



DRAFT Supplemental Environmental Impact Statement, Greater Sage-Grouse 2020

2 Hard Looks, 2011-15 and 2017-19



143 alternatives
considered in **18 EISs**



2,313
people attended



48,023
total pages of NEPA analysis



54
public meetings



\$16.9 million
total cost



326
partners and
cooperators

Public Comments

8,512 unique scoping comments

15,885 substantive comments on draft EISs



Habitat Investments

Treatment and Restoration, 2013–19

\$294 million 2.7 million acres

2020, planned

\$37 million 316,000 acres



Another Hard Look, 2020



United States Department of the Interior
BUREAU OF LAND MANAGEMENT

Idaho State Office
1387 South Vinnell Way
Boise, Idaho 83709-1657



FEB 10 2020

In Reply Refer To:
1793 (930)

Dear Reader:

The Idaho Greater Sage-Grouse Draft Supplemental Environmental Impact Statement (DSEIS) is available for your review and comment. The Bureau of Land Management (BLM) prepared this document in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, the Federal Land Policy and Management Act of 1976, as amended, implementing regulations, and other applicable law and policy. Please note when reading this document that we refer to the entire planning process that culminated in a Record of Decision in March 2019, as the 2019 Planning Process or Effort. The NEPA analysis, including the Draft Environmental Impact Statement (DEIS) and the Final Environmental Impact Statement (FEIS) were completed in 2018 so we refer to those documents as the 2018 DEIS and the 2018 FEIS.

The affected area includes the following BLM Idaho Field Offices: Owyhee, Four Rivers, Bruneau, Jarbidge, Burley, Shoshone, Pocatello, Upper Snake, Challis, and Salmon. The planning area encompasses approximately 11.4 million surface acres administered by the BLM and approximately 27 million subsurface acres in Ada, Adams, Bear Lake, Bingham, Blaine, Bonneville, Butte, Camas, Caribou, Cassia, Clark, Custer, Elmore, Fremont, Gem, Gooding, Jefferson, Jerome, Lemhi, Lincoln, Madison, Minidoka, Oneida, Owyhee, Payette, Power, Twin Falls, and Washington Counties.

The Management Alignment Alternative has been identified in the DSEIS as the preferred alternative. Identification of the preferred alternative does not indicate any commitments on the part of the BLM with regard to a final decision. In developing the Final Supplemental Environmental Impact Statement (FSEIS), which is the next phase of the planning process, the decision maker may select various management actions from each of the alternatives analyzed in the DSEIS for the purpose of creating a management strategy that best meets the needs of the resources and values in this area under the BLM multiple use and sustained yield mandate.

The BLM encourages the public to review and provide comments on the DSEIS. The DSEIS is available on the project website at: <https://goo.gl/Jd8uVf>. Hard copies are also available for public review at BLM offices within the planning area. Public comments will be accepted for forty-five (45) calendar days following the Environmental Protection Agency's publication of its Notice of Availability in the *Federal Register*. The BLM can best utilize your comments and resource information submissions if received within the review period.

Written comments may be submitted as follows (submittal of electronic comments is encouraged):

1. Written comments may be submitted electronically at:
<https://goo.gl/Jd8uVf>.
2. Written comments may also be mailed directly, or delivered to, the BLM at:
Bureau of Land Management
Idaho State Office
Attn: Greater Sage-Grouse State Implementation Lead
1387 S. Vinnell Way
Boise, Idaho 83709

To facilitate analysis of comments and information submitted, we encourage you to submit comments in an electronic format. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, be advised that your entire comment - including your personal identifying information - may be made publicly available at any time.

While you can ask us in your comment to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Thank you for your continued interest in Greater Sage-Grouse management. We appreciate the information and suggestions you contribute to the process.



John F. Ruhs
State Director

Idaho Greater Sage-Grouse Draft Supplemental Environmental Impact Statement

Responsible Agency: United States Department of the Interior
Bureau of Land Management

Abstract: This draft supplemental environmental impact statement (DSEIS) has been prepared by the United States Department of the Interior (DOI), Bureau of Land Management (BLM). The DSEIS describes and analyzes the eight alternatives considered during the 2015 and 2019 Greater Sage-Grouse planning processes, BLM's consultation and coordination process with federal and state stakeholders, and the rigorous analysis completed to align BLM Greater Sage-Grouse management with the State of Idaho's plans.

On October 16, 2019, the US District Court for the District of Idaho issued an order granting a motion for a preliminary injunction filed by Plaintiffs Western Watersheds Project, WildEarth Guardians, Center for Biological Diversity, and Prairie Hills Audubon Society. The court found that the Plaintiffs were likely to succeed on the merits of their claims that the BLM violated the National Environmental Policy Act (NEPA) when adopting the 2019 Greater Sage-Grouse plans. The BLM has prepared this DSEIS to review its previous NEPA analysis, clarify and augment it where necessary, and provide the public with additional opportunities to review and comment. The BLM's DSEIS, including any comments that the agency receives, will help the BLM determine whether its 2015 and 2019 land use planning and NEPA processes have sufficiently addressed Greater Sage-Grouse habitat conservation or whether the BLM should initiate a new land use planning process to consider additional alternatives or new information. To inform this decision that the BLM will make, it has prepared this DSEIS to address four specific issues: the range of alternatives, need to take a "hard look" at environmental impacts, cumulative effects analysis, and the BLM's approach to compensatory mitigation.

Review Period: Comments on the Idaho Greater Sage-Grouse Draft Supplemental Environmental Impact Statement will be accepted for forty-five (45) calendar days following publication of the United States Environmental Protection Agency's Notice of Availability in the Federal Register

For further information, contact:

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ACRONYMS AND ABBREVIATIONS

Full Phrase

ACEC	Area of Critical Environmental Concern
AML	Appropriate Management Level
ARMPA	approved resource management plan amendment
BLM	Bureau of Land Management
BMP	best management practice
BSU	Biologically Significant Unit
CEA	Cumulative Effects Analysis
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
COT	Conservation Objectives Team
CSU	controlled surface use
CX	Categorical Exclusion
DNA	Determination of NEPA Adequacy
DOI	US Department of the Interior
EIS	environmental impact statement
ESA	Endangered Species Act
FLPMA	Federal Land Policy and Management Act
GHMA	General Habitat Management Area
IDFG	Idaho Department of Fish and Game
IHMA	Important Habitat Management Area
IM	Instruction Memorandum
LCHMA	Linkage Connectivity Habitat Management Area
LG	Livestock Grazing
LHA	Land Health Assessment
LUPA	Land Use Plan Amendment
MAA	Management Alignment Alternative
MD	Management Decision
MOA	Memorandum of Agreement
NEPA	National Environmental Policy Act
NRCS	Natural Resource Conservation Service
NSO	no surface occupancy
NTT	National Technical Team
OHMA	Occupied Habitat Management Area
OHV	Off-highway Vehicle
PHMA	Priority Habitat Management Area

RDF	required design feature
RMP	resource management plan
RMPA	resource management plan amendment
RNA	Research Natural Area
ROD	record of decision
ROW	right of way
SFA	Sagebrush Focal Area
SSS	Special Status Species
TL	timing limitation
US	United States
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
WAFWA	Western Association of Fish and Wildlife Agencies
WEM	Waivers, Exceptions, and Modifications

Executive Summary

ES.I INTRODUCTION

Greater Sage-Grouse is a state-managed species that depends on sagebrush steppe ecosystems. These ecosystems are managed in partnership across its range by federal, state, and local authorities. State agencies responsible for fish and wildlife management possess broad responsibility for protecting and managing fish, wildlife, and plants within their borders, except where preempted by federal law. Similarly, the BLM has broad responsibilities to manage public lands and resources for the public's benefit. Approximately half of Greater Sage-Grouse habitat is managed by the BLM and Forest Service. State agencies are at the forefront of efforts to maintain healthy fish and wildlife populations and to conserve at-risk species. State-led efforts to conserve the species and its habitat date back to the 1950s. For 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 BLM prepared this Draft Supplemental Environmental Impact Statement (DSEIS) to clarify analysis from the 2018 Final Environmental Impact Statement (2018 FEIS) published as part of the 2019 Plan Amendment Process and subsequent Record of Decision. This DSEIS clarifies the range of alternatives analyzed, the range-wide nature of the analysis, and other aspects of the 2018 FEIS where information was incorporated by reference from the 2015 Greater Sage-Grouse Land Use Plan Amendments.

In 2010, the US Fish and Wildlife Service (USFWS) determined that listing the Greater Sage-Grouse under the Endangered Species Act of 1973 (ESA) was “warranted, but precluded” by other priorities. In its determination, the USFWS found there to be inadequate regulatory mechanisms to protect Greater Sage-Grouse and conserve its habitat. In response, the BLM, in coordination with the Forest Service, USFWS, and state agencies, developed a management strategy that included targeted Greater Sage-Grouse management actions. In 2015, the BLM and Forest Service adopted land use plan amendments and revisions to 98 BLM and Forest Service land use plans across ten western states. These planning decisions addressed, in part, threats to the Greater Sage-Grouse and its habitat. The amended land use plans govern the management of 67 million acres of Greater Sage-Grouse habitat on federal lands.

In September 2015, the USFWS determined that the Greater Sage-Grouse did not warrant listing under the ESA. The USFWS based its 2015 determination, in part, on the regulatory certainty provided by the conservation commitments and management actions in the federal planning decisions, as well as on other private, state, and federal conservation efforts.

The 2015 plans recommended that sagebrush focal areas (SFAs) be proposed for withdrawal from location and entry under the Mining Law of 1872. While the BLM later proposed to withdraw these areas, it canceled that proposed withdrawal on October 11, 2017. The BLM determined that the proposal to withdraw these areas was unreasonable in light of the data that showed that mining affected less than 0.1 percent of Greater Sage-Grouse across its occupied range.

On March 29, 2017, the Secretary of the Interior issued Secretary's Order 3349, *American Energy Independence*. It ordered DOI agencies to reexamine practices “to better balance conservation strategies and policies with the equally legitimate need of creating jobs for hard-working American families.”

On June 7, 2017, the Secretary issued Secretary's Order 3353 with a purpose of enhancing cooperation among eleven western states and the BLM in managing and conserving Greater Sage-Grouse. Secretary's Order 3353 directed an Interior Review Team, consisting of the BLM, the USFWS, and US Geological Survey (USGS), to coordinate with the Sage-Grouse Task Force. They also were directed to review the 2015 Greater Sage-Grouse plans and associated policies to identify provisions that may require modification, including opportunities to enhance consistency with individual state plans and better balance the BLM's multiple-use mission, as directed by Secretary's Order 3349.

On August 4, 2017, the Interior Review Team submitted its Report in Response to Secretary's Order 3353. The 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.

In the *Federal Register* of 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.

The BLM continues to prioritize efforts to conserve Greater Sage-Grouse and restore sagebrush habitat, and increase the amount of acres treated in every Fiscal Year. In Fiscal Year 2018 approximately 530,000 acres were treated and BLM is currently working on more detailed metrics and data for these acres treated. Also, in Fiscal Year 2017 the BLM treated approximately 480,000 acres, for an increase of almost 100,000 acres over 2016 accomplishments. The Fiscal Year 2017 treatments included 185,000 acres of conifer removal; 65,000 acres of fuel breaks; 125,000 acres with invasive species treatments; 10,000 acres of habitat protection; and restored habitat on 94,000 acres of uplands and another 600 acres of riparian habitat. In 2019 Idaho conducted habitat treatments on 208,000 acres.

The BLM is committed to working directly with local communities on sagebrush conservation efforts and to emulate the successes demonstrated by the Natural Resources Conservation Service (NRCS) through the Sage-Grouse Initiative on private lands. These efforts include:

- an agreement with the Intermountain West Joint Venture to work with local cattlemen associations to improve sagebrush rangeland conditions through actions such as controlling invasive species, improving mesic areas, and removing invasive conifers;
- a Memorandum of Understanding between the BLM, NRCS, and the Forest Service resulting in development of a map that identifies areas where the agencies have ongoing restoration projects and opportunities for additional collaboration across land ownerships and associated landscapes;
- promoting a locally led collaborative conservation, the BLM, the USFWS, and the Geological Survey are collaborating with the Western Association of Fish and Wildlife Agencies as they lead the development and implementation of the Sagebrush Conservation Strategy;
- working with livestock permittees and stakeholders on "targeted grazing" to utilize grazing as a tool to create and maintain fuel breaks to manage the threats of wildfire and invasive species in or next to Greater Sage-Grouse habitats; and,
- working to develop "outcome-based grazing" to provide greater flexibility for livestock permittees and land managers to meet habitat objectives as conditions on-the-ground change.

During the 2019 planning process's public scoping period, the BLM sought public comments on whether all, some, or none of the 2015 Greater Sage-Grouse plans should be amended, what issues should be considered, and if plans should be completed at the state level rather than at the national level. In addition, the BLM recognizes that the Greater Sage-Grouse is a state-managed species that depends on sagebrush steppe habitats managed in partnership by federal, state, and local authorities. Input from governors would weigh heavily when the BLM considers what management changes should be made and when ensuring consistency with the BLM's multiple-use mission.

Further, in the 2018 DEIS the BLM requested public comments on the BLM's approach to compensatory mitigation. In response to these comments and information supplied by the states about how to align with their compensatory mitigation laws and policies, the 2018 Final EIS clarified the BLM's approach to compensatory mitigation in its Management Alignment Alternative. Through this Draft Supplemental EIS (DSEIS), the BLM now seeks additional comment from the public on compensatory mitigation.

This DSEIS also addresses and clarifies the BLM's reliance on scientific information, including how the BLM addresses the recommendation and objectives in the National Technical Team [NTT] and Conservation Objectives Team [COT] reports. The BLM, the USFWS, states and other federal agency partners prepared the NTT (2011) and the COT (2013) reports to identify rangewide Greater Sage-Grouse conservation objectives and conservation measures that would: inform the USFWS 2015 decision under the Endangered Species Act and for partners; and provide guidance for the BLM to consider through land use planning, which the BLM did in 2015 and 2019, and again in this DSEIS.

Further, at the time that the NTT and COT reports were being developed, the BLM, USFWS, and state agencies had not completely developed or established the robust regulatory programs to conserve Greater Sage-Grouse that exist today.

In 2015, the BLM developed an action alternative around the NTT report. In the 2018 FEIS, the BLM incorporated this analysis by reference. The BLM also coordinated with the USFWS during the process culminating in the 2019 RODs to make sure that the conservation measures from the NTT and COT informed the management alignment alternative (**Appendix S-1**).

Idaho BLM, the Fish and Wildlife Service, and the Idaho Governor's Office of Species Conservation used the COT report as the benchmark when developing the Management Alignment Alternative. The USFWS was a cooperating agency that attended all meetings. They verified that the changes developed to align BLM management with the State plans were consistent with conservation measures in the COT Report (**Appendix S-1**). Including the USFWS as a cooperating agency during the 2019 planning process ensured that BLM used the same materials and newest science that the USFWS uses and recommends for Greater Sage-Grouse management.

This DSEIS also clarifies how the BLM considered comments, including those of other federal agencies (including EPA) and experts, when developing its 2019 planning decisions.

In 2018, the Environmental Protection Agency (EPA) provided comments on the Draft RMPAs/EISs. Specifically, they provided six comments on the Idaho Draft RMPA/EIS, seven comments on the Nevada/Northeast California Draft RMPA/EIS, six on the Utah Draft RMPA/EIS, three on the Wyoming Draft RMPA/EIS, six on the Oregon Draft RMPA/EIS, and five on the Colorado Draft RMPA/EIS. EPA's comments include suggestions and questions regarding lek buffers, recent science, mitigation, adaptive

management, and fluid minerals. BLM responded to each of EPA's comments and made corrections and/or changes in the 2018 FEISs. The complete EPA comment analysis can be found in the administrative record.

ES.2 PURPOSE OF AND NEED FOR ACTION

In the Federal Land Policy and Management Act (FLPMA), Congress provided the BLM with discretion and authority to manage public lands for multiple use and sustained yield and declared it the policy of the United States to, consistent with the laws governing the administration of the public lands, coordinate planning activities with the land use planning and management programs of other federal, state, and local governments. Further, FLPMA specifically provides that it neither enlarges nor diminishes the authority of the states in managing fish and wildlife. As the sovereign entities with the lead role in managing game species, including Greater Sage-Grouse, states play a critical role in conserving the Greater Sage-Grouse and its habitat.

In the 2019 Planning effort the BLM modified its approach to managing Greater Sage-Grouse habitat in land use plans by (1) enhancing cooperation and coordination with the State of Idaho, (2) aligning with DOI and BLM policies issued since 2015, and (3) incorporating appropriate management flexibility and adaptation to better align with Idaho's conservation plan. The BLM achieved these goals while maintaining the vast majority of Greater Sage-Grouse protections it incorporated into its land use plans in 2015. By implementing these land use plan conservation measures and continuing to exercise its discretion to approve future project proposals under appropriate terms and conditions or deny them where appropriate, the BLM can adequately protect Greater Sage-Grouse and its habitat while meeting its general obligation under FLPMA to manage public lands under principles of multiple use and sustained yield.

On October 16, 2019, the US District Court for the District of Idaho issued an order granting a motion for a preliminary injunction filed by Plaintiffs Western Watersheds Project, WildEarth Guardians, Center for Biological Diversity, and Prairie Hills Audubon Society. The court found that the Plaintiffs were likely to succeed on the merits of their claims that the BLM violated the National Environmental Policy Act (NEPA) when adopting the 2019 Greater Sage-Grouse plans.

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ES.3 ITEMS TO BE CLARIFIED IN THIS DSEIS

The items considered in this DSEIS are related to the analysis in the 2018 Final EIS. These items are:

- clarifying the range of alternatives (including how the BLM considered the full range of the 2015 alternatives in the 2019 planning process),

- taking a hard look and using the best available science (including clarified effects analysis, how the 2015 and 2019 FEISs addressed the NTT and COT recommendations and conservation measures) (**Appendix S-1**),
- clarifying that the cumulative effects analysis was done at the range wide level and organized by WAFWA Management Zone (MZs) Updated language also highlights why WAFWA MZs were used,
- an updated Reasonably Foreseeable Future Actions.

ES.4 ANALYSIS CONCLUSIONS

The additional information provided in this SEIS do not change analytical conclusions from either the 2018 Proposed RMPA/Final EIS or the 2015 Proposed LUPA/Final EIS. See summary of environmental consequences from 2018 in Section ES.4 of the Proposed RMPA/Final EIS and from 2015 in Section 2.13 of the Proposed LUPA/Final EIS.

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Chapter I. Purpose and Need for Action

I.1 INTRODUCTION

Greater Sage-Grouse is a state-managed species that depends on sagebrush steppe ecosystems. These ecosystems are managed in partnership across its range by federal, state, and local authorities. State agencies responsible for fish and wildlife management possess broad responsibility for protecting and managing fish, wildlife, and plants within their borders, except where preempted by federal law. Similarly, the BLM has broad responsibilities to manage public lands and resources for the public's benefit. Approximately half of Greater Sage-Grouse habitat is managed by the BLM and Forest Service.

State agencies are at the forefront of efforts to maintain healthy fish and wildlife populations and to conserve at-risk species. State-led efforts to conserve the species and its habitat date back to the 1950s. For 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.

In 2010, USFWS determined that listing the Greater Sage-Grouse under the Endangered Species Act of 1973 (ESA) was “warranted, but precluded” by other priorities. In its determination, the USFWS found there to be inadequate regulatory mechanisms to protect Greater Sage-Grouse and conserve its habitat. In response, the BLM, in coordination with the Forest Service, USFWS, and state agencies, developed a management strategy that included targeted Greater Sage-Grouse management actions. In 2015, the BLM and Forest Service adopted land use plan amendments and revisions to 98 BLM and Forest Service land use plans across ten western states. These planning decisions addressed, in part, threats to the Greater Sage-Grouse and its habitat. The amended land use plans govern the management of 67 million acres of Greater Sage-Grouse habitat on federal lands.

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were directed to review the 2015 Greater Sage-Grouse plans and associated policies to identify provisions that will maintain healthy Sage Grouse populations but may require modification, including opportunities to enhance consistency with individual state plans and better balance the BLM's multiple-use mission, as directed by Secretary's Order 3349.

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- working with livestock permittees and stakeholders on "targeted grazing" to utilize grazing as a tool to create and maintain fuel breaks to manage the threats of wildfire and invasive species in or next to Greater Sage-Grouse habitats; and,
- working to develop "outcome-based grazing" to provide greater flexibility for livestock permittees and land managers to meet habitat objectives as conditions on-the-ground change.

During the public scoping period for the 2019 planning process, the BLM sought public comments on whether all, some, or none of the 2015 Greater Sage-Grouse plans should be amended, what issues should be considered, and if plans should be completed at the state level rather than at the national level. The BLM specifically sought public comment on SFA designations, mitigation standards, lek buffers,

disturbance and density caps, habitat boundaries to reflect new information, and reversing adaptive manage response when the BLM determines that resource conditions no longer warrant those responses. In addition, the BLM recognizes that the Greater Sage-Grouse is a state-managed species that depends on sagebrush steppe habitats managed in partnership by federal, state, and local authorities. Input from governors would weigh heavily when the BLM considers what management changes should be made and when ensuring consistency with the BLM's multiple-use mission.

After reviewing comments received during the public scoping period, the BLM proposed the Draft EIS on May 4, 2018 and ultimately issued the Final EIS on December 6, 2018. Through the notice and comment process, the BLM was able to accomplish the objectives set forth in SO 3353 and remedy inconsistencies that existed in the 2015 LUPAs. Below is a summary of some of the issues raised during the Draft EIS and addressed during the Final EIS.

Further, in the 2018 DEIS the BLM again requested public comments on a number of issues, including the BLM's approach to compensatory mitigation. In response to these comments and information supplied by the states about how to align with their compensatory mitigation laws and policies, the 2018 Final EIS clarified the BLM's approach to compensatory mitigation in its Proposed Plan Amendment. Through this Draft Supplemental EIS (DSEIS), the BLM now seeks additional comment from the public on compensatory mitigation.

This DSEIS also addresses and clarifies the BLM's reliance on scientific information, including how the BLM addresses the recommendation and objectives in the National Technical Team [NTT] and Conservation Objectives Team [COT] reports. The BLM, the USFWS, states and other federal agency partners prepared the NTT (2011) and the COT (2013) reports to identify rangewide Greater Sage-Grouse conservation objectives and conservation measures that would: inform the USFWS 2015 decision under the Endangered Species Act and for partners; and provide guidance for the BLM to consider through land use planning, which the BLM did in 2015 and 2019, and again in this DSEIS. The NTT and COT reports constituted starting points for the BLM to consider in at least one alternative to be considered through the NEPA and land use planning process. They are not compendiums that, standing alone, represent best available science. The NTT and COT reports do not address, or even attempt to address, how the implementation of their Greater Sage-Grouse conservation measures would affect other uses of the public lands—such as recreation, fluid mineral development, mining, and livestock grazing. Moreover, the NTT and COT reports do not quantify, or even attempt to quantify, the Greater Sage-Grouse conservation benefits of each respective conservation measure.

At the time that the NTT and COT reports were being developed, the BLM, USFWS, and state agencies had not completely developed or established the robust regulatory programs to conserve Greater Sage-Grouse that exist today.

In 2015, the BLM developed an action alternative around the NTT report. In the 2018 Final EIS, the BLM incorporated this analysis by reference. The BLM also coordinated with USFWS during the process culminating in the 2019 RODs to make sure that the conservation measures from the NTT and COT informed the management alignment alternative (**Appendix S-1**).

Idaho BLM, the Fish and Wildlife Service, and the Idaho Governor's Office of Species Conservation used the COT report as the benchmark when developing the Management Alignment Alternative. USFWS was a cooperating agency that attended all meetings. They verified that the changes developed to align

BLM management with the State plans were consistent with conservation measures in the COT Report (**Appendix S-1**). Including the USFWS as a cooperating agency during the 2019 planning process ensured that BLM used the same materials and newest science that the USFWS uses and recommends for Greater Sage-Grouse management.

Prior to the release of the 2018 Draft EIS, the USFWS shared a draft comment memo with the Idaho BLM that supported the recommendations in the Idaho management alignment alternative. Specifically, USFWS concluded that recommendations provided by the State of Idaho incorporated relevant new science that would ensure regulatory mechanisms for BLM-administered lands would continue to be adequate to meet the COT Objectives.

This DSEIS also clarifies how the BLM considered comments, including those of other federal agencies (including EPA) and experts, when developing its 2019 planning decisions. For example, when the BLM published its 2018 DSEISs, the BLM received comments about potential reductions to lek buffers. Under the Management Alignment Alternative in the 2018 DSEIS, BLM Idaho considered removing GHMA lek buffers and reducing IHMA lek buffers. But in response to public comments, BLM Idaho changed its approach in the 2018 Final EIS. Under the Management Alignment Alternative in the 2018 Final EIS, BLM Idaho considered maintaining the GHMA buffers rather than eliminating them and maintaining larger IHMA buffers than those considered in the DSEIS's Management Alignment Alternative (see **Section 4.5.1, Modifying Lek Buffers, in Chapter 4**).

In 2018, the Environmental Protection Agency (EPA) provided comments on the Draft RMPAs/EISs. Specifically, they provided six comments on the Idaho Draft RMPA/EIS, seven discreet comments on the Nevada/Northeast California Draft RMPA/EIS, six on the Utah Draft RMPA/EIS, three on the Wyoming Draft RMPA/EIS, six on the Oregon Draft RMPA/EIS, and five on the Colorado Draft RMPA/EIS. EPA's comments include suggestions and questions regarding lek buffers, recent science, mitigation, adaptive management, and fluid minerals. BLM responded to each of EPA's comments and made corrections and/or changes in the 2018 Final EISs. The complete EPA comment analysis can be found in the administrative record. This DSEIS also clarifies how the BLM considered comments, including those of other federal agencies and experts, when developing its 2019 planning decisions (**Appendix I**).

In Idaho, the EPA contacted the BLM by telephone before submitting their comments on the 2018 Final EIS. EPA was interested in understanding how the alignment alternative was developed and wanted to let us know that they were appreciative that we considered their Draft EIS comments about lek buffers (see **Appendix 4**). During the call, BLM explained the process used to develop the Management Alignment Alternative. For example, we discussed the multidisciplinary approach where stakeholders from the Governor's Sage - grouse Taskforce worked closely with the BLM, USFWS, and other federal partners to create an alternative that met the needs of Greater Sage-Grouse. The EPA followed up with a December 20, 2018 comment letter on the Final EIS.

EPA's December 20, 2018 Final EIS comment letter acknowledged the changes that the BLM made in response to their Draft EIS comments. Specifically, they acknowledged that the BLM considered their Draft EIS comments regarding buffers by increasing the size in IHMA and adding them back in GHMA in the Final EIS. The EPA also acknowledged that the BLM considered their recommendation to "describe how data and science informed the buffer decisions." EPA wrote:

In our August 2018 comments on the Draft EIS, we recommended that the Final EIS include a description of how the BLM evaluated and interpreted the data and science relevant to the decision to reduce lek buffers within Important Habitat Management Areas and to remove buffers and mitigation requirements within General Habitat Management Areas. We appreciate that, for the FEIS, lek buffers have been increased relative to the DEIS, and mitigation requirements for General Habitat Management Areas are now included. Larger buffers and broader application of mitigation requirements will result in improved protection for Greater Sage-Grouse.

Regarding our recommendation to describe how data and science relevant to the decision was evaluated and interpreted, we appreciate this addition in the FEIS's Idaho-Specific Comment Responses:... We appreciate your consideration of our comments.

Ultimately, BLM Idaho's 2019 ROD and ARMPA did not reduce lek buffers in PHMA, leaving them unchanged from those in the 2015 ARMPA. BLM Idaho, however, chose to reduce lek buffers in IHMA and GHMA to better align buffers distances with the Governor's three-tier habitat approach where PHMA has the most restrictive buffers (same as 2015 ARMPA), IHMA has slightly reduced buffer distances, and GHMA has the smallest buffer distances. This approach encourages development outside of the best habitat and into lesser quality or non-habitat. All buffer reductions were within the ranges reported in the scientific literature (USGS Open File Report 2014-1239).

I.2 PURPOSE AND NEED FOR ACTION

In the Federal Land Policy and Management Act (FLPMA), Congress provided the BLM with discretion and authority to manage public lands for multiple use and sustained yield and declared it the policy of the United States to, consistent with the laws governing the administration of the public lands, coordinate planning activities with the land use planning and management programs of other federal, state, and local governments. Further, FLPMA specifically provides that it neither enlarges nor diminishes the authority of the states in managing fish and wildlife. As the sovereign entities with the lead role in managing game species, including Greater Sage-Grouse, states play a critical role in conserving the Greater Sage-Grouse and its habitat.

In the 2019 Planning effort the BLM modified its approach to managing Greater Sage-Grouse habitat in land use plans by (1) enhancing cooperation and coordination with the State of Idaho, (2) aligning with DOI and BLM policies issued since 2015, and (3) incorporating appropriate management flexibility and adaptation to better align with Idaho's conservation plan. The BLM achieved these goals while maintaining the vast majority of Greater Sage-Grouse protections it incorporated into its land use plans in 2015. By implementing these land use plan conservation measures and continuing to exercise its discretion to approve future project proposals under appropriate terms and conditions or deny them where appropriate, the BLM can adequately protect Greater Sage-Grouse and its habitat while meeting its general obligation under FLPMA to manage public lands under principles of multiple use and sustained yield.

On October 16, 2019, the US District Court for the District of Idaho issued an order granting a motion for a preliminary injunction filed by Plaintiffs Western Watersheds Project, WildEarth Guardians, Center for Biological Diversity, and Prairie Hills Audubon Society. The court found that the Plaintiffs were likely to succeed on the merits of their claims that the BLM violated the National Environmental Policy Act (NEPA) when adopting the 2019 Greater Sage-Grouse plans.

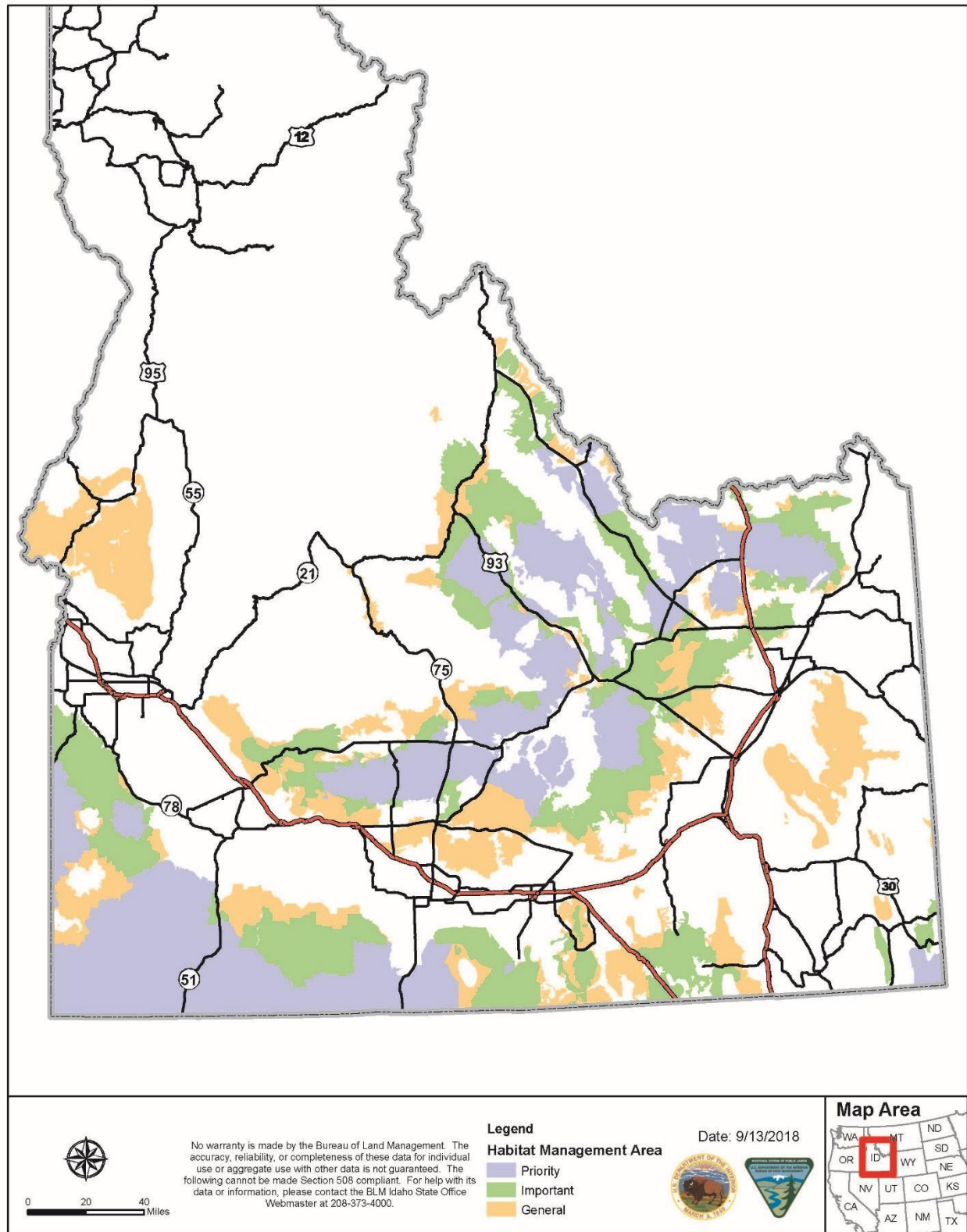
The BLM has prepared this DSEIS to review its previous NEPA analysis, clarify and augment it where necessary, and provide the public with additional opportunities to review and comment. The BLM's DSEIS, including any comments that the agency receives, will help the BLM determine whether its 2015 and 2019 land use planning and NEPA processes have sufficiently addressed Greater Sage-Grouse habitat conservation or whether the BLM should initiate a new land use planning process to consider additional alternatives or new information. To inform this decision that the BLM will make, it has prepared this DSEIS to address four specific issues: the range of alternatives, need to take a "hard look" at environmental impacts, cumulative effects analysis, and the BLM's approach to compensatory mitigation.

I.3 PLANNING AREA AND CURRENT MANAGEMENT

Figure I-1 shows the DSEIS planning area. See **Chapter 3**, Affected Environment, for a description of the planning area and current management.

Priority Habitat Management Areas (PHMA) are those that meet some stage of the Greater Sage-Grouse life-cycle requirements, based on best available science. PHMA include a variety of important seasonal habitats and movement corridors that are spread across geographically diverse and naturally fragmented landscapes. Greater Sage-Grouse use multiple areas to meet seasonal habitat needs throughout the year and the resulting mosaic of habitats—winter, breeding, nesting, early brood-rearing, late brood-rearing, transitional, and movement corridor habitats—can encompass large areas. Broad habitat maps increase the likelihood that all seasonal habitats (including transition and movement corridors) are included. While areas of non-habitat, such as canyons, water bodies, and human disturbances, in and of themselves may not provide direct habitat value for Greater Sage-Grouse, these areas may be crossed by birds when moving between seasonal habitats; therefore, these habitat management areas are not strictly about managing habitat but are about providing those large landscapes that are necessary to meet the life-stage requirements for Greater Sage-Grouse. These will include areas that do not meet the habitat requirements described in the Seasonal Habitat Objectives table in the 2015 Final EIS. These areas meet Greater Sage-Grouse habitat needs by maintaining large, contiguous expanses of relatively intact sagebrush vegetation community.

Figure I-1
Planning Area Consists of Designated Greater Sage-Grouse Habitat in Idaho



I.4 2019 ISSUES DEVELOPMENT

I.4.1 Issues and Related Resource Topics Identified Through Scoping as Part of the 2019 Planning Process

When deciding which issues to address related to the purpose and need, BLM considers points of disagreement, debate, or dispute regarding an anticipated outcome from a proposed action. Issues are based on anticipated environmental effects; as such, issues can help shape the proposal and alternatives. The BLM used internal, agency, and public scoping to identify issues to consider in the environmental analysis. A summary of the scoping process as part of the 2019 planning process is presented in a report titled Potential Amendments to Land Use Plans Regarding Greater Sage-Grouse Conservation Scoping Report (<https://goo.gl/FopNgW>).

When determining whether to retain an issue for more detailed analysis in the 2018 RMPA/EIS, the interdisciplinary team considered, among other things, the following:

- The environmental impacts associated with the issue and the threats to species and habitat associated with the issue are central to development of a Greater Sage-Grouse management plan or of critical importance.
- A detailed analysis of environmental impacts related to the issue is necessary to make a reasoned choice between alternatives.
- The environmental impacts associated with the issue are a significant point of contention among the public or other agencies.
- Whether there are potentially significant impacts on resources associated with the issue.

Ultimately, it was important for decision-makers and the public to understand the impacts that each of the alternatives would have on specific resources; therefore, the BLM used the resource topics that were tied to relevant issues as a heading to indicate which resources would be affected by a management change. Resource topics helped organize the discussions of the affected environment (**Chapter 3**) and environmental consequences (**Chapter 4**). Issues and resource topics were tracked in parallel structure throughout the affected environment and environmental consequences for easy reference.

The sections below lay out how issues raised during scoping for the 2019 planning process, as well as related resource topics, were considered in the 2018 EIS. Generally, they fell into the following categories:

- Issues and related resource topics retained for further consideration in the 2018 RMPA/EIS—These were issues raised during scoping that were retained in the 2018 RMPA/EIS and for which alternatives were developed to address the issues. In some cases, the resolution in the alternatives were previously analyzed in the 2015 Final EIS; in other cases, additional analysis is needed in the 2018 RMPA/EIS. Because the issues were analyzed under resource topics in 2015, the resource topics corresponding with those retained for further analysis were also considered in the 2018 RMPA/EIS. Just like issues, they may have been analyzed in the 2015 Final EIS for those decisions included in the 2018 RMPA/EIS.
- Clarification of decisions in the 2015 Approved Resource Management Plan Amendment (ARMPA)—These are decisions or frameworks in the 2015 ARMPA that require clarification as

to their application or implementation. No new analysis was required, as the intentions behind the decisions were analyzed in the 2015 Final EIS.

- Issues and resource topics not carried forward for additional consideration or analysis—These are issues brought up during scoping that were not carried forward in the 2018 RMPA/EIS. While some of these issues were considered in the 2018 RMPA/EIS, they did not require additional analysis because they were analyzed in the 2015 Final EIS. Others were not carried forward in the 2018 RMPA/EIS because they did not further the purpose of aligning with the state’s conservation plan. Similar to issues, there were resource topics that were not retained for further analysis in the 2018 RMPA/EIS. This is because either they were not affected by the changes proposed in Chapter 2 of the 2018 RMPA/EIS or because the effect was analyzed in the 2015 Final EIS.

Issues and Related Resource Topics Retained for Further Consideration in this DSEIS

Table I-1 summarizes those issues below that were identified through scoping and that have been retained for consideration and additional discussion in **Chapters 3** and **4**.

The issues identified in **Table I-1** are significant because they address concerns raised by the Idaho Governor and are specific to aligning the 2015 ARMPA/ROD with the Governor of Idaho’s Plan. **Table I-1** presents the issues as written by the Governor.

This amendment addresses the issues in **Table I-1** and provides focused changes to BLM management direction from the 2015 ROD/ARMPA to align with the Governor’s Plan, as directed in SO 3353. The characterization of the affected environment in **Chapter 3** and the analysis in **Chapter 4** focus only on the resource topics related to the issues in **Table I-1**.

