a spreading shape provide more protective cover than sagebrush plants that are more tree- or columnar shaped (HAF 2014).

[13] Existing LMP desired conditions for riparian areas/mesic meadows (spring seeps) may be used in place of properly functioning conditions, if appropriate for meeting greater sage-grouse habitat requirements.

[14] Preferred forbs are listed in Stiver et al. 2015 (Table B-1). Overall total forb cover may be greater than that of preferred forb cover since not all forb species are listed as preferred.

[15] The height of sagebrush remaining above the snow depends upon snow depth in a particular year. Intent is to manage for tall, healthy, sagebrush stands.

[16] Coates et al. 2013.

[17] Prichard et al. 2003, Dickard et al. 2015

**Table E-4. Seasonal habitat preferences for greater sage-grouse.**
*(Generally applies in Ecoregion 341[1], although may be applied outside of Ecoregion 341 based on local ecological site conditions.)*

| | INDICATOR | DESIRED VALUES |
|---|---|---|
| **GENERAL/LANDSCAPE-LEVEL** | | |
| **Cover (Nesting)** | Seasonal Habitat Needed | >65% of the landscape in sagebrush cover [2] |
| | Annual Grasses | <5% [3] |
| **Security (Nesting)** | Conifer encroachment | <3% phase I (>0% to <25% cover)<br>No phase II (25 – 50% cover)<br>No phase III (>50% cover) |
| **Cover and Food (Winter)** | Conifer encroachment | <5% phase I (>0% to <25% cover)<br>No phase II (25 – 50% cover)<br>No phase III (>50% cover) |
| | Sagebrush extent | >85% sagebrush land cover |
| **BREEDING AND NESTING (Seasonal Use Period March 1-June 30) [4]<br>(Within the Breeding and Nesting Period - Lekking Period: March 1 to May 15;<br>Nesting Period: April 1 to June 30) Apply 4.0 miles from pending and active leks. [19]** | | |
| **Security [6]** | Tree cover | <3% landscape canopy cover within 1 km of leks [5] |
| | Proximity of tall structures (1 meter above shrub canopy, excluding fences) | None within 3 miles (5 kilometers)[18] |
| | Availability of sagebrush cover | Has adjacent sagebrush cover [9,17] |
| | Sagebrush canopy cover | >20% [13,14] |
| | Residual and live perennial grass cover | >10% if shrub cover <25% [5,7,8] |
| | Annual grass cover [7] | <5% [15] |
| | Perennial grass height | Provide overhead and lateral concealment from predators [9,20] |
| | Total shrub cover | >30% [7,13] |

| | INDICATOR | DESIRED VALUES |
|---|---|---|
| **BROOD-REARING/SUMMER (Seasonal Use Period May 15 to September 15) [4]** | | |
| **Cover** | Sagebrush canopy cover | 10%-25% [9] |
| | Perennial grass canopy cover and forbs | >15% combined perennial grass and forb canopy cover [9] |
| | Perennial Grass Height | Provide overhead and lateral concealment from predators [9,20] |
| **Cover and Food** | Perennial forb canopy cover | >5% arid (<10 inches precipitation)<br>>15% mesic (> 10 inches precipitation or within meadow system) [6] |
| **Food** | Riparian Areas/Meadows | Proper Functioning Condition [17] |
| | Understory species richness (in the vicinity of riparian areas/meadows) | >5 preferred forb species present [5,6] |
| **Security** | Riparian Area/Meadow Interspersion with adjacent sagebrush | Has adjacent sagebrush cover [9,17] |
| **FALL/WINTER (Seasonal Use Period September 16 to February 28) [4]<br>(Fall: September 16 to October 31; Winter: November 1 to February 28)** | | |
| **Cover and Food** | Sagebrush canopy cover | >10% above snow depth [9] |
| | Sagebrush height | >10 inches (25 centimeters) above snow depth [9] |

[1] Bailey et al. 1994

[2] Aldridge and Boyce 2007.

[3] Blomberg et al. 2012

[4] Seasonal dates can be adjusted; that is, start and end dates may be shifted either earlier or later, but the amount of days cannot be shortened or lengthened by the local unit. Seasonal dates are based on dates used by Nevada Department of Wildlife (NDOW) to designate sage-grouse seasonal use. These dates overlap to allow for localized variation across the state.

[5] Baruch-Mordo et al. 2013

[6] Casazza et al. 2011

[7] Coates and Delehanty. 2010

[8] Coates et al. 2013.

[9] Connelly et al. 2000.

[10]Connelly et al. 200

[11]Doherty et al. 2008

[12]Hagen et al. 2007

[13]Kolada et al. 2009a.

[14]Kolada et al. 2009b.

[15]Lockyer et al. 2015

[16]Nevada Governor's Sage-grouse Conservation Team 2010

[17]Stiver et al. 2015.

[18] Gibson et al. 2013

[19] Buffer distance may be changed only if 3 out of 5 years of telemetry studies indicate the 4 miles is not appropriate.

[20] Projects will be designed to provide overhead and lateral concealment of nests on a site specific basis

# ATTACHMENT F – MONITORING FRAMEWORK MANAGEMENT APPROACH FOR NFS LANDS IN NEVADA

# ATTACHMENT F - MONITORING STRATEGY MANAGEMENT APPROACH

Actions, authorizations, and implementation of projects in compliance with this Land Management Plan (LMP) Amendment will be monitored consistently across all planning units and will be reported to the Forest Service Region 4 Office annually, with a summary report every five years, for the planning area.

The report will be based on current databases and information available at the time of writing, and some figures may be revised in later years as more complete information is compiled.

## Major items for monitoring during the implementation of the LMPA

### A. Implementation (Decision) Monitoring.

Measure: Number of authorizations (NEPA decisions) and associated conditions or restrictions (e.g., efforts to avoid, minimize, or implement compensatory mitigation) in priority and general habitat management areas.

### B. Habitat Monitoring.

Measure 1: Sagebrush Availability (percent of sagebrush per unit area)
Measure 2: Habitat Degradation (percent of human activity per unit area)
Measure 3: Energy and Mining Density (facilities and locations per unit area)

### C. Population (Demographics) Monitoring.

### D. Effectiveness Monitoring

Effectiveness Monitoring identifies various land agency contributions to habitat loss and calculates the trend of the above metrics over time by posing a series of additional questions:

1. Sagebrush Availability and Condition:
    a) Measure: Amount of sagebrush availability (existing vegetation) and the change in the amount and condition of sagebrush
    b) Measure: Existing amount of sagebrush on the landscape and the change in the amount relative to the pre-Euro-American historical, and potential, distribution of sagebrush (Biophysical potential).
    c) Measure: Trend and condition of the indicators describing sagebrush characteristics important to sage-grouse
2. Habitat Degradation and Intensity of Activities:
    a) Measure: Amount of habitat degradation and the change in that amount
    b) Measure: The intensity of activities and the change in the intensity
    c) Measure: the amount of reclaimed energy-related degradation and the change in the amount
3. Measure: the population estimation of sage-grouse and the change in the population estimation?
4. Measure: Forest Service contributions to changes in the amount of sagebrush

5. Measure:  Forest Service contributions to habitat disturbance

6. Is the Amendment effective?

   a) Measure:  movement toward, away, or neutral to sage-grouse desired conditions
   b) Measure:  Disturbances within sage-grouse areas relative to objectives (e.g., caps)
   c) Measure:  Are sage-grouse populations within the plan boundary increasing, stable, or declining?

To satisfy these monitoring requirements, Region 4, in collaboration with Regions 2 and 1, will collect required information from various sources, with particularly close cooperation with the BLM and state wildlife agencies.

# ATTACHMENT G – MITIGATION STRATEGY MANAGEMENT APPROACH FOR NFS LANDS IN NEVADA

# ATTACHMENT G - NEVADA MITIGATION STRATEGY MANAGEMENT APPROACH

## GENERAL

The Forest Service incorporates mitigation as an important element of this Greater Sage-grouse Land Management Plan (LMP) Amendment. The approach follows the regulations from the White House Council on Environmental Quality (CEQ) (40 CFR 1508.20) and the steps of avoid, minimize, and compensate, known as the mitigation hierarchy. The greater sage-grouse is also a potential species of conservation concern, so the Forest Service will also follow the Forest Service Handbook FSH 1099.12, 23.13 (c) 5 (c) (2) and work "…towards an all-lands approach to species conservation with other land managers across the range of the species, including efforts to mitigate threats or stressors and to provide ecological conditions that would support the species." When authorizing discretionary, third-party actions within greater sage-grouse (GRSG) priority and general habitat management areas (PHMA and GHMA respectively) that would result in direct, indirect, or cumulative impacts on GRSG or their habitat in Nevada, the Forest Service may ensure mitigation, subject to valid existing rights and federal regulations governing the authorization, that provides a net conservation gain (net benefit) to the species. As defined in the Glossary, the Forest Service applies mitigation in a hierarchical manner: first seeking to avoid, then minimize, then use compensatory mitigation, if any is necessary, to address residual impacts from anthropogenic disturbances. Application of the mitigation hierarchy and the development of compensatory mitigation would be done in close coordination with the project proponent, cooperating agencies (e.g., Nevada Department of Wildlife (NDOW), State of Nevada Sagebrush Ecosystem Technical Team (SETT), and local governments) and interested stakeholders in a transparent manner, based on the best available science and standardized metrics.

It is noted that the State of Nevada, in response to the Nevada Executive Order (NV EO) 2018-32, is in the process of developing regulations that would require mitigation of certain anthropogenic disturbances in PHMA, GHMA, and other habitat management areas (OHMA). The regulations would address mitigation of residual direct or indirect impacts when the anthropogenic disturbance is subject to state or federal review, approval, or authorization, as ordered by NV EO 2018-32.

The strategy contained in this appendix is considered other plan content and may be changed with administrative changes (36 CFR 219.13(c)).

## MITIGATION PRINCIPLES AND GUIDANCE

The Forest Service would apply the following mitigation principles using the mitigation hierarchy when evaluating third-party actions that result in residual impacts on GRSG or their habitat within PHMA and GHMA. Efforts to avoid and minimize should be documented before moving forward with compensatory mitigation.