Table I-1
Issues and Related Resource Topics

Issue Number	Issues	Resource Topics Related to the Issues
1	Modifying Habitat Boundary Designations <ul style="list-style-type: none"> • Integration of flexibility into the plans to be able to adjust habitat management area boundaries without the need for a plan amendment 	<ul style="list-style-type: none"> • Greater Sage-Grouse
2	Sagebrush Focal Area Designations <ul style="list-style-type: none"> • Sagebrush Focal Areas (SFA) duplicate many protections that are already in place through the designation of priority habitat management areas (PHMA). The SFA designation focuses on de minimis land use activities in Idaho, and does nothing to address the primary threats of wildfire and invasive species, nor do SFAs provide an appreciable benefit to Greater Sage-Grouse. SFAs also complicate the state’s adaptive management process and negatively affect the economic viability of the state through land use prohibitions (i.e., locatable mineral withdrawal recommendation). 	<ul style="list-style-type: none"> • Mineral Resources • Greater Sage-Grouse • Livestock Grazing • Wild Horse & Burro
3	Adjusting Disturbance and Density Caps <ul style="list-style-type: none"> • The project scale disturbance cap is overly complex and does not provide the flexibility to cluster multiple projects in one area of a Biologically Significant Unit; thus, penalizing project collocation. 	<ul style="list-style-type: none"> • Greater Sage-Grouse • Mineral Resources • Lands and Realty • Socioeconomics

Issue Number	Issues	Resource Topics Related to the Issues
4	Modifying Lek Buffers <ul style="list-style-type: none"> The application of uniform USGS lek buffers dilutes the efficacy of Idaho's unique, three-tiered habitat approach and does not provide an incentive to move development out of Greater Sage-Grouse priority habitat. Flexibility in lek buffer application should be based on site-specific information, habitat type, habitat quality, and type of development, not a one-size-fits-all approach. 	<ul style="list-style-type: none"> Greater Sage-Grouse Mineral Resources Lands and Realty Socioeconomics Livestock Grazing Recreation
5	Including Waivers, Exceptions, and Modifications on NSO Stipulations <ul style="list-style-type: none"> The no surface occupancy (NSO) requirement in PHMA should be consistent with the Governor's plan to include the flexibility of an exception, waiver, or modification process. 	<ul style="list-style-type: none"> Greater Sage-Grouse Fluid Minerals
6	Changing Requirements for Design Features <ul style="list-style-type: none"> The Required Design Features (RDFs) appendix is redundant and unclear, and does not provide managers the flexibility to apply the appropriate individual RDFs to address site-specific situations. 	<ul style="list-style-type: none"> Greater Sage-Grouse Mineral Resources Lands and Realty Socioeconomics Livestock Grazing
7	Modifying Habitat Objectives <ul style="list-style-type: none"> The Habitat Objectives table in the Idaho 2015 ROD/ARMPA is being interpreted and applied as standards and not objectives on the landscape. Clarification on its applicability and use are needed for each habitat indicator. 	<ul style="list-style-type: none"> Greater Sage-Grouse
8	Modifying Decisions for Livestock Grazing Commensurate with the Threat Posed <ul style="list-style-type: none"> Improper livestock grazing is a secondary threat in Idaho that should be managed using existing regulations. The USFWS's 2010 Warranted but Precluded determination recognized rangeland health standards as an adequate regulatory mechanism. The 2015 ROD/ARMPA imposes uniform and unnecessary grazing standards and does not incentivize proper livestock grazing (e.g., the grazing permit renewal thresholds requirement for allotments in SFAs is unnecessary). 	<ul style="list-style-type: none"> Livestock Grazing Greater Sage-Grouse
9	Modifying the Mitigation Strategy to Align with the State Mitigation Strategy, including Standard for No Net Loss <ul style="list-style-type: none"> The net gain mitigation standard is an elusive standard and creates no certainty to project proponents. The state can find no clear authority for the federal agencies to require a net conservation gain standard. Deference should be given to the state's mitigation framework. 	<ul style="list-style-type: none"> Greater Sage-Grouse

Issues and Resource Topics Not Carried Forward for Additional Analysis

Issues and Related Resource Topics Not Carried Forward for Additional Analysis

The following issues were raised during scoping for the 2018 Draft EIS, were not carried forward in that effort, and are not carried forward in this DSEIS for the same reasons. For example, population-based management is not carried forward for detailed analysis because the BLM does not manage species populations; that authority falls under the jurisdiction of the Idaho Department of Fish and Game.

Because the following issues were analyzed in the 2015 Final EIS, and no significant new information has emerged, they do not require additional analysis in this EIS. These issues were analyzed under most resource topics in the 2015 Final EIS. The related resource topics are dismissed from additional analysis. The types of impacts on these resources are described in the range of alternatives in the 2015 Final EIS. The impacts of implementing the alternatives in this DSEIS are within the range of alternatives previously analyzed.

- Restrictions on ROWs and infrastructure
- Wind energy development in PHMA
- ROW avoidance in PHMA and GHMA
- Retention of lands as identified as PHMA or GHMA in federal ownership
- Prioritization of fluid mineral leases outside of PHMA and GHMA
- Numerical noise limitations within PHMA
- Vegetation treatments and wildfire response
- Habitat assessment framework

The following issues were evaluated as part of the 2015 Final EIS. For the same reasons they were dismissed in the 2015 Final EIS, similarly they are not carried forward for detailed analysis in this EIS (see Section I.5.3, Planning Issues; Issues Not Addressed: Outside the Scope of the Planning Effort, pg. I-36, in the Final EIS):

- Hunting Greater Sage-Grouse
- Predator control
- Aircraft overflights in PHMA and GHMA
- No cattle grazing in Greater Sage-Grouse habitat

Resource Topics Not Carried Forward for Additional Analysis

The resource topics below are dismissed from detailed analysis because they have no potentially significant impacts from actions proposed in this DSEIS:

- Geology
- Paleontological resources
- Indian Trust resources
- Noise

I.5 ITEMS TO BE CLARIFIED IN THIS DSEIS

The items considered in this DSEIS are related to the analysis in the 2018 Final EIS. These items are:

- clarifying the range of alternatives (including how the BLM considered the full range of the 2015 alternatives in the 2019 planning process),
- taking a hard look and using the best available science (including clarified effects analysis, how the 2015 and 2019 FEISs addressed the NTT and COT recommendations and conservation measures) (**Appendix S-1**),

- clarifying that the cumulative effects analysis was done at the range wide level and organized by WAFWA Management Zone (MZs) Updated language also highlights why WAFWA MZs were used,
- an updated Reasonably Foreseeable Future Actions.

I.6 RELATIONSHIP TO OTHER POLICIES, PLANS, AND PROGRAMS

The BLM recognizes the importance of state and local plans. It will work to be consistent with or complementary to the management actions in these plans whenever possible.

I.6.1 State Plans

State plans considered during this effort are the following:

- Idaho Governor's Executive Order No. 2015-04 (Adopting Idaho's Sage-Grouse Management Plan)
- Idaho State Board of Land Commissioners Greater Sage-Grouse Conservation Plan

Chapter 2. Alternatives

2.1 INTRODUCTION

This chapter describes the eight alternatives considered during the 2019 planning processes. The 2018 Draft RMPA/Draft EIS and Proposed RMPA/Final EIS analyzed in detail a No-Action Alternative and one action alternative, the Management Alignment Alternative, while incorporating by reference the full range of alternatives evaluated in detail by the BLM in its 2015 EISs. The 2019 Record of Decision also explains how the BLM considered the alternatives evaluated in the BLM's 2015 and 2018 EISs. This DSEIS likewise considers this full range of reasonable alternatives, while adding a greater level of detail about each alternative and giving the public an additional opportunity to review and comment on these eight alternatives. The full range of alternatives considered in the 2018 Final EIS is both summarized and provided in detail in the three tables in **Section 2.6**. NEPA's implementing regulations require materials to be incorporated by reference when the effect will be to cut down on bulk without impeding agency and public review of the action (40 CFR 1502. 21).

2.2 2018 PLAN AMENDMENT/2019 ROD DESCRIPTION

In 2019 BLM Idaho amended the existing Greater Sage-Grouse management direction from the following Idaho plans, as directed by Secretary's Order 3353; 2018 Proposed RMPA/Final EIS and 2019 Record of Decision promoted alignment between the BLM's management of Greater Sage-Grouse habitat and the State of Idaho Greater Sage-Grouse Plan.

- Bennett Hills/Timmerman Hills Management Framework Plan (BLM 1980)
- Big Desert Management Framework Plan (BLM 1981)
- Big Lost Management Framework Plan (BLM 1983)
- Bruneau Management Framework Plan (BLM 1983)
- Cascade RMP (BLM 1988)
- Cassia RMP (BLM 1985)
- Challis RMP (BLM 1999)
- Craters of the Moon National Monument RMP (BLM 2006)
- Four Rivers RMP Revision
- Jarbidge (2015)
- Jarbidge RMP (BLM 1987)
- Kuna Management Framework Plan (BLM 1983)
- Lemhi RMP (BLM 1987)
- Little Lost-Birch Creek Management Framework Plan (BLM 1981)
- Magic Management Framework Plan (BLM 1975)
- Medicine Lodge RMP (BLM 1985)
- Monument RMP (BLM 1985)
- Owyhee RMP (BLM 1999)
- Pocatello RMP (BLM 2012)

- Snake River Birds of Prey National Conservation Area RMP (BLM 2008)
- Sun Valley Management Framework Plan (BLM 1981)
- Twin Falls Management Framework Plan (BLM 1982)
- Upper Snake RMP Revision

2.3 SUMMARY OF 2019 ALLOCATIONS

The Management Alignment Alternative and the Proposed Plan retained the decisions in the 2015 Record of Decision (ROD)/Amended Resource Management Plan Amendment (ARMPA), unless they were specifically identified for change to in the Management Alignment Alternative.

Table 2-1 displays the land use allocations for the No-Action Alternative, the Management Alignment Alternative, and the Proposed Plan Amendment; these allocation-level decisions are the same for all three alternatives. The changes between the Management Alignment Alternative and the Proposed Plan Amendment are more precise, as detailed in the side-by-side comparison in the 2018 Final EIS (Table 2.3).

Table 2-1
Land Use Allocations under the No-Action Alternative, the Management Alignment Alternative, and the Proposed Plan Amendment

Resource	PHMA	IHMA	GHMA
Land tenure	Retain	Retain	Retain
Wind and solar	Exclusion	Avoidance	Open
Rights-of-way	Avoidance	Avoidance	Open
Oil and gas and geothermal	Open with major stipulations	Open with major stipulations	Open with standard stipulations
Nonenergy leasables	Closed	Open	Open
Salable minerals	Closed with limited exceptions	Open	Open
Locatable minerals*	Open	Open	Open
Travel management	Limited	Limited	Limited
Livestock grazing	Open	Open	Open

*Areas are open for locatable mineral entry unless they have been withdrawn under a separate order.

2.4 2019 PLANNING PROCESS

The 2019 planning process amended the plans identified in **Section 2.2** by replacing the specific objectives, management decisions, and appendices from the 2015 ARMPA with the language below. All portions of the existing management plans, as amended by the 2015 ARMPA, that were not specifically changed remained in effect. The plan amendment was derived by combining the Management Alignment Alternative, with the further clarifications and modifications received from the Governor's Greater Sage-Grouse Task Force members and from applicable public comments. A detailed comparison of the alternatives considered during this planning process and the Proposed Plan Amendment is found in the side-by-side comparison tables below in **Section 2.3**.

The Management Alignment Alternative in the 2018 Draft RMPA/EIS included a proposed management action for compensatory mitigation based upon the mitigation framework BLM incorporated into its plans in 2015. However, following extensive review of FLPMA, including existing regulations, orders,

policies, and guidance, the BLM has concluded that FLPMA does not explicitly mandate or authorize the BLM to require public land users to implement compensatory mitigation as a condition of obtaining authorization for the use of the public lands (IM 2018-093, *Compensatory Mitigation*, July 24, 2018). In addition, the Draft 2018 RMPA/EIS analyzed a change to the net conservation gain standard for compensatory mitigation actions required to offset residual impacts to Greater Sage-Grouse on BLM-administered lands.

To align the 2019 planning effort with the BLM's compensatory mitigation policy (IM 2018-093), the 2019 Plan Amendment clarified that the BLM would consider compensatory mitigation only as a component of compliance with a state mitigation plan, program, or authority, or when offered voluntarily by a project proponent. The Amendment eliminated the net conservation gain standard for compensatory mitigation and clarified that the BLM would continue to require appropriate avoidance and mitigation actions to adequately conserve Greater Sage-Grouse and its habitat, and would pursue no net loss of habitat as a broader planning goal and objective in alignment with State Management plans.

The BLM committed to cooperating with the State of Idaho to analyze applicant-proffered or state-imposed compensatory mitigation to offset residual impacts. BLM could authorize such actions consistent with NEPA analysis and the governing RMP.

Habitat Management Area Flexibility

The boundaries of the habitat designations have been adjusted to correct administrative mapping errors that occurred when PHMA was designated in 2015. Habitat management area boundary changes also included removing some areas of non-habitat that were added to PHMA by the 2015 ROD/ARMPA as part of the SFA designations. Additionally, in the West Owyhee Conservation Area, the circle of 60,706 acres of PHMA (Brown's Creek Area) that is surrounded by IHMA was re-designated as IHMA (See Map I); 11,828 acres of non-Greater Sage-Grouse habitat managed as PHMA, in the Mountain Valleys Conservation Area, was changed to non-habitat (Donkey Hills Area of Critical Conservation Concern [ACEC] and mapping errors).

Management Decision (MD) SSS 6: The management area map and biologically significant unit (BSU) baseline map could be reevaluated, in conjunction with plan evaluation processes (i.e., approximately every 5 years). This reevaluation could indicate the need to adjust conservation area boundaries, PHMA, IHMA, or GHMA, or the habitat or population baselines. These adjustments could occur on completion of the appropriate analysis and process (e.g., plan maintenance in coordination with the teams identified in MD SSS 44) to review the allocation decisions based on the map. Results from the wildfire and invasive species assessments, such as identified focal or emphasis areas, would also be used to help inform mapping adjustments during this evaluation.

MD SSS 9: This decision was deleted.

New MD SSS 44: In collaboration with the Idaho Governor's Office of Species Conservation, Idaho Department of Fish and Game, US Fish and Wildlife Service, and potentially other state and federal agencies, the BLM would form two teams (a technical team and a policy team) through a memorandum of understanding. These teams would be responsible for reviewing proposed infrastructure developments, exceptions, variances, adaptive management triggers and responses, habitat management area adjustments, and mitigation, as described in detail in Appendix K [of the 2018 Final EIS].

Removing Sagebrush Focal Areas

MD SSS 10: This decision was deleted.

MD MR 10: This decision was deleted.

MD WHB 3: Prioritize gathers and population growth suppression techniques in herd management areas in Greater Sage-Grouse habitat, unless removals are necessary in other areas to address higher priority environmental issues, including herd health impacts. Place higher priority on herd areas not allocated as herd management areas and occupied by wild horses and burros in PHMA.

MD WHB 4: In PHMA, assess and adjust appropriate management levels (AMLs) through the NEPA process within herd management areas when wild horses or burros are identified as a significant causal factor in not meeting land health standards, even if current AML is not being exceeded.

MD WHB 5: In PHMA, monitor the effects of wild horse and burro use in relation to Greater Sage-Grouse seasonal habitat objectives to help determine future management actions.

MD WHB 6: Develop or amend herd management area plans to incorporate Greater Sage-Grouse habitat objectives and management considerations for all herd management areas in Greater Sage-Grouse habitat, with emphasis placed on PHMA.

Modifying Disturbance and Density Caps

MD SSS 27: If the 3 percent anthropogenic disturbance cap is exceeded on lands (regardless of land ownership) in Greater Sage-Grouse PHMA (or IHMA in Idaho) in any given BSU, no further discrete anthropogenic disturbances (subject to applicable laws and regulations, such as the General Mining Law of 1872, as amended, and valid existing rights) would be permitted by BLM within Greater Sage-Grouse PHMA and IHMA in any given BSU. This would be in effect until the disturbance has been reduced to less than the cap, as measured according to Appendix E [of the 2018 Final EIS] for the intermediate scale.

For Idaho, the BSU (**Figure 2-2**) is defined as the currently mapped nesting and wintering habitat in PHMA and IHMA in a conservation area, inclusive of all ownerships. Anthropogenic disturbance excludes habitat disturbance from wildfire and fuels management and includes the following developments (see Appendix E [of the 2018 Final EIS] for further details):

- Oil and gas wells and development facilities
- Coal mines
- Wind towers
- Solar fields
- Geothermal development facilities
- Mining (active locatable, nonenergy leasable and salable developments)
- Roads
- Railroads
- Power lines
- Communication towers

- Other vertical structures
- Coal bed methane ponds
- Meteorological towers (e.g., wind energy testing)
- Nuclear energy facilities
- Airport facilities and infrastructure
- Military range facilities and infrastructure
- Hydroelectric plants
- Recreation areas facilities and infrastructure

This disturbance is measured by direct footprint or by the distance between the outermost lines on transmission lines (Leu et al. 2008).

MD SSS 29: Subject to valid existing rights, new anthropogenic disturbances in PHMA: Anthropogenic Disturbance Screening Criteria. In order to avoid surface-disturbing activities in PHMA, priority would be given to development of rights-of-way (ROWs), fluid minerals, and other mineral resources subject to applicable stipulations outside of PHMA. When authorizing development in PHMA, priority would be given to development in non-habitat areas first and then in the least suitable habitat for Greater Sage-Grouse. In addition to the PHMA and IHMA anthropogenic disturbance development criteria (MD SSS 30), the BLM would ensure an applicant has worked with the State of Idaho to submit a proposal that meets the following criteria:

- a. The population trend for the Greater Sage-Grouse in the associated conservation area is stable or increasing over a 3-year period and the population levels are not currently engaging the adaptive management triggers (this applies strictly to new authorizations; renewals and amendments of existing authorizations would not be subject to this criteria when it can be shown that long-term impacts from those renewals or amendments would be substantially the same as the existing development).
- b. The development with associated design features, avoidance, minimization, or mitigation actions would not result in a net loss of Greater Sage-Grouse key habitat or of the respective PHMA.
- c. The project, its design features, avoidance and minimization actions, and associated impacts would not result in a net loss of Greater Sage-Grouse key habitat or habitat fragmentation or other impacts causing a decline in the population of the species in the relevant conservation area.
- d. The development cannot be reasonably accomplished outside of the PHMA or can be either developed pursuant to a valid existing authorization or collocated within the footprint of existing infrastructure. Proposed actions would not increase the 2011 authorized footprint and associated impacts more than 50 percent, depending on industry practice.
- e. Development would adhere to the RDFs described in Appendix C [of the 2018 Final EIS].
- f. The project would not exceed the disturbance cap (MD SSS 27).
- g. Large-scale anthropogenic disturbances in PHMA would be reviewed by the technical and policy teams, as described in MD SSS 44. (See the glossary for definition of large-scale anthropogenic disturbances.)

Modifying Lek Buffers

MD SSS 35: In undertaking BLM management actions in PHMA, IHMA and GHMA, and consistent with valid and existing rights and applicable law in authorizing third-party actions, the BLM would apply the lek buffer-distances in accordance with Appendix B [of the 2018 Final EIS]. The buffers do not apply to vegetation treatments specifically designed to improve or protect Greater Sage-Grouse habitat; however, impacts on leks should be analyzed and those impacts should be minimized to the extent practicable.

Including Exceptions to NSO Stipulations

MD MR 1: Areas in PHMA and IHMA would be open to mineral leasing and development and geophysical exploration, subject to NSO with a limited exception (MD MR 3). GHMA would be open to mineral leasing and development and geophysical exploration, subject to Controlled Surface Used (CSU), which includes standard stipulations and BMPs as identified in Appendix C [of the 2018 Final EIS] (Required Design Features).

MD MR 2: In Idaho, parcels nominated for lease in PHMA, IHMA, or GHMA would be evaluated prior to lease offering to determine if development is feasible.

MD MR 3: PHMA and IHMA: No waivers or modifications to a fluid mineral lease NSO stipulation would be granted. The BLM Authorized Officer may grant an exception to a fluid mineral lease NSO stipulation only where the proposed action: (i) would not have direct, indirect, or cumulative effects on Greater Sage-Grouse or its habitat, or (ii) is proposed to be undertaken as an alternative to a similar action occurring on a nearby parcel or the State of Idaho recommends the project goes forward, based on its determination that the action would not result in a net loss to Greater Sage-Grouse habitat.

Exceptions based on the goal of achieving no net loss may only be considered: (a) in PHMA of mixed ownership where federal minerals underlie less than 50 percent of the total surface, or (b) in areas of the public lands where the proposed exception is an alternative to an action occurring on a nearby parcel subject to a valid federal fluid mineral lease existing as of the date of this Proposed Plan Amendment. Exceptions based on the no net loss goal must also include measures, such as enforceable institutional controls and buffers, sufficient to allow the BLM to conclude that such benefits would endure for the duration of the proposed action's impacts.

Any exceptions to this lease stipulation may be approved by the BLM Authorized Officer, only with the concurrence of the BLM State Director and in coordination with the technical and policy team. Approved exceptions would be made publicly available.

MD MR 8: Issue written orders of the authorized officer (43 CFR 3161.2) requiring reasonable protective measures consistent with the lease terms where necessary to avoid or minimize impacts on Greater Sage-Grouse populations or habitat.

Changing Requirements for Design Features

MD SSS 32: In PHMA and IHMA, incorporate RDFs, as described in Appendix C [of the 2018 Final EIS], in developing the project or proposal implementation, reauthorizations or new authorizations, as conditions of approval into any post-lease activities and as BMPs for locatable minerals activities, to the

extent allowable by law, unless at least one of the following conditions could be demonstrated and documented in the NEPA analysis associated with the specific project:

- a. A specific RDF is not applicable to the site-specific conditions of the project or activity
- b. A proposed design feature or BMP is determined to provide equal or better protection for Greater Sage-Grouse or its habitat
- c. Analysis concludes that following a specific RDF would provide no more protection to Greater Sage-Grouse or its habitat than not following it, for the project being proposed

In GHMA, the RDFs are considered BMPs that should be considered and applied, unless the proponent can show that applying the BMP is technically or economically impracticable.

MD MR 11: PHMA—All PHMA would be closed to new mineral materials development but continued use of existing pits would be allowed. New free use permits and the expansion of existing pits may be considered only if the following criteria are met:

- a. The disturbance cap is not exceeded in a BSU
- b. The activity is subject to the provisions set forth in the mitigation framework (Appendix F [of the 2018 Final EIS])
- c. All applicable RDFs are applied
- d. The activity is permissible under the Idaho exception and development criteria (MD SSS 29 and MD SSS 30)
- e. IHMA—All IHMA would be open to mineral materials development, consistent with the Idaho Anthropogenic Disturbance Criteria (MD SSS 30) and subject to RDFs and buffers.

GHMA: All GHMA would be open to mineral materials development, subject to BMPs as described in Appendix C [of the 2018 Final EIS].

MD MR 15: PHMA are closed to leasing. IHMA and GHMA: Areas in known phosphate leasing areas would remain open to leasing, subject to standard stipulations. IHMA outside of KPLA are open to prospecting and subsequent leasing, provided the anthropogenic disturbance development criteria (MD SSS 30) and the anthropogenic disturbance cap (MD SSS 27) can be met.

RDFs and buffers would be applied to prospecting permits.

GHMA: Lands outside known phosphate leasing areas are available for prospecting and subsequent leasing and initial mine development subject to standard stipulations and BMPs, as described in Appendix C [of the 2018 Final EIS].

MD RE 1: PHMA—Designate and manage as exclusion areas for utility scale (20 megawatts) wind and solar testing and development and nuclear and hydropower energy development. IHMA—Designate and manage as avoidance areas for wind and solar testing and development, and nuclear and hydropower development. GHMA (Idaho)—Designate and manage as open for wind and solar testing and nuclear and hydropower development.

MD LR 2: PHMA—Designate and manage as ROW avoidance areas, consistent with MD SSS 29 and subject to RDFs and buffers (**Appendices B and C**). IHMA—Designate and manage as ROW avoidance areas, consistent with MD SSS 30 and subject to RDFs and buffers. GHMA—Designate and manage as open, with proposals subject to BMPs, as described in Appendix C [of the 2018 Final EIS].

Modifying Habitat Objectives

OBJ SSS 2: In PHMA and IHMA, maintain large intact sagebrush steppe communities with vegetation characteristics consistent with their ecological potential such that Greater Sage-Grouse can select suitable seasonal habitats for breeding, nesting, rearing young, and wintering. Greater Sage-Grouse select suitable use areas in large intact sagebrush ecosystems. Not every site would provide for every Greater Sage-Grouse need, which is why they require large intact sagebrush ecosystems.

The desired conditions for Greater Sage-Grouse (see Table 2.2 in the 2015 Final EIS) are a list of indicators, characteristics, and values that describe Greater Sage-Grouse seasonal habitat use areas. The BLM used indicator values derived from a synthesis of local and regional Greater Sage-Grouse habitat research and data to describe the typical vegetation communities that Greater Sage-Grouse select. While the desired conditions are not attainable on every site or every acre in designated Greater Sage-Grouse habitat management areas, the values reflect a range of habitat conditions that generally lead to greater survival of individuals in a population. When permitting land use activities, the BLM would consider the ecological site potential in designated habitat management areas to validate the habitat conditions achievable for a specific site.

The seasonal habitat descriptions in Table 2.2 in the 2015 Final EIS vary across the range of Greater Sage-Grouse, in a subregion, and between sites. They are not land health standards but are quantitative measures that help inform the special status species habitat land health standard for Greater Sage-Grouse. These measurable values reflect ecological potential and may be adjusted, based on local factors influencing Greater Sage-Grouse habitat selection. Local data or recent science may indicate that Greater Sage-Grouse select for vegetation structure and composition in seasonal habitats not characterized by the values in the desired conditions table. In these cases, it may be appropriate to adjust the values. Desired conditions should be evaluated in the context of annual variability in ecological conditions and should not be used singly to determine habitat suitability for Greater Sage-Grouse. As appropriate, they may be used to demonstrate trends over time, during plan evaluations for effectiveness of Greater Sage-Grouse conservation, or when identifying limiting habitat characteristics for a given area.

The indicators, characteristics, values, and desired seasonal habitat conditions in the Greater Sage-Grouse plan desired conditions table are meant to inform the wildlife habitat component of the land health standards evaluation process (43 CFR 4180.2) but do not replace rangeland health assessments. Results from the land health standards evaluation should be used to support the BLM in land use authorization processes and during development of appropriate objectives for management actions, such as vegetation treatments.

The desired conditions tables are to be used as follows:

- To assess habitat suitability, as defined by BLM policy and the Habitat Assessment Framework, for Greater Sage-Grouse at the appropriate scale

- To describe desired conditions that provide habitat at multiple spatial scales, as defined by the best available science
- To evaluate land use plan effectiveness for Greater Sage-Grouse conservation
- To develop measurable project objectives for actions in BLM-designated Greater Sage-Grouse habitat management areas, as needed, when considered alongside land health standards, ecological potential, and local information

Update Table 2.2 from the 2015 ARMPA as follows:

NESTING/EARLY BROOD REARING (Seasonal Use Period May 1–June 30)			
Cover and food	Perennial grass (and forb) height (includes residual grasses)	Adequate nesting cover	Connelly et al. 2000; ⁸ Connelly et al. 2003; ⁹ Hagen et al. 2007; ¹¹ Stiver et al. 2015; ¹³ Hausleitner 2005 Holloran et al. 2005 Gibson et al. 2016 Smith et al. 2017 Smith et al. 2018

Modifying Decisions for Livestock Grazing

MD LG 15: Generally, the BLM would prioritize (1) the review of grazing permits/leases, in particular to determine if modification is necessary prior to renewal, and (2) the processing of grazing permits/leases based on land health conditions or concerns related to rangeland health standards. If similar issues are found in both PHMA and IHMA, then those in PHMA should be addressed first. In setting workload priorities, precedence would be given to existing permits/leases in these areas not meeting land health standards and that have declining Greater Sage-Grouse populations, defined by a soft or hard population adaptive management trigger being engaged. Greater Sage-Grouse populations that are stable or trending upward would be a lower priority for permit renewal and the assessment process. The BLM may use other criteria for prioritization to respond to urgent natural resource concerns, such as fire, and legal obligations.

MD LG 16: Grazing in the PHMA and IHMA would be managed according to the process outlined in the text below, and the grazing permit renewal process would be managed according to 43 CFR 4100, Subpart 4180, and as outlined in the process below.

- Incorporate the Greater Sage-Grouse desired conditions in Table 2.2 [of the 2015 Final EIS] and management considerations as desired conditions, and manage livestock grazing, recognizing that these conditions may not be achievable: (1) due to the existing ecological condition, ecological potential, or existing vegetation; or (2) due to causal events unrelated to existing livestock grazing; and 3) that they are not intended to be prescriptive at the allotment level.
- Conduct habitat assessments using appropriate monitoring methods. Where appropriate, make a determination of factors causing any failure to achieve the desired conditions in Table 2.2 [of the 2015 Final EIS]. The assessment would be conducted at a resolution and scale sufficient to document the habitat condition and would include local, spatial, and interannual variability. Any determination relative to the habitat characteristics (Table 2.2 [of the 2015 Final EIS]) would be

based on existing ecological condition, ecological potential, and existing vegetation information. This is to ensure the assessment recognizes whether these habitat characteristics are achievable.

- c. The assessment would rely on published characteristics of Greater Sage-Grouse habitat and the ecological site descriptions, on Table 2.2 [of the 2015 Final EIS as amended], and where available and applicable, rangeland health determinations made in accordance with 43 CFR 4180.2(c).
- d. After conducting the assessment in (b), above, if the current grazing system achieves applicable Idaho rangeland health standards, absent substantial and compelling information, no further grazing management changes are necessary to achieve desired conditions for Greater Sage-Grouse habitat.
- e. If the process and conditions outlined in (b), above demonstrate that livestock grazing is limiting achievement of the desired conditions (Table 2.2 [of the 2015 Final EIS]), renewed permits would include measures, including but not limited to the actions outlined in Appendix C [of the 2018 Final EIS] to achieve desired habitat conditions. These measures must be tailored to address the specific management issues.
- f. Adaptive management changes related to existing grazing permits should be undertaken only where improper grazing is determined to be the causal factor in not meeting habitat characteristics, specific to site capability, based on monitoring, with appropriate spatial variability. See Appendix C.
- g. Where management changes are needed and necessary pursuant to (f), above, implement management actions that are narrowly tailored to address the specific habitat objective applied at the allotment or activity plan level, including the actions outlined in Appendix C [of the 2018 Final EIS], Grazing Section of BMPs.

MD LG 17: Allotments in PHMA, focusing on those with declining Greater Sage-Grouse populations, defined by a soft or hard adaptive management trigger being engaged and/or with land health concerns, would be prioritized for field checks. This is to help ensure compliance with the terms and conditions of the grazing permits. Field checks can include monitoring for actual use, utilization, and use supervision.

MD WHB 2: Complete rangeland health assessments for herd management areas containing Greater Sage-Grouse habitat using an interdisciplinary team of range, wildlife, and riparian specialists. The priority for conducting assessments is herd management areas with known land health issues and where local populations of Greater Sage-Grouse are in decline according to the adaptive management trigger standards. When similar issues are found in multiple herd management areas, then the priority should be: 1) herd management areas containing PHMA; 2) herd management areas containing IHMA; 3) herd management areas containing GHMA; 4) herd management areas containing Greater Sage-Grouse habitat outside of PHMA, IHMA, and GHMA mapped habitat; 5) herd management areas without Greater Sage-Grouse habitat.

Modifying the Mitigation Strategy to Align with the State Mitigation Strategy

In all designated Greater Sage-Grouse habitat, in undertaking BLM management actions, and consistent with valid existing rights and applicable law, in authorizing third-party actions that result in habitat loss and degradation, the BLM would achieve the planning-level Greater Sage-Grouse management goals and objectives through implementation of mitigation and management actions. Under this Proposed Plan Amendment, management would be consistent with the Greater Sage-Grouse goals and objectives, and in conformance with BLM Manual 6840, Special Status Species Management. In accordance with BLM

Manual 6840, the BLM would undertake planning decisions, actions and authorizations “to minimize or eliminate threats affecting the status of [Greater Sage-Grouse] or to improve the condition of [Greater Sage-Grouse] habitat” across the planning area.

The BLM has determined that compensatory mitigation must be voluntary unless required by other applicable law and in recognition that State authorities may also require compensatory mitigation (IM 2018-093, Compensatory Mitigation, July 24, 2018). Therefore, consistent with valid existing rights and applicable law, when authorizing third-party actions that result in habitat loss and degradation, the BLM would consider voluntary compensatory mitigation actions only as a component of compliance with a State mitigation plan, program, or authority, or when offered voluntarily by a project proponent.

Project-specific analysis would be necessary to determine how a compensatory mitigation proposal addresses impacts from a proposed action. The BLM would cooperate with the State to determine appropriate project design and alignment with State policies and requirements, including those regarding compensatory mitigation. When the BLM is considering compensatory mitigation as a component of the project proponent’s submission or based on a recommendation from the State, the BLM’s NEPA analysis would evaluate the need to avoid or minimize impacts of the proposed project and achieve the goals and objectives of this RMPA. The BLM would defer to the appropriate State authority to quantify habitat offsets, durability, and other aspects used to determine the recommended compensatory mitigation action.

The BLM would not deny a proposed authorization in Greater Sage-Grouse habitat solely on the grounds that the proponent has not proposed or agreed to undertake voluntary compensatory mitigation. In cases where waivers, exceptions, or modification may be granted for projects with a residual impact, voluntary compensatory mitigation consistent with the State’s management goals can be one mechanism by which a proponent achieves the RMPA goals, objectives, and waiver, exception, or modification criteria. When a proponent volunteers compensatory mitigation as their chosen approach to address residual impacts, the BLM can incorporate those actions into the rationale used to grant a waiver, exception, or modification. The final decision to grant a waiver, exception, or modification would be based, in part, on criteria consistent with the State’s Greater Sage-Grouse management plans and policies.

In 2015, Governor Otter issued Executive Order 2015-04 directing all Idaho executive agencies to implement the Idaho Greater Sage-Grouse Management Plan to the extent consistent with state law. The application of the foundational elements of the management plan is consistent with the USFWS Conservation Objectives Team Report and apply across all land ownerships in Idaho. This plan included compensatory mitigation for large-scale anthropogenic development within a set of project screening criteria, based on the three-tiered management approach if new, significant, and unavoidable impacts are demonstrated to be associated with the project. In the Governor’s plan, if unavoidable impacts are demonstrated to be associated with the project, a compensatory mitigation plan would be based on the guiding principles of Idaho’s Mitigation Framework, 2011.

The State of Idaho is working to adopt compensatory mitigation guidelines that would be legally binding for state and federal lands, to achieve a no net loss mitigation standard in Greater Sage-Grouse habitat management areas in Idaho. The state mitigation guidelines are scheduled to be finalized in late 2018. The BLM would defer to the compensatory mitigation requirements in the state mitigation guidelines through a memorandum of agreement (MOA) with the State of Idaho and DOI.

The BLM recognizes that Greater Sage-Grouse is a State-managed species, and, in accordance with 43 CFR 24.3(a), that State authority regarding fish and resident wildlife guides how the BLM cooperates with the State in the absence of specific, overriding federal law. Further, the BLM recognizes that state governments have established fish and wildlife agencies that are charged with the responsibility and mandate to implement state statutes for effective, appropriate, and efficient conservation and management of fish and resident wildlife species. Accordingly, the BLM has coordinated with the State to develop a memorandum of agreement (MOA) to guide the application of the mitigation hierarchy and compensatory mitigation actions for future project authorizations in Greater Sage-Grouse habitat on BLM-administered lands.

The MOA describes the State's policies, authorities, and programs for Greater Sage-Grouse conservation and the process regarding how the BLM would incorporate avoidance, minimization, and other recommendations from the State necessary to improve the condition of Greater Sage-Grouse habitat consistent with RMPA goals and objectives, in one or more of the NEPA analysis alternatives. The MOA would be implemented to provide an improvement to Greater Sage-Grouse habitat at a State level (as opposed to a WAFWA Management Zone or a Field Office), in collaboration with applicable partners (e.g., federal, tribal, and state agencies). Generally, and as described in the MOA, when the BLM receives applications for projects in Greater Sage-Grouse habitat, the BLM would ensure project design is aligned with State requirements and would ensure the proponent coordinates with the State to develop any additional mitigation—including compensatory mitigation—that the State may recommend in order to comply with State policies and programs for the conservation of Greater Sage-Grouse.

When considering third-party actions that result in habitat loss and degradation, BLM would work with the applicant to apply avoidance and minimization mitigation options. If the proposal would have residual effects that cause habitat loss and degradation, the BLM would complete the following steps, in alignment with the Governor of Idaho's Executive Order 2015-04:

1. Notify the Idaho Office of Species Conservation (OSC) to determine if the State requires or recommends any additional mitigation – including compensatory mitigation – under State regulations, policies, or programs related to the conservation of Greater Sage-Grouse.
2. If the OSC determines that there are unacceptable residual impacts on Greater Sage-Grouse or its habitat and compensatory mitigation is required as a part of State policy or authorization, or if a proponent voluntarily offers mitigation, the BLM would incorporate that mitigation into the BLM's NEPA and decision-making process.
3. The BLM would recommend to the project proponent that it coordinate with the State of Idaho to ensure it complies with all applicable State requirements relating to its proposal.
4. The BLM would ensure mitigation outcomes are consistent with the State of Idaho's mitigation strategy and principles outlined in Appendix F [of the 2018 Final EIS] including, but not limited to:
 - a. achieves measurable outcomes for Greater Sage-Grouse habitat function that are at least equal to the lost or degraded values
 - b. provides benefits that are in place for at least the duration of the impacts
 - c. accounts for a level of risk that the mitigation action may fail or not persist for the full duration of the impact

MD MT 3: In PHMA, IHMA, and GHMA, in undertaking BLM management actions, and consistent with valid existing right and applicable law, in authorizing third-party actions that result in habitat loss and degradation (Appendix E, Table E-1 [of the 2018 Final EIS]), the BLM would work towards achieving the planning-level Greater Sage-Grouse management goals and objectives through implementation of mitigation and management actions. Under this Proposed Plan Amendment, the BLM Greater Sage-Grouse management would be consistent with the Greater Sage-Grouse goals and objectives, and in conformance with BLM Manual 6840, *Special Status Species Management*, undertake planning decisions, actions and authorizations “to minimize or eliminate threats affecting the status of [Greater Sage-Grouse] or to improve the condition of [Greater Sage-Grouse] habitat” across the planning area. Further, the BLM recognizes that the state of Idaho’s state Greater Sage-Grouse management goals and policies include mitigation that provides no net loss to Greater Sage-Grouse, including accounting for any uncertainty associated with the effectiveness of such mitigation. This would be achieved by ensuring Greater Sage-Grouse habitat impacts are addressed by implementing mitigating actions in coordination with the State of Idaho and the Proposed Plan Amendment.

MD SSS 30: The applicant would work with the State of Idaho to submit a proposal that meets all of the following anthropogenic disturbance development criteria in the screening and assessment process for proposals in PHMA and IHMA. This is to discourage additional disturbance in PHMA and IHMA (as described in MD LR 2 and MD RE 1):

- Through coordination with the State of Idaho (as described in MD CC 1), it is determined that the project cannot be achieved, technically or economically, outside of this management area
- The project siting and/or design should best reduce cumulative impacts and/or impacts on Greater Sage-Grouse and other high value natural, cultural, or societal resources; this may include collocation in the footprint for existing infrastructure, to the extent practicable
- The State of Idaho determines in coordination with BLM the project results in **no net loss** to Greater Sage-Grouse key habitat or, with mitigation actions, reduces habitat fragmentation or other threats in the conservation area;
- Development would adhere to the RDFs described in Appendix C [of the 2018 Final EIS]
- The project would not exceed the disturbance cap (MD SSS 27)
- Large-scale anthropogenic disturbances in PHMA and IHMA would be reviewed by the technical and policy teams, as described in MD SSS 44

MD LR 14: Lands classified as PHMA, IHMA, and GHMA for Greater Sage-Grouse would be retained in federal management, unless: (1) the agency can demonstrate that disposal of the lands, including land exchanges, would provide **no net loss** to the Greater Sage-Grouse, or (2) the agency can demonstrate that the disposal, including land exchanges, of the lands would have no direct or indirect adverse impact on conservation of the Greater Sage-Grouse.