### Avoidance

- Eliminate conflicts by relocating disturbances outside of greater sage-grouse habitat. Avoidance of GRSG habitat when initiating an activity that will cause disturbance is the preferred option. If impacts are not avoided in PHMA and GHMA, the adverse effects would need to be both minimized and compensated for with compensatory mitigation.

### Minimization

- Impacts should be minimized by modifying proposed actions or incorporating measures that lessen the adverse effects on GRSG and its habitat.
    - Minimization would be accomplished through project-level, site-specific application of actions (e.g., design features and best management practices), such as reducing the disturbance footprint, seasonal use limitations, and co-location of structures.
    - Minimization would not preclude the need for compensatory mitigation, but could effectively reduce the severity of impacts and the degree to which compensatory mitigation was needed to offset those impacts.

### Compensation (also referred to as compensatory mitigation)

- When impacts on GRSG and its habitat remain in PHMA or GHMA after avoidance and minimization, compensatory mitigation would be considered with the applicant subject to the federal regulations governing the authorization and valid existing rights.
- Compensatory mitigation actions would be developed and implemented commensurate with the impacts of the proposed project such that net conservation is achieved through replacement or enhancement of GRSG habitat quality and quantity, as measured using consistent metrics for impacts and mitigation actions, such as those described in the State of Nevada's Habitat Quantification Tool (HQT). Any compensatory mitigation would be durable, timely, and in addition to that which would have resulted without the compensatory mitigation.

### Impact and Compensatory Mitigation Project Valuation Guidance

- A common, standardized method, such as the HQT would be used for quantifying the impacts of a proposed project and any pursuant compensatory mitigation projects (see GRSG-GEN-MA-008-Management Approach).

### Compensatory Mitigation Options

- Options for implementing compensatory mitigation may include:
    - Using the State of Nevada Conservation Credit System (CCS) or an established mitigation/conservation bank.
    - Contributing to an established mitigation/conservation fund that can demonstrate how funds would be used to achieve net conservation gain.
    - Authorized user- (proponent-) conducted mitigation projects that demonstrate net conservation gain.
- For any compensatory mitigation project, the investment must be additional (i.e., additionality means the conservation benefits of compensatory mitigation are demonstrably new and would not have resulted without the compensatory mitigation project).

# ATTACHMENT H –
# ADAPTIVE MANAGEMENT PLAN MANAGMENT APPROACH AND DISTURBANCE CAP GUIDANCE FOR NFS LANDS IN NEVADA

# ATTACHMENT H - ADAPTIVE MANAGEMENT PLAN MANAGEMENT APPROACH

## INTRODUCTION

Adaptive management is a process that promotes flexible resource-management decision- making that can be adjusted as outcomes from management actions and other events become better understood. Careful monitoring of these outcomes both advances scientific understanding and helps adjust resource management direction as part of an iterative learning process. Adaptive management recognizes the importance of natural variability in contributing to ecological resilience and productivity. It is not a "trial and error" process, but rather emphasizes learning while doing. Inclusion of an adaptive management plan to complement the desired conditions, objectives, standards, guidelines, and management approaches in the proposed action is intended to increase the likelihood that conservation measures are effective in reducing threats to greater sage-grouse and its habitat and to lead to more effective decisions and enhanced benefits.

This adaptive management strategy consists of the following elements (Figure H-1):

1. Scale at which the Forest Service and partners will monitor and apply adaptive management in Nevada;
2. Population and habitat analyses with warnings, soft triggers, and hard triggers that represent thresholds for habitat and population decline; and
3. A process for interpreting, responding to, and monitoring population and habitat triggers.

This adaptive management strategy calls for a collaborative effort that would result in individual plans for the recovery of declining greater sage-grouse populations. The adaptive management habitat analysis will be led by a statewide technical team of specialists representing federal, state, and local agencies. This team would recommend specific habitat restoration efforts targeted at multiple spatial scales. These plans would be focused based on discussion of how threats impact greater sage-grouse and its habitat, and the relative importance of various conservation measures. The outcomes would be used to assist local efforts in identifying and prioritizing areas to enable efficiencies and pool resources. This would increase the likelihood that greater sage-grouse population and habitat declines can be addressed effectively through collaboration, stewardship, and conservation. The principles of adaptive management would be incorporated into the conservation measures that lessen threats to greater sage-grouse and its habitat. This strategy is considered other plan content and may be changed with administrative changes (36 CFR 219.13(c)).

## ADAPTIVE MANAGEMENT ANALYSIS SCALES

The scales used to analyze population triggers and apply management responses are at the individual lek, lek cluster, and biologically significant units (BSU) as defined below (Figure H-2). Adaptive management responses would only apply to habitat management areas (HMAs), which includes Priority, General and Other HMAs within these scales. Habitat adaptive management warnings and triggers would be analyzed only at the lek cluster scale. The boundaries of the BSU and lek clusters may be adjusted over time, based on the understanding of local GRSG population interactions, genetic sampling and climate variation. Population and habitat analysis used to identify warnings and triggers may be updated based on new science and advances in technology (e.g., integrated population models).