Land tenure adjustments would be subject to the following disposal, exchange, and acquisition criteria, which include retaining lands with Greater Sage-Grouse habitat. This would reduce the likelihood of habitat conversion to agriculture, urbanization, or other uses that would remove sagebrush habitat and potentially affect sensitive plants.

- Retain lands in PHMA, IHMA, and GHMA. However, on a case by case basis, consider whether disposal of those lands would increase the extent or provide for connectivity of PHMA, IHMA, or GHMA.
- Recognizing that the goal of the Department of the Interior is to keep lands in federal ownership, the BLM would evaluate potential land exchanges containing historically low-quality Greater Sage-Grouse habitat that may be too costly to restore in exchange for lands of higher quality habitat, lands that connect seasonal Greater Sage-Grouse habitats, or lands providing for threatened and endangered species. These potential exchanges should increase the extent or continuity of or provide for improved connectivity of PHMA. Higher priority would be given to exchanges for those intact areas of sagebrush that would contribute to the expansion of sagebrush areas in PHMA currently in public ownership. Lower priority would be given to other lands that would enhance the IHMA and GHMA, such as areas with fragmented or less intact sagebrush.
- Lands for acquisition increase the extent of or provide for connectivity of PHMA.

OBJ MR 2: Where a proposed fluid mineral development project on an existing lease can adversely affect Greater Sage-Grouse populations or habitat in PHMA, IHMA, and GHMA, the BLM would work with the lessees, operators, or other project proponents to avoid and minimize impacts to the extent compatible with lessees' rights to drill and produce fluid mineral resources. The BLM would work with the lessee, operator, or project proponent in developing applications for permit to drill or geothermal drilling permit for the lease. This would be to apply the mitigation hierarchy to impacts on Greater Sage-Grouse or its habitat and would ensure that the best information about the Greater Sage-Grouse and its habitat informs and helps to guide development of such federal leases.

Modifying Adaptive Management Strategy

MD SSS 15: The data from the lek counts and the key habitat map update would be reviewed annually to determine if any hard or soft adaptive management triggers have been met.

MD SSS 20: Population soft triggers are defined as one of the following:

- A 10 percent decline in the current 3-year average of total maximum number of males counted, compared to the 2011 maximum male baseline and a finite rate of change (λ) below 1.0 within PHMA within a conservation area over the same 3-year period
- A 10 percent decline in the current 3-year average of total maximum number of males counted, compared to the 2011 maximum male baseline and a finite rate of change (λ) below 1.0 within IHMA within a conservation area over the same 3-year period

Significance for soft triggers is defined by the 80 percent confidence interval around the current 3-year finite rate of change. If the 80 percent confidence interval is less than and does not include 1.0, then the finite rate of change is considered significant. The finite rate of change and variance would be calculated following Garton et al. (2011).

MD SSS 24: Remove the automatic hard trigger adaptive management response when the habitat or maximum male population count (i.e., 3-year average) returns to or exceeds the 2011 baseline levels within the associated conservation area, in accordance with the adaptive management strategy

(Appendix E [of the 2018 Final EIS]). In such a case, changes in management allocations resulting from a tripped trigger would revert to the original allocation (MD SSS 22).

Modifying Appendices

The following appendices from the 2015 Final EIS are proposed for change in this amendment:

- Appendix A (update mapping to match decisions in this Proposed Plan Amendment)—Display the following changes:
 - Update to display only Idaho
 - Remove SFA
 - Update PHMA and IHMA boundaries to reflect the change of the Brown’s Creek area from PHMA to IHMA
 - Update PHMA, IHMA, and GHMA boundaries to reflect corrections to administrative errors
 - Update BSU boundaries to reflect the change of the Brown’s Creek area from PHMA BSU to IHMA BSU
- Appendix B (modification to buffer distances in IHMA and GHMA)
- Appendix C (clarification and some modification of RDFs)
- Appendix E (removal/additions to match decisions in this Proposed Plan Amendment)
- Appendix F (modification to match decisions in this Proposed Plan Amendment)
- Appendix K (would be added to help explain the two-team approach)

2.5 OTHER ALTERNATIVES CONSIDERED

2.5.1 Varying Constraints on Land Uses and Development Activities

During scoping, some commenters asked the BLM to consider additional constraints on land uses and ground-disturbing development activities to protect Greater Sage-Grouse habitat. These constraints are beyond those in the current management plan.¹ Other commenters, in contrast, asked the BLM to consider eliminating or reducing constraints on land uses, or incorporating other flexibilities into the BLM’s implementation of RMPs, in addition to those issues that are already evaluated in the Management Alignment Alternative. The BLM considered every scoping comment and, where appropriate, incorporated these issues into the Management Alignment Alternative, following coordination with the State. Because the purpose and need for the BLM’s action, building off of the 2015 ROD/ARMPA, is to enhance cooperation with the States by seeking to better align the BLM’s RMPs with individual state plans and/or conservation measures, the BLM gave great weight to the States’ identification of issues that warrant consideration in that planning effort.

The 2018 planning process did not revisit every issue that the BLM evaluated in 2015. Instead, the BLM addressed refinements to the 2015 ROD/ARMPA decisions, consistent with the BLM’s purpose and

¹For example, this 2019 planning process, built upon the 2015 planning process, will continue to ensure that the BLM complies with its special status species policy, including the commitment to “implement measures to conserve [special status] species and their habitats...and promote their conservation and reduce the likelihood and need for such species to be listed pursuant to the ESA.” (BLM Manual 6840, Special Status Species Management)

need for action. Accordingly, this DSEIS has its foundation in the comprehensive 2015 and 2019 Final EISs, and incorporates those documents by reference—including the entire range of alternatives evaluated through the 2015 planning process:

- Alternative A would have retained the management goals, objectives and direction specified in the BLM RMPs and the Forest Service land and resource management plans effective prior to the 2015 ROD/ARMPA.
- Alternative B was based on the conservation measures developed by the National Technical Team planning effort in Washington Office IM 2012-044. As directed in the IM, the conservation measures developed by the National Technical Team must be considered and analyzed, as appropriate, through the land use planning process and NEPA by all BLM state and field offices that contain occupied Greater Sage-Grouse habitat. Most management actions included in Alternative B would have been applied to PHMA.
- Alternative C was based on a citizen group's recommended alternative. This alternative emphasized improvement and protection of habitat for Greater Sage-Grouse and was applied to all occupied Greater Sage-Grouse habitat. Alternative C would have limited commodity development in areas of occupied Greater Sage-Grouse habitat and would have closed or designated portions of the planning area to some land uses.
- Alternative D, which was identified as the Preferred Alternative in the Draft 2018 RMPA/EIS, balanced opportunities to use and develop the planning area and protects Greater Sage-Grouse habitat based on scoping comments and input from cooperating agencies involved in the alternatives development process. Protective measures would have been applied to Greater Sage-Grouse habitat.
- Alternative E was the alternative provided by the State or Governor's offices for inclusion and analysis in the EISs. It incorporated guidance from specific State Conservation strategies and emphasized management of Greater Sage-Grouse seasonal habitats and maintaining habitat connectivity to support population objectives. This alternative was identified as a co-Preferred Alternative in the Idaho Draft EIS.
- Alternative F was also based on a citizen group-recommended alternative. This alternative emphasized improvement and protection of habitat for Greater Sage-Grouse and defined different restrictions for PHMA and GHMA. Alternative F would have limited commodity development in areas of occupied Greater Sage-Grouse habitat and would have closed or designated portions of the planning area to some land uses.
- The Proposed LUPA incorporated guidance from specific State Conservation strategies, as well as additional management based on the National Technical Team recommendations. This alternative emphasized management of Greater Sage-Grouse seasonal habitats and maintaining habitat connectivity to support population objectives.

The BLM considered the entire range of alternatives from the 2015 Final EIS to identify issues meriting reconsideration, given the BLM's goal of enhancing alignment with state plans. In this manner, the BLM would continue to appropriately manage Greater Sage-Grouse and its habitat through this planning effort in tandem with the 2015 ROD/ARMPA.

Further, additional constraints on land uses or development without a documented need would not meet the purpose of SO 3353. As part of the consideration of whether to amend the 2015 Greater

Sage-Grouse RMPs, the BLM requested the USGS to develop an annotated bibliography of Greater Sage-Grouse science published since January 2015 (Carter et al. 2018; see **Section 3.1**). In addition, SO 3353 directs the BLM to promote habitat conservation, while contributing to economic growth and energy independence. As analyzed in the 2015 Final EIS (Section 4.15), all of the previously analyzed alternatives, including one proposing constraints stricter than the current management plan, were predicted to result in a loss of development opportunities on public lands.

2.6 DESCRIPTION OF ALTERNATIVES FROM 2018

2.6.1 No-Action Alternative

Under the No-Action Alternative, the BLM would not have amended the RMPs amended by the Idaho and Montana Greater Sage-Grouse Resource Management Plan Amendment (2015 ROD/ARMPA). Greater Sage-Grouse habitat would have continued to be managed under the 2015 ROD/ARMPA management direction. Goals and objectives for BLM-administered lands and federal mineral estate would not have changed. Allowable uses and restrictions pertaining to activities such as mineral leasing and development, recreation, lands and realty, and livestock grazing would also have remained the same.

2.6.2 Management Alignment Alternative

This alternative is derived through coordination with the State and cooperating agencies to better align with the Idaho Governor's conservation plan and to support conservation outcomes for Greater Sage-Grouse. The BLM continues to build upon the 2015 planning effort as envisioned in SO 3353 by collaborating with states and stakeholders to improve compatibility between federal management plans and other plans and programs at the state level, while ensuring consistency with the BLM's multiple use mission.

This enhanced cooperation between the BLM and the Governor's office would lead to improved management and coordination with states across the range of Greater Sage-Grouse. The Management Alignment Alternative aligns the 2015 ROD/ARMPA with the Governor's Plan by strategically removing or altering the specific points of contention while preserving those parts that were already in alignment with the substance of the Governor's Plan. All parts of the existing 2015 ROD/ARMPA in Idaho would remain in place except those specifically called out for change or deletion in this alternative. At the request of the State, the Management Alignment Alternative in the Draft 2018 RMPA/EIS proposes a change to compensatory mitigation by modifying the net conservation gain standard that the BLM incorporated into its plans in 2015. The DOI and the BLM have also modified their mitigation policies since the 2015 plans were finalized. The public did not have the opportunity to comment specifically on a net conservation gain approach to compensatory mitigation during the 2015 land use planning process. In addition, the DOI and the BLM are evaluating whether the implementation of compensatory mitigation standard on public lands is appropriate and consistent with applicable legal authorities. We request public comment about how the BLM should consider and implement mitigation with respect to the Greater Sage-Grouse, including alternative approaches to requiring compensatory mitigation in BLM land use plans.

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

In 2012 Governor C. L. "Butch" Otter proposed an approach that divided Greater Sage-Grouse habitat in Idaho into three management zones. These three zones provide a management continuum where the

highest priority habitats have the most protections and the lowest priority habitats have the fewest protections and the most flexibility for multiple use management. This approach allows land management agencies to focus future disturbance in lower quality habitat or non-habitat areas. The 2015 ROD/ARMPA adopted this strategy and identified the habitat management zones as PHMA, IHMA, and GHMA; both alternatives in the 2018 RMPA/EIS continue this theme. To align with the Governor's Plan, the Management Alignment Alternative also provides a management continuum where the highest priority habitats have the most protections and the lowest priority habitats have the fewest protections and the most flexibility for multiple use management.

2.6.3 Detailed Description of Alternatives Considered during the 2019 Planning Process

BLM considered a range of reasonable alternatives when responding to Secretary's Order 3353 to enhance cooperation with Western States in the management and conservation of Greater Sage-Grouse and its habitat. The BLM reconsidered the six alternatives it analyzed in detail during the 2015 planning process and two new alternatives during the 2019 planning process. The BLM incorporated the 2015 alternatives by reference into the 2018 Final EISs, for a total of eight alternatives evaluated in detail.

The following three tables illustrate the alternatives that the BLM considered during the 2019 land use planning effort. **Table 2-2** summarizes the alternatives that the BLM evaluated in detail during the 2019 planning effort, as well as alternatives that the BLM considered but did not analyze in detail.

Table 2-3 describes in detail the new alternatives developed during the 2019 planning effort to address the issues raised during scoping. Because the 2019 effort was focused on aligning BLM Greater Sage-Grouse management with State plans, BLM focused on a narrower set of issues and therefore only two additional alternatives were analyzed in detail. However, that did not limit the BLM which incorporated analysis from 2015 to consider all the alternatives considered in 2015 as well.

Table 2-4 describes in detail the alternatives developed during the 2015 planning effort that were also considered in the most recent Greater Sage-Grouse land use planning process. **Table 2-4** is considerably longer than **Table 2-3** because the 2015 process addressed many more issues than the focused 2019 planning effort.

Table 2-2
Alternatives Considered During the 2019 Planning Process

Idaho Planning Document	Document Date	Alternative Title	Analysis Level	Alternative Description
Idaho and Southwestern Montana Greater Sage-Grouse Proposed LUPA/Final EIS	June 2015	Alternative A	Fully Analyzed	Alternative A would have retained the management goals, objectives and direction specified in the BLM RMPs and the Forest Service land and resource management plans effective prior to the 2015 ROD/ARMPA.
Idaho and Southwestern Montana Greater Sage-Grouse Proposed LUPA/Final EIS	June 2015	Alternative B	Fully Analyzed	Alternative B was based on the conservation measures developed by the National Technical Team planning effort in Washington Office IM 2012-044. As directed in the IM, the conservation measures developed by the National Technical Team must be considered and analyzed, as appropriate, through the land use planning process and NEPA by all BLM state and field offices that contain occupied Greater Sage-Grouse habitat. Most management actions included in Alternative B would have been applied to PHMA. This alternative analyzed designation of 4 new ACECS.
Idaho and Southwestern Montana Greater Sage-Grouse Proposed LUPA/Final EIS	June 2015	Alternative C	Fully Analyzed	Alternative C was based on a citizen group's recommended alternative. This alternative emphasized improvement and protection of habitat for Greater Sage-Grouse and was applied to all occupied Greater Sage-Grouse habitat. Alternative C would have limited commodity development in areas of occupied Greater Sage-Grouse habitat and would have closed or designated portions of the planning area to some land uses.
Idaho and Southwestern Montana Greater Sage-Grouse Proposed LUPA/Final EIS	June 2015	Alternative D	Fully Analyzed	Alternative D, which was identified as the Preferred Alternative in the Draft RMPA/EIS, balanced opportunities to use and develop the planning area and protects Greater Sage- Grouse habitat based on scoping comments and input from cooperating agencies involved in the alternatives development process. Protective measures would have been applied to Greater Sage-Grouse habitat.
Idaho and Southwestern Montana Greater Sage-Grouse Proposed LUPA/Final EIS	June 2015	Alternative E	Fully Analyzed	Alternative E was the alternative provided by the State or Governor's offices for inclusion and analysis in the EISs. It incorporated guidance from specific State Conservation strategies and emphasized management of Greater Sage-Grouse seasonal habitats and maintaining habitat connectivity to support population objectives. This alternative was identified as a co-Preferred Alternative in the Idaho Draft EIS.

Idaho Planning Document	Document Date	Alternative Title	Analysis Level	Alternative Description
Idaho and Southwestern Montana Greater Sage-Grouse Proposed LUPA/Final EIS	June 2015	Alternative F	Fully Analyzed	Alternative F was also based on a citizen group-recommended alternative. This alternative emphasized improvement and protection of habitat for Greater Sage-Grouse and defined different restrictions for PHMA and GHMA. Alternative F would have limited commodity development in areas of occupied Greater Sage-Grouse habitat and would have closed or designated portions of the planning area to some land uses.
Idaho and Southwestern Montana Greater Sage-Grouse Proposed LUPA/Final EIS	June 2015	USFWS-Listing Alternative	Considered; Not Analyzed in Detail	Comments provided through scoping requested analysis of an alternative based on the assumption that Greater Sage-Grouse become listed under the ESA. This was outside the scope; the purpose and need of this plan amendment is to address inadequacy of regulatory mechanisms that were identified as one of the listing factors for Greater Sage-Grouse in the USFWS finding on the petition to list Greater Sage-Grouse. Although the potential listing of Greater Sage-Grouse would also include conservation measures identified by the USFWS, those conservation measures were not known at this time. Therefore, an alternative that includes USFWS-listing with associated conservation measures for Greater Sage-Grouse was not being analyzed in detail.
Idaho and Southwestern Montana Greater Sage-Grouse Proposed LUPA/Final EIS	June 2015	Elimination of Recreational Hunting	Considered; Not Analyzed in Detail	Neither the BLM nor the Forest Service regulate hunting activities on federal lands; this responsibility resides with IDFG, MFWP, and Utah Division of Wildlife Resources. IDFG, MFWP, and the Utah Division of Wildlife Resources manage wildlife within Idaho, Montana, and Utah, respectively, while the BLM and Forest Service manage wildlife habitat. Recreational hunting of Greater Sage-Grouse, including hunting seasons, is directed by the relevant state conservation plans for Greater Sage-Grouse and criteria therein.

Idaho Planning Document	Document Date	Alternative Title	Analysis Level	Alternative Description
Idaho and Southwestern Montana Greater Sage-Grouse Proposed LUPA/Final EIS	June 2015	Predation	Considered; Not Analyzed in Detail	Commenters stated that predator control was needed to protect Greater Sage-Grouse from predation. IDFG and MFWP possess primary responsibility for managing the wildlife within Idaho and Montana, respectively, while the BLM and Forest Service are responsible for managing habitat. Predator control is allowed on BLM-administered lands and is regulated by IDFG and MFWP. Avian predators such as ravens and birds of prey are protected under the Migratory Bird Treaty Act; eagles are protected under the Bald and Golden Eagle Act. Control of these avian predators is under the jurisdiction of the USFWS. Therefore, these comments relate to state- and federal-regulated actions that are outside of BLM or Forest Service authority and are outside the scope of the LUPA/EIS.
Idaho and Southwestern Montana Greater Sage-Grouse Proposed LUPA/Final EIS	June 2015	Close All or Portions of PHMA or GHMA to Off-Highway Vehicle Use	Considered; Not Analyzed in Detail	Through this LUPA/EIS, the BLM has identified, but has not studied in detail, an alternative to designate new area closures for OHV use within PHMA and GHMA. The BLM has analyzed alternatives to designate all areas within PHMAs and GHMAs as “limited” to existing roads and trails for OHV use, if not already closed by existing planning efforts. Subsequent Travel Management Plans will be developed to identify specific routes within limited areas that will be closed in order to protect and conserve Greater Sage-Grouse and its habitat. The BLM and Forest Service have analyzed existing OHV area closures within PHMAs and GHMAs as part of the No Action alternative and as a decision common to all alternatives.
Idaho Greater Sage-Grouse Draft Resource Management Plan Amendment and Environmental Impact Statement-May 2018	May 2018	No Action	Fully Analyzed	The No Action would not amend the current RMPs amended by the Idaho and Montana Greater Sage-Grouse Resource Management Plan Amendment (2015 ROD/ARMPA). Greater Sage-Grouse habitat would continue to be managed under current management direction. Goals and objectives for BLM-administered lands and federal mineral estate would not change. Allowable uses and restrictions pertaining to activities such as mineral leasing and development, recreation, lands and realty, and livestock grazing would also remain the same.

Idaho Planning Document	Document Date	Alternative Title	Analysis Level	Alternative Description
Idaho Greater Sage-Grouse Draft Resource Management Plan Amendment and Environmental Impact Statement	May 2018	Management Alignment Alternative	Fully Analyzed	This alternative was derived through coordination with the State and cooperating agencies to better align with the Idaho Governor's conservation plan and to support conservation outcomes for Greater Sage- Grouse. The BLM continued to build upon the 2015 planning effort as envisioned in SO 3353 by collaborating with states and stakeholders to improve compatibility between federal management plans and other plans and programs at the state level, while ensuring consistency with the BLM's multiple use mission.

Table 2-3, below, is organized by issue and provides a side-by-side comparison of the No-Action Alternative, the 2018 Draft EIS Management Alignment Alternative, and the 2018 Final EIS Proposed Plan Amendment. The Management Alignment Alternative attempts to adjust the No-Action Alternative to bring it into alignment with the Idaho Governor’s Greater Sage-Grouse Plan, while maintaining the format and all parts of the 2015 ARMPA that were not specifically identified as issues.

Table 2-3
Alternatives Analyzed in Detail During the 2019 Planning Process

2015 ARMPA Decision Number	No-Action Alternative (2015 ARMPA Decisions) <i>Note: References to figures, tables, or appendices are those in the 2015 ROD/ARMPA.</i>	Management Alignment Alternative <i>Note: References to figures, tables, or appendices are those in the 2015 ROD/ARMPA.</i>	Proposed Plan <i>Note: References to figures, tables, or appendices are those in the 2015 ARMPA.</i>
Habitat Management Area Flexibility			
MD SSS 6	The management area map and Biologically Significant Unit (BSU) baseline map will be reevaluated in conjunction with plan evaluation processes (i.e., approximately every 5 years). This reevaluation can indicate the need to adjust PHMA, IHMA, or GHMA or the habitat baseline. These adjustments can occur upon completion of the appropriate analysis and process (e.g., plan amendment) to review the allocation decisions based on the map. Results from the Wildfire and Invasive Species Assessments, such as identified focal or emphasis areas, will also be used to help inform mapping adjustments during this evaluation.	The management area map and Biologically Significant Unit (BSU) baseline map will be reevaluated in conjunction with plan evaluation processes (i.e., approximately every 5 years). This reevaluation can indicate the need to adjust Conservation Area Boundaries, PHMA, IHMA, or GHMA, or the habitat or population baselines. These adjustments can occur upon completion of the appropriate analysis and process (e.g., plan maintenance in coordination with the teams identified in MD SSS 44) to review the allocation decisions based on the map. Results from the Wildfire and Invasive Species Assessments, such as identified focal or emphasis areas, will also be used to help inform mapping adjustments during this evaluation.	The management area map and Biologically Significant Unit (BSU) baseline map will be reevaluated in conjunction with plan evaluation processes (i.e., approximately every 5 years). This reevaluation can indicate the need to adjust Conservation Area Boundaries, PHMA, IHMA, or GHMA, or the habitat or population baselines. These adjustments can occur upon completion of the appropriate analysis and process (e.g., plan maintenance in coordination with the teams identified in MD SSS 44) to review the allocation decisions based on the map. Results from the Wildfire and Invasive Species Assessments, such as identified focal or emphasis areas, will also be used to help inform mapping adjustments during this evaluation.
MD SSS 9	Areas of habitat outside of delineated habitat management areas identified during the Key habitat update process will be evaluated during site specific NEPA for project level activities and Greater Sage-Grouse required design features (Appendix C [of the 2015 Final EIS]) and buffers (Appendix B [of the 2015 Final EIS]) will be included as part of project design. These areas will be further evaluated during plan evaluation and the 5-year update to the management areas, to determine whether they should be included as PHMA, IHMA, or GHMA.	Delete	Delete
-	Habitat Designations for PHMA, IHMA, and GHMA remain the same as mapped in the 2015 ARMPA.	The boundaries of the habitat designations have been adjusted to correct administrative errors to the 2015 mapping. This includes removing some areas of non-habitat that were added to PHMA as part of the SFA designations. Additionally, in the West Owyhee Conservation Area, the circle of 60,706 acres of PHMA (Brown’s Creek Area) that is surrounded by IHMA will be re-designated as IHMA (See Map I). 11,828 acres of PHMA would be changed to non-habitat, and 60,706 acres of PHMA would be changed to IHMA.	The boundaries of the habitat designations have been adjusted to correct administrative errors to the 2015 mapping. This includes removing some areas of non-habitat that were added to PHMA as part of the SFA designations. Additionally, in the West Owyhee Conservation Area, the circle of 60,706 acres of PHMA (Brown’s Creek Area) that is surrounded by IHMA will be re-designated as IHMA (See Map I). 11,828 acres of PHMA would be changed to non-habitat, and 60,706 acres of PHMA would be changed to IHMA.
New MD SSS 44	-	The BLM will, in collaboration with the Idaho Governor’s Office of Species Conservation (OSC), Idaho Department of Fish and Game (IDFG), US Fish and Wildlife Service (USFWS), and potentially other state and federal agencies, form two teams (Technical Team and Policy Team), through an MOU, that will be responsible for review of proposed infrastructure developments, exceptions, variances, adaptive management triggers and responses, habitat management area adjustments, mitigation, etc. as described in detail in Appendix K [of the 2015 Final EIS].	The BLM will, in collaboration with the Idaho Governor’s Office of Species Conservation (OSC), Idaho Department of Fish and Game (IDFG), US Fish and Wildlife Service (USFWS), and potentially other state and federal agencies, form two teams (Technical Team and Policy Team), through an MOU, that will be responsible for review of proposed infrastructure developments, exceptions, variances, adaptive management triggers and responses, habitat management area adjustments, mitigation, etc. as described in detail in Appendix K [of the 2015 Final EIS].

2015 ARMPA Decision Number	No-Action Alternative (2015 ARMPA Decisions) <i>Note: References to figures, tables, or appendices are those in the 2015 ROD/ARMPA.</i>	Management Alignment Alternative <i>Note: References to figures, tables, or appendices are those in the 2015 ROD/ARMPA.</i>	Proposed Plan <i>Note: References to figures, tables, or appendices are those in the 2015 ARMPA.</i>
Removing Sagebrush Focal Area Designations			
MD SSS 10	MD SSS 10: Designate Sagebrush Focal Areas (SFA) as shown on Figure 1-2. SFA will be managed as PHMA, with the following additional management: <ul style="list-style-type: none"> Recommended for withdrawal from the General Mining Act of 1872, as amended, subject to valid existing rights. Managed as NSO, without waiver, exception, or modification, for fluid mineral leasing. Prioritized for vegetation management and conservation actions in these areas, including, but not limited to, land health assessments, wild horse and burro management actions, review of livestock grazing permits/leases, and habitat restoration (see specific management sections). 	Delete MD SSS 10 (no areas would be managed as SFA).	Delete MD SSS 10 (no areas would be managed as SFA).
MD MR 10	Recommend SFA for withdrawals from the General Mining Act of 1872, as amended, subject to valid existing rights.	Delete MD MR 10	Delete MD MR 10
MD WHB 3	Prioritize gathers and population growth suppression techniques in HMAs in Greater Sage-Grouse habitat, unless removals are necessary in other areas to address higher priority environmental issues, including herd health impacts. Place higher priority on Herd Areas not allocated as HMAs and occupied by wild horses and burros in SFA followed by PHMA.	Prioritize gathers and population growth suppression techniques in HMAs in Greater Sage-Grouse habitat, unless removals are necessary in other areas to address higher priority environmental issues, including herd health impacts. Place higher priority on Herd Areas not allocated as HMAs and occupied by wild horses and burros in PHMA.	Prioritize gathers and population growth suppression techniques in HMA in Greater Sage-Grouse habitat, unless removals are necessary in other areas to address higher priority environmental issues, including herd health impacts. Place higher priority on Herd Areas not allocated as HMA and occupied by wild horses and burros in PHMA.
MD WHB 4	In SFA and PHMA outside of SFA, assess and adjust AMLs through the NEPA process within HMAs when wild horses or burros are identified as a significant causal factor in not meeting land health standards, even if current AML is not being exceeded.	In PHMA, assess and adjust AMLs through the NEPA process within HMAs when wild horses or burros are identified as a significant causal factor in not meeting land health standards, even if current AML is not being exceeded.	In PHMA, assess and adjust appropriate management levels (AMLs) through the NEPA process within HMA when wild horses or burros are identified as a significant causal factor in not meeting land health standards, even if current AML is not being exceeded.
MD WHB 5	In SFAs and PHMA outside of SFA, monitor the effects of wild horse and burro use in relation to Greater Sage-Grouse seasonal habitat objectives on an annual basis to help determine future management actions.	In PHMA, monitor the effects of wild horse and burro use in relation to Greater Sage-Grouse seasonal habitat objectives on an annual basis to help determine future management actions.	In PHMA, monitor the effects of wild horse and burro use in relation to Greater Sage-Grouse seasonal habitat objectives on an annual basis to help determine future management actions.
MD WHB 6	Develop or amend herd management area plans (HMAPs) to incorporate Greater Sage-Grouse habitat objectives and management considerations for all HMAs within Greater Sage-Grouse habitat, with emphasis placed on SFA and other PHMA.	Develop or amend herd management area plans (HMAPs) to incorporate Greater Sage-Grouse habitat objectives and management considerations for all HMAs within Greater Sage-Grouse habitat, with emphasis placed on PHMA.	Develop or amend herd management area plans (HMAPs) to incorporate Greater Sage-Grouse habitat objectives and management considerations for all HMA within Greater Sage-Grouse habitat, with emphasis placed on PHMA.
Modifying Disturbance and Density Caps			
MD SSS 27	For Idaho and Montana, if the 3 percent anthropogenic disturbance cap is exceeded on lands (regardless of land ownership) within Greater Sage-Grouse PHMA (or IHMA in Idaho) Habitat Management Areas in any given BSU, then no further discrete anthropogenic disturbances (subject to applicable laws and regulations, such as the General Mining Law of 1872, as amended, valid existing rights, etc.) will be permitted by BLM within Greater Sage-Grouse PHMA and IHMA in any given BSU until the disturbance has been reduced to less than the cap, as measured according to the Disturbance and Adaptive Management Appendix (Appendix E [of the 2015 Final EIS]) for the intermediate scale. For Idaho, if the 3 percent disturbance cap is exceeded on all lands (regardless of land ownership) within a proposed project analysis area (Appendix E [of the 2015 Final EIS]) in a PHMA (or IHMA in Idaho), then no further anthropogenic disturbance will be permitted by BLM until disturbance in the proposed project analysis area has been reduced to	If the 3 percent anthropogenic disturbance cap is exceeded on lands (regardless of landownership) within Greater Sage-Grouse PHMA (or IHMA in Idaho) habitat management areas in any given BSU, then no further discrete anthropogenic disturbances (subject to applicable laws and regulations, such as the General Mining Law of 1872, as amended, valid existing rights, etc.) will be permitted by BLM within Greater Sage-Grouse PHMA and IHMA in any given BSU until the disturbance has been reduced to less than the cap, as measured according to the Disturbance and Adaptive Management Appendix (Appendix E [of the 2015 Final EIS]) for the intermediate scale. For Idaho, the BSU (Figure 2-2) is defined as the currently mapped nesting and wintering habitat within PHMA and IHMA within a Conservation Area, inclusive of all ownerships. Anthropogenic disturbance excludes habitat disturbance from wildfire and fuels management activities and includes the following developments (see Appendix E [of the 2015 Final EIS] for further details):	If the 3 percent anthropogenic disturbance cap is exceeded on lands (regardless of land ownership) within Greater Sage-Grouse PHMA (or IHMA in Idaho) habitat management areas in any given BSU, then no further discrete anthropogenic disturbances (subject to applicable laws and regulations, such as the General Mining Law of 1872, as amended, valid existing rights, etc.) will be permitted by BLM within Greater Sage-Grouse PHMA and IHMA in any given BSU until the disturbance has been reduced to less than the cap, as measured according to the Disturbance and Adaptive Management Appendix (Appendix E [of the 2015 Final EIS]) for the intermediate scale. For Idaho, the BSU (Figure 2-2) is defined as the currently mapped nesting and wintering habitat within PHMA and IHMA within a Conservation Area, inclusive of all ownerships. Anthropogenic disturbance excludes habitat disturbance from wildfire and fuels management activities and includes the following developments (see Appendix E [of the 2015 Final EIS] for further details):

2015 ARMPA Decision Number	No-Action Alternative (2015 ARMPA Decisions) <i>Note: References to figures, tables, or appendices are those in the 2015 ROD/ARMPA.</i>	Management Alignment Alternative <i>Note: References to figures, tables, or appendices are those in the 2015 ROD/ARMPA.</i>	Proposed Plan <i>Note: References to figures, tables, or appendices are those in the 2015 ARMPA.</i>
	<p>maintain the area under the cap (subject to applicable laws and regulations, such as the General Mining Law of 1872, as amended, valid existing rights, etc.). For Montana, if the 3 percent disturbance cap is exceeded on lands (regardless of land ownership) or if anthropogenic disturbance and habitat loss associated with conversion to agricultural tillage or fire exceed 5% within a project analysis area in PHMA, then no further discrete anthropogenic disturbances (subject to applicable laws and regulations, such as the 1872 Mining Law, valid existing rights, etc.) will be permitted by BLM within PHMA in a project analysis area until the disturbance has been reduced to less than the cap. If the BLM determines that the State of Montana has adopted a Greater Sage-Grouse Habitat Conservation Program that contains comparable components to those found in the State of Wyoming's Core Area Strategy including an all lands approach for calculating anthropogenic disturbances, a clear methodology for measuring the density of operations, and a fully operational Density Disturbance Calculation Tool, the 3% disturbance cap will be converted to a 5% cap for all sources of habitat alteration within a project analysis area.</p> <p>In both Idaho and Montana, 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 which fulfill the use for which the corridors were designated (ex., transmission lines, pipelines) and the designated width of a corridor will not be exceeded as a result of any project co-location.</p> <p>For Idaho the BSU (Figure 2-2) is defined as the currently mapped nesting and wintering habitat within PHMA and IHMA within a Conservation Area, inclusive of all ownerships. For Montana the BSU is defined as the PHMA in Montana. Anthropogenic disturbance excludes habitat disturbance from wildfire and fuels management activities and includes the following developments (see Appendix E [of the 2015 Final EIS] for further details):</p> <ul style="list-style-type: none"> • Oil and Gas Wells and Development Facilities • Coal Mines • Wind Towers • Solar Fields • Geothermal Development Facilities • Mining (Active Locatable, Non-Energy Leasable and Saleable Developments) • Roads • Railroads • Power lines • Communication Towers • Other Vertical Structures • Coal bed Methane Ponds • Meteorological Towers (e.g., wind energy testing) • Nuclear Energy Facilities • Airport Facilities and Infrastructure 	<ul style="list-style-type: none"> • Oil and Gas Wells and Development Facilities • Coal Mines • Wind Towers • Solar Fields • Geothermal Development Facilities • Mining (Active Locatable, Nonenergy Leasable and Saleable Developments) • Roads • Railroads • Power Lines • Communication Towers • Other Vertical Structures • Coal Bed Methane Ponds • Meteorological Towers (e.g., wind energy testing) • Nuclear Energy Facilities • Airport Facilities and Infrastructure • Military Range Facilities and Infrastructure • Hydroelectric Plants • Recreation Areas Facilities and infrastructure <p>This disturbance is measured by direct footprint or by ROW width for linear features (power lines, pipelines, and roads).</p>	<ul style="list-style-type: none"> • Oil and gas wells and development facilities • Coal mines • Wind towers • Solar fields • Geothermal development facilities • Mining (active locatable, nonenergy leasable and salable developments) • Roads • Railroads • Power lines • Communication towers • Other vertical structures • Coal bed methane ponds • Meteorological towers (e.g., wind energy testing) • Nuclear energy facilities • Airport facilities and infrastructure • Military range facilities and infrastructure • Hydroelectric plants • Recreation area facilities and infrastructure <p>This disturbance is measured by direct footprint or by the distance between the outermost lines on transmission lines (Leu et al. 2008). by ROW width for linear features (power lines, pipelines, and roads).</p>

2015 ARMPA Decision Number	No-Action Alternative (2015 ARMPA Decisions) <i>Note: References to figures, tables, or appendices are those in the 2015 ROD/ARMPA.</i>	Management Alignment Alternative <i>Note: References to figures, tables, or appendices are those in the 2015 ROD/ARMPA.</i>	Proposed Plan <i>Note: References to figures, tables, or appendices are those in the 2015 ARMPA.</i>
	<ul style="list-style-type: none">• Military Range Facilities and Infrastructure• Hydroelectric Plants• Recreation Areas Facilities and infrastructure <p>For Idaho this disturbance is measured by direct footprint or by ROW width for linear features (power lines, pipelines and roads). For Montana disturbance is measured similar to the Wyoming Disturbance Density Calculation Tool process described in Appendix E [of the 2015 Final EIS].</p> <p>Subject to applicable laws and regulations and valid existing rights, if the average density of one energy and mining facility per 640 acres (the density cap) is exceeded on all lands (regardless of land ownership) in the Priority Habitat Management Area within a proposed project analysis area, then no further disturbance from energy or mining facilities will be permitted by BLM: (1) until disturbance in the proposed project analysis area has been reduced to maintain the limit under the cap; or (2) unless the energy or mining facility is co-located into an existing disturbed area.</p>		