The hierarchy of GRSG population and habitat scales is as follows:

- Lek—Individual breeding display site where male and female greater sage-grouse congregate, with males performing courtship displays to gain mating opportunities with females. The Nevada Department of Wildlife (NDOW) maintains the official Nevada lek database.
- Lek cluster— A group of leks in the same vicinity, among which GRSG may interchange over time and representing a group of closely related individuals. A lek cluster boundary is defined by minimal greater sage-grouse movement between clusters, so demographic rates are influenced by birth/death rates rather than immigration/emigration. Lek clusters are defined by the USGS (Coates et al. 2017).
- BSU—Represents nested lek clusters with similar climate and vegetation conditions. A BSU boundary is defined by similar environmental conditions where greater sage-grouse population dynamics are likely driven by larger scale variations (e.g., climate). BSUs are defined by the USGS (Coates et al. 2017) and are also used for anthropogenic disturbance calculations.

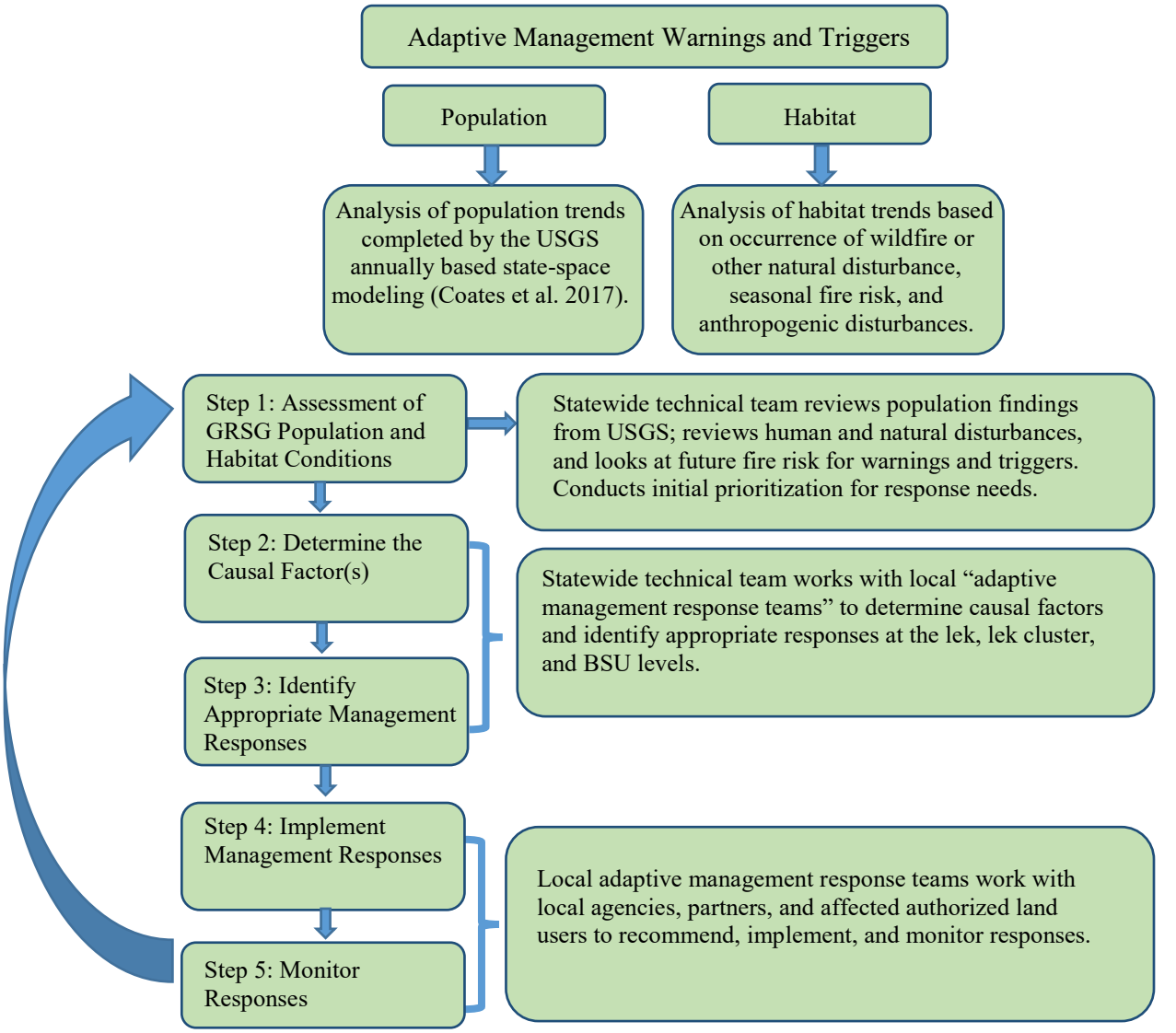



**Figure H-1. Flowchart of the adaptive management process for Nevada.**

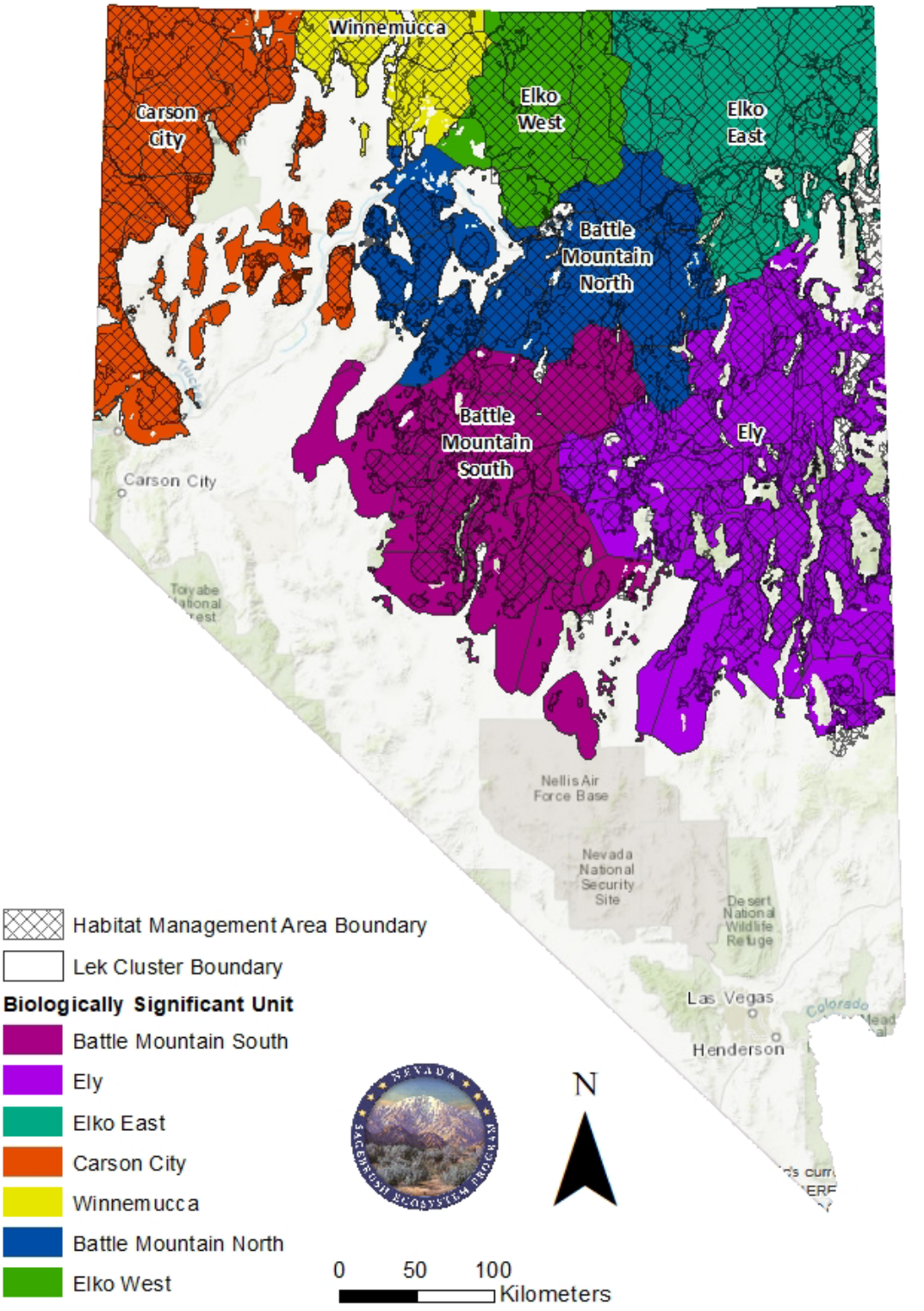



**Figure H-2. Biologically significant units and lek clusters for greater sage-grouse in Nevada.**

## ADAPTIVE MANAGEMENT POPULATION ANALYSIS

Each year, the USGS greater sage-grouse State-Space model (Coates et al. 2017[6]) will be used to estimate the rate of greater sage-grouse population change (lambda) at the individual lek, lek cluster, and BSU scales. The USGS State-Space model uses lek count data provided by NDOW to inform annual trends, accounts for potential variability in observations during lek counts and for natural variations in populations, and integrates information from the three scales to discern if population performance is likely due to localized events or connected to larger scale environmental or climatic conditions. A trigger is less likely to be reached at smaller spatial scales (e.g., lek, lek cluster) if regional environmental (e.g., BSU) conditions are influencing population decline (Figure H-3).

The rate at which a population trend destabilizes (population decline) and decouples from the trend at the associated higher-order scale will dictate whether or not a soft or hard trigger is reached. USGS will provide notice to the statewide technical team of any population warnings, soft triggers, or hard triggers that are reached on an annual basis.

### Population Warnings

Population warnings[7] represent precursors to triggers that are the result of cumulative factors that negatively affect population growth rate. A warning could be seen when population rate of change (lambda) within any of the three analyzed spatial scales is below an established threshold as defined in Coates et al. (2017). A population that is destabilized and decoupled is also considered a warning at that spatial scale. Multiple annual warnings are required to reach a soft or hard population trigger.

### Population Soft Triggers

Soft triggers represent a threshold of population decline that indicates that management actions should be considered at the project or implementation level to address GRSG population declines. Specific thresholds for lambda values are included in Coates et al. 2017.