2015 ARMPA Decision Number	No-Action Alternative (2015 ARMPA Decisions) <i>Note: References to figures, tables, or appendices are those in the 2015 ROD/ARMPA.</i>	Management Alignment Alternative <i>Note: References to figures, tables, or appendices are those in the 2015 ROD/ARMPA.</i>	Proposed Plan <i>Note: References to figures, tables, or appendices are those in the 2015 ARMPA.</i>
MD SSS 29	<p>New anthropogenic disturbances within PHMA (Idaho only): Anthropogenic Disturbance Screening Criteria. In order to avoid surface-disturbing activities in PHMA, priority will be given to development (including ROWs, fluid minerals and other mineral resources subject to applicable stipulations) outside of PHMA. When authorizing development in PHMA, priority will be given to development in non-habitat areas first and then in the least suitable habitat for Greater Sage-Grouse. In addition to the PHMA and IHMA Anthropogenic Disturbance Development Criteria (MD SSS 30), the following criteria must all be met in the project screening and assessment process:</p> <ol style="list-style-type: none"> The population trend for the Greater Sage-Grouse within the associated Conservation Area is stable or increasing over a 3-year period and the population levels are not currently engaging the adaptive management triggers (this applies strictly to new authorizations; renewals and amendments of existing authorizations will not be subject to this criteria when it can be shown that long-term impacts from those renewals or amendments will be substantially the same as the existing development); The development with associated mitigation will not result in a net loss of Greater Sage-Grouse Key habitat and mitigation will provide a net conservation benefit to the respective PHMA; The project and associated impacts will not result in a net loss of Greater Sage-Grouse Key habitat or habitat fragmentation or other impacts causing a decline in the population of the species within the relevant Conservation Area (the project will be outside Key habitat in areas not meeting desired habitat conditions or the project will provide a benefit to habitat areas that are functioning in a limited way as habitat); The development cannot be reasonably accomplished outside of the PHMA; or can be either: 1) developed pursuant to a valid existing authorization; or 2) is co-located within the footprint of existing infrastructure (proposed actions will not increase the 2011 authorized footprint and associated impacts more than 50 percent, depending on industry practice). Development will be implemented adhering to the required design features (RDF) described in Appendix C [of the 2015 Final EIS]; The project will not exceed the disturbance cap (MD SSS 27) The project has been reviewed by the State Implementation Team and recommended for consideration by the Idaho Governor. 	<p>Subject to valid existing rights, new anthropogenic disturbances within PHMA (Idaho only): Anthropogenic Disturbance Screening Criteria. In order to avoid surface-disturbing activities in PHMA, priority will be given to development (including ROWs, fluid minerals, and other mineral resources subject to applicable stipulations) outside of PHMA. When authorizing development in PHMA, priority will be given to development in non-habitat areas first and then in the least suitable habitat for Greater Sage-Grouse. In addition to the PHMA and IHMA Anthropogenic Disturbance Development Criteria (MD SSS 30), the following criteria must all be met in the project screening and assessment process:</p> <ol style="list-style-type: none"> The population trend for the Greater Sage-Grouse within the associated Conservation Area is stable or increasing over a 3-year period and the population levels are not currently engaging the adaptive management triggers (this applies strictly to new authorizations; renewals and amendments of existing authorizations will not be subject to this criteria when it can be shown that long-term impacts from those renewals or amendments will be substantially the same as the existing development); The development with associated mitigation will not result in a net loss of Greater Sage-Grouse key habitat or of the respective PHMA; The project and associated impacts will not result in a net loss of Greater Sage-Grouse key habitat or habitat fragmentation or other impacts causing a decline in the population of the species within the relevant Conservation Area. The development cannot be reasonably accomplished outside of the PHMA; or can be either: 1) developed pursuant to a valid existing authorization; or 2) is collocated within the footprint of existing infrastructure (proposed actions will not increase the 2011 authorized footprint and associated impacts more than 50 percent, depending on industry practice). Development will be implemented adhering to the required design features (RDF) described in Appendix C [of the 2015 Final EIS]; The project will not exceed the disturbance cap (MD SSS 27) Large scale anthropogenic disturbances will be reviewed by the Technical and Policy Teams as described in MD SSS 44. Large Scale Anthropogenic disturbance includes highways, high voltage transmission lines, commercial wind projects, energy development (e.g., oil and gas development, geothermal wells), airports, mines, cell phone towers, landfills, residential, and commercial subdivisions, etc. 	<p>Subject to valid existing rights, new anthropogenic disturbances within PHMA (Idaho only): Anthropogenic Disturbance Screening Criteria. In order to avoid surface-disturbing activities in PHMA, priority will be given to development (including ROWs, fluid minerals, and other mineral resources subject to applicable stipulations) outside of PHMA. When authorizing development in PHMA, priority will be given to development in non-habitat areas first and then in the least suitable habitat for Greater Sage-Grouse. In addition to the PHMA and IHMA Anthropogenic Disturbance Development Criteria (MD SSS 30), the following criteria must all be met in the project screening and assessment process:</p> <ol style="list-style-type: none"> The population trend for the Greater Sage-Grouse within the associated Conservation Area is stable or increasing over a 3-year period and the population levels are not currently engaging the adaptive management triggers (this applies strictly to new authorizations; renewals and amendments of existing authorizations will not be subject to this criteria when it can be shown that long-term impacts from those renewals or amendments will be substantially the same as the existing development). The development with associated mitigation will not result in a net loss of Greater Sage-Grouse key habitat or of the respective PHMA. The project and associated impacts will not result in a net loss of Greater Sage-Grouse key habitat or habitat fragmentation or other impacts causing a decline in the population of the species within the relevant Conservation Area. The development cannot be reasonably accomplished outside of the PHMA; or can be either: 1) developed pursuant to a valid existing authorization; or 2) is collocated within the footprint of existing infrastructure (proposed actions will not increase the 2011 authorized footprint and associated impacts more than 50 percent, depending on industry practice). Development will be implemented adhering to the required design features (RDF) described in Appendix C [of the 2015 Final EIS]. The project will not exceed the disturbance cap (MD SSS 27). Large-scale anthropogenic disturbances in PHMA will be reviewed by the Technical and Policy Teams as described in MD SSS 44. (Large-scale anthropogenic disturbances is defined in the glossary.) <p>Large Scale Anthropogenic disturbance includes highways, high voltage transmission lines, commercial wind projects, energy development (e.g., oil and gas development, geothermal wells), airports, mines, cell phone towers, landfills, residential, and commercial subdivisions, etc.</p>
Modifying Lek Buffers			
MD SSS 35	<p>In undertaking BLM management actions, and consistent with valid and existing rights and applicable law in authorizing third-party actions, the BLM will apply the lek buffer-distances identified in the USGS Report Conservation Buffer Distance Estimates for Greater Sage-Grouse – A Review (Open File Report 2014-1239) in accordance with Appendix B [of the 2015 Final EIS].</p>	<p>In undertaking BLM management actions in PHMA and IHMA, and consistent with valid and existing rights and applicable law in authorizing third-party actions, the BLM will apply the lek buffer-distances identified in the USGS Report Conservation Buffer Distance Estimates for Greater Sage-Grouse – A Review (Open File Report 2014-1239) lek buffer-distances in accordance with Appendix B [of the 2015 Final EIS]. The buffers do not apply to vegetation treatments specifically designed to improve or protect Greater Sage-Grouse habitat.</p>	<p>In undertaking BLM management actions in PHMA, IHMA and GHMA, and consistent with valid and existing rights and applicable law in authorizing third-party actions, the BLM will apply the lek buffer-distances in accordance with Appendix B [of the 2015 Final EIS] (Buffers). The buffers do not apply to vegetation treatments specifically designed to improve or protect Greater Sage-Grouse habitat; however, impacts on leks should be analyzed and those impacts should be minimized to the extent practicable.</p>

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Including Waivers, Exceptions, and Modifications on NSO Stipulations			
MD MR 1	Idaho and Montana: Areas within SFA will be open to fluid mineral leasing and development and geophysical exploration subject to NSO without waiver, exception, or modification. Areas within PHMA (outside SFA) and IHMA will be open to mineral leasing and development and geophysical exploration subject to NSO with a limited exception (MD MR 3). GHMA will be open to mineral leasing and development and geophysical exploration subject to CSU which includes buffers and standard stipulations.	Areas within PHMA and IHMA will be open to mineral leasing and development and geophysical exploration subject to NSO with a limited exception (MD MR 3). GHMA will be open to mineral leasing and development and geophysical exploration subject to CSU which includes standard stipulations and best management practices as identified in Appendix C [of the 2015 Final EIS].	Areas within PHMA and IHMA will be open to mineral leasing and development and geophysical exploration subject to NSO with a limited exception (MD MR 3). GHMA will be open to mineral leasing and development and geophysical exploration subject to CSU which includes standard stipulations and best management practices as identified in Appendix C [of the 2015 Final EIS] (Required Design Features).
MD MR 2	In Idaho, parcels nominated for lease in PHMA or IHMA will be evaluated prior to lease offering to determine if development is feasible. In GHMA, parcels will not be offered for lease if buffers and restrictions (including RDFs) preclude development in the leasing area.	In Idaho, parcels nominated for lease in PHMA, IHMA, or GHMA will be evaluated prior to lease offering to determine if development is feasible.	In Idaho, parcels nominated for lease in PHMA, IHMA, or GHMA will be evaluated prior to lease offering to determine if development is feasible.
MD MR 3	<p>PHMA and IHMA: No waivers or modifications to a fluid mineral lease NSO stipulation will be granted. The Authorized Officer may grant an exception to a fluid mineral lease NSO stipulation only where the proposed action:</p> <ul style="list-style-type: none"> i. Would not have direct, indirect, or cumulative effects on Greater Sage-Grouse or its habitat; or, ii. Is proposed to be undertaken as an alternative to a similar action occurring on a nearby parcel, and would provide a clear conservation gain to Greater Sage-Grouse. <p>Exceptions based on conservation gain (ii) may only be considered in (a) PHMAs of mixed ownership where federal minerals underlie less than fifty percent of the total surface, or (b) areas of the public lands where the proposed exception is an alternative to an action occurring on a nearby parcel subject to a valid Federal fluid mineral lease existing as of the date of this RMP amendment. Exceptions based on conservation gain must also include measures, such as enforceable institutional controls and buffers, sufficient to allow the BLM to conclude that such benefits will endure for the duration of the proposed action's impacts.</p> <p>Any exceptions to this lease stipulation may be approved by the Authorized Officer only with the concurrence of the State Director. The Authorized Officer may not grant an exception unless the applicable state wildlife agency, the USFWS, and the BLM unanimously find that the proposed action satisfies (i) or (ii). Such finding shall initially be made by a team of one field biologist or other Greater Sage-Grouse expert from each respective agency. In the event the initial finding is not unanimous, the finding may be elevated to the appropriate BLM State Director, USFWS State Ecological Services Director, and state wildlife agency head for final resolution. In the event their finding is not unanimous, the exception will not be granted. Approved exceptions will be made publicly available at least quarterly.</p>	<p>PHMA and IHMA: No waivers or modifications to a fluid mineral lease NSO stipulation will be granted. The Authorized Officer may grant an exception to a fluid mineral lease NSO stipulation only where the proposed action:</p> <ul style="list-style-type: none"> i. Would not have direct, indirect, or cumulative effects on Greater Sage-Grouse or its habitat; or, ii. Is proposed to be undertaken as an alternative to a similar action occurring on a nearby parcel, and would provide no net loss to Greater Sage-Grouse. <p>Exceptions based on no net loss (ii) may only be considered in (a) PHMA of mixed ownership where federal minerals underlie less than fifty percent of the total surface, or (b) areas of the public lands where the proposed exception is an alternative to an action occurring on a nearby parcel subject to a valid Federal fluid mineral lease existing as of the date of this RMP amendment. Exceptions based on no net loss must also include measures, such as enforceable institutional controls and buffers, sufficient to allow the BLM to conclude that such benefits will endure for the duration of the proposed action's impacts.</p> <p>Any exceptions to this lease stipulation may be approved by the Authorized Officer, only with the concurrence of the State Director and in coordination with the Technical and Policy Team. Approved exceptions will be made publicly available.</p>	<p>PHMA and IHMA: No waivers or modifications to a fluid mineral lease NSO stipulation will be granted. The BLM Authorized Officer may grant an exception to a fluid mineral lease NSO stipulation only where the proposed action:</p> <ul style="list-style-type: none"> i. Would not have direct, indirect, or cumulative effects on Greater Sage-Grouse or its habitat; or, ii. Is proposed to be undertaken as an alternative to a similar action occurring on a nearby parcel, and would provide no net loss to Greater Sage-Grouse. <p>Exceptions based on no net loss (ii) may only be considered in (a) PHMA of mixed ownership where federal minerals underlie less than fifty percent of the total surface, or (b) areas of the public lands where the proposed exception is an alternative to an action occurring on a nearby parcel subject to a valid Federal fluid mineral lease existing as of the date of this RMP amendment. Exceptions based on no net loss must also include measures, such as enforceable institutional controls and buffers, sufficient to allow the BLM to conclude that such benefits will endure for the duration of the proposed action's impacts.</p> <p>Any exceptions to this lease stipulation may be approved by the BLM Authorized Officer, only with the concurrence of the State Director and in coordination with the Technical and Policy Team. Approved exceptions will be made publicly available.</p>
MD MR 8	Issue Written Orders of the Authorized Officer (43 CFR 3161.2) requiring reasonable protective measures consistent with the lease terms where necessary to avoid or minimize impacts on Greater Sage-Grouse populations or habitat.	Delete MD MR 8	Delete MD MR 8 Issue Written Orders of the BLM Authorized Officer (43 CFR 3161.2) requiring reasonable protective measures consistent with the lease terms where necessary to avoid or minimize impacts on Greater Sage-Grouse populations or habitat.

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Changing Requirements for Design Features			
MD SSS 32	<p>Incorporate RDFs as described in Appendix C [of the 2015 Final EIS] in the development of project or proposal implementation, reauthorizations or new authorizations and suppression activities, as conditions of approval (COAs) into any post-lease activities and as best management practices for locatable minerals activities, to the extent allowable by law, unless at least one of the following conditions can be demonstrated and documented in the NEPA analysis associated with the specific project:</p> <ul style="list-style-type: none"> a. A specific RDF is not applicable to the site-specific conditions of the project or activity; b. A proposed design feature or BMP is determined to provide equal or better protection for Greater Sage-Grouse or its habitat; or c. Analysis concludes that following a specific RDF will provide no more protection to Greater Sage-Grouse or its habitat than not following it, for the project being proposed. 	<p>In PHMA and IHMA, incorporate RDFs as described in Appendix C [of the 2015 Final EIS] in the development of project or proposal implementation, reauthorizations or new authorizations and suppression activities, as conditions of approval (COAs) into any post-lease activities and as best management practices for locatable minerals activities, to the extent allowable by law, unless at least one of the following conditions can be demonstrated and documented in the NEPA analysis associated with the specific project:</p> <ul style="list-style-type: none"> a. A specific RDF is not applicable to the site-specific conditions of the project or activity; b. A proposed design feature or BMP is determined to provide equal or better protection for Greater Sage-Grouse or its habitat; or c. Analysis concludes that following a specific RDF will provide no more protection to Greater Sage-Grouse or its habitat than not following it, for the project being proposed. <p>In GHMA, incorporate RDFs as best management practices in the development of project or proposal implementation, reauthorizations or new authorizations, suppression activities, post-lease activities, and locatable minerals activities.</p>	<p>In PHMA and IHMA, incorporate RDFs as described in Appendix C [of the 2015 Final EIS] in the development of project or proposal implementation, reauthorizations or new authorizations and suppression activities; as conditions of approval (COAs) into any post-lease activities and as best management practices for locatable minerals activities, to the extent allowable by law, unless at least one of the following conditions can be demonstrated and documented in the NEPA analysis associated with the specific project:</p> <ul style="list-style-type: none"> a. A specific RDF is not applicable to the site-specific conditions of the project or activity; b. A proposed design feature or BMP is determined to provide equal or better protection for Greater Sage-Grouse or its habitat; or c. Analysis concludes that following a specific RDF will provide no more protection to Greater Sage-Grouse or its habitat than not following it, for the project being proposed. <p>In GHMA, the RDFs are considered best management practices (BMPs) that should be considered and applied unless the proponent can show that applying the BMP is technically or economically impracticable. incorporate RDFs as best management practices in the development of project or proposal implementation, reauthorizations or new authorizations, suppression activities, post-lease activities, and locatable minerals activities.</p>
MD MR 11	<p>PHMA: PHMA are closed to new mineral materials sales. However, these areas remain “open” to free use permits and the expansion of existing active pits only if the following criteria are met:</p> <ul style="list-style-type: none"> • the project area disturbance cap is not exceeded within a BSU; • the activity is subject to the provisions set forth in the mitigation framework [Appendix F [of the 2015 Final EIS]]; • all applicable required design features are applied; and • the activity is permissible under the Idaho exception and development criteria (MD SSS 29 and MD SSS 30) • IHMA: All IHMA will be open to mineral materials development, consistent with the Idaho Anthropogenic Disturbance Criteria (MD SSS 30), and subject to RDFs, and buffers. Sales from existing community pits within IHMA will be subject to seasonal timing restrictions (Appendix C [of the 2015 Final EIS]). • GHMA: All GHMA will be open to mineral materials development, subject to RDFs and buffers. Sales from existing community pits within GHMA will be subject to seasonal timing restrictions (Appendix C [of the 2015 Final EIS]). 	<p>PHMA: All PHMA will be closed to new mineral materials development, but continued use of existing pits will be allowed. New free use permits and the expansion of existing pits may be considered only if the following criteria are met:</p> <ul style="list-style-type: none"> • The disturbance cap is not exceeded within a BSU. • The activity is subject to the provisions set forth in the mitigation framework (Appendix F [of the 2015 Final EIS]). • All applicable required design features are applied. • The activity is permissible under the Idaho exception and development criteria (MD SSS 29 and MD SSS 30). • IHMA: All IHMA will be open to mineral materials development, consistent with the Idaho Anthropogenic Disturbance Criteria (MD SSS 30), and subject to RDFs and buffers. Sales from existing community pits within IHMA will be subject to seasonal timing restrictions (Appendix C [of the 2015 Final EIS]). • GHMA: All GHMA will be open to mineral materials development, subject to best management practices as described in Appendix C. Sales from existing community pits within GHMA will be subject to seasonal timing restrictions (Appendix C [of the 2015 Final EIS]). 	<p>PHMA: All PHMA will be closed to new mineral materials development, but continued use of existing pits will be allowed. New free use permits and the expansion of existing pits may be considered only if the following criteria are met:</p> <ul style="list-style-type: none"> • The disturbance cap is not exceeded within a BSU • The activity is subject to the provisions set forth in the mitigation framework (Appendix F [of the 2015 Final EIS]) • All applicable required design features are applied • The activity is permissible under the Idaho exception and development criteria (MD SSS 29 and MD SSS 30) • IHMA—All IHMA will be open to mineral materials development, consistent with the Idaho Anthropogenic Disturbance Criteria (MD SSS 30), and subject to RDFs and buffers. Sales from existing community pits within IHMA will be subject to seasonal timing restrictions (Appendix C). • GHMA—All GHMA will be open to mineral materials development, subject to best management practices, as described in Appendix C [of the 2015 Final EIS]. Sales from existing community pits within GHMA will be subject to seasonal timing restrictions (Appendix C).

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MD MR 15	<p>PHMA are closed to leasing. IHMA and GHMA: Areas within Known Phosphate Leasing Areas (KPLAs) will remain open to leasing subject to standard stipulations. IHMA areas outside of KPLAs are open to prospecting and subsequent leasing provided the Anthropogenic Disturbance Development Criteria (MD SSS 30) and the anthropogenic disturbance cap (MD SSS 27) can be met.</p> <p>RDFs and buffers shall be applied to prospecting permits.</p> <p>GHMA: Lands outside KPLAs are available for prospecting and subsequent leasing and initial mine development subject to RDFs, buffers, and standard stipulations.</p>	<p>PHMA are closed to leasing. IHMA and GHMA: Areas within Known Phosphate Leasing Areas (KPLAs) will remain open to leasing subject to standard stipulations. IHMA areas outside of KPLAs are open to prospecting and subsequent leasing provided the Anthropogenic Disturbance Development Criteria (MD SSS 30) and the anthropogenic disturbance cap (MD SSS 27) can be met.</p> <p>RDFs and buffers shall be applied to prospecting permits.</p> <p>GHMA: Lands outside KPLAs are available for prospecting and subsequent leasing and initial mine development subject to standard stipulations and best management practices as described in Appendix C [of the 2015 Final EIS].</p>	<p>PHMA are closed to leasing. IHMA and GHMA: Areas within Known Phosphate Leasing Areas (KPLAs) will remain open to leasing subject to standard stipulations. IHMA areas outside of KPLAs are open to prospecting and subsequent leasing provided the Anthropogenic Disturbance Development Criteria (MD SSS 30) and the anthropogenic disturbance cap (MD SSS 27) can be met.</p> <p>RDFs and buffers shall be applied to prospecting permits.</p> <p>GHMA: Lands outside KPLAs are available for prospecting and subsequent leasing and initial mine development subject to standard stipulations and best management practices as described in Appendix C [of the 2015 Final EIS].</p>
MD RE 1	<p>PHMA: Designate and manage PHMA as exclusion areas for utility scale (20 MW) wind and solar testing and development, nuclear and hydropower energy development. IHMA: Designate and manage IHMA as avoidance areas for wind and solar testing and development, nuclear and hydropower development. GHMA (Idaho): Designate and manage GHMA as open for wind and solar testing and development and nuclear and hydropower development subject to RDFs and buffers. GHMA (Montana): Designate and manage GHMA as avoidance for wind and solar testing and development and nuclear and hydropower development.</p>	<p>PHMA: Designate and manage PHMA as exclusion areas for utility scale (20 MW) wind and solar testing and development, and nuclear and hydropower energy development. IHMA: Designate and manage IHMA as avoidance areas for wind and solar testing and development, and nuclear and hydropower development. GHMA (Idaho): Designate and manage GHMA as open for wind and solar testing and development, and nuclear and hydropower development.</p>	<p>PHMA: Designate and manage PHMA as exclusion areas for utility scale (20 MW) wind and solar testing and development, and nuclear and hydropower energy development. IHMA: Designate and manage IHMA as avoidance areas for wind and solar testing and development, and nuclear and hydropower development. GHMA (Idaho): Designate and manage GHMA as open for wind and solar testing and development, and nuclear and hydropower development.</p>
MD LR 2	<p>PHMA: Designate and manage PHMA as ROW avoidance areas, consistent with MD SSS 29 and subject to RDFs and buffers (Appendices B and C). IHMA: Designate and manage IHMA as ROW avoidance areas, consistent with MD SSS 30 and subject to RDFs and buffers. GHMA (Idaho and Montana): Designate and manage GHMA as open with proposals subject to RDFs and buffers.</p>	<p>PHMA: Designate and manage PHMA as ROW avoidance areas, consistent with MD SSS 29 and subject to RDFs and buffers (Appendices B and C). IHMA: Designate and manage IHMA as ROW avoidance areas, consistent with MD SSS 30 and subject to RDFs and buffers. GHMA: Designate and manage GHMA as open with proposals subject to best management practices as described in Appendix C [of the 2015 Final EIS].</p>	<p>PHMA: Designate and manage PHMA as ROW avoidance areas, consistent with MD SSS 29 and subject to RDFs and buffers (Appendices B and C). IHMA: Designate and manage IHMA as ROW avoidance areas, consistent with MD SSS 30 and subject to RDFs and buffers. GHMA: Designate and manage GHMA as open with proposals subject to best management practices as described in Appendix C [of the 2015 Final EIS].</p>
Modifying Habitat Objectives			
SSS OBJ 2	<p>The Habitat Objectives for Greater Sage-Grouse (the Habitat Objectives table (Table 2-2) [in the 2015 Final EIS]) is a list of indicators, characteristics, and values that describe Greater Sage-Grouse seasonal habitat use areas. The BLM used indicator values derived from a synthesis of local and regional Greater Sage-Grouse habitat research and data to describe the typical vegetation communities that Greater Sage-Grouse select. While the habitat objectives are not attainable on every site or every acre within designated Greater Sage-Grouse habitat management areas, the values reflect a range of habitat conditions that generally lead to greater survival of individuals within a population. When permitting land use activities, BLM should consider the ecological site potential within designated habitat management areas to validate the habitat conditions achievable for a specific site.</p> <p>The seasonal habitat descriptions in Table 2-2 [the Habitat Objectives table in the 2015 Final EIS] vary across the range of Greater Sage-Grouse, within a subregion, and between sites. They are not land health standards but are quantitative measures that inform the Special Status Species Habitat Land Health Standard for Greater Sage-Grouse. These measurable values reflect ecological potential, and may be adjusted based on local factors influencing Greater Sage-Grouse habitat selection. Local data or recent science may indicate that Greater Sage-Grouse select for</p>	<p>Within PHMA and IHMA, maintain large intact sagebrush steppe communities with vegetative characteristics consistent with their ecological potential such that Greater Sage-Grouse can select suitable seasonal habitats for breeding, nesting, rearing young, and wintering.</p> <p>Greater Sage-Grouse actively select suitable use areas within large intact sagebrush ecosystems. Not every site will provide for every Greater Sage-Grouse need, which is why they require large intact sagebrush ecosystems.</p> <p>The habitat objectives for Greater Sage-Grouse (the Habitat Objectives table (Table 2-2) [in the 2015 Final EIS]) are a list of indicators, characteristics, and values that describe Greater Sage-Grouse seasonal habitat use areas. The BLM used indicator values derived from a synthesis of local and regional Greater Sage-Grouse habitat research and data to describe the typical vegetation communities that Greater Sage-Grouse select. While the habitat objectives are not attainable on every site or every acre within designated Greater Sage-Grouse habitat management areas, the values reflect a range of habitat conditions that generally lead to greater survival of individuals within a population. When permitting land use activities, the BLM shall consider the ecological site potential within designated habitat management areas to validate the habitat conditions achievable for a specific site.</p>	<p>Within PHMA and IHMA, maintain large intact sagebrush steppe communities with vegetative characteristics consistent with their ecological potential such that Greater Sage-Grouse can select suitable seasonal habitats for breeding, nesting, rearing young, and wintering.</p> <p>Greater Sage-Grouse actively select suitable use areas within large intact sagebrush ecosystems. Not every site will provide for every Greater Sage-Grouse need, which is why they require large intact sagebrush ecosystems.</p> <p>The desired conditions for Greater Sage-Grouse (the Desired Conditions table (Table 2-2) [in the 2015 Final EIS]) are a list of indicators, characteristics, and values that describe Greater Sage-Grouse seasonal habitat use areas. The BLM used indicator values derived from a synthesis of local and regional Greater Sage-Grouse habitat research and data to describe the typical vegetation communities that Greater Sage-Grouse select. While the desired conditions are not attainable on every site or every acre within designated Greater Sage-Grouse habitat management areas, the values reflect a range of habitat conditions that generally lead to greater survival of individuals within a population. When permitting land use activities, the BLM shall consider the ecological site potential within designated habitat management areas to validate the habitat conditions achievable for a specific site.</p>

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	<p>vegetation structure and composition in seasonal habitats not characterized by the values in the habitat objectives table. In these cases, it may be appropriate to adjust the values. Habitat objectives should be evaluated in the context of annual variability in ecological conditions and should not be used singly to determine habitat suitability for Greater Sage-Grouse. They may be used to demonstrate trends over time, during plan evaluations for effectiveness of Greater Sage-Grouse conservation, or when identifying limiting habitat characteristics for a given area.</p> <p>The indicators, characteristics, values, and desired seasonal habitat conditions in the Greater Sage-Grouse Plan Habitat Objectives Table are meant to inform the wildlife habitat component of the Land Health Standards evaluation process (LHS, 43 CFR 4180.2), but do not replace rangeland health assessments. Results from the LHS evaluation should be used to support BLM in land use authorization processes and during development of objectives for management actions such as vegetation treatments. BLM land use authorizations will contain terms and conditions regarding the actions needed to achieve or make progress toward achieving habitat objectives and land health standards.</p> <p>The Habitat Objectives Tables are to be used:</p> <ul style="list-style-type: none"> To assess habitat suitability for Greater Sage-Grouse following the BLM policy on Greater Sage-Grouse habitat assessments To evaluate land use plan effectiveness for Greater Sage-Grouse conservation As a basis to develop measurable project objectives for actions in BLM-designated Greater Sage-Grouse Habitat Management areas when considered alongside land health standards, ecological potential and local information. <p>Excerpt from Table 2.2 [in the 2015 Final EIS]</p> <table border="1"> <tr> <th colspan="4">NESTING/EARLY BROOD REARING (Seasonal Use Period May 1–June 30)</th></tr> <tr> <td>Cover and Food</td><td>Perennial grass (and forb) height (includes residual grasses)</td><td>≥ 7 inches</td><td>Connelly et al. 2000⁸ Connelly et al. 2003⁹ Hagen et al. 2007¹¹ Stiver et al. 2015¹³</td></tr> </table> <p>References: US Department of the Interior, Bureau of Land Management. 2001. Rangeland Health Standards Handbook H-4180-1. https://www.blm.gov/sites/blm.gov/files/uploads/MediaLibraryBLMPolicyH4180-1.pdf.</p> <p>(The Habitat Objectives table (Table 2-2) is in the 2015 ROD/ARMPA, Section 2.2.1 Page 2-5 through 2-6)</p>	NESTING/EARLY BROOD REARING (Seasonal Use Period May 1–June 30)				Cover and Food	Perennial grass (and forb) height (includes residual grasses)	≥ 7 inches	Connelly et al. 2000 ⁸ Connelly et al. 2003 ⁹ Hagen et al. 2007 ¹¹ Stiver et al. 2015 ¹³	<p>The seasonal habitat descriptions in Table 2-2 [the Habitat Objectives table in the 2015 Final EIS] vary across the range of Greater Sage-Grouse, within a subregion, and between sites. They are not land health standards but are quantitative measures that help inform the Special Status Species Habitat Land Health Standard for Greater Sage-Grouse. These measurable values reflect ecological potential, and may be adjusted based on local factors influencing Greater Sage-Grouse habitat selection. Local data or recent science may indicate that Greater Sage-Grouse select for vegetation structure and composition in seasonal habitats not characterized by the values in the habitat objectives table. In these cases, it may be appropriate to adjust the values. Habitat objectives should be evaluated in the context of annual variability in ecological conditions and should not be used singly to determine habitat suitability for Greater Sage-Grouse. They may be used to demonstrate trends over time, during plan evaluations for effectiveness of Greater Sage-Grouse conservation, or when identifying limiting habitat characteristics for a given area.</p> <p>The indicators, characteristics, values, and desired seasonal habitat conditions in the Greater Sage-Grouse Plan Habitat Objectives Table are meant to inform the wildlife habitat component of the Land Health Standards evaluation process (LHS, 43 CFR 4180.2), but do not replace rangeland health assessments. Results from the LHS evaluation should be used to support the BLM in land use authorization processes and during development of appropriate objectives for management actions such as vegetation treatments. BLM land use authorizations will contain terms and conditions regarding the actions needed to achieve or make progress toward achieving habitat objectives and land health standards.</p> <p>The Habitat Objectives Tables are to be used:</p> <ul style="list-style-type: none"> To assess habitat suitability for Greater Sage-Grouse following the BLM policy on Greater Sage-Grouse habitat assessments To evaluate land use plan effectiveness for Greater Sage-Grouse conservation As a basis to develop measurable project objectives for actions in BLM-designated Greater Sage-Grouse habitat management areas when considered alongside land health standards, ecological potential, and local information <p>Excerpt from Table 2.2 [in the 2015 Final EIS]</p> <table border="1"> <tr> <th colspan="4">NESTING/EARLY BROOD REARING (Seasonal Use Period May 1–June 30)</th></tr> <tr> <td>Cover and Food</td><td>Perennial grass (and forb) height (includes residual grasses)</td><td>Adequate Residual Nesting Cover</td><td>Connelly et al. 2000⁸ Connelly et al. 2003⁹ Hagen et al. 2007¹¹ Stiver et al. 2015¹³ Hausleitner 2003; Holloran et al. 2005</td></tr> </table> <p>References: US Department of the Interior, Bureau of Land Management. 2001. Rangeland Health Standards Handbook H-4180-1. https://www.blm.gov/sites/blm.gov/files/uploads/MediaLibraryBLMPolicyH4180-1.pdf.</p>	NESTING/EARLY BROOD REARING (Seasonal Use Period May 1–June 30)				Cover and Food	Perennial grass (and forb) height (includes residual grasses)	Adequate Residual Nesting Cover	Connelly et al. 2000 ⁸ Connelly et al. 2003 ⁹ Hagen et al. 2007 ¹¹ Stiver et al. 2015 ¹³ Hausleitner 2003; Holloran et al. 2005	<p>The seasonal habitat descriptions in Table 2-2 [the Desired Conditions table in the 2015 Final EIS] vary across the range of Greater Sage-Grouse, within a sub-region, and between sites. They are not land health standards but are quantitative measures that help inform the Special Status Species Habitat Land Health Standard for Greater Sage-Grouse. These measurable values reflect ecological potential, and may be adjusted based on local factors influencing Greater Sage-Grouse habitat selection. Local data or recent science may indicate that Greater Sage-Grouse select for vegetation structure and composition in seasonal habitats not characterized by the values in the desired conditions table. In these cases, it may be appropriate to adjust the values. Desired Conditions should be evaluated in the context of annual variability in ecological conditions and should not be used singly to determine habitat suitability for Greater Sage-Grouse. As appropriate, they may be used to demonstrate trends over time, during plan evaluations for effectiveness of Greater Sage-Grouse conservation, or when identifying limiting habitat characteristics for a given area.</p> <p>The indicators, characteristics, values, and desired seasonal habitat conditions in the Greater Sage-Grouse Plan Desired Conditions Table are meant to inform the wildlife habitat component of the Land Health Standards evaluation process (LHS, 43 CFR 4180.2), but do not replace rangeland health assessments. Results from the LHS evaluation should be used to support the BLM in land use authorization processes and during development of appropriate objectives for management actions such as vegetation treatments.</p> <p>The Desired Conditions Tables are to be used:</p> <ul style="list-style-type: none"> To assess habitat suitability for Greater Sage-Grouse following the BLM policy on Greater Sage-Grouse habitat assessments at the appropriate scale To describe desired conditions that provide habitat at multiple spatial scales as defined by the best available science To evaluate land use plan effectiveness for Greater Sage-Grouse conservation As a basis to develop measurable project objectives for actions in BLM-designated Greater Sage-Grouse habitat management areas as needed when considered alongside land health standards, ecological potential, and local information <p>Excerpt from Table 2.2 [in the 2015 Final EIS]</p> <table border="1"> <tr> <th colspan="4">NESTING/EARLY BROOD-REARING (Seasonal Use Period May 1–June 30)</th></tr> <tr> <td>Cover and Food</td><td>Perennial grass (and forb) height (includes residual grasses)</td><td>Adequate Residual Nesting Cover</td><td>Connelly et al. 2000⁸ Connelly et al. 2003⁹ Hagen et al. 2007¹¹ Stiver et al. 2015¹³ Hausleitner 2005; Holloran et al. 2005 Gibson et al 2016 Smith et al 2017 Smith et al 2018</td></tr> </table>	NESTING/EARLY BROOD-REARING (Seasonal Use Period May 1–June 30)				Cover and Food	Perennial grass (and forb) height (includes residual grasses)	Adequate Residual Nesting Cover	Connelly et al. 2000 ⁸ Connelly et al. 2003 ⁹ Hagen et al. 2007 ¹¹ Stiver et al. 2015 ¹³ Hausleitner 2005; Holloran et al. 2005 Gibson et al 2016 Smith et al 2017 Smith et al 2018
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			References: US Department of the Interior, Bureau of Land Management. 2001. Rangeland Health Standards Handbook H-4180-1. https://www.blm.gov/sites/blm.gov/files/uploads/MediaLibraryBLMPolicyh4180-1.pdf .
VEG OBJ 3	In all SFA and PHMA, the desired condition is to maintain all lands ecologically capable of producing sagebrush (but no less than 70%) with a minimum of 15% sagebrush canopy cover or as consistent with specific ecological site conditions. The attributes necessary to sustain these habitats are described in Interpreting Indicators of Rangeland Health (BLM Tech Ref 1734-6).	Delete VEG OBJ 3	Delete VEG OBJ 3 - Redundant to OBJ SSS I which states: (Maintain or make progress toward all lands within PHMA and IHMA (at least 70%) capable of producing sagebrush so there is a minimum of 15 percent sagebrush cover and conifers absent to uncommon within 1.86 miles of occupied leks.)
Modifying Decisions for Livestock Grazing Commensurate with the Threat Posed			
MD LG 15	The BLM will prioritize (1) the review of grazing permits/leases, in particular to determine if modification is necessary prior to renewal, and (2) the processing of grazing permits/leases in Sagebrush Focal Areas (SFA) followed by PHMA outside of the SFA. In setting workload priorities, precedence will be given to existing permits/leases in these areas not meeting Land Health Standards, with focus on those containing riparian areas, including wet meadows. Management and conservation action prioritization will occur at the Conservation Area (CA) scale and be based on Greater Sage-Grouse population and habitat trends: Focusing management and conservation actions first in SFA followed by areas of PHMA outside SFA. The BLM may use other criteria for prioritization to respond to urgent natural resource concerns (e.g., fire) and legal obligations.	Generally, the BLM will prioritize (1) the review of grazing permits/leases, in particular to determine if modification is necessary prior to renewal, and (2) the processing of grazing permits/leases based on land health conditions or concerns. If similar issues are found in both PHMA and IHMA, then those in PHMA should be addressed first followed by those in IHMA. In setting workload priorities, precedence will be given to existing permits/leases in these areas not meeting Land Health Standards, with focus on those containing riparian areas, including wet meadows. The BLM may use other criteria for prioritization to respond to urgent natural resource concerns (e.g., fire) and legal obligations.	Generally, the BLM will prioritize (1) the review of grazing permits/leases, in particular to determine if modification is necessary prior to renewal, and (2) the processing of grazing permits/leases based on land health conditions or concerns related to rangeland health standards. If similar issues are found in both PHMA and IHMA, then those in PHMA should be addressed first followed by those in IHMA. In setting workload priorities, precedence will be given to existing permits/leases in these areas not meeting Land Health Standards and that have declining Greater Sage-Grouse populations, defined by a soft or hard population adaptive management trigger being engaged. Sage-grouse populations that are stable or trending upward will be a lower priority for permit renewal and the assessment process. with focus on those containing riparian areas, including wet meadows. The BLM may use other criteria for prioritization to respond to urgent natural resource concerns (e.g., fire) and legal obligations.

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MD LG 16	<p>The NEPA analysis for renewals and modifications of livestock grazing permits/leases that include lands within SFA and PHMA will include specific management thresholds, based on Greater Sage-Grouse Habitat Objectives Table, Land Health Standards (43 CFR 4180.2) and ecological site potential, and one or more defined responses that will allow the authorizing officer to make adjustments to livestock grazing that have already been subjected to NEPA analysis.</p>	<p>Grazing within the CHZ and IHZ will be managed according to the process outlined in the text below.</p> <p>a. Incorporate the Greater Sage-Grouse habitat characteristics in Table 3-5 [in the 2015 Final EIS] and management considerations into relevant resource management plans as desired conditions recognizing that these conditions may not be achievable (1) due to the existing ecological condition, ecological potential, or existing vegetation; or (2) due to casual events unrelated to existing livestock grazing.</p> <p>b. Prioritize permit renewal and the land health assessments outlined in (iii)(c) in allotments with declining Greater Sage-Grouse populations.</p> <p>c. Conduct fine- and site-scale habitat assessments and, where appropriate, a determination of factors causing any failure to achieve the habitat characteristics in Tables 3-5. The assessment(s) shall be conducted at a resolution sufficient to document the habitat condition and will include local spatial and inter-annual variability. Any determination relative to the habitat characteristics (Tables 3-5) shall be based upon existing ecological condition, ecological potential, and existing vegetation information to ensure the assessment recognizes whether or not these habitat characteristics are achievable.</p> <p>d. The assessment will rely on published characteristics of Greater Sage-Grouse habitat and the Ecological Site Descriptions, and Tables 3-5, and where available and applicable, rangeland health determinations made in accordance with 43 CFR 4180.2(c).</p> <p>e. After conducting the assessment in (iii)(c), if the current grazing system achieves the habitat characteristics (Tables 3-5), absent substantial and compelling information no further grazing management changes are necessary.</p> <p>f. If the process and conditions outlined in (iii)(c) demonstrate that livestock grazing is limiting achievement of the habitat characteristics (Tables 3-5), renewed permits will include measures, including but not limited to the actions outlined in Appendix C [of the 2015 Final EIS], Grazing Section of BMPs to achieve desired habitat conditions. These measures must be tailored to address the specific management issues.</p> <p>g. Adaptive management changes related to existing grazing permits should only be undertaken where improper grazing is determined to be the casual factor in not meeting habitat characteristics, specific to site capability, based upon monitoring over with appropriate spatial variability.</p> <p>h. Where management changes are needed and necessary pursuant to (f), implement management actions that are narrowly tailored to address the specific habitat objective applied at the allotment and/or activity plan level, including but not limited to the actions outlined in Appendix C [of the 2015 Final EIS], Grazing Section of BMPs. (The Governor's Plan is attached as Appendix I [of the 2015 Final EIS] for references to this section.)</p>	<p>Grazing within the PHMA and IHMA will be managed according to the process outlined in the text below and the grazing permit renewal process will be managed according to 43 CFR Part 4100, Subpart 4180 and as outlined in the process below.</p> <p>a. Incorporate the Greater Sage-Grouse habitat characteristics desired conditions in Table 2.2 [in the 2015 Final EIS] and management considerations into relevant resource management plans as desired conditions and manage livestock grazing recognizing that these conditions may not be achievable (1) due to the existing ecological condition, ecological potential, or existing vegetation; or (2) due to casual events unrelated to existing livestock grazing; and 3) that they are not intended to be prescriptive at the allotment level.</p> <p>b. Prioritize permit renewal and the land health assessments outlined in (iii)(c) in allotments with declining Greater Sage-Grouse populations. (Addressed above in MD LG 15)</p> <p>b. Conduct fine and site-scale habitat assessments using appropriate monitoring methods and, where appropriate, a make a determination of factors causing any failure to achieve the desired conditions in Tables 2.2. The assessment(s) shall be conducted at a resolution and scale sufficient to document the habitat condition and will include local, spatial and inter-annual variability. Any determination relative to the habitat characteristics (Tables 2.2) shall be based upon existing ecological condition, ecological potential, and existing vegetation information to ensure the assessment recognizes whether or not these habitat characteristics are achievable.</p> <p>c. The assessment will rely on published characteristics of Greater Sage-Grouse habitat and the Ecological Site Descriptions, and Tables 2.2, and where available and applicable, rangeland health determinations made in accordance with 43 CFR 4180.2(c).</p> <p>d. After conducting the assessment in (b), if the current grazing system achieves applicable Idaho rangeland health standards the habitat characteristics (Tables 3-5), absent substantial and compelling information no further grazing management changes are necessary to achieve desired conditions for Greater Sage-Grouse habitat.</p> <p>e. If the process and conditions outlined in (b) demonstrate that livestock grazing is limiting achievement of the desired conditions (Tables 2.2), renewed permits will include measures, including but not limited to the actions outlined in Appendix C [of the 2015 Final EIS], Grazing Section of BMPs to achieve desired habitat conditions. These measures must be tailored to address the specific management issues.</p> <p>f. Adaptive management changes related to existing grazing permits should only be undertaken where improper grazing is determined to be the casual factor in not meeting habitat characteristics, specific to site capability, based upon monitoring over with appropriate spatial variability. See Appendix C [of the 2015 Final EIS] (Required Design Features).</p> <p>g. Where management changes are needed and necessary pursuant to (f), implement management actions that are narrowly tailored to address the specific habitat objective applied at the allotment and/or activity plan level, including but not limited to the actions outlined in Appendix C [of the 2015 Final EIS], Grazing Section of BMPs. (The Governor's Plan is attached as Appendix I [of the 2015 Final EIS] for references to this section.)</p>

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MD LG 17	Allotments within SFA, followed by those within PHMA, and focusing on those containing riparian areas, including wet meadows, will be prioritized for field checks to help ensure compliance with the terms and conditions of the grazing permits. Field checks can include monitoring for actual use, utilization, and use supervision. Management and conservation action prioritization will occur at the Conservation Area scale and be based on Greater Sage-Grouse population and habitat trends: Focusing management and conservation actions first in SFA followed by areas of PHMA outside SFA.	Allotments within PHMA, and focusing on those with land health concerns, especially those containing riparian areas, including wet meadows, will be prioritized for field checks to help ensure compliance with the terms and conditions of the grazing permits. Field checks can include monitoring for actual use, utilization, and use supervision.	Allotments within PHMA, focusing on those with declining Greater Sage-Grouse populations, defined by a soft or hard adaptive management trigger being engaged and/or with land health concerns, especially those containing riparian areas, including wet meadows, will be prioritized for field checks to help ensure compliance with the terms and conditions of the grazing permits. Field checks can include monitoring for actual use, utilization, and use supervision.
MD WHB 2	Complete rangeland health assessments for HMAs containing Greater Sage-Grouse habitat using an interdisciplinary team of specialists (e.g. range, wildlife, riparian). The priorities for conducting assessments are 1) HMAs Containing SFA; 2) HMAs containing PHMA; 3) HMAs containing IHMA; 4) HMAs containing GHMA; 5) HMAs containing sagebrush habitat outside of PHMA, IHMA, and GHMA mapped habitat; 6) HMAs without Greater Sage-Grouse Habitat.	Complete rangeland health assessments for HMAs containing Greater Sage-Grouse habitat using an interdisciplinary team of specialists (e.g. range, wildlife, and riparian). The priority for conducting assessments is HMAs with known land health issues and where local populations of Greater Sage-Grouse are in decline. When similar issues are found in multiple HMAs, then the priority should be 1) HMAs containing PHMA; 2) HMAs containing IHMA; 3) HMAs containing GHMA; 4) HMAs containing Greater Sage-Grouse habitat outside of PHMA, IHMA, and GHMA mapped habitat; 5) HMAs without Greater Sage-Grouse Habitat.	Complete rangeland health assessments for HMA containing Greater Sage-Grouse habitat using an interdisciplinary team of specialists (e.g. range, wildlife, and riparian). The priority for conducting assessments is HMA with known land health issues and where local populations of Greater Sage-Grouse are in decline according to the adaptive management trigger standards. When similar issues are found in multiple HMA, then the priority should be 1) HMA containing PHMA; 2) HMA containing IHMA; 3) HMA containing GHMA; 4) HMA containing Greater Sage-Grouse habitat outside of PHMA, IHMA, and GHMA mapped habitat; 5) HMA without Greater Sage-Grouse Habitat.
Modifying the Mitigation Strategy to Align with the State Mitigation Strategy			
MD MT 3	In all Greater Sage-Grouse habitat, in undertaking BLM management actions, and, consistent with valid existing rights and applicable law, in authorizing third-party actions that result in habitat loss and degradation (Appendix E, Table E-1 [in the 2015 Final EIS]), the BLM will require and ensure mitigation that provides a net conservation gain to the species including accounting for any uncertainty associated with the effectiveness of such mitigation. This will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions.	In PHMA and IHMA, in undertaking BLM management actions, and, consistent with valid existing right and applicable law, in authorizing third-party actions that result in habitat loss and degradation (Appendix E, Table E-1 [in the 2015 Final EIS]), the BLM will require and ensure mitigation that provides no net loss to the species including accounting for any uncertainty associated with the effectiveness of such mitigation. This will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions. In GHMA, proponents will be required to avoid and minimize impacts to the extent practicable.	In PHMA, IHMA, and GHMA in undertaking BLM management actions, and, consistent with valid existing right and applicable law, in authorizing third-party actions that result in habitat loss and degradation (Appendix E, Table E-1 [in the 2015 Final EIS]), the BLM will achieve the planning-level Greater Sage-Grouse management goals and objectives through implementation of mitigation and management actions. Under this Proposed Plan Amendment, the BLM's Greater Sage-Grouse management would be consistent with the Greater Sage-Grouse goals and objectives, and in conformance with BLM Manual 6840 – Special Status Species Management, undertake planning decisions, actions, and authorizations to “minimize or eliminate threats affecting the status of [Greater Sage-Grouse] or to improve the condition of [Greater Sage-Grouse] habitat” across the planning area. Further the BLM will require and ensure mitigation that provides no net loss to the species including accounting for any uncertainty associated with the effectiveness of such mitigation. This will be achieved by ensuring Greater Sage-Grouse habitat impacts are addressed by implementing mitigating actions consistent with the State of Idaho and the Proposed Plan Amendment. In GHMA, proponents will be required to avoid and minimize impacts on the extent practicable.

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MD SSS 30	<p>The following Anthropogenic Disturbance Development Criteria must be met in the screening and assessment process for proposals in PHMA and IHMA to discourage additional disturbance in PHMA and IHMA (as described in MD LR 2 and MD RE 1; applies to Idaho only):</p> <ol style="list-style-type: none"> Through coordination with the USFWS and State of Idaho (as described in MD CC 1), it is determined that the project cannot be achieved, technically or economically, outside of this management area; and The project siting and/or design should best reduce cumulative impacts and/or impacts on Greater Sage-Grouse and other high value natural, cultural, or societal resources; this may include collocation within the footprint for existing infrastructure, to the extent practicable; and The project results in a net conservation gain to Greater Sage-Grouse Key habitat or with beneficial mitigation actions reduces habitat fragmentation or other threats within the Conservation Area; and The project design mitigates unavoidable impacts through appropriate compensatory mitigation; and Development will be implemented adhering to the RDFs described in Appendix C [of the 2015 Final EIS]. The project will not exceed the disturbance cap (MD SSS 27). In Montana, the BLM will apply the project/action screen and mitigation process (Appendix J [of the 2015 Final EIS]) 	<p>The following Anthropogenic Disturbance Development Criteria must be met in the screening and assessment process for proposals in PHMA and IHMA to discourage additional disturbance in PHMA and IHMA (as described in MD LR 2 and MD RE 1; applies to Idaho only):</p> <ol style="list-style-type: none"> Through coordination with the State of Idaho (as described in MD CC 1), it is determined that the project cannot be achieved, technically or economically, outside of this management area; and The project siting and/or design should best reduce cumulative impacts and/or impacts on Greater Sage-Grouse and other high value natural, cultural, or societal resources; this may include collocation within the footprint for existing infrastructure, to the extent practicable; and The project results in no net loss to Greater Sage-Grouse key habitat or with beneficial mitigation actions reduces habitat fragmentation or other threats within the Conservation Area; and The project design mitigates unavoidable impacts through appropriate compensatory mitigation; and Development will be implemented adhering to the RDFs described in Appendix C [of the 2015 Final EIS]. The project will not exceed the disturbance cap (MD SSS 27). 	<p>All of the following anthropogenic disturbance development criteria must be met in the screening and assessment process for proposals in PHMA and IHMA to discourage additional disturbance in PHMA and IHMA (as described in MD LR 2 and MD RE 1; applies to Idaho only):</p> <ol style="list-style-type: none"> Through coordination with the State of Idaho (as described in MD CC 1), it is determined that the project cannot be achieved, technically or economically, outside of this management area The project siting or design should best reduce cumulative impacts or impacts on Greater Sage-Grouse and other high value natural, cultural, or societal resources; this may include collocation within the footprint for existing infrastructure, to the extent practicable The project results in no net loss to Greater Sage-Grouse key habitat or with beneficial actions reduces habitat fragmentation or other threats within the Conservation Area Development will be implemented adhering to the RDFs described in Appendix C [of the 2015 Final EIS]. Large scale anthropogenic disturbances in PHMA and IHMA will be reviewed by the Technical and Policy Teams as described in MD SSS 44 The project will not exceed the disturbance cap (MD SSS 27)

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MD LR 14	<p>Lands classified as PHMA, IHMA, and GHMA for Greater Sage-Grouse will be retained in federal management unless: (1) the agency can demonstrate that disposal of the lands, including land exchanges, will provide a net conservation gain to the Greater Sage-Grouse or (2) the agency can demonstrate that the disposal, including land exchanges, of the lands will have no direct or indirect adverse impact on conservation of the Greater Sage-Grouse. Land tenure adjustments will be subject to the following disposal, exchange, and acquisition criteria, which include retaining lands with Greater Sage-Grouse habitat. Retention of areas with Greater Sage-Grouse will reduce the likelihood of habitat conversion to agriculture, urbanization, or other uses that will remove sagebrush habitat and potentially impact sensitive plants.</p> <p>Criteria:</p> <ol style="list-style-type: none"> Acquire habitat within PHMA and IHMA, when possible (i.e. willing landowner), and retain ownership of habitat within all Areas, except if disposal will allow for additional or more contiguous federal ownership patterns. Lands within PHMA, IHMA and GHMA will be retained unless disposal of those lands will increase the extent or provide for connectivity of PHMA, IHMA or GHMA. Evaluate potential land exchanges containing historically low-quality Greater Sage-Grouse habitat that may be too costly to restore in exchange for lands of higher quality habitat, lands that connect seasonal Greater Sage-Grouse habitats or lands providing for threatened and endangered species. These potential exchanges should lead to an increase in the extent or continuity of or provide for improved connectivity of PHMA. Higher priority will be given to exchanges for those in-tact areas of sagebrush that will contribute to the expansion of sagebrush areas within PHMA currently in public ownership. Lower priority will be given to other lands that will promote enhancement in the PHMA and IHMA (i.e., areas with fragmented or less in-tact sagebrush). Identify lands for acquisition that increase the extent of or provide for connectivity of PHMA. 	<p>Lands classified as PHMA, IHMA, and GHMA for Greater Sage-Grouse will be retained in federal management unless: (1) the agency can demonstrate that disposal of the lands, including land exchanges, will provide no net loss to the Greater Sage-Grouse or (2) the agency can demonstrate that the disposal, including land exchanges, of the lands will have no direct or indirect adverse impact on conservation of the Greater Sage-Grouse. Land tenure adjustments will be subject to the following disposal, exchange, and acquisition criteria, which include retaining lands with Greater Sage-Grouse habitat. Retention of areas with Greater Sage-Grouse will reduce the likelihood of habitat conversion to agriculture, urbanization, or other uses that will remove sagebrush habitat and potentially impact sensitive plants.</p> <p>Criteria:</p> <ol style="list-style-type: none"> Lands within PHMA, IHMA, and GHMA will be retained unless disposal of those lands will increase the extent or provide for connectivity of PHMA, IHMA, or GHMA. Evaluate potential land exchanges containing historically low-quality Greater Sage-Grouse habitat that may be too costly to restore in exchange for lands of higher-quality habitat, lands that connect seasonal Greater Sage-Grouse habitats, or lands providing for threatened and endangered species. These potential exchanges should lead to an increase in the extent or continuity of or provide for improved connectivity of PHMA. Higher priority will be given to exchanges for those intact areas of sagebrush that will contribute to the expansion of sagebrush areas within PHMA currently in public ownership. Lower priority will be given to other lands that will promote enhancement in the IHMA and GHMA (i.e., areas with fragmented or less intact sagebrush). Identify lands for acquisition that increase the extent of or provide for connectivity of PHMA. 	<p>Lands classified as PHMA, IHMA, and GHMA for Greater Sage-Grouse will be retained in federal management unless: (1) the agency can demonstrate that disposal of the lands, including land exchanges, will provide no net loss to the Greater Sage-Grouse or (2) the agency can demonstrate that the disposal, including land exchanges, of the lands will have no direct or indirect adverse impact on conservation of the Greater Sage-Grouse. Land tenure adjustments will be subject to the following disposal, exchange, and acquisition criteria, which include retaining lands with Greater Sage-Grouse habitat. Retention of areas with Greater Sage-Grouse will reduce the likelihood of habitat conversion to agriculture, urbanization, or other uses that will remove sagebrush habitat and potentially impact sensitive plants.</p> <p>Criteria:</p> <ol style="list-style-type: none"> Retain lands in PHMA, IHMA, and GHMA, unless disposal of those lands would increase the extent or provide for connectivity of PHMA, IHMA, or GHMA. Evaluate potential land exchanges containing historically low-quality Greater Sage-Grouse habitat that may be too costly to restore in exchange for lands of higher-quality habitat, lands that connect seasonal Greater Sage-Grouse habitats, or lands providing for threatened and endangered species. These potential exchanges should lead to an increase in the extent or continuity of or provide for improved connectivity of PHMA. Higher priority will be given to exchanges for those intact areas of sagebrush that will contribute to the expansion of sagebrush areas within PHMA currently in public ownership. Lower priority will be given to other lands that will promote enhancement in the IHMA and GHMA (i.e., areas with fragmented or less intact sagebrush). Identify Lands for acquisition that increase the extent of or provide for connectivity of PHMA.
OBJ MR 2	<p>Where a proposed fluid mineral development project on an existing lease can adversely affect Greater Sage-Grouse populations or habitat, the BLM will work with the lessees, operators, or other project proponents to avoid, minimize and apply compensatory mitigation to the extent compatible with lessees' rights to drill and produce fluid mineral resources. The BLM will work with the lessee, operator, or project proponent in developing an APD or Geothermal Drilling Permit (GDP) for the lease to avoid, minimize, and apply compensatory mitigation to impacts on Greater Sage-Grouse or its habitat and will ensure that the best information about the Greater Sage-Grouse and its habitat informs and helps to guide development of such Federal leases.</p>	<p>Where a proposed fluid mineral development project on an existing lease can adversely affect Greater Sage-Grouse populations or habitat in PHMA and IHMA, the BLM will work with the lessees, operators, or other project proponents to avoid and minimize impacts and to compensate for unavoidable impacts to the extent compatible with lessees' rights to drill and produce fluid mineral resources. The BLM will work with the lessee, operator, or project proponent in developing an APD or Geothermal Drilling Permit (GDP) for the lease to apply the mitigation hierarchy to impacts on Greater Sage-Grouse or its habitat and will ensure that the best information about the Greater Sage-Grouse and its habitat informs and helps to guide development of such federal leases.</p>	<p>Where a proposed fluid mineral development project on an existing lease can adversely affect Greater Sage-Grouse populations or habitat in PHMA, and IHMA, and GHMA the BLM will work with the lessees, operators, or other project proponents to avoid and minimize impacts and to compensate for unavoidable impacts to the extent compatible with lessees' rights to drill and produce fluid mineral resources. The BLM will work with the lessee, operator, or project proponent in developing an APD or Geothermal Drilling Permit (GDP) for the lease to apply the mitigation hierarchy to impacts on Greater Sage-Grouse or its habitat and will ensure that the best information about the Greater Sage-Grouse and its habitat informs and helps to guide development of such federal leases.</p>

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MD REC 2	In PHMA and IHMA, do not construct new recreation facilities (e.g., campgrounds, trails, trailheads, staging areas) unless the development will have a net conservation gain to Greater Sage-Grouse habitat (such as concentrating recreation, diverting use away from critical areas, etc.), or unless the development is required for visitor health and safety or resource protection.	In PHMA and IHMA, do not construct new recreation facilities (campgrounds, parking lots, trailheads, and staging areas) larger than 0.25 acres and subject to appropriate buffers and RDFs and appropriate mitigation. Locate and design facilities to avoid or minimize impacts on Greater Sage-Grouse habitat. New trails in PHMA and IHMA should be designed to avoid or minimize impacts on Greater Sage-Grouse habitat. New trails would not be subject to buffers but may be subject to timing restrictions to avoid impacts on Greater Sage-Grouse.	In PHMA and IHMA, do not construct new recreation facilities (campgrounds, parking lots, trailheads, and staging areas) larger than 0.25 acres unless subject to appropriate buffers and RDFs and appropriate mitigation. Locate and design facilities to avoid or minimize impacts on Greater Sage-Grouse habitat. New trails in PHMA and IHMA should be designed to avoid or minimize impacts on Greater Sage-Grouse habitat. New non-motorized trails would not be subject to buffers but may be subject to timing restrictions to avoid impacts on Greater Sage-Grouse during the lekking/nesting season. Motorized trails would also be subject to buffers and seasonal timing restrictions.
Modifying Adaptive Management Strategy			
MD-SSS 15	Idaho: The hard and soft trigger data will be analyzed as soon as it becomes available after the signing of the ROD, and twice each year thereafter the applicable monitoring information will be reviewed to determine if any adaptive management triggers have been met.	The data from the lek counts and the key habitat map update will be reviewed annually to determine if any hard or soft adaptive management triggers have been met.	The data from the lek counts and the key habitat map update will be reviewed annually to determine if any hard or soft adaptive management triggers have been met.
MD SSS 20	Population Soft Triggers are defined as: <ul style="list-style-type: none"> A 10 percent decline in the current 3-year average of total maximum number of males counted compared to the 2011 maximum male baseline and a finite rate of change (λ) below 1.0 within PHMA within a Conservation Area over the same 3-year period; or A 10 percent decline in the current 3-year average of total maximum number of males counted compared to the 2011 maximum male baseline and a finite rate of change (λ) below 1.0 within IHMA within a Conservation Area over the same 3-year period. 	Population soft triggers are defined as: <ul style="list-style-type: none"> A 10 percent decline in the current 3-year average of total maximum number of males counted compared to the 2011 maximum male baseline and a finite rate of change (λ) below 1.0 within PHMA within a Conservation Area over the same 3-year period; or A 10 percent decline in the current 3-year average of total maximum number of males counted compared to the 2011 maximum male baseline and a finite rate of change (λ) below 1.0 within IHMA within a Conservation Area over the same 3-year period. Significance for soft triggers is defined by the 80 percent confidence interval around the current 3-year finite rate of change. If the 80 percent confidence interval is less than, and does not include 1.0, then the finite rate of change is considered significant. The finite rate of change and variance will be calculated following Garton et al. (2011). 	Population soft triggers are defined as: <ul style="list-style-type: none"> A 10 percent decline in the current 3-year average of total maximum number of males counted compared to the 2011 maximum male baseline and a finite rate of change (λ) below 1.0 within PHMA within a Conservation Area over the same 3-year period A 10 percent decline in the current 3-year average of total maximum number of males counted compared to the 2011 maximum male baseline and a finite rate of change (λ) below 1.0 within IHMA within a Conservation Area over the same 3-year period Significance for soft triggers is defined by the 80 percent confidence interval around the current 3-year finite rate of change. If the 80 percent confidence interval is less than, and does not include 1.0, then the finite rate of change is considered significant. The finite rate of change and variance will be calculated following Garton et al. (2011).
MD SSS 24	Remove any adaptive management response when the habitat or maximum male population count (i.e., 3-year average) returns to or exceeds the 2011 baseline levels within the associated Conservation Area in accordance with the Adaptive Management Strategy (Appendix E [of the 2015 Final EIS]). In such a case, changes in management allocations resulting from a tripped trigger will revert back to the original allocation.	Remove the automatic hard trigger adaptive management response when the habitat or maximum male population count (i.e., 3-year average) returns to or exceeds the 2011 baseline levels within the associated Conservation Area in accordance with the Adaptive Management Strategy (Appendix E [of the 2015 Final EIS]). In such a case, changes in management allocations resulting from a tripped trigger will revert back to the original allocation (MD SSS 22).	Remove the automatic hard trigger adaptive management response when the habitat or maximum male population count (i.e., 3-year average) returns to or exceeds the 2011 baseline levels within the associated Conservation Area in accordance with the Adaptive Management Strategy (Appendix E [of the 2015 Final EIS]). In such a case, changes in management allocations resulting from a tripped trigger will revert back to the original allocation (MD SSS 22).
Modifying Appendices			
Appendix A Maps	All maps remain as they were printed in 2015.	Update all maps to reflect the following changes: <ul style="list-style-type: none"> Update to display only Idaho Remove SFA Update PHMA and IHMA boundaries to reflect the change of the Brown's Creek area from PHMA to IHMA Update PHMA, IHMA, and GHMA boundaries to reflect corrections to administrative errors Update PHMA and IHMA boundaries to reflect the change of the Brown's Creek area from PHMA BSU to IHMA BSU Delete Figure 2-11b, as it only applies to Montana 	Update all maps to reflect the following changes: <ul style="list-style-type: none"> Update to display only Idaho Remove SFA Update PHMA and IHMA boundaries to reflect the change of the Brown's Creek area from PHMA to IHMA Update PHMA, IHMA, and GHMA boundaries to reflect corrections to administrative errors Update PHMA and IHMA boundaries to reflect the change of the Brown's Creek area from PHMA BSU to IHMA BSU Delete Figure 2-11b, as it applies to Montana only

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Appendix B	<p>B. Buffers Applying Lek Buffer-Distances When Approving Actions • <i>Buffer Distances and Evaluation of Impacts on Leks</i> Evaluate impacts on leks from actions requiring NEPA analysis. In addition to any other relevant information determined to be appropriate (e.g. State wildlife agency plans), the BLM will assess and address impacts from the following activities using the lek buffer-distances as identified in the USGS Report <i>Conservation Buffer Distance Estimates for Greater Sage-Grouse – A Review</i> (Open File Report 2014-1239). The BLM will apply the lek buffer-distances specified as the lower end of the interpreted range in the report unless justifiable departures are determined to be appropriate (see below). The lower end of the interpreted range of the lek buffer-distances is as follows:</p> <ul style="list-style-type: none"> o linear features (roads) within 3.1 miles of leks o infrastructure related to energy development within 3.1 miles of leks. o tall structures (e.g., communication or transmission towers, transmission lines) within 2 miles of leks. o low structures (e.g., fences, rangeland structures) within 1.2 miles of leks. o surface disturbance (continuing human activities that alter or remove the natural vegetation) within 3.1 miles of leks. o noise and related disruptive activities including those that do not result in habitat loss (e.g., motorized recreational events) at least 0.25 miles from leks. <p>Justifiable departures to decrease or increase from these distances, based on local data, best available science, landscape features, and other existing protections (e.g., land use allocations, state regulations) may be appropriate for determining activity impacts. The USGS report recognized “that because of variation in populations, habitats, development patterns, social context, and other factors, for a particular disturbance type, there is no single distance that is an appropriate buffer for all populations and habitats across the sage-grouse range”. The USGS report also states that “various protection measures have been developed and implemented... [which have] the ability (alone or in concert with others) to protect important habitats, sustain populations, and support multiple-use demands for public lands”. All variations in lek buffer-distances will require appropriate analysis and disclosure as part of activity authorization. In determining lek locations, the BLM will use the most recent active or occupied lek data available from the state wildlife agency.</p> <p><i>For Actions in GHMA</i> The BLM will apply the lek buffer-distances identified above as required conservation measures to fully address the impacts on leks as identified in the NEPA analysis. Impacts should first be avoided by locating the action outside of the applicable lek buffer – distance(s) identified above. The BLM may approve actions in GHMA that are within the applicable lek buffer distance identified above only if:</p> <ul style="list-style-type: none"> o Impacts should first be avoided by locating the action outside of the applicable lek buffer-distance(s) identified above. 	<p><i>Distance Estimates for Greater Sage-Grouse – A Review</i> (Open File Report 2014-1239). In PHMA: The BLM will apply the lek buffer-distances specified as the lower end of the interpreted range in the report unless justifiable departures are determined to be appropriate (see below). The lower end of the interpreted range of the lek buffer-distances is as follows:</p> <ul style="list-style-type: none"> o linear features (roads) within 3.1 miles of leks o infrastructure related to energy development within 3.1 miles of leks o tall structures (e.g., communication or transmission towers, transmission lines) within 2 miles of leks o low structures (e.g., fences and rangeland structures) within 1.2 miles of leks o surface disturbance (continuing human activities that alter or remove the natural vegetation) within 3.1 miles of leks o noise and related disruptive activities including those that do not result in habitat loss (e.g., motorized recreational events) at least 0.25 miles from leks <p>In IHMA: The BLM will apply the lek buffer-distances specified as the USGS Literature Minimums in the report unless justifiable departures are determined to be appropriate (see below). The USGS Literature Minimums of the lek buffer-distances are as follows:</p> <ul style="list-style-type: none"> o linear features (roads) within 0.25 miles of leks o infrastructure related to energy development within 2 miles of leks o tall structures (e.g., communication or transmission towers, transmission lines) within 0.6 miles of leks o low structures (e.g., fences and rangeland structures) within 0.12 miles of leks o surface disturbance (continuing human activities that alter or remove the natural vegetation) within 2 miles of leks o noise and related disruptive activities including those that do not result in habitat loss (e.g., motorized recreational events) at least 0.12 miles from leks <p>The buffers do not apply to vegetation treatments specifically designed to improve or protect Greater Sage-Grouse habitat.</p> <p>Buffers are not required in GHMA.</p> <p>Justifiable departures to decrease or increase from these distances, based on local data, best available science, landscape features, and other existing protections (e.g., land use allocations and state regulations) may be appropriate for determining activity impacts. The USGS report recognized “that because of variation in populations, habitats, development patterns, social context, and other factors, for a particular disturbance type, there is no single distance that is an appropriate buffer for all populations and habitats across the sage-grouse range.” The USGS report also states that “various protection measures have been developed and implemented... [which have] the ability (alone or in concert with others) to protect important habitats, sustain populations, and support multiple-use demands for public lands.” All variations in lek buffer-distances will require appropriate analysis and disclosure as part of activity authorization. In determining lek locations, the BLM will use the most recent active or occupied lek data available from the state wildlife agency.</p> <p>• <i>For Actions in PHMA and IHMA</i> The BLM will apply the lek buffer-distances identified above as required conservation measures to fully address the impacts on leks as identified in the NEPA analysis.</p>	<p><i>Distance Estimates for GRSg – A Review</i> (Open File Report 2014-1239). In PHMA: The BLM will apply the lek buffer-distances specified as the lower end of the interpreted range in the report unless justifiable departures are determined to be appropriate (see below). The lower end of the interpreted range of the lek buffer-distances is as follows:</p> <ul style="list-style-type: none"> • linear features (roads) within 3.1 miles of leks • infrastructure related to energy development within 3.1 miles of leks • tall structures (e.g., communication or transmission towers, transmission lines) within 2 miles of leks • low structures (e.g., fences and rangeland structures) within 1.2 miles of leks • surface disturbance (continuing human activities that alter or remove the natural vegetation) within 3.1 miles of leks <ul style="list-style-type: none"> o Noise and related disruptive activities o Repeated/sustained disturbance including those that do not result in habitat loss at least 2 miles from leks o Temporary noise including those that do not result in habitat loss (e.g., motorized recreational events) at least 0.25 miles from leks) <p>In IHMA: The BLM will apply the lek buffer-distances as follows unless justifiable departures are determined to be appropriate (see below).</p> <ul style="list-style-type: none"> • Linear features (e.g. roads) within 0.8 miles of leks • Infrastructure related to energy development (e.g. oil, gas, wind, solar) within 2 miles of leks • Tall structures (e.g., electrical, communication, meteorological) <ul style="list-style-type: none"> o Transmission lines/towers: within 1.2 miles of leks, with a 1.2 - 2 mile buffer subject to the exemption criteria: applicable to this variable and select variables in GHMA below o Distribution lines/poles: within 0.6 miles of leks o Communication and meteorological towers: within 2 miles of leks o Low structures (e.g., fences and rangeland structures) within 0.12-0.6 miles of leks • Surface disturbance (continuing human activities that alter or remove the natural vegetation) within 2 miles of leks • Noise and related disruptive activities • Repeated/sustained noise disturbance including those that do not result in habitat loss at least 2 miles of leks • Temporary noise disturbance including those that do not result in habitat loss (e.g., motorized recreational events) at least 0.25 miles from leks • at least 0.12 miles from leks <p>Buffers are not required in GHMA.</p> <p>In GHMA: The BLM will apply the lek buffer-distances as follows, subject to exception criteria:</p> <ul style="list-style-type: none"> • Linear features (e.g. roads) within 0.25 miles of leks • Infrastructure related to energy development (e.g. oil, gas, wind, solar) within 0.6 miles of leks; 2 mile feasibility/practicality conditions • Tall structures (e.g., electrical, communication, meteorological): within 0.6 miles of leks • Low structures (e.g., fences and rangeland structures) within 0.12 miles of leks

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	<p>o If it is not possible to relocate the project outside of the applicable lek buffer-distance(s) identified above, the BLM may approve the project only if:</p> <ul style="list-style-type: none"> – Based on best available science, landscape features, and other existing protections, (e.g., land use allocations, state regulations), the BLM determines that a lek buffer-distance other than the applicable distance identified above offers the same or a greater level of protection to Greater Sage-Grouse and its habitat, including conservation of seasonal habitat outside of the analyzed buffer area; or – The BLM determines that impacts on Greater Sage-Grouse and its habitat are minimized such that the project will cause minor or no new disturbance (ex. co-location with existing authorizations); and – Any residual impacts within the lek buffer-distances are addressed through compensatory mitigation measures sufficient to ensure a net conservation gain, as outlined in the Mitigation Strategy (Appendix X [of the 2015 Final EIS]). <p>• <i>For Actions in PHMA and IHMA</i> The BLM will apply the lek buffer-distances identified above as required conservation measures to fully address the impacts on leks as identified in the NEPA analysis. Impacts should be avoided by locating the action outside of the applicable lek buffer-distance(s) identified above. The BLM may approve actions in PHMA and IMHA that are within the applicable lek buffer distance identified above only if:</p> <ul style="list-style-type: none"> o The BLM, with input from the state fish and wildlife agency, determines, based on best available science, landscape features, and other existing protections, that a buffer distance other than the distance identified above offers the same or greater level of protection to Greater Sage-Grouse and its habitat, including conservation of seasonal habitat outside of the analyzed buffer area. • Range improvements which do not impact Greater Sage-Grouse, or, range improvements which provide a conservation benefit to Greater Sage-Grouse such as fences for protecting important seasonal habitats, meet the lek buffer requirement. • The BLM will explain its justification for determining the approved buffer-distances meet these conditions in its project decision. 	<p>Impacts should be avoided by locating the action outside of the applicable lek buffer-distance(s) identified above. The BLM may approve actions in PHMA and IMHA that are within the applicable lek buffer-distance identified above only if:</p> <ul style="list-style-type: none"> o The BLM, with input from the state fish and wildlife agency, determines, based on best available science, landscape features, and other existing protections, that a buffer-distance other than the distance identified above offers the same or greater level of protection to Greater Sage-Grouse and its habitat, including conservation of seasonal habitat outside of the analyzed buffer area. • Range improvements that do not impact Greater Sage-Grouse, or, range improvements that provide a conservation benefit to Greater Sage-Grouse, such as fences for protecting important seasonal habitats, meet the lek buffer requirement. • The BLM will explain its justification for determining the approved buffer distances meet these conditions in its project decision. 	<ul style="list-style-type: none"> • Surface disturbance (continuing human activities that alter or remove the natural vegetation) within 2 miles of leks <p>Noise and related disruptive activities</p> <ul style="list-style-type: none"> • Repeated/sustained disturbance including those that do not result in habitat loss at least 2 miles from leks • Temporary disturbance including those that do not result in habitat loss (e.g., motorized recreational events) at least 0.25 miles from leks <p>Buffer Exception Criteria for IHMA and GHMA: It is impracticable, technically or economically, to locate the project outside of the buffer area; and Impacts are avoided through project siting and design to the extent reasonable or impacts are minor or nonexistent and impacts are avoided through project siting and design to the extent reasonable.</p> <p>The buffers do not apply to vegetation treatments specifically designed to improve or protect Greater Sage-Grouse habitat.</p> <p>Justifiable departures to decrease or increase from these distances, based on local data, best available science, landscape features, and other existing protections (e.g., land use allocations and state regulations) may be appropriate for determining activity impacts. The USGS report recognized “that because of variation in populations, habitats, development patterns, social context, and other factors, for a particular disturbance type, there is no single distance that is an appropriate buffer for all populations and habitats across the sage-grouse range.” The USGS report also states that “various protection measures have been developed and implemented... [which have] the ability (alone or in concert with others) to protect important habitats, sustain populations, and support multiple-use demands for public lands.” All variations in lek buffer-distances will require appropriate analysis and disclosure as part of activity authorization. In determining lek locations, the BLM will use the most recent active or occupied lek data available from the state wildlife agency.</p> <p><i>For actions in PHMA and IHMA</i></p> <ul style="list-style-type: none"> • The BLM will apply the lek buffer-distances identified above as required conservation measures to fully address the impacts on leks as identified in the NEPA analysis. Impacts should be avoided by locating the action outside of the applicable lek buffer-distance(s) identified above. • The BLM may approve actions in PHMA and IMHA that are within the applicable lek buffer-distance identified above only if: • The BLM, with input from the state fish and wildlife agency, determines, based on best available science, landscape features, and other existing protections, that a buffer-distance other than the distance identified above offers the same or greater level of protection to Greater Sage-Grouse and its habitat, including conservation of seasonal habitat outside of the analyzed buffer area. • Range improvements that do not impact Greater Sage-Grouse, or, range improvements that provide a conservation benefit to Greater Sage-Grouse, such as fences for protecting important seasonal habitats, meet the lek buffer requirement. <p>The BLM will explain its justification for determining the approved buffer distances meet these conditions in its project decision.</p>

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Appendix C	<p>C. Required Design Features</p> <p>Required Design Features (RDFs) are required for certain activities in all Greater Sage-Grouse habitat. RDFs establish the minimum specifications for certain activities to help mitigate adverse impacts. However, the applicability and overall effectiveness of each RDF cannot be fully assessed until the project level when the project location and design are known. Because of site-specific circumstances, some RDFs may not apply to some projects (e.g., a resource is not present on a given site) and/or may require slight variations (e.g., a larger or smaller protective area). RDFs are continuously improving as new science and technology become available and therefore are subject to change. All variations in RDFs would require that at least one of the following be demonstrated in the NEPA analysis associated with the project/activity:</p> <ul style="list-style-type: none"> • A specific RDF is documented to not be applicable to the site-specific conditions of the project/activity (e.g. due to site limitations or engineering considerations). Economic considerations, such as increased costs, do not necessarily require that an RDF be varied or rendered inapplicable; • An alternative RDF, a state-implemented conservation measure or plan-level protection is determined to provide equal or better protection for Greater Sage-Grouse or its habitat. • A specific RDF will provide no additional protection to Greater Sage-Grouse or its habitat. <p>The following required design features (RDFs) are included for consideration and use based upon review of current science and effects analysis (circa 2014) (Table B-1 [in the 2015 Final EIS]). These may be reviewed during project evaluation and updated through plan maintenance as new information and updated scientific findings become available. The table is organized by program area grouping the RDFs most relevant to that program. All relevant RDFs, regardless of which program they are grouped under, should be considered during project evaluation and applicable RDFs should be applied during implementation. The following measures would be applied as RDFs for all solid minerals. They would also apply to locatable minerals consistent with applicable law. In some cases the RDFs may not all be appropriate based on local conditions and would be assessed in the appropriate site specific NEPA analysis, these all should be considered and where determined to be beneficial to achieving Greater Sage-Grouse habitat objectives included as part of the site specific project. In other cases additional project design criteria or best management practices could be incorporated into project implementation to address site specific concerns not fully addressed by the RDFs described here.</p> <p>General</p> <p>1. Solicit and consider expertise and ideas from local landowners, working groups, and other federal, state, county, and private organizations during development of projects.</p> <p>2. No repeated or sustained behavioral disturbance (e.g., visual, noise over 10 dbA at lek, etc.) to lekking birds from 6:00 pm to 9:00 am within 2 miles (3.2 km) of leks during the lekking season.</p>	<p>C. Required Design Features</p> <p>Required design features (RDFs) are a list of best management practices that are intended to avoid and minimize impacts on Greater Sage-Grouse or Greater Sage-Grouse habitat. When the RDFs are applicable to a given project in PHMA and IHMA, they are required unless an alternate action is implemented that will provide equal or greater protection. The RDFs are considered best management practices that may be considered and applied in GHMA as practicable. Because of site-specific circumstances, some RDFs may not apply to some projects (e.g., a resource is not present on a given site) and/or may require slight variations (e.g., a larger or smaller protective area). RDFs are continuously improving as new science and technology become available and therefore are subject to change. All variations in RDFs would require that at least one of the following be demonstrated in the NEPA analysis associated with the project/activity:</p> <ul style="list-style-type: none"> • A specific RDF is documented to not be applicable to the site-specific conditions of the project/activity (e.g. due to site limitations or engineering considerations). Economic considerations, such as increased costs, do not necessarily require that an RDF be varied or rendered inapplicable. • An alternative RDF, a state-implemented conservation measure, or plan-level protection is determined to provide equal or better protection for Greater Sage-Grouse or its habitat. • A specific RDF will provide no additional protection to Greater Sage-Grouse or its habitat. <p>The following RDFs are included for consideration and use based upon review of current science and effects analysis (circa 2014; Table B-1 [in the 2015 Final EIS]). These may be reviewed during project evaluation and updated through plan maintenance as new information and updated scientific findings become available. The table is organized by program area grouping the RDFs most relevant to that program. All relevant RDFs, regardless of which program they are grouped under, should be considered during project evaluation, and applicable RDFs should be applied during implementation. The following measures would be applied as RDFs for all solid minerals. They would also apply to locatable minerals consistent with applicable law. In some cases, the RDFs may not all be appropriate based on local conditions and would be assessed in the appropriate site-specific NEPA analysis; these all should be considered and where determined to be beneficial to achieving Greater Sage-Grouse habitat objectives included as part of the site-specific project. In other cases, additional project design criteria or best management practices could be incorporated into project implementation to address site-specific concerns not fully addressed by the RDFs described here.</p> <p>Required Design Features</p> <p>General (applicable to all projects)</p> <p>Seasonal Restrictions</p> <ol style="list-style-type: none"> 1. Solicit and consider expertise and ideas from local landowners, working groups, and other federal, state, county, and private organizations during development of projects 2. No repeated or sustained behavioral disturbance (e.g., visual, noise over 10 dbA at lek, etc.) to lekking birds from 6:00 pm to 9:00 am within 2 miles (3.2 km) of leks during the lekking season 	<p>C. Required Design Features</p> <p>Required design features (RDFs) are a list of best management practices that are intended to avoid and minimize impacts on Greater Sage-Grouse or Greater Sage-Grouse habitat. When the RDFs are applicable to a given project in PHMA and IHMA, they are required unless an alternate action is implemented that will provide equal or greater protection. The RDFs are considered best management practices that should be considered and applied in GHMA unless the proponent can show that applying the BMP is technically or economically impracticable. Because of site-specific circumstances, some RDFs may not apply to some projects (e.g., a resource is not present on a given site) and/or may require slight variations (e.g., a larger or smaller protective area). RDFs are continuously improving as new science and technology become available and therefore are subject to change. All variations in RDFs would require that at least one of the following be demonstrated in the NEPA analysis associated with the project/activity:</p> <ul style="list-style-type: none"> • A specific RDF is documented to not be applicable to the site-specific conditions of the project/activity (e.g. due to site limitations or engineering considerations). Economic considerations, such as increased costs, do not necessarily require that an RDF be varied or rendered inapplicable. • An alternative RDF, a state-implemented conservation measure, or plan-level protection is determined to provide equal or better protection for Greater Sage-Grouse or its habitat. • A specific RDF will provide no additional protection to Greater Sage-Grouse or its habitat. <p>The following RDFs are included for consideration and use based upon review of current science and effects analysis (circa 2014; Table B-1 [in the 2015 Final EIS]). These may be reviewed during project evaluation and updated through plan maintenance as new information and updated scientific findings become available. The table is organized by program area grouping the RDFs most relevant to that program. All relevant RDFs, regardless of which program they are grouped under, should be considered during project evaluation, and applicable RDFs should be applied during implementation. The following measures would be applied as RDFs for all solid minerals. They would also apply to locatable minerals consistent with applicable law. In some cases, the RDFs may not all be appropriate based on local conditions and would be assessed in the appropriate site-specific NEPA analysis; these all should be considered and where determined to be beneficial to achieving Greater Sage-Grouse habitat objectives included as part of the site-specific project. In other cases, additional project design criteria or best management practices could be incorporated into project implementation to address site-specific concerns not fully addressed by the RDFs described here.</p> <p>Required Design Features</p> <p>General (applicable to all projects)</p> <p>Seasonal Restrictions</p> <ol style="list-style-type: none"> 1. Solicit and consider expertise and ideas from local landowners, working groups, and other federal, state, county, and private organizations during development of projects. 2. No repeated or sustained behavioral disturbance (e.g., visual, noise over 10 dbA at lek, etc.) to lekking birds from 6:00 pm to 9:00 am within 2 miles