### Population Hard Triggers

Hard triggers represent a threshold of population decline that indicates that immediate action needs to be considered to address significant deviation from GRSG population declines. Specific thresholds for lambda values are included in Coates et al. 2017.

[6] The methods to determine population triggers and the specific quantitative soft and hard triggers for the lek, lek cluster, and BSU spatial scales are identified in the USGS State-Space model *Hierarchical population monitoring of greater sage-grouse (Centrocercus urophasianus) in Nevada and California—Identifying populations for management at the appropriate spatial scale*: U.S. Geological Survey Open-File Report 2017-1089.

[7] The USGS analysis uses the term “signals” which is synonymous with “triggers.”

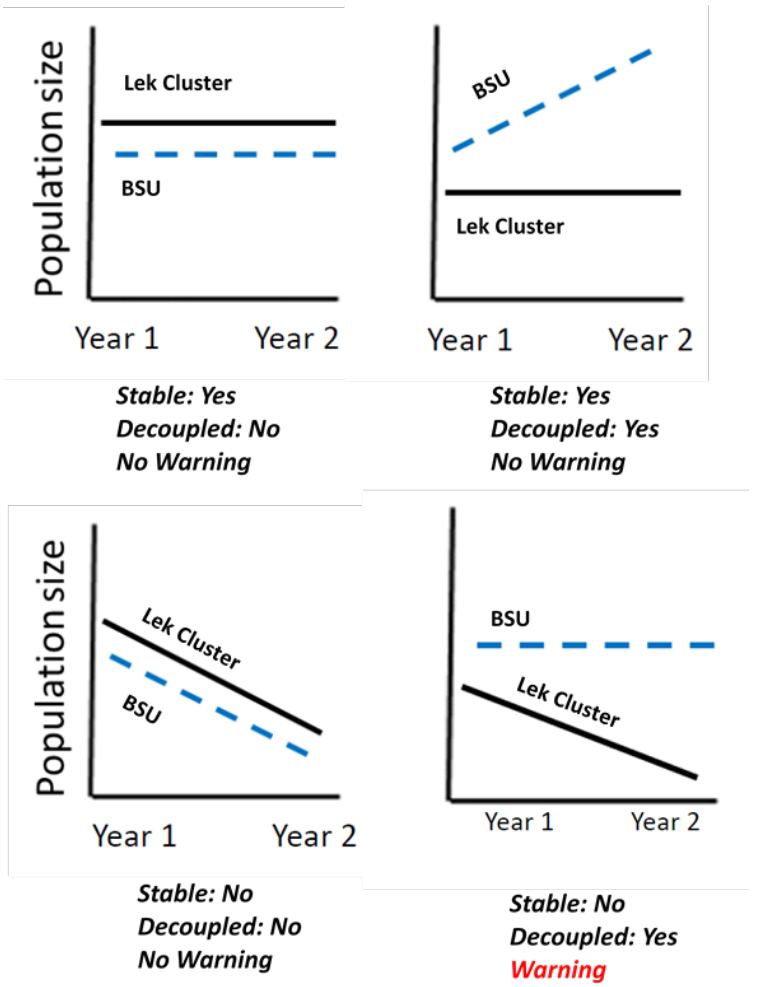



**Figure H-3. Scenarios depicting population stability (trend) and decoupling from the higher-order spatial scales (Coates et al. 2017).**

## ADAPTIVE MANAGEMENT HABITAT ANALYSIS

The adaptive management habitat analysis will be led by a statewide technical team of specialists representing federal, state, and local agencies. This team will convene annually following completion of the population analysis, and may meet more frequently if needed.

### Habitat Warnings

Habitat warnings include fire risk, the occurrence of wildfires larger than 1,000 acres, other natural disturbances, and new anthropogenic disturbance that results in direct and indirect effects as determined using the State of Nevada's Habitat Quantification Tool (HQT). These warnings will be evaluated within HMAs at the scale of the lek cluster. Fire risk will be analyzed using various applicable data sources and support tools including but not limited to current vegetation composition and biomass, precipitation, fire regime condition class, fire risk or predictive models, and other applicable resources to identify areas that have the potential for high fine or woody fuel loads or have a high probability for re-burning. Natural disturbances evaluated as warnings will focus on wildfires and other natural disturbances that affect 1,000 acres or more in Nevada. The statewide technical team will generate the full list of habitat warnings

for the year, complete a preliminary assessment of ecological impact and magnitude, and draft a priority list of warnings that may warrant a management response. Generally, a management response will be warranted if an action could be taken that could effectively improve conditions for greater sage-grouse.

### Habitat Triggers

Within a lek cluster, habitat warnings that warrant a significant greater sage-grouse focused management response will be considered triggers and prioritized based on best available science, site-specific conditions (context), and ecological criteria (e.g., ecological site description, current state, resistance and resilience, state and transition models, disturbance response group, cheatgrass dominance, etc.).

## CAUSAL FACTOR ANALYSIS AND MANAGEMENT RESPONSE PROCESS

**Step 1**-Assessment of Greater Sage-grouse Population and Habitat Conditions: The statewide technical team will meet semi-annually to evaluate population data using the results of the USGS greater sage-grouse State-Space model (Coates et al. 2017), habitat disturbance data from the land and resource management agencies, and fire risk data to identify warnings and triggers.