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	<p>3. Avoid mechanized anthropogenic disturbance, in nesting habitat during the nesting season when implementing: 1) fuels/vegetation/habitat restoration management projects, 2) infrastructure construction or maintenance, 3) geophysical exploration activities; 4) organized motorized recreational events.</p> <p>4. Avoid mechanized anthropogenic disturbance during the winter, in wintering areas when implementing: 1) fuels/vegetation/habitat restoration management projects, 2) infrastructure construction or maintenance, 3) geophysical exploration activities; 4) organized motorized recreational events.</p> <p>Wildfire Suppression</p> <p>5. Compile district-level information into state-wide Greater Sage-Grouse tool boxes. Tool boxes will contain maps, listing of resource advisors, contact information, local guidance, and other relevant information for each district, which will be aggregated into a state-wide document.</p> <p>6. Provide localized maps to dispatch offices and extended attack incident commanders for use in prioritizing wildfire suppression resources and designing suppression tactics. The Fire Planning and Fuels Management Division (FA-600) hosts a webpage containing up-to-date maps, instruction memoranda, conservation measures, BMPs, and spatial data specific to fire operations and fuels management/Greater Sage-Grouse interactions. These resources can be accessed at: http://web.blm.gov/internal/fire/fpfm/sg/index.html. Additional BLM Greater Sage-Grouse information can be found at: http://www.blm.gov/wo/st/en/prog/more/fish__wildlife_and/sage-grouse-conservation.html.</p> <p>7. Assign a resource advisor with Greater Sage-Grouse expertise, or who has access to Greater Sage-Grouse expertise, to all extended attack fires in or near Greater Sage-Grouse habitat areas. Prior to the fire season, provide training to Greater Sage-Grouse resource advisors on wildfire suppression organization, objectives, tactics, and procedures to develop a cadre of qualified individuals. Involve state wildlife agency expertise in fire operations through:</p> <ul style="list-style-type: none"> • instructing resource advisors during preseason trainings; • qualification as resource advisors; • coordination with resource advisors during fire incidents; • contributing to incident planning with information such as habitat features or other key data useful in fire decision making <p>8. At the onset of an emerging wildland fire the Agency Administrators and Fire Management Officers will engage a local Resource Advisor to assess Greater Sage-Grouse habitat that may be affected by the fire or suppression activities.</p> <p>9. If complexity of the wildland fire warrants the activation of an Incident Management Team, locally refined information regarding important Greater Sage-Grouse habitat will be relayed during in brief and continually throughout the incident.</p> <p>10. On critical fire weather days, pre-position additional fire suppression resources to optimize a quick and efficient response in Greater Sage-Grouse habitat areas.</p>	<p>3. Avoid mechanized anthropogenic disturbance, in nesting habitat during the nesting season, and in wintering habitat during the winter season when implementing: 1) fuels/vegetation/habitat restoration management projects, 2) infrastructure construction or maintenance, 3) geophysical exploration activities; 4) organized motorized recreational events.</p> <ul style="list-style-type: none"> • Routine road blading, where no water turnouts or culverts are cleaned, repaired, or replaced and no road upgrades occur, is not included in this restriction. • Emergency actions to protect life or property are excluded from these restrictions. • Fuels and vegetation treatments specifically designed to improve or protect Greater Sage-Grouse habitat are subject to this restriction as practicable; however, restoring and improving Greater Sage-Grouse habitat is a high priority of this plan. <p>General infrastructure development activities</p> <p>4. Minimize cross-country vehicle travel during all types of activities in Greater Sage-Grouse habitat.</p> <p>5. Power-wash all vehicles and equipment involved in off-road activities (including firefighting vehicles, construction equipment, seeding equipment, etc.) prior to entering the area, to minimize the introduction of undesirable and/or invasive plant species.</p> <p>6. Above-ground disturbance areas would be seeded with perennial vegetation as per vegetation management.</p> <p>7. Where practicable, place infrastructure in already disturbed locations where the habitat has not been fully restored.</p> <p>8. Cluster disturbances, operations (fracturing stimulation, liquids gathering, etc.) and facilities as close as possible.</p> <p>9. Collocate linear facilities within 1 mile of existing linear facilities.</p> <p>10. Micro-site linear facilities to reduce impacts on Greater Sage-Grouse habitats.</p> <p>11. Locate staging areas outside PHMA to the extent possible.</p> <p>12. Consider collocating powerlines, flowlines, and pipelines under or immediately adjacent to a road or adjacent to other pipelines first, before considering collocating with other ROWs.</p> <p>13. Restrict the construction of tall facilities and fences to the minimum number and amount needed.</p> <p>14. Construction and development activities should conform to seasonal restrictions.</p> <p>15. Control the spread and effects of nonnative plant species (e.g. by washing vehicles and equipment; Gelbard and Belnap 2003; Bergquist et al. 2007; Evangelista et al. 2011).</p> <p>16. The BLM/Forest Service would evaluate the potential for limitation of new noise sources on a case-by-case basis as appropriate.</p> <p>17. Design and locate fences to reduce the risk of Greater Sage-Grouse collisions.</p> <p>18. As new research is completed, new specific limitations would be coordinated with the IDFG and partners.</p> <p>19. Clean up refuse (Bui et al. 2010).</p> <p>20. Eliminate or minimize corvid subsidies as practicable.</p>	<p>(3.2 km) of leks during the lekking season. (This RDF is covered through HMA buffers.)</p> <p>3. Avoid mechanized anthropogenic disturbance, in nesting habitat during the nesting season, and in wintering habitat during the winter season when implementing: 1) fuels/vegetation/habitat restoration management projects, 2) infrastructure construction or maintenance, 3) geophysical exploration activities; 4) organized motorized recreational events.</p> <ul style="list-style-type: none"> • Routine road blading, where no water turnouts or culverts are cleaned, repaired, or replaced and no road upgrades occur, is not included in this restriction. • Emergency actions to protect life or property are excluded from these restrictions. • Fuels and vegetation treatments specifically designed to improve or protect Greater Sage-Grouse habitat are not subject to this restriction. as practicable; however, restoring and improving Greater Sage-Grouse habitat is a high priority of this plan and the activity's effects will be analyzed for that sage-grouse population. <p>General infrastructure development activities</p> <p>4. Minimize cross-country vehicle travel during all types of activities in Greater Sage-Grouse habitat.</p> <p>5. Power-wash all vehicles and equipment involved in off-road activities (including firefighting vehicles, construction equipment, seeding equipment, etc.) prior to entering the area, to minimize the introduction of undesirable and/or invasive plant species.</p> <p>6. Above-ground disturbance areas would be seeded with perennial vegetation as per vegetation management.</p> <p>7. Where practicable, place infrastructure in already disturbed locations where the habitat has not been fully restored.</p> <p>8. Cluster disturbances, operations (fracturing stimulation, liquids gathering, etc.) and facilities as close as possible.</p> <p>9. Collocate linear facilities within 1 km of existing linear facilities.</p> <p>10. Micro-site linear facilities to reduce impacts on Greater Sage-Grouse habitats.</p> <p>11. Locate staging areas outside PHMA to the extent possible.</p> <p>12. Consider collocating power lines, flowlines, and pipelines under or immediately adjacent to a road or adjacent to other pipelines first, before considering collocating with other ROWs.</p> <p>13. Restrict the construction of tall facilities and fences to the minimum number and amount needed.</p> <p>14. Construction and development activities should conform to seasonal restrictions.</p> <p>15. Control the spread and effects of nonnative plant species (e.g. by washing vehicles and equipment; Gelbard and Belnap 2003; Bergquist et al. 2007; Evangelista et al. 2011).</p> <p>16. The BLM/Forest Service would evaluate the potential for limitation of new noise sources on a case-by-case basis as appropriate.</p> <p>17. Design and locate fences to reduce the risk of Greater Sage-Grouse collisions.</p> <p>18. As new research is completed, new specific limitations would be coordinated with the IDFG and partners.</p>

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	<p>11. As appropriate, utilize existing fuel breaks, such as roads or discrete changes in fuel type, as control lines in order to minimize fire spread.</p> <p>12. During periods of multiple fires, ensure line officers are involved in setting priorities.</p> <p>13. To the extent possible, locate wildfire suppression facilities (i.e., base camps, spike camps, drop points, staging areas, heli-bases, etc.) in areas where physical disturbance to Greater Sage-Grouse habitat can be minimized. These include disturbed areas, grasslands, near roads/trails or in other areas where there is existing disturbance or minimal sagebrush cover.</p> <p>14. Power-wash all firefighting vehicles, to the extent possible, including engines, water tenders, personnel vehicles, and all-terrain vehicles (ATV) prior to deploying in or near Greater Sage-Grouse habitat areas to minimize noxious weed spread.</p> <p>15. Minimize cross-country vehicle travel during fire operations in Greater Sage-Grouse habitat.</p> <p>16. Minimize burnout operations in key Greater Sage-Grouse habitat areas by constructing direct fireline whenever safe and practical to do so.</p> <p>17. Utilize retardant, mechanized equipment, and other available resources to minimize burned acreage during initial attack.</p> <p>18. As safety allows, conduct mop-up where the black adjoins unburned islands, dog legs, or other habitat features to minimize sagebrush loss.</p> <p>19. Adequately document fire operation activities in Greater Sage-Grouse habitat for potential follow-up coordination activities.</p> <p>Fuels Management <i>Unless otherwise specified as part of the land use plan consider the full array of fuels management treatment types (prescribed fire, mechanical, chemical and biological) when implementing the following RDFs.</i></p> <p>20. Where applicable, design fuels treatment objectives to protect existing sagebrush ecosystems, modify fire behavior, restore native plants, and create landscape patterns which most benefit Greater Sage-Grouse habitat.</p> <p>21. Provide training to fuels treatment personnel on Greater Sage-Grouse biology, habitat requirements, and identification of areas utilized locally.</p> <p>22. Use burning prescriptions which minimize undesirable effects on vegetation or soils (e.g., minimize mortality of desirable perennial plant species and reduce risk of annual grass invasion).</p> <p>23. Ensure proposed sagebrush treatments are planned with full interdisciplinary input pursuant to NEPA and coordination with state fish and wildlife agencies, and that treatment acreage is conservative in the context of surrounding Greater Sage-Grouse seasonal habitats and landscape.</p> <p>24. Where appropriate, ensure that treatments are configured in a manner that promotes use by Greater Sage-Grouse.</p> <p>25. Where applicable, incorporate roads and natural fuel breaks into fuel break design.</p> <p>26. Power-wash all vehicles and equipment involved in fuels management activities, prior to entering the area, to minimize the introduction of undesirable and/or invasive plant species.</p>	<p>Roads</p> <p>21. Utilize existing roads, or realignments of existing routes to the extent possible.</p> <p>22. Design roads to an appropriate standard no higher than necessary to accommodate their intended purpose.</p> <p>23. Do not issue ROWs or SUAs to counties on newly constructed energy or mineral development roads, unless for a temporary use consistent with all other terms and conditions included in this document.</p> <p>24. Establish speed limits on BLM and USFS system roads to reduce vehicle/wildlife collisions or design roads to be driven at slower speeds.</p> <p>25. Coordinate road construction and use among ROW or SUA holders.</p> <p>26. Construct road crossings at right angles to ephemeral drainages and stream crossings.</p> <p>27. Use dust abatement on roads and pads as necessary.</p> <p>28. Close and reclaim duplicate roads by restoring original landform and establishing desired vegetation.</p> <p>29. Locate roads to avoid priority areas and habitats as described in the Wildfire and Invasive Species Assessments to the extent practicable.</p> <p>Reclamation Activities</p> <p>30. Include objectives for ensuring habitat restoration to meet Greater Sage-Grouse habitat needs in reclamation practices/sites (Pyke 2011).</p> <p>31. Address post-reclamation management in the reclamation plan such that goals and objectives are to protect and improve Greater Sage-Grouse habitat needs.</p> <p>32. Maximize the area of interim reclamation on long-term access roads and well pads, including reshaping, topsoiling, and revegetating cut-and-fill slopes.</p> <p>33. Restore disturbed areas at final reclamation to the pre-disturbance landforms and desired plant community.</p> <p>34. Irrigate interim reclamation if necessary for establishing seedlings more quickly.</p> <p>35. Utilize mulching techniques to expedite reclamation and to protect soils.</p> <p>Specific (Applicable only to certain project types) Wildfire Suppression</p> <p>36. Compile district-level information into statewide Greater Sage-Grouse tool boxes. Tool boxes will contain maps, listing of resource advisors, contact information, local guidance, and other relevant information for each district, which will be aggregated into a statewide document.</p> <p>37. Provide localized maps to dispatch offices and extended attack incident commanders for use in prioritizing wildfire suppression resources and designing suppression tactics. The Fire Planning and Fuels Management Division (FA-600) hosts a webpage containing up-to-date maps, instruction memoranda, conservation measures, BMPs, and spatial data specific to fire operations and fuels management/Greater Sage-Grouse interactions. These resources can be accessed at:</p>	<p>19. Clean up refuse (Bui et al. 2010).</p> <p>20. Eliminate or minimize corvid subsidies as practicable.</p> <p>Roads</p> <p>21. Utilize existing roads, or realignments of existing routes to the extent possible.</p> <p>22. Design roads to an appropriate standard no higher than necessary to accommodate their intended purpose.</p> <p>23. Do not issue ROWs or SUAs to counties on newly constructed energy or mineral development roads, unless for a temporary use consistent with all other terms and conditions included in this document.</p> <p>24. Establish speed limits on BLM and USFS system roads to reduce vehicle/wildlife collisions or design roads to be driven at slower speeds.</p> <p>25. Coordinate road construction and use among ROW or SUA holders.</p> <p>26. Construct road crossings at right angles to ephemeral drainages and stream crossings.</p> <p>27. Use dust abatement on roads and pads as necessary.</p> <p>28. Close and reclaim duplicate roads by restoring original landform and establishing desired vegetation.</p> <p>29. Locate roads to avoid priority areas and habitats as described in the Wildfire and Invasive Species Assessments to the extent practicable.</p> <p>Reclamation Activities</p> <p>30. Include objectives for ensuring habitat restoration to meet Greater Sage-Grouse habitat needs in reclamation practices/sites (Pyke 2011).</p> <p>31. Address post-reclamation management in the reclamation plan such that goals and objectives are to protect and improve Greater Sage-Grouse habitat needs.</p> <p>32. Maximize the area of interim reclamation on long-term access roads and well pads, including reshaping, topsoiling, and revegetating cut-and-fill slopes.</p> <p>33. Restore disturbed areas at final reclamation to the pre-disturbance landforms and desired plant community.</p> <p>34. Irrigate interim reclamation if necessary for establishing seedlings more quickly.</p> <p>35. Utilize mulching techniques to expedite reclamation and to protect soils.</p> <p>Specific (Applicable only to certain project types) Wildfire Suppression</p> <p>36. Compile district-level information into statewide Greater Sage-Grouse tool boxes. Tool boxes will contain maps, listing of resource advisors, contact information, local guidance, and other relevant information for each district, which will be aggregated into a statewide document.</p> <p>37. Provide localized maps to dispatch offices and extended attack incident commanders for use in prioritizing wildfire suppression resources and designing suppression tactics. The Fire Planning and Fuels Management Division (FA-600) hosts a webpage containing up-to-date maps, instruction memoranda, conservation measures, BMPs, and spatial data specific to fire</p>

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	<p>27. Design vegetation treatments in areas of high fire frequency which facilitate firefighter safety, reduce the potential acres burned, and reduce the fire risk to Greater Sage-Grouse habitat. Additionally, develop maps for Greater Sage-Grouse habitat which spatially display existing fuels treatments that can be used to assist suppression activities.</p> <p>28. As funding and logistics permit, restore annual grasslands to a species composition characterized by perennial grasses, forbs, and shrubs or one of that referenced in land use planning documentation.</p> <p>29. Emphasize the use of native plant species, especially those from a warmer area of the species' current range, recognizing that non-native species may be necessary depending on the availability of native seed and prevailing site conditions.</p> <p>30. Remove standing and encroaching trees within at least 110 yards of occupied Greater Sage-Grouse leks and other habitats (e.g., nesting, wintering and brood rearing) to reduce the availability of perch sites for avian predators, as resources permit.</p> <p>31. Protect wildland areas from wildfire originating on private lands, infrastructure corridors, and recreational areas.</p> <p>32. Reduce the risk of vehicle- or human-caused wildfires and the spread of invasive species by installing fuel breaks and/or planting perennial vegetation (e.g., green-strips) paralleling road rights-of-way.</p> <p>33. Strategically place and maintain pre-treated strips/areas (e.g., mowing, herbicide application, etc.) to aid in controlling wildfire, should wildfire occur near PHMA or priority restoration areas (such as where investments in restoration have already been made).</p> <p>34. Design treatments to provide a break in fuel continuity in large, at-risk, expanses of continuous sagebrush. Use local knowledge of fire occurrence, spread patterns, and habitat values at risk to determine the proper placement and size of the fuel break.</p> <p>35. Use existing agreements with local, county, and state road departments to improve and maintain existing fuel breaks during routine road maintenance. Examples include: blading, mowing, disking, grading, and spraying roadside vegetation.</p> <p>36. Form partnerships with linear right-of-way holders to maintain fuel breaks, which reduce fuel continuity and serve to protect at-risk landscapes.</p> <p>37. Use existing NEPA documentation and authorities, where possible, when conducting road right-of-way maintenance. In many instances, existing authorizations for roads or linear rights-of-way contain provisions for maintenance activities that could be implemented and incorporated into a vegetation and habitat protection strategy without requiring additional NEPA analysis. Document this with a Determination of NEPA Adequacy (DNA).</p> <p>38. Enter into agreements with road departments which may help fund the construction and maintenance of fuel breaks adjacent to roads, as funding permits.</p> <p>39. Spatially depict the locations of existing and planned fuel breaks in a landscape fuel break map and label each vegetation polygon for reference. Offices will make these maps available to suppression resources for use in fire operations.</p>	<p>http://web.blm.gov/internal/fire/fpfm/sg/index.html. Additional BLM Greater Sage-Grouse information can be found at: http://www.blm.gov/wo/st/en/prog/more/fish__wildlife_and/sage-grouse_conservation.html.</p> <p>38. Assign a resource advisor with Greater Sage-Grouse expertise, or who has access to Greater Sage-Grouse expertise, to all extended attack fires in or near Greater Sage-Grouse habitat areas. Prior to the fire season, provide training to Greater Sage-Grouse resource advisors on wildfire suppression organization, objectives, tactics, and procedures to develop a cadre of qualified individuals. Involve state wildlife agency expertise in fire operations through:</p> <ul style="list-style-type: none"> • instructing resource advisors during preseason trainings • qualification as resource advisors • coordination with resource advisors during fire incidents • contributing to incident planning with information such as habitat features or other key data useful in fire decision making <p>39. At the onset of an emerging wildland fire, the Agency Administrators and Fire Management Officers will engage a local Resource Advisor to assess Greater Sage-Grouse habitat that may be affected by the fire or suppression activities.</p> <p>40. If complexity of the wildland fire warrants the activation of an Incident Management Team, locally refined information regarding important Greater Sage-Grouse habitat will be relayed during in brief and continually throughout the incident.</p> <p>41. On critical fire weather days, pre-position additional fire suppression resources to optimize a quick and efficient response in Greater Sage-Grouse habitat areas.</p> <p>42. As appropriate, utilize existing fuel breaks, such as roads or discrete changes in fuel type, as control lines in order to minimize fire spread.</p> <p>43. During periods of multiple fires, ensure line officers are involved in setting priorities.</p> <p>44. To the extent possible, locate wildfire suppression facilities (i.e., base camps, spike camps, drop points, staging areas, heli-bases, etc.) in areas where physical disturbance to Greater Sage-Grouse habitat can be minimized. These include disturbed areas, grasslands, near roads/trails, or in other areas where there is existing disturbance or minimal sagebrush cover.</p> <p>45. Minimize burnout operations in key Greater Sage-Grouse habitat areas by constructing direct fireline whenever safe and practical to do so.</p> <p>46. Utilize retardant, mechanized equipment, and other available resources to minimize burned acreage during initial attack.</p> <p>47. As safety allows, conduct mop-up where the black adjoins unburned islands, dog legs, or other habitat features to minimize sagebrush loss.</p> <p>48. Adequately document fire operation activities in Greater Sage-Grouse habitat for potential follow-up coordination activities.</p> <p>Fuels Management <i>Unless otherwise specified as part of the land use plan, consider the full array of fuels management treatment types (prescribed fire, mechanical, chemical, and biological) when implementing the following RDFs.</i></p>	<p>operations and fuels management/Greater Sage-Grouse interactions. Internet websites: http://web.blm.gov/internal/fire/fpfm/sg/index.html and http://www.blm.gov/wo/st/en/prog/more/fish__wildlife_and/sage-grouse_conservation.html.</p> <p>38. Assign a resource advisor with Greater Sage-Grouse expertise, or who has access to Greater Sage-Grouse expertise, to all extended attack fires in or near Greater Sage-Grouse habitat areas. Prior to the fire season, provide training to Greater Sage-Grouse resource advisors on wildfire suppression organization, objectives, tactics, and procedures to develop a cadre of qualified individuals. Involve state wildlife agency expertise in fire operations through:</p> <ul style="list-style-type: none"> • instructing resource advisors during preseason trainings • qualification as resource advisors • coordination with resource advisors during fire incidents • contributing to incident planning with information such as habitat features or other key data useful in fire decision making <p>39. At the onset of an emerging wildland fire, the Agency Administrators and Fire Management Officers will engage a local Resource Advisor to assess Greater Sage-Grouse habitat that may be affected by the fire or suppression activities.</p> <p>40. If complexity of the wildland fire warrants the activation of an Incident Management Team, locally refined information regarding important Greater Sage-Grouse habitat will be relayed during in brief and continually throughout the incident.</p> <p>41. On critical fire weather days, pre-position additional fire suppression resources to optimize a quick and efficient response in Greater Sage-Grouse habitat areas.</p> <p>42. As appropriate, utilize existing fuel breaks, such as roads or discrete changes in fuel type, as control lines in order to minimize fire spread.</p> <p>43. During periods of multiple fires, ensure line officers are involved in setting priorities.</p> <p>44. To the extent possible, locate wildfire suppression facilities (i.e., base camps, spike camps, drop points, staging areas, heli-bases, etc.) in areas where physical disturbance to Greater Sage-Grouse habitat can be minimized. These include disturbed areas, grasslands, near roads/trails, or in other areas where there is existing disturbance or minimal sagebrush cover.</p> <p>45. Minimize burnout operations in key Greater Sage-Grouse habitat areas by constructing direct fireline whenever safe and practical to do so.</p> <p>46. Utilize retardant, mechanized equipment, and other available resources to minimize burned acreage during initial attack.</p> <p>47. As safety allows, conduct mop-up where the black adjoins unburned islands, dog legs, or other habitat features to minimize sagebrush loss.</p> <p>48. Adequately document fire operation activities in Greater Sage-Grouse habitat for potential follow-up coordination activities.</p> <p>Fuels Management <i>Unless otherwise specified as part of the land use plan, consider the full array of fuels management treatment types (prescribed fire, mechanical, chemical, and biological) when implementing the following RDFs.</i></p>

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	<p>Vegetation Treatment</p> <p>40. Utilize available plant species based on their adaptation to the site when developing seed mixes (Lambert 2005; VegSpec).</p> <p>41. Utilizing the warmer component of a species' current range when selecting native species for restoration when available (Kramer and Havens 2009).</p> <p>42. Reduce annual grass densities and competition through herbicide, targeted grazing, tillage, prescribed fire, etc. (Pyke 2011).</p> <p>43. Reduce density and competition of introduced perennial grasses using appropriate techniques to accomplish this reduction (Pellant and Lysne 2005).</p> <p>44. Utilize techniques to introduce desired species to the site such as drill seeding, broadcast seeding followed by a seed coverage technique, such as harrowing, chaining or livestock trampling, and transplanting container or bare-root seedlings.</p> <p>45. Assess existing on-site vegetation to ascertain if enough desirable perennial vegetation exists to consider techniques to increase on-site seed production to facilitate an increase in density of desired species.</p> <p>46. Use site preparation techniques that retain existing desirable vegetation.</p> <p>47. Use "mother plant" techniques or planting of satellite populations of desirable plants to serve as seed sources.</p> <p>48. Utilize post-treatment control of annual grass and other invasive species.</p> <p>49. Utilize new tools and use of new science and research as it becomes available.</p> <p>50. Give higher priority to vegetation rehabilitation or manipulation projects that include:</p> <ul style="list-style-type: none"> • Sites where environmental variables contribute to improved chances for project success (Meinke et al. 2009). • Areas where seasonal habitat is limiting Greater Sage-Grouse distribution and/or abundance (wintering areas, wet meadows and riparian areas, nesting areas, leks, etc.). • Re-establish sagebrush cover in otherwise suitable Greater Sage-Grouse with consideration to local needs and conditions using the general priorities in the following order: <ul style="list-style-type: none"> • Recently burned native areas • Native grassland with suitable forb component • Nonnative grassland with suitable forb component • Recently converted annual grass areas • Native grassland • Nonnative grassland • Where desirable perennial bunchgrasses and/or forbs are deficient in existing sagebrush stands, use appropriate mechanical, aerial or other techniques to re-establish them. Examples include but are not limited to, use of a Lawson aerator with seeding, harrow or chain with seeding, drill seeding, hand planting plugs, aerial seeding or other appropriate technique. • Cooperative efforts that may improve Greater Sage-Grouse habitat quality over multiple ownerships. 	<p>49. Where applicable, design fuels treatment objectives to protect existing sagebrush ecosystems, modify fire behavior, restore native plants, and create landscape patterns that most benefit Greater Sage-Grouse habitat.</p> <p>50. Provide training to fuels treatment personnel on Greater Sage-Grouse biology, habitat requirements, and identification of areas utilized locally.</p> <p>51. Use burning prescriptions that minimize undesirable effects on vegetation or soils (e.g., minimize mortality of desirable perennial plant species and reduce risk of annual grass invasion).</p> <p>52. Ensure proposed sagebrush treatments are planned with full interdisciplinary input pursuant to NEPA and coordination with state fish and wildlife agencies, and that treatment acreage is conservative in the context of surrounding Greater Sage-Grouse seasonal habitats and landscape.</p> <p>53. Where appropriate, ensure that treatments are configured in a manner that promotes use by Greater Sage-Grouse.</p> <p>54. Where applicable, incorporate roads and natural fuel breaks into fuel break design.</p> <p>55. Design vegetation treatments in areas of high fire frequency that facilitate firefighter safety, reduce the potential acres burned, and reduce the fire risk to Greater Sage-Grouse habitat. Additionally, develop maps for Greater Sage-Grouse habitat that spatially display existing fuels treatments that can be used to assist suppression activities.</p> <p>56. As funding and logistics permit, restore annual grasslands to a species composition characterized by perennial grasses, forbs, and shrubs or one of that referenced in land use planning documentation.</p> <p>57. Emphasize the use of native plant species, especially those from a warmer area of the species' current range, recognizing that nonnative species may be necessary depending on the availability of native seed and prevailing site conditions.</p> <p>58. Remove standing and encroaching trees within at least 110 yards of occupied Greater Sage-Grouse leks and other habitats (e.g., nesting, wintering, and brood rearing) to reduce the availability of perch sites for avian predators, as resources permit.</p> <p>59. Protect wildland areas from wildfire originating on private lands, infrastructure corridors, and recreational areas.</p> <p>60. Maximize the benefit and minimize adverse impacts on Greater Sage-Grouse when designing fuel breaks. Additionally, look for ways to minimize costs associated with maintenance and construction of fuel breaks.</p> <ul style="list-style-type: none"> • Reduce the risk of vehicle- or human-caused wildfires and the spread of invasive species by installing fuel breaks and/or planting perennial vegetation (e.g., green-strips) paralleling road rights-of-way. • Use existing agreements with local, county, and state road departments to improve and maintain existing fuel breaks during routine road maintenance. Examples include blading, mowing, disking, grading, and spraying roadside vegetation. • Form partnerships with linear right-of-way holders to maintain fuel breaks, which reduce fuel continuity and serve to protect at-risk landscapes. 	<p>49. Where applicable, design fuels treatment objectives to protect existing sagebrush ecosystems, modify fire behavior, restore native plants, and create landscape patterns that most benefit Greater Sage-Grouse habitat.</p> <p>50. Provide training to fuels treatment personnel on Greater Sage-Grouse biology, habitat requirements, and identification of areas utilized locally.</p> <p>51. Use burning prescriptions that minimize undesirable effects on vegetation or soils (e.g., minimize mortality of desirable perennial plant species and reduce risk of annual grass invasion).</p> <p>52. Ensure proposed sagebrush treatments are planned with full interdisciplinary input pursuant to NEPA and coordination with state fish and wildlife agencies, and that treatment acreage is conservative in the context of surrounding Greater Sage-Grouse seasonal habitats and landscape.</p> <p>53. Where appropriate, ensure that treatments are configured in a manner that promotes use by Greater Sage-Grouse.</p> <p>54. Where applicable, incorporate roads and natural fuel breaks into fuel break design.</p> <p>55. Design vegetation treatments in areas of high fire frequency that facilitate firefighter safety, reduce the potential acres burned, and reduce the fire risk to Greater Sage-Grouse habitat. Additionally, develop maps for Greater Sage-Grouse habitat that spatially display existing fuels treatments that can be used to assist suppression activities.</p> <p>56. As funding and logistics permit, restore annual grasslands to a species composition characterized by perennial grasses, forbs, and shrubs or one of that referenced in land use planning documentation.</p> <p>57. Emphasize the use of native plant species, especially those from a warmer area of the species' current range, recognizing that nonnative species may be necessary depending on the availability of native seed and prevailing site conditions.</p> <p>58. 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	<ul style="list-style-type: none"> Projects that may provide connectivity between suitable habitats or expand existing good quality habitats. Projects that address conifer encroachment into important Greater Sage-Grouse habitats. In general the priority for treatment is 1) Phase 1 (≤10% conifer cover), 2) Phase 2 (10-30%), and 3) Phase 3 (>30%). Replacing stands of annual grasses within otherwise good quality habitats with desirable perennial species. Other factors that contribute to the importance of the restoration project in maintaining or improving Greater Sage-Grouse habitat. <p>51. When conducting vegetation treatments in areas inhabited or potentially inhabited by slickspot peppergrass (<i>Lepidium papilliferum</i>) follow the conservation measures in the applicable conservation agreement between Idaho BLM and US Fish and Wildlife Service (most recent version dated September 2014).</p> <p>Lands and Realty</p> <p>52. Where technically and financially feasible, bury distribution powerlines and communication lines within existing disturbance.</p> <p>53. Above-ground disturbance areas would be seeded with perennial vegetation as per vegetation management.</p> <p>54. Place infrastructure in already disturbed locations where the habitat has not been fully restored.</p> <p>55. Cluster disturbances, operations (fracturing stimulation, liquids gathering, etc.) and facilities as close as possible.</p> <p>56. Co-locate linear facilities within one mile of existing linear facilities.</p> <p>57. Micro-site linear facilities to reduce impacts on Greater Sage-Grouse habitats.</p> <p>58. Locate staging areas outside the Priority Habitat Management Areas to the extent possible.</p> <p>59. Consider collocating powerlines, flowlines and pipelines under or immediately adjacent to a road or adjacent to other pipelines first, before considering co-locating with other ROW.</p> <p>60. Restrict the construction of tall facilities and fences to the minimum number and amount needed.</p> <p>61. Use free standing structures where possible, to limit the use of guy wires. Where guy wires are necessary and appropriate bird collision diverters would be used, if doing so would not cause a human safety risk.</p> <p>62. Place new utility developments (power lines, pipelines, etc.) and transportation routes in existing utility or transportation corridors.</p> <p>63. Construction and development activities should conform to seasonal restrictions.</p> <p>Fluid Mineral Leasing</p> <p>64. Use directional drilling and/or multi well-pads to reduce surface disturbance.</p> <p>65. Apply a phased development approach with concurrent reclamation.</p> <p>66. Place liquid gathering facilities outside of PHMAs. Have no tanks at well locations within PHMAs to minimize truck traffic and perching and nesting sites for ravens and raptors.</p>	<ul style="list-style-type: none"> Use existing NEPA documentation and authorities, where possible, when conducting road right-of-way maintenance. In many instances, existing authorizations for roads or linear rights-of-way contain provisions for maintenance activities that could be implemented and incorporated into a vegetation and habitat protection strategy without requiring additional NEPA analysis. Document this with a Determination of NEPA Adequacy (DNA). Enter into agreements with road departments that may help fund the construction and maintenance of fuel breaks adjacent to roads, as funding permits. Strategically place and maintain pre-treated strips/areas (e.g., mowing, herbicide application, etc.) to aid in controlling wildfire, should wildfire occur near PHMA or priority restoration areas (such as where investments in restoration have already been made). Design treatments to provide a break in fuel continuity in large, at-risk expanses of continuous sagebrush. Use local knowledge of fire occurrence, spread patterns, and habitat values at risk to determine the proper placement and size of the fuel break. <p>61. Spatially depict the locations of existing and planned fuel breaks in a landscape fuel break map and label each vegetation polygon for reference. Offices will make these maps available to suppression resources for use in fire operations.</p> <p>Vegetation Treatment</p> <p>62. Utilize available plant species based on their adaptation to the site when developing seed mixes (Lambert 2005; VegSpec).</p> <p>63. Consider utilizing the warmer component of a species' current range when selecting native species for restoration when available (Kramer and Havens 2009).</p> <p>64. Reduce annual grass densities and competition through herbicide, targeted grazing, tillage, prescribed fire, etc. (Pyke 2011).</p> <p>65. Reduce density and competition of introduced perennial grasses using appropriate techniques to accomplish this reduction (Pellant and Lysne 2005).</p> <p>66. Utilize effective techniques to introduce desired species to the site based on site-specific conditions (e.g. drill seeding, broadcast seeding followed by a seed coverage technique, such as harrowing, churning, or incorporation by livestock trampling, and transplanting container or bare-root seedlings).</p> <p>67. Assess existing on-site vegetation to ascertain if enough desirable perennial vegetation exists to consider techniques to increase on-site seed production to facilitate an increase in density of desired species.</p> <p>68. Use site preparation techniques that retain existing desirable vegetation and biological soil crusts to the extent practicable.</p> <p>69. Use "mother plant" techniques or planting of satellite populations of desirable plants to serve as seed sources as appropriate.</p> <p>70. Utilize posttreatment control of annual grass and other invasive species.</p> <p>71. Give higher priority to vegetation rehabilitation or manipulation projects that include:</p>	<ul style="list-style-type: none"> Use existing NEPA documentation and authorities, where possible, when conducting road right-of-way maintenance. In many instances, existing authorizations for roads or linear rights-of-way contain provisions for maintenance activities that could be implemented and incorporated into a vegetation and habitat protection strategy without requiring additional NEPA analysis. Document this with a Determination of NEPA Adequacy (DNA). Enter into agreements with road departments that may help fund the construction and maintenance of fuel breaks adjacent to roads, as funding permits. Strategically place and maintain pre-treated strips/areas (e.g., mowing, herbicide application, etc.) to aid in controlling wildfire, should wildfire occur near PHMA or priority restoration areas (such as where investments in restoration have already been made). Design treatments to provide a break in fuel continuity in large, at-risk expanses of continuous sagebrush. Use local knowledge of fire occurrence, spread patterns, and habitat values at risk to determine the proper placement and size of the fuel break. <p>60. Spatially depict the locations of existing and planned fuel breaks in a landscape fuel break map and label each vegetation polygon for reference. Offices will make these maps available to suppression resources for use in fire operations.</p> <p>Vegetation Treatment</p> <p>61. Utilize available plant species based on their adaptation to the site when developing seed mixes (Lambert 2005; VegSpec).</p> <p>62. Consider utilizing the warmer component of a species' current range when selecting native species for restoration when available (Kramer and Havens 2009).</p> <p>63. Reduce annual grass densities and competition through herbicide, targeted grazing, tillage, prescribed fire, etc. (Pyke 2011).</p> <p>64. Reduce density and competition of introduced perennial grasses using appropriate techniques to accomplish this reduction (Pellant and Lysne 2005).</p> <p>65. Utilize effective techniques to introduce desired species to the site based on site-specific conditions (e.g. drill seeding, broadcast seeding followed by a seed coverage technique, such as harrowing, churning, or incorporation by livestock trampling, and transplanting container or bare-root seedlings).</p> <p>66. Assess existing on-site vegetation to ascertain if enough desirable perennial vegetation exists to consider techniques to increase on-site seed production to facilitate an increase in density of desired species.</p> <p>67. Use site preparation techniques that retain existing desirable vegetation and biological soil crusts to the extent practicable.</p> <p>68. Use "mother plant" techniques or planting of satellite populations of desirable plants to serve as seed sources as appropriate.</p> <p>69. Utilize posttreatment control of annual grass and other invasive species.</p> <p>70. Give higher priority to vegetation rehabilitation or manipulation projects that include:</p>

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	<p>67. Use remote monitoring techniques for production facilities and develop a plan to reduce the frequency of vehicle use (Lyon and Anderson 2003).</p> <p>68. Site and/or minimize linear ROWs or SUAs to reduce disturbance to sagebrush habitats.</p> <p>69. Design or site permanent structures which create movement (e.g. pump jack) to minimize impacts on Greater Sage-Grouse.</p> <p>70. Equip tanks and other above-ground facilities with structures or devices that discourage nesting of raptors and corvids.</p> <p>71. Control the spread and effects of non-native plant species (Gelbard and Belnap 2003, Bergquist et al. 2007, Evangelista et al. 2011). (E.g. by washing vehicles and equipment.)</p> <p>72. Restrict pit and impoundment construction to reduce or eliminate threats from West Nile virus (Doherty 2007).</p> <p>73. Remove or re-inject produced water to reduce habitat for mosquitoes that vector West Nile virus. If surface disposal of produced water continues, use the following steps for reservoir design to limit favorable mosquito habitat:</p> <ul style="list-style-type: none"> • Overbuild size of ponds for muddy and non-vegetated shorelines. • Build steep shorelines to decrease vegetation and increase wave actions. • Avoid flooding terrestrial vegetation in flat terrain or low lying areas. • Construct dams or impoundments that restrict down slope seepage or overflow. • Line the channel where discharge water flows into the pond with crushed rock. • Construct spillway with steep sides and line it with crushed rock. • Treat waters with larvicides to reduce mosquito production where water occurs on the surface <p>74. Require noise shields when drilling during the lek, nesting, brood-rearing, or wintering season.</p> <p>75. The BLM/Forest Service would work with proponents to limit project related noise where it would be expected to reduce functionality of habitats in Priority and Important Habitat Management Areas.</p> <p>76. The BLM/Forest Service would evaluate the potential for limitation of new noise sources on a case-by-case basis as appropriate.</p> <p>77. Limit noise sources that would be expected to negatively impact populations in Priority and Important Habitat Management Areas and continue to support the establishment of ambient baseline noise levels for occupied leks in Priority Habitat Management Areas.</p> <p>78. As additional research and information emerges, specific new limitations appropriate to the type of projects being considered would be evaluated and appropriate limitations would be implemented where necessary to minimize potential for noise impacts on Greater Sage-Grouse core population behavioral cycles.</p> <p>79. As new research is completed, new specific limitations would be coordinated with the IDFG and MT FWP and partners.</p> <p>80. Fit transmission towers with anti-perch devices (Lammers and Collopy 2007).</p> <p>81. Require Greater Sage-Grouse-safe fences.</p>	<ul style="list-style-type: none"> • Sites where environmental variables contribute to improved chances for project success (Meinke et al. 2009). • Areas where seasonal habitat is limiting Greater Sage-Grouse distribution and/or abundance (wintering areas, wet meadows and riparian areas, nesting areas, leks, etc.). • Reestablish sagebrush cover in otherwise suitable Greater Sage-Grouse with consideration to local needs and conditions using the general priorities in the following order: <ul style="list-style-type: none"> i. Recently burned native areas ii. Native grassland with suitable forb component iii. Nonnative grassland with suitable forb component iv. Recently converted annual grass areas v. Native grassland vi. Nonnative grassland • Where desirable perennial bunchgrasses and/or forbs are deficient in existing sagebrush stands, use appropriate mechanical, aerial, or other techniques to reestablish them (e.g. a Lawson aerator with seeding, harrow or chain with seeding, drill seeding, hand planting plugs, aerial seeding, or other appropriate techniques). • Cooperative efforts that may improve Greater Sage-Grouse habitat quality over multiple ownerships. • Projects that may provide connectivity between suitable habitats or expand existing good quality habitats. • Projects that address conifer encroachment into important Greater Sage-Grouse habitats. In general the priority for treatment is 1) Phase 1 ($\leq 10\%$ conifer cover), 2) Phase 2 (10-30%), and 3) Phase 3 ($>30\%$). • Replacing stands of annual grasses within otherwise good quality habitats with desirable perennial species. Other factors that contribute to the importance of the restoration project in maintaining or improving Greater Sage-Grouse habitat. <p>72. When conducting vegetation treatments in areas inhabited or potentially inhabited by slickspot peppergrass (<i>Lepidium papilliferum</i>), follow the conservation measures in the applicable conservation agreement between Idaho BLM and US Fish and Wildlife Service (most recent version dated September 2014).</p> <p>Lands and Realty</p> <p>73. Where technically and financially feasible, bury distribution powerlines and communication lines within existing disturbance.</p> <p>74. Use free standing structures where possible, to limit the use of guy wires. Where guy wires are necessary and appropriate, bird collision diverters would be used, if doing so would not cause a human safety risk.</p> <p>75. Place new utility developments (power lines, pipelines, etc.) and transportation routes in existing utility or transportation corridors.</p> <p>76. Fit transmission towers with anti-perch devices (Lammers and Collopy 2007).</p> <p>Fluid Mineral Leasing</p>	<ul style="list-style-type: none"> • Sites where environmental variables contribute to improved chances for project success (Meinke et al. 2009). • Areas where seasonal habitat is limiting Greater Sage-Grouse distribution and/or abundance (wintering areas, wet meadows and riparian areas, nesting areas, leks, etc.). • Reestablish sagebrush cover in otherwise suitable Greater Sage-Grouse with consideration to local needs and conditions using the general priorities in the following order: <ul style="list-style-type: none"> 1. Recently burned native areas 2. Native grassland with suitable forb component 3. Nonnative grassland with suitable forb component 4. Recently converted annual grass areas 5. Native grassland 6. 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Other factors that contribute to the importance of the restoration project in maintaining or improving Greater Sage-Grouse habitat. <p>71. When conducting vegetation treatments in areas inhabited or potentially inhabited by slickspot peppergrass (<i>Lepidium papilliferum</i>), follow the conservation measures in the applicable conservation agreement between Idaho BLM and US Fish and Wildlife Service (most recent version dated September 2014).</p> <p>Lands and Realty</p> <p>72. Where technically and financially feasible, bury distribution power lines and communication lines within existing disturbance.</p> <p>73. Use free standing structures where possible, to limit the use of guy wires. Where guy wires are necessary and appropriate, bird collision diverters would be used, if doing so would not cause a human safety risk.</p> <p>74. Place new utility developments (power lines, pipelines, etc.) and transportation routes in existing utility or transportation corridors.</p> <p>75. Fit transmission towers with anti-perch devices (Lammers and Collopy 2007).</p> <p>Fluid Mineral Leasing</p>

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	<p>82. Locate new compressor stations outside Priority Habitat Management Areas and design them to reduce noise that may be directed towards Priority Habitat Management Areas.</p> <p>83. Clean up refuse (Bui et al. 2010).</p> <p>84. Locate man camps outside of priority Greater Sage-Grouse habitats.</p> <p>85. Consider using oak (or other material) mats for drilling activities to reduce vegetation disturbance and for roads between closely spaced wells to reduce soil compaction and maintain soil structure to increase likelihood of vegetation reestablishment following drilling.</p> <p>86. Use only closed-loop systems for drilling operations and no reserve pits.</p> <p>87. Cover (e.g., fine mesh netting or use other effective techniques) all drilling and production pits and tanks regardless of size to reduce Greater Sage-Grouse mortality.</p> <p>Roads</p> <p>88. Utilize existing roads, or realignments of existing routes to the extent possible.</p> <p>89. Design roads to an appropriate standard no higher than necessary to accommodate their intended purpose.</p> <p>90. Do not issue ROWs or SUAs to counties on newly constructed energy or mineral development roads, unless for a temporary use consistent with all other terms and conditions included in this document.</p> <p>91. Establish speed limits on BLM and FS system roads to reduce vehicle/wildlife collisions or design roads to be driven at slower speeds.</p> <p>92. Coordinate road construction and use among ROW or SUA holders.</p> <p>93. Construct road crossings at right angles to ephemeral drainages and stream crossings.</p> <p>94. Use dust abatement on roads and pads.</p> <p>95. Close and reclaim duplicate roads by restoring original landform and establishing desired vegetation.</p> <p>Roads Specific to Priority and Important Habitat Management Areas</p> <p>96. Locate roads to avoid priority areas and habitats as described in the Wildfire and Invasive Species Assessments.</p> <p>97. Establish trip restrictions (Lyon and Anderson 2003) or minimization through use of telemetry and remote well control (e.g., Supervisory Control and Data Acquisition).</p> <p>98. Restrict vehicle traffic to only authorized users on newly constructed routes (using signage, gates, etc.)</p> <p>Reclamation Activities</p> <p>99. Include objectives for ensuring habitat restoration to meet Greater Sage-Grouse habitat needs in reclamation practices/sites (Pyke 2011).</p> <p>100. Address post reclamation management in reclamation plan such that goals and objectives are to protect and improve Greater Sage-Grouse habitat needs.</p> <p>101. Maximize the area of interim reclamation on long-term access roads and well pads, including reshaping, topsoiling and revegetating cut-and-fill slopes.</p>	<p>77. Use directional drilling and/or multi well-pads to reduce surface disturbance.</p> <p>78. Apply a phased development approach with concurrent reclamation.</p> <p>79. Place liquid gathering facilities outside of PHMA. Have no tanks at well locations within PHMA to minimize truck traffic and perching and nesting sites for ravens and raptors.</p> <p>80. Use remote monitoring techniques for production facilities and develop a plan to reduce the frequency of vehicle use (Lyon and Anderson 2003).</p> <p>81. Site and/or minimize linear ROWs or SUAs to reduce disturbance to sagebrush habitats.</p> <p>82. Design or site permanent structures that create movement (e.g. pump jack) to minimize impacts on Greater Sage-Grouse.</p> <p>83. Equip tanks and other above-ground facilities with structures or devices that discourage nesting of raptors and corvids.</p> <p>84. Restrict pit and impoundment construction to reduce or eliminate threats from West Nile virus (Doherty 2007).</p> <p>85. Remove or re-inject produced water to reduce habitat for mosquitoes that vector West Nile virus as practicable. If surface disposal of produced water continues, use the following steps for reservoir design to limit favorable mosquito habitat:</p> <ul style="list-style-type: none"> • Overbuild size of ponds for muddy and non-vegetated shorelines. • Build steep shorelines to decrease vegetation and increase wave actions. • Avoid flooding terrestrial vegetation in flat terrain or low-lying areas. • Construct dams or impoundments that restrict down slope seepage or overflow. • Line the channel where discharge water flows into the pond with crushed rock. • Construct spillway with steep sides and line it with crushed rock. • Treat waters with larvicides to reduce mosquito production where water occurs on the surface. <p>86. Require noise shields when drilling during the lek, nesting, brood-rearing, or wintering season.</p> <p>87. The BLM/Forest Service would work with proponents to limit project-related noise where it would be expected to reduce functionality of habitats in PHMA and IHMA.</p> <p>88. Limit noise sources that would be expected to negatively impact populations in PHMA and IHMA and continue to support the establishment of ambient baseline noise levels for occupied leks in PHMA.</p> <p>89. As additional research and information emerges, specific new limitations appropriate to the type of projects being considered would be evaluated and appropriate limitations would be implemented where necessary to minimize potential for noise impacts on Greater Sage-Grouse core population behavioral cycles.</p> <p>90. Locate new compressor stations outside PHMA and design them to reduce noise that may be directed toward PHMA.</p> <p>91. Locate man camps outside of priority Greater Sage-Grouse habitats.</p> <p>92. Consider using oak (or other material) mats for drilling activities to reduce vegetation disturbance and for roads between closely spaced wells to</p>	<p>76. Use directional drilling and/or multi well-pads to reduce surface disturbance.</p> <p>77. 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The BLM/Forest Service would work with proponents to limit project-related noise where it would be expected to reduce functionality of habitats in PHMA and IHMA.</p> <p>87. Limit noise sources that would be expected to negatively impact populations in PHMA and IHMA and continue to support the establishment of ambient baseline noise levels for occupied leks in PHMA.</p> <p>88. As additional research and information emerges, specific new limitations appropriate to the type of projects being considered would be evaluated and appropriate limitations would be implemented where necessary to minimize potential for noise impacts on Greater Sage-Grouse core population behavioral cycles.</p> <p>89. Locate new compressor stations outside PHMA and design them to reduce noise that may be directed toward PHMA.</p> <p>90. Locate man camps outside of priority Greater Sage-Grouse habitats.</p> <p>91. Consider using oak (or other material) mats for drilling activities to reduce vegetation disturbance and for roads between closely spaced wells to</p>

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	<p>102. Restore disturbed areas at final reclamation to the pre-disturbance landforms and desired plant community.</p> <p>103. Irrigate interim reclamation if necessary for establishing seedlings more quickly.</p> <p>104. Utilize mulching techniques to expedite reclamation and to protect soils.</p> <p>Grazing</p> <p>105. Avoid building new wire fences within 2 km of occupied leks (Stevens 2011). If this is not feasible, ensure that high risk segments are marked with collision diverter devices or as latest science indicates.</p> <p>106. Place new, taller structures, including corrals, loading facilities, water storage tanks, windmills, out of line of sight or at least one kilometer (preferably 3 km) from occupied leks, where such structures would increase the risk of avian predation.</p> <p>107. Utilize temporary fencing (e.g., ESR, drop down fencing) where feasible and appropriate to meet management objectives.</p> <p>108. Fence wetlands (e.g., springs, seeps, wet meadows and/or riparian areas) where appropriate, to maintain or foster progress toward Proper Functioning Condition and to facilitate management of Greater Sage-Grouse habitat objectives. Where constructing fences or exclosures to improve riparian and/or upland management, incorporate fence marking or other BMPs/RDFs as appropriate.</p> <p>109. During lekking periods, as determined locally (approximately March 15-May 1 in lower elevations and March 25-May 15 in higher elevations), livestock trailing will be avoided to the extent possible within 1 km (0.62 mile) of occupied leks between 6:00 p.m. and 9:00 a.m. to avoid disturbance to lekking and roosting Greater Sage-Grouse. Over-nighting, watering and sheep bedding locations on public lands must be at least 1 km from occupied leks during the lekking season to reduce disturbance from sheep, human activity and guard animals.</p> <p>110. Work with permittees in locating sheep over-nighting, watering and sheep bedding locations to minimize impacts on Greater Sage-Grouse seasonal habitats.</p> <p>111. When trailing livestock during the lekking or nesting season, use roads or existing trails, to the extent possible to reduce disturbance to roosting, lekking or nesting Greater Sage-Grouse.</p> <p>112. Design new spring developments in Greater Sage-Grouse habitat to maintain or enhance the free flowing characteristics of springs and wet meadows. Modify developed springs, seeps and associated pipelines to maintain the continuity of the predevelopment riparian area within priority Greater Sage-Grouse habitat where necessary.</p> <p>113. Install ramps in new and existing livestock troughs and open water storage tanks to facilitate the use of and escape from troughs by Greater Sage-Grouse and other wildlife.</p> <p>West Nile Virus</p> <p>114. Construct water return features and maintain functioning float valves to prohibit water from being spilled on the ground surrounding the trough and/or tank and return water to the original water source, to the extent practicable.</p>	<p>reduce soil compaction and maintain soil structure to increase likelihood of vegetation reestablishment following drilling.</p> <p>93. Use only closed-loop systems for drilling operations and no reserve pits.</p> <p>94. Cover (e.g., fine mesh netting or use other effective techniques) all drilling and production pits and tanks regardless of size to reduce Greater Sage-Grouse mortality.</p> <p>95. Establish trip restrictions (Lyon and Anderson 2003) or minimization through use of telemetry and remote well control (e.g., Supervisory Control and Data Acquisition).</p> <p>96. Restrict vehicle traffic to only authorized users on newly constructed routes (using signage, gates, etc.)</p> <p>Grazing</p> <p>97. Avoid building new wire fences within 2 kilometers of occupied leks (Stevens 2011). If this is not feasible, ensure that high-risk segments are marked with collision diverter devices or as latest science indicates.</p> <p>98. Place new, taller structures, including corrals, loading facilities, water storage tanks, and windmills, out of line of sight or at least 1 kilometer (preferably 3 kilometers) from occupied leks, where such structures would increase the risk of avian predation.</p> <p>99. Utilize temporary fencing (e.g., ESR and drop down fencing) where feasible and appropriate to meet management objectives.</p> <p>100. Fence wetlands (e.g., springs, seeps, wet meadows, and/or riparian areas) where appropriate, to maintain or foster progress toward proper functioning condition and to facilitate management of Greater Sage-Grouse habitat objectives. Where constructing fences or exclosures to improve riparian and/or upland management, incorporate fence marking or other BMPs/RDFs as appropriate.</p> <p>101. During lekking periods, as determined locally (approximately March 15-May 1 in lower elevations and March 25-May 15 in higher elevations), livestock trailing will be avoided to the extent possible within 1 kilometer (0.62 miles) of occupied leks between 6:00 p.m. and 9:00 a.m. to avoid disturbance to lekking and roosting Greater Sage-Grouse. Over-nighting, watering, and sheep bedding locations on public lands must be at least 1 kilometer from occupied leks during the lekking season to reduce disturbance from sheep, human activity, and guard animals. When trailing livestock during the lekking or nesting season, use roads or existing trails to the extent possible.</p> <p>102. Work with permittees in locating sheep over-nighting, watering, and sheep bedding locations to minimize impacts on Greater Sage-Grouse seasonal habitats.</p> <p>103. Design new spring developments in Greater Sage-Grouse habitat to maintain or enhance the free flowing characteristics of springs and wet meadows. Modify developed springs, seeps, and associated pipelines to maintain the continuity of the predevelopment riparian area within priority Greater Sage-Grouse habitat where practicable and appropriate.</p> <p>104. Install ramps in new and existing livestock troughs and open water storage tanks to facilitate the use of and escape from troughs by Greater Sage-Grouse and other wildlife.</p>	<p>reduce soil compaction and maintain soil structure to increase likelihood of vegetation reestablishment following drilling.</p> <p>92. Use only closed-loop systems for drilling operations and no reserve pits.</p> <p>93. Cover (e.g., fine mesh netting or use other effective techniques) all drilling and production pits and tanks regardless of size to reduce Greater Sage-Grouse mortality.</p> <p>94. Establish trip restrictions (Lyon and Anderson 2003) or minimization through use of telemetry and remote well control (e.g., Supervisory Control and Data Acquisition).</p> <p>95. Restrict vehicle traffic to only authorized users on newly constructed routes (using signage, gates, etc.)</p> <p>Grazing</p> <p>97. Avoid building new wire fences within 2 kilometers of occupied leks (Stevens 2011). If this is not feasible, ensure that high-risk segments are marked with collision diverter devices or as latest science indicates.</p> <p>98. Place new, taller structures, including corrals, loading facilities, water storage tanks, and windmills, out of line of sight or at least 1 kilometer (preferably 3 kilometers) from occupied leks, where such structures would increase the risk of avian predation.</p> <p>100. Fence wetlands (e.g., springs, seeps, wet meadows, and/or riparian areas) where appropriate, to maintain or foster progress toward proper functioning condition and to facilitate management of Greater Sage-Grouse habitat objectives. Where constructing fences or exclosures to improve riparian and/or upland management, incorporate fence marking or other BMPs/RDFs as appropriate.</p> <p>103. Design new spring developments in Greater Sage-Grouse habitat to maintain or enhance the free flowing characteristics of springs and wet meadows. Modify developed springs, seeps, and associated pipelines to maintain the continuity of the predevelopment riparian area within priority Greater Sage-Grouse habitat where practicable and appropriate.</p> <p>104. Install ramps in new and existing livestock troughs and open water storage tanks to facilitate the use of and escape from troughs by Greater Sage-Grouse and other wildlife.</p> <p>96. Utilize temporary range infrastructure (troughs, fences, supplements) fencing (e.g., ESR and drop down fencing) where feasible and appropriate to meet management objectives.</p> <p>97. During lekking periods, as determined locally (approximately March 15-May 1 in lower elevations and March 25-May 15 in higher elevations), livestock trailing will be avoided to the extent possible within 1 kilometer (0.62 miles) of occupied leks between 6:00 p.m. and 9:00 a.m. to avoid disturbance to lekking and roosting Greater Sage-Grouse. Over-nighting, watering, and sheep bedding locations on public lands will be avoided to the extent possible by at least 1 kilometer from occupied leks during the lekking season to reduce disturbance from sheep, human activity, and guard animals. When trailing livestock during the lekking or nesting season, use roads or existing trails to the extent possible.</p> <p>98. Work with permittees in locating sheep over-nighting, watering, and sheep bedding locations to minimize impacts on Greater Sage-Grouse seasonal habitats.</p>

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	<p>115. Minimize the construction of new ponds or reservoirs except as needed to meet important resource management and/or restoration objectives.</p> <p>116. Develop and maintain non-pond/reservoir watering facilities, such as troughs and bottomless tanks, to provide livestock water.</p> <p>117. For most spring developments or wells, mosquito breeding habitat usually is not an issue. Flowing cold (less than 50° Fahrenheit) water and steep sides of the stock tanks are not conducive for egg laying or larvae production. If flows are low, the water is warm, or moss production is an issue in the tank, mosquito breeding habitat could exist in the tank.</p> <p>118. Maintenance of healthy wetlands at spring sources helps control mosquitoes and their larvae by providing habitat for natural predators such as birds, dragonflies and amphibians. Protecting the wetland at the spring source with a fence is an option to consider.</p> <p>119. Clean and drain stock tanks before the season starts. If never cleaned or drained, many tanks will fill with silt or debris causing warmer water and heavy vegetation growth conducive to mosquito reproduction.</p> <p>120. Draining tanks after the period of use is completed, particularly in warmer weather, also reduces potential habitat by eliminating stagnant standing water.</p> <p>121. Maintain a properly functioning overflow to prevent water from flowing onto the pad and surrounding area, to eliminate or minimize pooling of water that is attractive to breeding mosquitoes.</p> <p>122. Clean or deepen overflow ponds to maintain colder temperatures to reduce mosquito habitat.</p> <p>123. Install and maintain float valves on stock tank fill pipes to minimize overflow</p> <p>124. Harden stock tank pads to reduce tracks that can potentially hold water where mosquitoes may breed.</p> <p>125. Build ponds with steep shorelines to reduce shallow water (>60 cm) and aquatic vegetation around the perimeter of impoundments to deter colonizing by mosquitos (Knight et al. 2003, cited in NTT report page 61).</p> <p>126. Consider removing and controlling trees and shrubs to reduce shade and wind barriers on pit and reservoir shorelines if not needed for wildlife, fish, or recreational values.</p> <p>127. Impoundments that remain accessible to livestock and wildlife can cause tracking and nutrient enrichment from manure which can create favorable mosquito breeding habitat. Where this is a concern, it may be desirable to fence the reservoir and pipe the water to a tank.</p> <p>128. Construct dams or impoundments that minimize down-slope seepage or overflow. Seepage and overflow results in down-grade accumulation of vegetated shallow water areas that support breeding mosquitoes.</p> <p>129. On ponds and reservoirs with enough depth and volume, introduce native fish species, which feed on mosquito larvae.</p> <p>130. Line the overflow of a dam's spillway with crushed rock and constructing the spillway with steep sides to preclude the accumulation of shallow water and vegetation to reduce mosquito habitat.</p> <p>131. Where an existing reservoir has filled with silt, consider cleaning to reduce shallow water habitat conducive to mosquito reproduction.</p>	<p>West Nile Virus</p> <p>105. Minimize the construction of new ponds or reservoirs except as needed to meet important resource management and/or restoration objectives.</p> <p>106. Maintenance of healthy wetlands at spring sources helps control mosquitoes and their larvae by providing habitat for natural predators such as birds, dragonflies, and amphibians. Protecting the wetland at the spring source with a fence is an option to consider.</p> <p>107. For most spring developments or wells, mosquito breeding habitat usually is not an issue. Flowing cold (less than 50° Fahrenheit) water and steep sides of the stock tanks are not conducive for egg laying or larvae production. If flows are low, the water is warm, or moss production is an issue in the tank, mosquito breeding habitat could exist in the tank.</p> <p>Maintain stock tanks and ponds/reservoirs such that they are not conducive to mosquito reproduction (little or no silt, algae, or vegetation accumulation). Consider the following options as appropriate:</p> <ul style="list-style-type: none"> Construct water return features and maintain functioning float valves to prohibit water from being spilled on the ground surrounding the trough and/or tank and return water to the original water source, to the extent practicable. Drain and clean tanks at the end of the season to prevent them from filling with fill with silt or debris, causing warmer water and heavy vegetation growth conducive to mosquito reproduction. Draining tanks after the period of use is completed, particularly in warmer weather, also reduces potential habitat by eliminating stagnant standing water. Maintain a properly functioning overflow to prevent water from flowing onto the pad and surrounding area, to eliminate or minimize pooling of water that is attractive to breeding mosquitoes. Clean or deepen overflow ponds to maintain colder temperatures to reduce mosquito habitat. Install and maintain float valves on stock tank fill pipes to minimize overflow. Harden stock tank pads to reduce tracks that can potentially hold water where mosquitoes may breed. Build ponds with steep shorelines to reduce shallow water (>60 centimeters) and aquatic vegetation around the perimeter of impoundments to deter colonizing by mosquitos (Knight et al. 2003, cited in NTT report page 61). Consider removing and controlling trees and shrubs to reduce shade and wind barriers on pit and reservoir shorelines if not needed for wildlife, fish, or recreational values. Impoundments that remain accessible to livestock and wildlife can cause tracking and nutrient enrichment from manure that can create favorable mosquito breeding habitat. Where this is a concern, it may be desirable to fence the reservoir and pipe the water to a tank. Construct dams or impoundments that minimize down-slope seepage or overflow. Seepage and overflow results in down-grade accumulation of vegetated shallow water areas that support breeding mosquitoes. 	<p>Adaptive Management Measures for Livestock Grazing (Appendix J from Idaho Executive Order 2015-04): In the development, administration, and implementation of grazing management programs, flexible grazing management practices over relatively large landscapes can be utilized, singly or in combination, to help successfully achieve desired conditions through BMPs such as, but not limited to:</p> <p>99. Employ grazing management systems that ensure adequate nesting and early brood rearing habitat within the breeding landscape.</p> <p>100. When use-pattern mapping or monitoring demonstrates an opportunity to adjust livestock distribution to benefit occupied Greater Sage-Grouse breeding habitat, include as appropriate herding, salting, and water-source management (e.g., turning troughs/pipelines on/off, extending pipelines/moving troughs) in grazing programs.</p> <p>101. If available and feasible, utilize exotic perennial grass seedings and/or annual grasslands to meet desired conditions or outcomes across the landscape of use of occupied Greater Sage-Grouse habitat.</p> <p>102. Modify authorized seasons of use within grazing permits to provide greater flexibility in managing livestock for the benefit of Greater Sage-Grouse.</p> <p>103. Where appropriate, maintain herbaceous vegetation at the end of the growing/grazing season to contribute to nesting and brood-rearing habitat quality during the coming nesting season. Table 2.2 [in the 2015 Final EIS].</p> <p>104. Ensure that permittees are informed of management and movement requirements related to avoidance of recent burns, habitat rehabilitation, or other restoration sites.</p> <p>105. Manage livestock grazing of riparian areas, meadows, springs, and seeps in a manner that promotes vegetative structure and composition appropriate to the site. In some cases enclosure fencing may be an option; however, recognize the availability and quality of desired herbaceous species may be improved by periodic grazing use of the enclosure.</p> <p>106. Implement management actions (grazing decisions, allotment management plan/conservation plan development, or other agreements) to modify grazing management to meet seasonal Greater Sage-Grouse desired conditions. Employ proper grazing management by providing flexibility in scheduling the intensity, timing, duration and frequency of livestock grazing use over time that best promotes management objectives. During drought periods, prioritize evaluating effects of drought in the PHMA relative to grouse needs for food and cover. Ensure that post-drought management allows for vegetation recovery, based on ecological potential, that meets Greater Sage-Grouse needs in priority Greater Sage-Grouse habitat areas. During periods of higher than average precipitation, prioritize effects of the increase in available forage and fuels.</p> <p>107. When using salt or mineral supplements: a) place them in existing disturbed sites, areas with reduced sagebrush cover—e.g., seedings or cheatgrass sites—to reduce impacts on Greater Sage-Grouse breeding habitat, b) where feasible use salts or mineral supplements to improve management of livestock for the benefit of Greater Sage-Grouse habitat.</p> <p>108. In general, avoid constructing new fences in high and moderate risk areas (Stevens 2013). If this is not feasible, ensure that high and moderate-risk segments are marked with collision diverter devices or as latest science indicates. Where feasible, place new, taller structures, such as corrals, loading facilities, water-storage tanks, windmills, etc., at least as far as the</p>

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	<p>I 32. During confirmed West Nile virus outbreaks in Greater Sage-Grouse habitat, consider larvicide applications.</p> <p>Travel Management</p> <p>I 33. Designate or design routes to direct use away from priority areas identified in Wildfire and Invasive Species Assessments and still provide for high-quality and sustainable travel routes and administrative access, legislatively mandated requirements, and commercial needs</p> <p>Recreation</p> <p>I 34. Direct use away from Greater Sage-Grouse priority areas as described in the Wildfire and Invasive Species Assessments.</p> <p>I 35. Eliminate or minimize external food sources for corvids.</p> <p>I 36. Avoid development of new campgrounds or recreation facilities in nesting habitat.</p>	<ul style="list-style-type: none"> On ponds and reservoirs with enough depth and volume, consider introducing native fish species, which feed on mosquito larvae. Line the overflow of a dam's spillway with crushed rock and construct the spillway with steep sides to preclude the accumulation of shallow water and vegetation to reduce mosquito habitat. Where an existing reservoir has filled with silt, consider cleaning to reduce shallow water habitat conducive to mosquito reproduction. Develop and maintain non-pond/reservoir watering facilities, such as troughs and bottomless tanks, to provide livestock water. During confirmed West Nile virus outbreaks in Greater Sage-Grouse habitat, consider larvicide applications. <p>Travel Management</p> <p>I 08. Designate or design routes to direct use away from priority areas identified in Wildfire and Invasive Species Assessments and still provide for high-quality and sustainable travel routes and administrative access, legislatively mandated requirements, and commercial needs.</p> <p>Recreation</p> <p>I 09. Direct use away from seasonally important Greater Sage-Grouse habitats as practicable.</p> <p>I 10. Eliminate or minimize external food sources for corvids.</p> <p>I 11. Avoid development of new campgrounds or recreation facilities in nesting habitat as practicable.</p>	<p>corresponding buffer set back from occupied leks for the corresponding HMA to reduce opportunities for avian predators. Careful consideration, based on local conditions (e.g. topography) should also be given to the placement of new fences or rangeland infrastructure near other important seasonal habitats (winter-use areas, movement corridors etc.) to reduce potential impacts.</p> <p>I 09. New spring developments in Greater Sage-Grouse habitat should be designed to maintain or enhance the free-flowing characteristics of springs and wet meadows. Analyze developed springs, seeps and associated pipelines to determine if modifications are necessary to maintain the continuity of the predevelopment riparian area within Greater Sage-Grouse habitat. Make modifications where necessary, considering impacts on other water users when such considerations are neutral or beneficial to Greater Sage-Grouse.</p> <p>I 10. Ensure that new and existing livestock troughs and open water storage tanks are fitted with ramps to facilitate the use of and escape from troughs by Greater Sage-Grouse and other wildlife. Do not use floating boards or similar objects, as these are too unstable and are ineffective.</p> <p>I 11. Identify and when feasible, establish strategically located forage reserves focusing on areas unsuitable for Greater Sage-Grouse habitat restoration or lower priority habitat restoration areas.</p> <p>I 12. Consider initiating vegetative management projects where sagebrush canopy cover exceeds desired conditions to promote a perennial grass and forb understory.</p> <p>West Nile Virus</p> <p>I 13. Minimize the construction of new ponds or reservoirs except as needed to meet important resource management and/or restoration objectives.</p> <p>I 14. Maintenance of healthy wetlands at spring sources helps control mosquitoes and their larvae by providing habitat for natural predators such as birds, dragonflies, and amphibians. Protecting the wetland at the spring source with a fence is an option to consider.</p> <p>I 15. For most spring developments or wells, mosquito breeding habitat usually is not an issue. Flowing cold (less than 50° Fahrenheit) water and steep sides of the stock tanks are not conducive for egg laying or larvae production. If flows are low, the water is warm, or moss production is an issue in the tank, mosquito breeding habitat could exist in the tank.</p> <p>Maintain stock tanks and ponds/reservoirs such that they are not conducive to mosquito reproduction (little or no silt, algae, or vegetation accumulation). Consider the following options as appropriate:</p> <ol style="list-style-type: none"> Construct water return features and maintain functioning float valves to prohibit water from being spilled on the ground surrounding the trough and/or tank and return water to the original water source, to the extent practicable. Drain and clean tanks at the end of the season to prevent them from filling with fill with silt or debris, causing warmer water and heavy vegetation growth conducive to mosquito reproduction. Draining tanks after the period of use is completed, particularly in warmer weather, also reduces potential habitat by eliminating stagnant standing water.

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			<p>d. Maintain a properly functioning overflow to prevent water from flowing onto the pad and surrounding area, to eliminate or minimize pooling of water that is attractive to breeding mosquitoes.</p> <p>e. Clean or deepen overflow ponds to maintain colder temperatures to reduce mosquito habitat.</p> <p>f. Install and maintain float valves on stock tank fill pipes to minimize overflow.</p> <p>g. Harden stock tank pads to reduce tracks that can potentially hold water where mosquitoes may breed.</p> <p>h. Build ponds with steep shorelines to reduce shallow water (>60 centimeters) and aquatic vegetation around the perimeter of impoundments to deter colonizing by mosquitos (Knight et al. 2003, cited in NTT report page 61).</p> <p>i. Consider removing and controlling trees and shrubs to reduce shade and wind barriers on pit and reservoir shorelines if not needed for wildlife, fish, or recreational values.</p> <p>j. Impoundments that remain accessible to livestock and wildlife can cause tracking and nutrient enrichment from manure that can create favorable mosquito breeding habitat. Where this is a concern, it may be desirable to fence the reservoir and pipe the water to a tank.</p> <p>k. Construct dams or impoundments that minimize down-slope seepage or overflow. Seepage and overflow results in down-grade accumulation of vegetated shallow water areas that support breeding mosquitoes.</p> <p>l. On ponds and reservoirs with enough depth and volume, consider introducing native fish species, which feed on mosquito larvae.</p> <p>m. Line the overflow of a dam's spillway with crushed rock and construct the spillway with steep sides to preclude the accumulation of shallow water and vegetation to reduce mosquito habitat.</p> <p>n. Where an existing reservoir has filled with silt, consider cleaning to reduce shallow water habitat conducive to mosquito reproduction.</p> <p>o. Develop and maintain non-pond/reservoir watering facilities, such as troughs and bottomless tanks, to provide livestock water.</p> <p>p. During confirmed West Nile virus outbreaks in Greater Sage-Grouse habitat, consider larvicide applications.</p> <p>Travel Management</p> <p>116. Designate or design routes to direct use away from priority areas identified in Wildfire and Invasive Species Assessments and still provide for high-quality and sustainable travel routes and administrative access, legislatively mandated requirements, and commercial needs.</p> <p>Recreation</p> <p>117. Direct use away from seasonally important Greater Sage-Grouse habitats as practicable.</p> <p>118. Eliminate or minimize external food sources for corvids.</p> <p>119. Avoid development of new campgrounds or recreation facilities in nesting habitat as practicable.</p>

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Appendix E	Appendix E remains as it is in the 2015 ARMPA	<p>Delete a portion of Appendix E [of the 2015 Final EIS], Starting on Page E-10 at the bullet titled Derivation of the Disturbance Formula through page E-26.</p> <p>Delete the portion of Appendix E [of the 2015 Final EIS] that deals with the project-level disturbance cap and the density cap.</p>	<p>Delete a portion of Appendix E, [of the 2015 Final EIS] Starting on Page E-10 at the bullet titled Derivation of the Disturbance Formula through page E-26.</p> <p>Delete the portion of Appendix E [of the 2015 Final EIS] that deals with the project-level disturbance cap and the density cap.</p> <p>E.6 Part VI – No Net Loss Criterion for Anthropogenic Disturbance This part of the appendix provides guidelines for the implementation of the “no net loss” criterion for proposed anthropogenic disturbance (e.g., MD SSS 30.c.). The following steps identify the screening process by which BLM will review proposed activities in PHMA, IHMA, and GHMA. These steps commence after the BLM has determined that the proposal for authorization of use is adequate and consistent with other provisions of the LUPA, including the BSU-level disturbance cap (MD SSS 27).</p> <p>Step 1—Determine if Impacts on Greater Sage-Grouse Habitat Can Be Avoided in Accordance with LUPA Standards and Guidelines.</p> <p>Step 2—Quantify Residual Impacts of the Project</p> <p>Project impacts occur at multiple scales. Impact analysis will account for both the direct impacts (e.g., habitat loss) and indirect impacts (e.g., Greater Sage-Grouse avoidance of the project area) to the ecological values, functions and/or services of Greater Sage-Grouse habitat. Indirect impacts extend beyond the footprint of disturbance and may extend beyond ownership boundaries. The quantification of these impacts must be based on the best available science (e.g., Manier 2017), provide an objective and transparent assessment of these impacts, measure impacts over multiple scales and address the cumulative impacts and interactions among stressors.</p> <p>Methods should take into account differences in habitat quality. Thus, they should assign lower impact scores in lower quality habitat and higher impact scores in higher quality habitat.</p> <p>Step 3—Determine Minimization Measures</p> <p>If Greater Sage-Grouse impacts cannot be avoided by relocating or modifying the project in accordance with LUPA standards and guidelines, then minimize impacts, including use of applicable required design features and/or best management practices.</p> <p>Step 4— Determine if there are residual effects after applying avoidance and minimization measures If there are residual effects, the BLM will require the project proponent to coordinate with the State of Idaho to determine whether any modification to the proposal or additional mitigation—including compensatory mitigation—may be necessary to comply with State policies and programs for the conservation of Greater Sage-Grouse.</p>

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Appendix K	No Appendix K	<p>This will become Appendix K [of the 2015 Final EIS] in the New Plan. Idaho proposed using a two-team approach to ensure collaborative implementation efforts regarding Greater Sage-Grouse conservation in Idaho.</p> <p>The following state and federal agencies are expected to collaborate to implement Greater Sage-Grouse conservation in Idaho: Bureau of Land Management (BLM), Fish and Wildlife Service (USFWS), US Forest Service (USFS), Idaho Governor's Office of Species Conservation (OSC), Idaho Department of Fish and Game (IDFG), Idaho State Department of Agriculture (ISDA), Idaho Department of Lands (IDL), United States Geologic Survey (USGS), and Natural Resource Conservation Service (NRCS).</p> <p>Idaho Technical Team: Technical experts from the above mentioned state and federal agencies comprise this team. This team's primary responsibilities are to review and analyze data and proposals related to infrastructure development and conservation actions in Greater Sage-Grouse habitat and make recommendations to the Policy Team. Specifically, their responsibilities include:</p> <ul style="list-style-type: none"> • Compile and analyze adaptive management population and habitat trigger data and recommend conservation actions based on the results of their analysis. Perform causal factor analysis when a soft or hard trigger is tripped. Population data are collected under the direction of IDFG, and habitat data on public lands are collected under the direction of the BLM • Review proposals for large-scale development projects (new transmission lines, highways, power plants, wind or solar farms, etc.) to determine if they meet the necessary anthropogenic screening criteria and development criteria (MD SSS 29 and MD SSS 30). Their findings and recommendations would be submitted to the Policy Team for review and decisions • Review applications for exceptions of the NSO policy in PHMA and IHMA and make recommendations to the Policy Team (MD SSS 29, MD SSS 30, and MD MR 3) • Review applications for exceptions to allow a new free use mineral material pit in PHMA • Review proposals to modify Greater Sage-Grouse habitat designations and make recommendations to the Policy Team. • Review proposals to modify the adaptive management trigger system described in the ARMPA and make recommendations to the Policy Team • Review BSU scale disturbance cap annual report from the BLM National Operations Center • Other duties as the Policy Team may direct <p>Idaho Policy Team: Decision-makers from the above mentioned state and federal agencies comprise this team. This team has the following responsibilities:</p> <ul style="list-style-type: none"> • Review and discuss recommendations from the Technical Team • Strive for consensus among the team and provide recommendations to the primary decision-maker (BLM State Director for actions occurring on federal public land) • Authorize changes to the adaptive management program • Review and refine the vision for Greater Sage-Grouse management in Idaho • Changes to the duties of the Technical Team must be made by consensus of the Policy Team. 	<p>This will become Appendix K [of the 2015 Final EIS] in the New Plan. Idaho proposed using a two-team approach to ensure collaborative implementation efforts regarding Greater Sage-Grouse conservation in Idaho.</p> <p>The following state and federal agencies are expected to collaborate to implement Greater Sage-Grouse conservation in Idaho: Bureau of Land Management (BLM), Fish and Wildlife Service (USFWS), US Forest Service (USFS), Idaho Governor's Office of Species Conservation (OSC), Idaho Department of Fish and Game (IDFG), Idaho State Department of Agriculture (ISDA), Idaho Department of Lands (IDL), United States Geologic Survey (USGS), and Natural Resource Conservation Service (NRCS).</p> <p>Idaho Technical Team: Technical experts from the above mentioned state and federal agencies comprise this team. This team's primary responsibilities are to review and analyze data and proposals related to infrastructure development and conservation actions in Greater Sage-Grouse habitat and make recommendations to the Policy Team. Specifically, their responsibilities include:</p> <ul style="list-style-type: none"> • Compile and analyze adaptive management population and habitat trigger data and recommend conservation actions based on the results of their analysis. Perform causal factor analysis when a soft or hard trigger is tripped. Population data are collected under the direction of IDFG, and habitat data on public lands are collected under the direction of the BLM • Review proposals for large-scale development projects (new transmission lines, highways, power plants, wind or solar farms, etc.) to determine if they meet the necessary anthropogenic screening criteria and development criteria (MD SSS 29 and MD SSS 30). Their findings and recommendations would be submitted to the Policy Team for review and decisions • Review applications for exceptions of the NSO policy in PHMA and IHMA and make recommendations to the Policy Team (MD SSS 29, MD SSS 30, and MD MR 3) • Review applications for exceptions to allow a new free use mineral material pit in PHMA • Review proposals to modify Greater Sage-Grouse habitat designations and make recommendations to the Policy Team. • Review proposals to modify the adaptive management trigger system described in the ARMPA and make recommendations to the Policy Team • Review BSU scale disturbance cap annual report from the BLM National Operations Center • Other duties as the Policy Team may direct <p>Idaho Policy Team: Decision-makers from the above mentioned state and federal agencies comprise this team. This team has the following responsibilities:</p> <ul style="list-style-type: none"> • Review and discuss recommendations from the Technical Team • Strive for consensus among the team and provide recommendations to the primary decision-maker (BLM State Director for actions occurring on federal public land) • Authorize changes to the adaptive management program • Review and refine the vision for Greater Sage-Grouse management in Idaho • Changes to the duties of the Technical Team must be made by consensus of the Policy Team.