**Step 2**-Determine the Causal Factor(s): Following Step 1, the statewide technical team will work with other local agency representatives to form an adaptive management response team. This team will determine causal factors related to population and habitat triggers at each analysis scale:

- Lek (population only): Causal factors will be considered within greater sage-grouse seasonal habitats associated with the lek. At a minimum, seasonal habitats within four miles of the lek will be considered.
- Lek cluster: Causal factors will be considered within greater sage-grouse seasonal habitats associated with the lek cluster.
- BSU (population only): Causal factors will be considered within greater sage-grouse seasonal habitats associated with the BSU.

Causal factors may include natural or human caused disturbances, changes in human or animal use patterns, and climatic influences, among many other possibilities. Adaptive management response teams would consider all available information to examine potential causal factor(s) and will ask questions such as: What natural and human-caused events have occurred within the causal factor analysis area? What additional greater sage-grouse threats exist in the area? Did factors and events outside the triggered scale contribute to the population or habitat decline? Did the event or outcome arise from the interaction of more than one potential causal factor(s)? Adaptive management response teams will document their findings in a report to the statewide technical team.

**Step 3**-Identify Appropriate Management Responses: The adaptive management response reams will identify appropriate management responses for each trigger and will document them in a report provided to the statewide technical team. Both proactive and reactive management responses may be included to address existing or anticipated threats in areas where warnings or triggers have been reached. The adaptive management response teams may also identify an emergency/contingency plan that would outline immediate management actions that would take place, in the event the trigger is exacerbated. Such a plan should include goals, objectives, management actions and monitoring requirements developed specifically for the appropriate geographic area and/or population being affected.

In the case of proactive responses to fire risk, short term management may include season-specific fuels

reduction, and long-term management may include prioritizing areas for fuel breaks and vegetation treatments. Reactive management responses may include emergency closures, re-prioritizing vegetation treatments for implementation, or repositioning fire resources. Many potential management responses may already be included as plan components in the proposed action and could be investigated to ensure they are being implemented or are working properly. Some potential management responses may be available for implementation immediately where National Environmental Policy Act (NEPA) analysis and decisionmaking are already complete. In many cases, a NEPA analysis will need to be initiated and completed before the action would occur.

**Step 4**-Implement Management Responses: Decision-makers from the appropriate land management agency may decide to implement the recommended management responses in coordination with the adaptive management response team within the affected response area or at the scale in which the trigger was reached. If a population hard trigger or a habitat trigger is reached, a much more aggressive management response may be anticipated. The federal land management agency local offices may implement the site specific actions outlined in the emergency/contingency response plan.

**Step 5**-Monitor Responses: The appropriate land management agency in coordination with the adaptive management response teams may continue to monitor the lek(s), lek cluster(s) and/or BSU(s) or affected area in which a recommended management response is being applied to determine if the responses are adequately addressing the reason for the population and/or habitat decline. This information would be used in Step 1 above, "Assessment of Greater Sage-grouse Population and Habitat Conditions" the following year.

## MONITORING MANAGEMENT RESPONSES

The appropriate land management agency will work with the statewide technical team to develop criteria that will be used to evaluate whether a lek (populations only), lek cluster, and/or BSU (populations only) that reached a trigger has recovered sufficiently or is trending in a positive direction. Longevity of a management response should be appropriate and apply to the type of management action being implemented.

The process for evaluating population and habitat management responses may include, but is not limited to: identification of upward population trends, based on an annual analysis of the greater sage-grouse State-Space model; response of vegetation community and habitat following fire or other disturbance (including habitat trending towards desired conditions); and evaluation of habitat or population response based on an adaptive management process to determine what management actions are successful, what actions are unlikely to be successful and should be discontinued, what objectives should be modified to better reflect an achievable goal, and what actions should be changed to achieve the desired outcome. Habitat triggers that had insufficient funds and resources available to implement projects will remain on the habitat trigger list and could be re-prioritized in the next annual evaluation by the statewide technical team. The team will also review the trigger list annually and determine whether a habitat trigger remains on the list or should be removed; if inadequate funding or other resources are continually not available to implement appropriate management responses for habitat triggers, the State of Nevada's Sagebrush Ecosystem Council will support efforts to request additional resources.

# DISTURBANCE CAP GUIDANCE
## Management Approach

This Land Management Plan (LMP) Amendment incorporates a 3% cap for anthropogenic disturbances in priority habitat management areas (PHMA). The disturbance cap applies to discretionary activities that result in anthropogenic disturbance in PHMA at the Biologically Significant Unit (BSU) (Figure H-2) and the project area scale. It must be determined whether proposed discretionary activities will exceed the cap on anthropogenic disturbances before a new project can be authorized. Discretionary activities would normally not be permitted if the 3% cap has been exceeded, unless a net conservation gain can be demonstrated.

For the BSUs, west-wide habitat degradation (disturbance) data layers will be used at a minimum to calculate the amount of disturbance and to determine if the disturbance cap has been exceeded. Locally collected disturbance data may be used to determine if the disturbance cap has been exceeded for project authorizations, and they may also be used to calculate the amount of disturbance in the BSUs. For actions that are non-discretionary, there is no requirement to calculate the project area scale disturbance. The project footprint would, however, be counted within the project area scale analysis of a discretionary disturbance in the same location proposed at a later date.

This disturbance cap guidance is considered other plan content and may be changed with administrative changes (36 CFR 219.13(c)).

**Formulas for calculations of the amount of disturbance in the PHMA in a BSU and or in a proposed project area are as follows:**

For the BSUs: Anthropogenic disturbances at the BSU scale are: *Oil/Gas Wells and Development Facilities, Coal Mines, Wind Towers, Solar Fields, Geothermal Development Facilities, Mining, Roads, Railroads, Power lines, Communication Towers, Other Vertical Structures, and Other Developed Rights of Ways*.

% Disturbance = (combined acres of the 12 disturbance types (above)) ÷ (acres of all lands within the PHMAs in a BSU) x 100.

For the Project Area Scale: Additional disturbances that are also considered at the project area scale are: *Coal Bed Methane Ponds, Meteorological Towers, Nuclear Energy Facilities, Airport Facilities, Military Range Facilities, Hydroelectric Plants, and Recreation Areas and Facilities (> 0.25 acres)*.

% Disturbance = (combined acres of the 12 disturbance types plus the 7 project area scale disturbance types (above)) ÷ (acres of all lands within the PHMA in the project area) x 100.

The denominator in the disturbance calculation formula consists of all acres of lands classified as PHMA within the analysis area (BSU or project area). Areas that are non-habitat, or are not currently supporting sagebrush cover (e.g., due to wildfire), are not excluded from the acres of PHMA in the denominator of the formula. Information regarding sage-grouse seasonal habitats, sagebrush availability, and areas with

the potential to support sage-grouse populations will be considered along with other local conditions that may affect sage-grouse during the analysis of the proposed project area.

**Project Analysis Area Method for Calculating Anthropogenic Disturbance Activities at the Project Area Scale**

1. Create a 4 mile buffer around the digitized proposed project footprint if it falls in or partially in PHMA (see Table H-5, for buffer sizes).
2. Identify any active or pending leks that fall within the 4 mile project buffer.
3. Create a 4 mile buffer around each active or pending lek that falls within the project buffer. If there are no leks within the project buffer, the analysis area is the spatial intersection of the proposed project buffer and PHMA.
4. Merge the intersection of the project buffer, lek buffers, and mapped PHMA. The intersection of the layers is the Anthropogenic Disturbance Project Area for calculating the percent of area disturbed by Anthropogenic Disturbances.
5. In the Anthropogenic Disturbance Project Area, check for accuracy of disturbance layers using site visit and/or imagery. Correct or add anthropogenic disturbance footprints (using imagery or other appropriate data sources) as needed. Consider, at a minimum, the direct area of influence buffers identified in Table H-5 when digitizing. Digitize all existing anthropogenic disturbances that are considered threats to greater sage-grouse. Using one-meter resolution NAIP imagery is recommended. Use existing local data if available.
6. The disturbance cap calculation will be used to inform a decision regarding the proposed project. When a project scale analysis extends into BLM lands, the state BLM office will be contacted to ensure that there is continuity in mapping and disturbance calculations.

**Table H-5. Anthropogenic Disturbance Types for Disturbance Calculations**

| Disturbance Type | Specific Activity | Feature Buffer Radius |
|---|---|---|
| **Oil and Gas** | | |
| | Wells | 263 feet (5.0 ac buffer) |
| | Power Plants | 263 feet (5.0 ac buffer) |
| **Coal** | | |
| | Mines | Digitized Polygon Area |
| | Power Plants | Digitized Polygon Area |
| | Coal Bed Methane Ponds | Digitized Polygon Area |
| **Wind** | | |
| | Wind Turbines | 204 feet (3.0 ac buffer) |
| | Power plants | 204 feet (3.0 ac buffer) |
| **Solar** | | |
| | Fields/Power Plants | 316 feet (7.2 ac buffer) |
| **Geothermal** | | |
| | Wells | 204 feet (3.0 ac buffer) |
| | Power plants | Digitized Polygon Area |
| **Mining** | | |
| | Locatable Developments | Digitized Polygon Area |
| **Roads** | | |
| | Surface Streets* | 40.7 feet |
| | Major Roads | 84.0 feet |
| | Interstate Highways | 240.2 feet |
| **Railroads** | | |
| | Active Lines | 30.8 feet |
| **Powerlines** | | |
| | 1-199 kV | 100 feet |
| | 200-399 kV | 150 feet |
| | 400-699 kV | 200 feet |
| | 700+ kV | 250 feet |
| **Communication** | | |
| | Towers | 186 feet (2.5 ac buffer) |
| | Meteorological towers | 186 feet (2.5 ac buffer) |
| **Facilities** | | |
| | Nuclear Energy Facilities | Digitized Polygon Area |
| | Airport Facilities | Digitized Polygon Area |
| | Military Range Facilities | Digitized Polygon Area |
| | Hydroelectric Plants | Digitized Polygon Area |
| | Recreation Areas and Facilities (>0.25 acres) | Digitized Polygon Area |

*Includes graded gravel roads and those more improved, not dirt and two-track roads or trails