2015 ARMPA Decision Number	No-Action Alternative (2015 ARMPA Decisions) <i>Note: References to figures, tables, or appendices are those in the 2015 ROD/ARMPA.</i>	Management Alignment Alternative <i>Note: References to figures, tables, or appendices are those in the 2015 ROD/ARMPA.</i>	Proposed Plan <i>Note: References to figures, tables, or appendices are those in the 2015 ARMPA.</i>
		<p>This collaborative two-team approach provides the foundation for flexibility in Greater Sage-Grouse habitat management in Idaho. The interagency group technical experts in the Technical Team will review and summarize technical data and provide summaries and recommendations to the interagency group of decision-makers in the Policy Team. The Policy Team needs to include the primary decision-maker for whatever proposals come to that team. The remainder of the team will act as policy advisors to aid the primary decision-maker in considering the recommendations of the Technical Team. This process will ensure that both the technical and the policy related issues for each agency are considered as part of Greater Sage-Grouse management in Idaho. Meetings/coordination of the Policy Team will be led by the primary decision-maker of the proposal being discussed. Only proposals for large-scale anthropogenic disturbances need to be submitted.</p>	<p>This collaborative two-team approach provides the foundation for flexibility in Greater Sage-Grouse habitat management in Idaho. The interagency group technical experts in the Technical Team will review and summarize technical data and provide summaries and recommendations to the interagency group of decision-makers in the Policy Team. The Policy Team needs to include the primary decision-maker for whatever proposals come to that team. The remainder of the team will act as policy advisors to aid the primary decision-maker in considering the recommendations of the Technical Team. This process will ensure that both the technical and the policy related issues for each agency are considered as part of Greater Sage-Grouse management in Idaho. Meetings/coordination of the Policy Team will be led by the primary decision-maker of the proposal being discussed. Only proposals for large-scale anthropogenic disturbances need to be submitted.</p>

Table 2-4 includes the alternatives analyzed in detail during the 2015 planning effort and incorporated into the 2019 process. **Table 2-4** is in two parts. Part I are the LUP Goals and Objectives by Alternative analyzed in 2015 and Part II are the Management Actions analyzed in 2015.

Part I Goals and Objectives

Table 2-4 Part I
Goals and Objectives by Alternative (2015 Planning Effort)

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Goals					
A-GOAL-1: No common goal across LUPs within the sub-region	B-GOAL-1: Maintain and/or increase Greater Sage-Grouse abundance and distribution by conserving, enhancing or restoring the sagebrush ecosystem upon which populations depend in cooperation with other conservation partners.	C-GOAL-1: Same as Alternative A.	D-GOAL-1: Maintain and/or increase Greater Sage-Grouse abundance and distribution by conserving, enhancing or restoring the sagebrush ecosystem upon which populations depend in cooperation with other conservation partners.	E-GOAL-1: Conserve the Greater Sage-Grouse and its habitat to avoid a listing under the ESA (see NTT 2011).	F-GOAL -1: Maintain and increase current Greater Sage-Grouse abundance and distribution by conserving, enhancing or restoring the sagebrush ecosystem
Objectives					
A-OBJ-1: No common objective across LUPs within the sub-region.	B-OBJ-1: Protect priority Greater Sage-Grouse habitats from anthropogenic disturbances that will reduce distribution or abundance of Greater Sage-Grouse.	C-OBJ-1: —	D-OBJ-1: Manage anthropogenic development and human disturbance in priority habitat to minimize the likelihood of adverse local population-level effects on Greater Sage-Grouse.	E-OBJ-1: CHZ: Provide a level of protection sufficient to conserve at least 65% of the current known leks occurring in the State within CHZ through implementation of regulatory mechanisms. IHZ: Provide a population buffer to CHZ to minimize the risk of habitat loss from wildfire, invasive species while providing the opportunity to consider limited high-value infrastructure development.	F-OBJ-1: —
A-OBJ-2: No common objective across LUPs within the sub-region.	B-OBJ-2: Manage land uses, habitat treatments, and anthropogenic disturbances below thresholds necessary to conserve local Greater Sage-Grouse populations, sagebrush communities and landscapes	C-OBJ-2: —	D-OBJ-2: —	E-OBJ-2: CHZ and IHZ: Limit habitat loss in CHZ and IHZ during the first three-year period of implementation (2014-2017) to no more than 10% loss due to fire and/or infrastructure development resulting in a proportionate reduction of males counted on leks within a particular CA.	F-OBJ-2: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-OBJ-3: No common objective across LUPs within the sub-region.	B-OBJ-3: Sub-objective: Manage priority Greater Sage-Grouse habitats so that discrete anthropogenic disturbances cover less than 3% of the total Greater Sage-Grouse habitat regardless of ownership. Anthropogenic features include but are not limited to paved highways, graded gravel roads, transmission lines, substations, wind turbines, oil and gas wells, geothermal wells and associated facilities, pipelines, landfills, homes, and mines. In priority habitats where the 3% disturbance threshold is already exceeded from any source, no further anthropogenic disturbances will be permitted by BLM or Forest Service until enough habitat has been restored to maintain the area under this threshold (subject to valid existing rights). In this instance, an additional objective will be designated for the priority area to prioritize and reclaim/restore areas affected by anthropogenic disturbances so that 3% or less of the total priority habitat area is disturbed within 10 years.	C-OBJ-3: —	D-OBJ-3: —	E-OBJ-3: —	F-OBJ-3: —
A-OBJ-4: No common objective across LUPs within the sub-region.	B-OBJ-4: Maintain or increase current distribution and abundance of Greater Sage-Grouse on BLM administered lands in support of the range-wide goals	C-OBJ-4: —	D-OBJ-4: —	E-OBJ-4: —	F-OBJ-4: —
A-OBJ-5: No common objective across LUPs within the sub-region.	B-OBJ-5: Sub-objective: Develop quantifiable habitat and population objectives with WAFWA and other conservation partners at the management zone and/or other appropriate scales. Develop a monitoring and adaptive management strategy to track whether these objectives are being met, and allow for revisions to management approaches if they are not.	C-OBJ-5: —	D-OBJ-5: —	E-OBJ-5: —	F-OBJ-5: —
A-OBJ-6: No common objective across LUPs within the sub-region.	B-OBJ-6: Sub-objective: Designate priority Greater Sage-Grouse habitats for each WAFWA management zone (Stiver et al. 2006) across the current geographic range of Greater Sage-Grouse that are large enough to stabilize populations in the short term and enhance populations over the long term.	C-OBJ-6: —	D-OBJ-6: Sub-objective: Designate priority Greater Sage-Grouse habitats for each WAFWA management zone (Stiver et al. 2006) across the current geographic range of Greater Sage-Grouse that are large enough to stabilize populations in the short term and enhance populations over the long term.	E-OBJ-6: CHZ: Focus management by Federal and State agencies on the maintenance and enhancement of habitats, populations and connectivity in areas within this management zone. IHZ: Focus management by Federal and State agencies on areas within this zone that have the best opportunities for conserving, enhancing or restoring habitat for Greater Sage-Grouse. Provide management flexibility to permit high-value infrastructure projects.	F-OBJ-6: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-OBJ-7: No common objective across LUPs within the sub-region.	B-OBJ-7: Sub-objective: To maintain or increase current populations, manage or restore priority areas so that at least 70% of the land cover provides adequate sagebrush habitat to meet Greater Sage-Grouse needs.	C-OBJ-7: —	D-OBJ-7: Identify and expand sagebrush areas to increase the extent and condition of available habitat on the landscape.	E-OBJ-7: —	F-OBJ-7: —
A-OBJ-8: No common objective across LUPs within the sub-region.	B-OBJ-8: —	C-OBJ-8: —	D-OBJ-8: Manage GHMAs in a way that buffers adjoining PHMAs from disturbances.	E-OBJ-8: —	F-OBJ-8: —
A-OBJ-9: No common objective across LUPs within the sub-region.	B-OBJ-9: —	C-OBJ-9: —	D-OBJ-10: Reconnect and expand areas of higher native plant community integrity/rangeland health to increase the extent of high quality habitat and, where possible, to accommodate the future effects of climate change.	E-OBJ-9: —	F-OBJ-9: —
A-OBJ-10: No common objective across LUPs within the sub-region.	B-OBJ-10: —	C-OBJ-10: —	D-OBJ-10: Increase the amount and functionality of seasonal habitats. a. Increase canopy cover and average patch size of sagebrush in perennial grasslands. b. Increase the amount, condition and connectivity of seasonal habitats. c. Protect or improve Greater Sage-Grouse migration/movement corridors. d. Reduce conifer encroachment within Greater Sage-Grouse seasonal habitats. e. Improve understory (grass, forb) and/or riparian condition within breeding and late brood-rearing habitats. f. Reduce the extent of annual grasslands adjacent to priority habitat.	E-OBJ-10: —	F-OBJ-10: —
A-OBJ-11: No common objective across LUPs within the sub-region.	B-OBJ-11: —	C-OBJ-11: —	D-OBJ-11: Minimize the loss of existing priority sagebrush habitat. In particular, identify and strategically protect larger in-tact sagebrush areas and areas of lower fragmentation to maintain Greater Sage-Grouse population persistence.	E-OBJ-11: CHZ: Implement the regulatory mechanisms to maintain and enhance Greater Sage-Grouse habitats, populations and connectivity in areas within CHZ, buffered by strategic areas within IHZ, dominated by sagebrush. IHZ: Provide strategic buffers in areas dominated by sagebrush to CHZ where regulatory mechanisms maintain and enhance Greater Sage-Grouse habitats, populations and connectivity in areas within CHZ.	F-OBJ-11: Establish a system of sagebrush reserves to anchor recovery efforts by protecting the highest quality habitats.
A-OBJ-12: No common objective across LUPs within the sub-region.	B-OBJ-12: —	C-OBJ-12: —	D-OBJ-12: Conserve, enhance or restore GHMAs to improve habitat condition and connectivity between PHMAs.	E-OBJ-12: —	F-OBJ-12: Restore and maintain sagebrush steppe to its ecological potential in occupied Greater Sage-Grouse habitat.
A-OBJ-13: No common objective across LUPs within the sub-region.	B-OBJ-13: —	C-OBJ-13: —	D-OBJ-13: Reduce or minimize risk of West Nile Virus or other diseases.	E-OBJ-13: —	F-OBJ-13: —

Management Actions

Table 2-4 Part II
Management Actions by Alternative (2015 Planning Process)

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
SSS – Greater Sage-Grouse					
<p>A-SSS-I: There is no consistent mapping representation of Greater Sage-Grouse habitat across the sub-region, nor is there any consistent designation of habitat within the sub-region (see Table 2-9).</p> <p>Idaho BLM, in coordination with IDFG and LVGs, has developed and maintained a Key Greater Sage-Grouse map over the last 12 years which depicts areas important to Greater Sage-Grouse (Key areas) and areas where restoration could potentially occur to restore habitat conditions (R1 perennial grass dominated areas; R2 – annual grass dominated areas; and R3 – conifer encroachment areas) Montana BLM in coordination with MFWP has developed a Core Habitat map that depicts important areas for Greater Sage-Grouse (Core areas). These maps (the Idaho Key Habitat and Montana Core Habitat) do not represent any habitat designation with associated management direction, but instead are used as an information tool to help prioritize site specific management, suppression and rehabilitation efforts.</p> <p>Several National Forests have designated Greater Sage-Grouse habitat with associated management guidance. These include the Beaverhead-Deerlodge, Caribou-Targhee and Sawtooth NFs. The habitat designations were typically defined as buffers around existing leks and adjusted managed within those areas.</p>	<p>B-SSS-I: PHMA: Designate PHMAs on 8,235,900 acres (see Table 2-9).</p> <p>PHMA includes areas that have the highest conservation value to maintaining or increasing Greater Sage-Grouse populations. These areas include breeding, late brood-rearing, winter concentration areas, and where known, migration or connectivity corridors.</p> <p>GHMA: Designate GHMAs on 3,102,400 acres (see Table 2-9).</p> <p>GHMA is occupied (seasonal or year-round) habitat outside of PHMA.</p>	<p>C-SSS-I: PHMA: Designate PHMA on 11,106,900 acres (see Table 2-9).</p> <p>PHMA is all occupied (seasonal or year-round) Greater Sage-Grouse habitat.</p>	<p>D-SSS-I: PHMA: Designate PHMA on 6,849,200 acres (see Table 2-9).</p> <p>PHMA includes areas that have the highest conservation value to Greater Sage-Grouse. Key characteristics include areas of higher lek attendance and lek connectivity, lower habitat fragmentation, important movement corridors and winter habitat.</p> <p>IHMA: Designate Important Habitat Management Areas (IHMA) on 1,386,800 acres (see Table 2-9).</p> <p>IHMA includes areas of moderate to high conservation value to Greater Sage-Grouse that are generally adjacent to PHMAs but reflect reduced Greater Sage-Grouse population and/or habitat characteristics.</p> <p>GHMA: Designate GHMA on 2,934,100 acres (see Table 2-9).</p> <p>GHMA is occupied (seasonal or year-round) habitat outside of PHMA and IHMA.</p>	<p>E-SSS-I: Idaho – CHZ: Designate CHZ on 4,908,100 acres (see Table 2-9).</p> <p>CHZ focuses on conserving each of the two key meta-populations in the State. These meta-populations consist of a large aggregation of interconnected breeding subpopulations of Greater Sage-Grouse that have the highest likelihood of long-term persistence. One meta-population is located north of the Snake River and includes the Mountain Valley and Desert CAs; the other is located south of the Snake River and includes the West Owyhee and Southern CAs.</p> <p>Idaho – IHZ: Designate IHZ on 2,743,800 acres (see Table 2-9).</p> <p>IHZ, while permitting more management flexibility, also contains important habitat for the species and is an important buffer against the threat of wildfire. IHZ captures high quality habitat and populations that provide a management buffer for CHZ, connect patches of CHZ, and support important populations and habitat independent of CHZ.</p> <p>Idaho – GHZ: Designate GHZ on 4,908,100 acres (see Table 2-9).</p> <p>GHZ generally includes few active leks, and fragmented or marginal habitat. It includes habitat for two isolated populations of Greater Sage-Grouse in the East Idaho Uplands and West Central Idaho.</p> <p>Montana Habitat: All goals, objectives and management actions are the same as Alternative A and are summarized in Appendix U [of the 2015 Final EIS].</p> <p>Utah Habitat: Designate PHMA on 71,800 acres. All lands with Greater Sage-Grouse habitat in the portion of the</p>	<p>F-SSS-I: PHMA: Designate PHMA on 8,235,900 acres (see Table 2-9).</p> <p>PHMA conserves large expanses of sagebrush steppe and all active Greater Sage-Grouse leks, and brood-rearing, transitional, and winter habitats.</p> <p>GHMA: Designate GHMA on 2,870,900 acres (see Table 2-9).</p> <p>GHMA is occupied (seasonal or year-round) habitat outside of PHMA.</p> <p>RHMA: Designate Restoration Habitat Management Areas (RHMA) on 500,300 acres (see Table 2-9).</p> <p>RHMA is degraded or fragmented habitat that is currently unoccupied by Greater Sage-Grouse but might be useful to the species if restored to its potential natural community.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
(see above)	(see above)	(see above)	(see above)	Sawtooth National Forest sub-region in Utah are PHMA (see Table 2-9).	(see above)
A-SSS-2: —.	B-SSS-2: PHMA: —. GHMA: —.	C-SSS-2: PHMA: —.	D-SSS-2: PHMA: —. IHMA: —. GHMA: —.	E-SSS-2: Idaho – Common to All Habitats: —. Utah Habitat: Limit or ameliorate impacts from activities as identified in this matrix through the use of the following stipulations: <ul style="list-style-type: none">• New permanent disturbance, including structures, fences, and buildings, should not be located within the occupied lek itself.• No permanent disturbance within 1 mile of an occupied lek, unless it is not visible to the Greater Sage-Grouse using the lek.• New permanent tall structures should not be located within one mile of the lek, if visible by the birds within the lek.• A disturbance outside the lek should not produce noise more than 10 dBs above the ambient (background) level at the edge of the lek during breeding season.• Apply time-of-day stipulations when the lek is active (e.g., no activity from 2-hours before sunrise to 2-hours after sunrise).• Avoid activities (construction, vehicle noise, etc.) in the following seasons and habitats:<ul style="list-style-type: none">○ On leks from February 15 – May 15 to avoid activities that will disturb lek attendance or breeding.○ In nesting and brood-rearing areas from April 1 – August 15.○ In winter habitat from November 15 – March 15.• Specific time and distance determinations for seasonal stipulations would be based on site-specific conditions, in coordination with the local Utah Department of Wildlife Resources biologist.• Avoid disturbance within PHMA (nesting and brood-rearing areas, winter habitat, other habitat), if possible. Project proponents must demonstrate why avoidance is not possible. If avoidance in PHMA is not	F-SSS-2: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
(see above)	(see above)	(see above)	(see above)	<ul style="list-style-type: none"> possible, minimize as appropriate to the area (e.g., try to minimize effects by locating development in habitat of the least importance, take advantage of topographic to screen the disturbance, or maintaining and enhancing wet meadow and riparian vegetation). After minimization, mitigation is required (see mitigation section). Cumulative new permanent disturbance should not exceed 5% of surface area of nesting, winter, or other habitat, within the population area's PHMA. Manage PHMA to avoid barriers to migration, if applicable. 	(see above)
A-SSS-3: No disturbance cap is managed across the sub-region.	B-SSS-3: PHMA: Apply a three percent surface disturbance cap on anthropogenic disturbances (not including fire). GHMA: —.	C-SSS-3: Same as Alternative B.	D-SSS-3: PHMA: Require no net unmitigated loss of PHMAs. IHMA: —. GHMA: —.	E-SSS-3: Idaho – CHZ: Apply a three percent surface disturbance cap on fluid mineral development. Idaho – IHZ: Apply a five percent surface disturbance cap on fluid mineral development. Idaho – GHZ: —. Utah Habitat: —.	F-SSS-3: PHMA: Apply a three percent disturbance cap on surface disturbances, including fire.
Monitoring					
A-SSS-4: —.	B-SSS-4: Develop a Monitoring Framework to include: methods, data standards, and intervals of monitoring at broad and mid scales; consistent indicators to measure and metric descriptions for each of the scales [see Habitat Assessment Framework (HAF) and Assessment, Inventory and Monitoring core indicators]; analysis and reporting methods; and the incorporation of monitoring results into adaptive management.	C-SSS-4: Same as Alternative B.	D-SSS-4: Same as Alternative B.	E-SSS-4: Utilize lek monitoring and habitat monitoring to annually assess adaptive management triggers.	F-SSS-4: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Adaptive Management					
A-SSS-5: —.	B-SSS-5: Develop an adaptive management strategy to provide certainty that unintended negative impacts on Greater Sage-Grouse will be addressed before consequences become severe or irreversible and to provide regulatory certainty to the USFWS that appropriate action will be taken by the BLM and Forest Service.	C-SSS-5: Same as Alternative B.	D-SSS-5: Use habitat and population triggers to adjust management in IHMA. All management identified for PHMAs would apply to IHMAs in response to triggers. See Section 2.6.4 for details.	E-SSS-5: Use hard and soft population and habitat triggers to adjust management in IHZ. Management from CHZs, primarily for infrastructure, would apply to IHZ in response to triggers. Develop the following: <ul style="list-style-type: none"> Fuel Break Strategy Response Time Analysis Water Availability Analysis Restoration Strategy (see Appendix Q [of the 2015 Final EIS])	F-SSS-5: Same as Alternative B.
Vegetation					
A-VG-1: —.	B-VG-1: PHMA: —. GHMA: —.	C-VG-1: PHMA: —.	D-VG-1: PHMA: —. IHMA: —. GHMA: —.	E-VG-1: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-VG-1: PHMA: In PHMA, ensure that soil cover and native herbaceous plants are at their Ecological Site Description potential to help protect against invasive plants. In areas without Ecological Site Descriptions, reference sites would be utilized to identify appropriate vegetation communities and soil cover. GHMA: —. RHMA: —.
Habitat Restoration					
A-VG-2: In most LUPs, either no priorities are established or prioritization is given to projects that benefit multiple resources (e.g., livestock, wildlife, wild horses and burros, special status species). All LUPs which recognize conifer expansion and its effects on sagebrush steppe habitat uniformly identify the need for controlling conifer expansion through various methods including: hand cutting, wood cutting, mechanical, prescribed fire, chemical treatments, and through the use of wildfire where feasible. Montana BLM: Restore vegetation to benefit multiple uses. Promote the use of native species where possible (See ROD pg. 51 Actions 3, 12, 14 and Appendix X of Dillon ROD/RMP). Restore and maintain desired ecological conditions and fuel loadings. Evaluate benefits against loss of sagebrush in NEPA	B-VG-2: PHMA: Prioritize implementation of restoration projects based on environmental variables that improve chances for project success in areas most likely to benefit Greater Sage-Grouse (Meinke et al. 2009). Prioritize restoration in seasonal habitats that are thought to be limiting Greater Sage-Grouse distribution and/or abundance. GHMA: —.	C-VG-2: PHMA: Same as Alternative B.	D-VG-2: PHMA: Prioritize implementation of vegetation rehabilitation projects to achieve the greatest improvement in Greater Sage-Grouse habitat. Factors contributing to higher emphasis for implementation include: <ul style="list-style-type: none"> Sites where environmental variables contribute to improved chances for project success (Meinke et al. 2009). Improvement of seasonal habitats that are thought to be limiting Greater Sage-Grouse distribution and/or abundance (wintering areas, wet meadows and riparian areas, nesting areas, leks, etc.). Re-establishment of sagebrush cover in otherwise suitable Greater Sage-Grouse with consideration to local needs and conditions using the general priorities in the following order: Native grassland with suitable forb component 	E-VG-2: Idaho – CHZ: Prioritize the removal of conifers through methods appropriate for the terrain and most likely to facilitate expeditious Greater Sage-Grouse population and habitat recovery. To the extent possible, utilize removal methods creating the least amount of disturbance. <ol style="list-style-type: none"> Efforts should focus on areas with highest restoration potential typically evidenced by low canopy cover, existing sagebrush understory, and adjacent current populations. Refrain from using prescribed fire and conducting removal projects in juniper stands older than one hundred years. Maximize the use of Natural Resource Conservation Service funding through permittee grants under the Environmental Quality Incentives Program and Wildlife Habitat Improvement programs. Idaho – IHZ: Prioritize the removal of conifers through methods appropriate	F-VG-2: PHMA: Prioritize implementation of restoration projects based on environmental variables that improve chances for project success in areas most likely to benefit Greater Sage-Grouse (Meinke et al. 2009). Prioritize restoration in seasonal habitats that are thought to be limiting Greater Sage-Grouse distribution and/or abundance and where factors causing degradation have already been addressed (e.g., changes in livestock management). GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
process. Do not burn Wyoming sagebrush.	(see above)	(see above)	<ul style="list-style-type: none"> • Nonnative grassland with suitable forb component • Recently burned native areas • Native grassland • Nonnative grassland • Where desirable perennial bunchgrasses and/or forbs are deficient in existing sagebrush stands, use appropriate mechanical, aerial or other techniques to re-establish them. Examples include but are not limited to, use of a Lawson aerator with seeding, harrow or chain with seeding, drill seeding, hand planting plugs, aerial seeding or other appropriate technique. • Cooperative efforts that may improve Greater Sage-Grouse habitat quality over multiple ownerships. • Projects in GHMA that may provide connectivity between suitable habitats or expand existing good quality habitats. • Projects that address conifer encroachment into important Greater Sage-Grouse habitats. In general the priority for treatment is 1) Phase 1 ($\leq 10\%$ conifer cover), 2) Phase 2 (10-30%), and 3) Phase 3 ($>30\%$). • Replacing stands of annual grasses within otherwise good quality habitats with desirable perennial species. Other factors that contribute to the importance of the restoration project in maintaining or improving Greater Sage-Grouse habitat. <p>IHMA: Same as PHMA.</p> <p>GHMA: Same as PHMA.</p>	<p>for the terrain and most likely to facilitate expeditious Greater Sage-Grouse habitat recovery. Especially prioritize and target removal treatments adjacent to CHZ. To the extent possible, utilize methods creating the least amount of disturbance.</p> <p>a. Areas with highest restoration potential will typically have low canopy cover, existing sagebrush understory, and adjacent current populations.</p> <p>b. Refrain from using prescribed fire and conducting removal projects in juniper stands older than one-hundred years.</p> <p>c. Maximize the use of Natural Resource Conservation Service funding through permittee grants under the Environmental Quality Incentives Program and Wildlife Habitat Improvement programs.</p> <p>Idaho – GHZ: —.</p> <p>Montana Habitat: Same as Alternative A.</p> <p>Utah Habitat: Protection of Greater Sage-Grouse habitat is the primary focus of conservation efforts, but many locations can be reclaimed or restored by active vegetation management actions. For example:</p> <ul style="list-style-type: none"> • removal of encroaching conifers may create new habitat or increase the carrying capacity of habitat and thereby expand Greater Sage-Grouse populations, or • the distribution of water into wet meadow areas may improve seasonal brood-rearing range and enhance Greater Sage-Grouse recruitment. <p>Aggressively remove encroaching conifers and other plant species to expand Greater Sage-Grouse habitat where possible.</p> <p>Sagebrush treatment projects within nesting and winter habitat should be limited and require pre-approval by the appropriate regulatory agency in</p>	(see above)

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
(see above)	(see above)	(see above)	(see above)	discussions with DWR. Sagebrush treatment projects should maintain 80% of the available habitat as sagebrush within the project area; 20% of the habitat can be managed for younger age classes of sagebrush, if appropriate. These treatments are generally recommended only to improve brood-rearing habitat, but need to be carefully considered before use in winter and other habitat.	(see above)
A-VG-3: Guidance and management direction for general vegetation is fairly broad and trends toward maintaining the components of the vegetative community in the same relative proportion as those which would have historically occurred in the area. Some LUPs contain objectives for maintaining, improving, or restoring sagebrush plant communities. The level of detail varies depending on the age of the land use plan.	B-VG-3: PHMA: —. GHMA: —.	C-VG-3: PHMA: Composition, function, and structure of native vegetation communities will be consistent with the reference state of the appropriate Ecological Site Description and will be maximized to provide for healthy, resilient, and recovering Greater Sage-Grouse habitat components.	D-VG-3: PHMA: —. IHMA: —. GHMA: —.	E-VG-3: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-VG-3: PHMA: —. GHMA: —. RHMA: —.
A-VG-4: All recent LUPs include management actions that promote use of native species where possible, acknowledging that in some instances, vegetative treatments may not be successful without the use of nonnative desired species. Older plans typically do not include a similar management action.	B-VG-4: PHMA: Require use of native seeds for restoration based on availability, adaptation (ecological site potential), and probability of success (Richards et al. 1998). Where probability of success or adapted seed availability is low, nonnative seeds may be used as long as they support Greater Sage-Grouse habitat objectives (Pyke 2011). GHMA: —.	C-VG-4: PHMA: Same as Alternative B.	D-VG-4: PHMA: Same as Alternative B. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-VG-4: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-VG-4: PHMA: Same as Alternative B. GHMA: —. RHMA: —.
A-VG-5: All LUPs, which are written in accordance with applicable program direction, include management actions that allow the administering agency to make adjustments to livestock grazing, wild horse and burro management, and travel management on a case-by case basis following restoration activities.	B-VG-5: PHMA: Design post restoration management to ensure long term persistence. This could include changes in livestock grazing management, wild horse and burro management and travel management, etc., to achieve and maintain the desired condition of the restoration effort that benefits Greater Sage-Grouse (Eiswerth and Shonkwiler 2006). GHMA: —.	C-VG-5: PHMA: Same as Alternative B.	D-VG-5: PHMA: Implement management changes, as necessary, to maintain suitable Greater Sage-Grouse habitat, improve unsuitable Greater Sage-Grouse habitat and to ensure long-term persistence of improved Greater Sage-Grouse habitat achieved through restoration efforts (Eiswerth and Shonkwiler 2006). Management changes could be considered for livestock grazing, wild horse and burros, travel planning, and other resources. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-VG-5: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-VG-5: PHMA: Same as Alternative B. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-VG-6: —.	B-VG-6: PHMA: Consider potential changes in climate (Miller et al. 2011) when proposing restoration seedings when using native plants. Consider collection from the warmer component of the species current range when selecting native species (Kramer and Havens 2009). GHMA: —.	C-VG-6: PHMA: Same as Alternative B.	D-VG-6: PHMA: —. IHMA: —. GHMA: —.	E-VG-6: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-VG-6: PHMA: Same as Alternative B. GHMA: —. RHMA: —.
A-VG-7: Most LUPs do not include specific management actions related to seedings. Plans do include generic decisions that allow maintenance of existing range improvements, which includes maintenance of historical seedings. Recently completed LUPs promote use of native species when conducting restoration activities. This would include restoration projects conducted in areas that have perennial grass cover. Older plans do not include a similar management action.	B-VG-7: PHMA: Restore native (or desirable) plants and create landscape patterns which most benefit Greater Sage-Grouse. GHMA: —.	C-VG-7: PHMA: Exotic seedings will be rehabbed, interseeded, restored to recover sagebrush in areas to expand occupied habitats.	D-VG-7: PHMA: —. IHMA: —. GHMA: —.	E-VG-7: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-VG-7: PHMA: —. GHMA: —. RHMA: —.
A-VG-8: Some LUPs contain objectives for maintaining improving, or restoring sagebrush plant communities. The level of detail varies depending on the age of the land use plan. All LUPs address vegetation treatments for improvement of wildlife habitat overall or to provide increased forage for wildlife, livestock, and wild horses and burros. Recent LUPs may include management actions that purposely restore or enhance Greater Sage-Grouse habitat.	B-VG-8: PHMA: Make re-establishment of sagebrush cover and desirable understory plants (relative to ecological site potential) the highest priority for restoration efforts. GHMA: —.	C-VG-8: PHMA: Same as Alternative B.	D-VG-8: PHMA: —. IHMA: —. GHMA: —.	E-VG-8: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-VG-8: PHMA: —. GHMA: —. RHMA: —.
A-VG-9: —.	B-VG-9: PHMA: In fire prone areas where sagebrush seed is required for Greater Sage-Grouse habitat restoration, consider establishing seed harvest areas that are managed for seed production (Armstrong 2007) and are a priority for protection from outside disturbances. GHMA: —.	C-VG-9: PHMA: Same as Alternative B.	D-VG-9: PHMA: In fire prone areas where sagebrush seed is required for Greater Sage-Grouse habitat restoration, consider establishing seed harvest areas that are managed for seed production (Armstrong 2007). IHMA: Same as PHMA. GHMA: —.	E-VG-9: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-VG-9: PHMA: Same as Alternative B. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-VG-10: —.	B-VG-10: PHMA: —. GHMA: —.	C-VG-10: PHMA: Active restoration practices: <ul style="list-style-type: none"> Removal of livestock water troughs, pipelines, and wells. Where possible, without further damage to springs/water sources, remove waterline piping and maximize water at spring/stream sources supporting diverse riparian and meadow vegetation. Promote natural healing of headcuts to the maximum extent possible by limiting disturbance throughout the watershed. At times, a combination of methods may need to be used – but gabions and structural devices and boulder dumping should be limited, and restoration should strive for a functioning system. Ripping/recontouring of roads and seeding with native local ecotypes of shrubs and grasses. 	D-VG-10: PHMA: —. IHMA: —. GHMA: —.	E-VG-10: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-VG-10: PHMA: —. GHMA: —. RHMA: —.
A-VG-11: —.	B-VG-11: PHMA: —. GHMA: —.	C-VG-11: PHMA: Active restoration of crested wheatgrass seedlings. This can be accomplished, following targeted restoration planning to expand, reconnect or recover habitats required by Greater Sage-Grouse by: <ul style="list-style-type: none"> Inter-seeding sagebrush seed or seedlings. Removal of crested wheatgrass through plowing while minimizing use of herbicides. Subsequent re-seeding with local native ecotypes. Active restoration of cheatgrass infestation areas. In all cases, local native plant ecotype seeds and seedlings must be used. 	D-VG-11: PHMA: —. IHMA: —. GHMA: —.	E-VG-11: Idaho – Common to All Habitats: —. Utah Habitat: Limit or ameliorate impacts through the use of the general stipulations identified in the Greater Sage-Grouse section. Engage in reclamation efforts as projects advance or are completed. Recognize that stipulations for other species (e.g., raptors) may impede the ability to effectively reclaim disturbed areas, and remove those barriers in order to achieve immediate and effective reclamation, if otherwise allowable by law. Prioritize areas for habitat improvement to make best use of mitigation funds.	F-VG-11: PHMA: —. GHMA: —. RHMA: —.
A-VG-12: —.	B-VG-12: PHMA: —. GHMA: —.	C-VG-12: PHMA: —.	D-VG-12: PHMA: —. IHMA: —. GHMA: —.	E-VG-12: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-VG-12: PHMA Habitat: Avoid sagebrush reduction/treatments to increase livestock or big game forage in PHMA and include plans to restore high-quality habitat in areas with invasive species. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-VG-13: —.	B-VG-13: PHMA: —. GHMA: —.	C-VG-13: PHMA: —.	D-VG-13: PHMA: Utilize cooperative planning efforts to develop and implement habitat restoration projects. Expertise and ideas from local landowners, working groups, and other federal, state, county, and private organizations should be solicited and considered in development of projects. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-VG-13: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-VG-13: PHMA: —. GHMA: —. RHMA: —.
A-VG-14: —.	B-VG-14: PHMA: —. GHMA: —.	C-VG-14: PHMA: —.	D-VG-14: PHMA: Consider design features that will contribute to the most favorable conditions for success when planning and implementing rehabilitation projects. Considerations should include: <ul style="list-style-type: none"> Careful review of available plant species and their adaptation to the site when developing seed mixes. (Lambert 2005; VegSpec). The impacts of potential climate changes (Miller et al. 2011), consider utilizing the warmer component of a species' current range when selecting native species for restoration (Kramer and Havens 2009). The need to reduce annual grass densities and competition through herbicide, targeted grazing, tillage, prescribed fire, etc. (Pyke 2011). The need to reduce density and competition of perennial grasses and techniques to accomplish this reduction (Pellant and Lysne 2005). Techniques to introduce desired species to the site such as drill seeding, broadcast seeding followed by a seed coverage technique, such as harrowing, chaining or livestock trampling, and transplanting container or bare-root seedlings Assessment of on-site vegetation to ascertain if enough desirable perennial vegetation exists to consider techniques to increase on-site seed production to facilitate an increase in density of desired species. Use of site preparation techniques that retain existing desirable vegetation. 	E-VG-14: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-VG-14: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
(see above)	(see above)	(see above)	<ul style="list-style-type: none"> Use of "mother plant" techniques or planting of satellite populations of desirable plants to serve as seed sources. The need for post-treatment control of annual grass and other invasive species. The availability of new tools and use of new science and research as it becomes available. <p>IHMA: Same as PHMA.</p> <p>GHMA: Same as PHMA.</p>	(see above)	(see above)
<p>A-VG-15: Recently completed LUPs promote use of native species when conducting restoration activities. This would include restoration projects conducted in areas that have perennial grass cover.</p> <p>Older plans do not include a similar management action.</p>	<p>B-VG-15: PHMA: —.</p> <p>GHMA: —.</p>	C-VG-15: PHMA: —.	<p>D-VG-15: PHMA: —.</p> <p>IHMA: —.</p> <p>GHMA: —.</p>	<p>E-VG-15: Idaho – CHZ: Emphasize the use of native seeds for fuels management treatment based on availability, adaptation (site potential), and probability of success.</p> <p>Idaho – IHZ: Same as Idaho – CHZ.</p> <p>Idaho – GHZ: —.</p> <p>Utah Habitat: —.</p>	<p>F-VG-15: PHMA: —.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>
A-VG-16: —.	<p>B-VG-16: PHMA: —.</p> <p>GHMA: —.</p>	C-VG-16: PHMA: —.	<p>D-VG-16: PHMA: —.</p> <p>IHMA: —.</p> <p>GHMA: —.</p>	<p>E-VG-16: Idaho – CHZ: Reallocate native plant seeds for ESR from outside the Greater Sage-Grouse Management Area and GHZ to this management zone if necessary.</p> <p>Idaho – IHZ: Same as Idaho - CHZ.</p> <p>Idaho – GHZ: —.</p> <p>Utah Habitat: —.</p>	<p>F-VG-16: PHMA: —.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-VG-17: —.	<p>B-VG-17: PHMA: Prioritize native seed allocation for use in Greater Sage-Grouse habitat in years when preferred native seed is in short supply. This may require reallocation of native seed from ESR (BLM) and/or BAER (Forest Service) projects outside of PHMA to those inside it. Use of native plant seeds for ESR or BAER seedings is required based on availability, adaptation (site potential), and probability of success (Richards et al. 1998). Where probability of success or native seed availability is low, nonnative seeds may be used as long as they meet Greater Sage-Grouse habitat conservation objectives (Pyke 2011). Re-establishment of appropriate sagebrush species/subspecies and important understory plants, relative to site potential, shall be the highest priority for rehabilitation efforts.</p> <p>GHMA: —.</p>	C-VG-17: PHMA: Same as Alternative B.	<p>D-VG-17: PHMA: Prioritize native seed allocation for use in Greater Sage-Grouse habitat in years when preferred native seed is in short supply. This may require reallocation of native seed from ESR (BLM) and/or BAER (Forest Service) projects outside of PHMA to those inside it. Where probability of success or native seed availability is low, nonnative seeds may be used as long as they meet Greater Sage-Grouse habitat conservation objectives (Pyke 2011). Re-establishment of appropriate sagebrush species/subspecies and important understory plants, relative to site potential, shall be the highest priority for rehabilitation efforts.</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: Same as PHMA.</p>	<p>E-VG-17: Idaho – CHZ: Where the probability of obtaining sufficient native seed is low, nonnative seeds may be used provided Greater Sage-Grouse habitat objectives are met.</p> <p>Idaho – IHZ: Same as Idaho - CHZ.</p> <p>Idaho – GHZ: —.</p> <p>Utah Habitat: —.</p>	<p>F-VG-17: PHMA: Same as Alternative B.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>
A-VG-18: All LUPs, which are written in accordance with applicable program direction, include management actions that allow the administrating agency to make adjustments to livestock grazing, wild horse and burro management, and travel management on a case-by case basis following restoration activities.	<p>B-VG-18: PHMA: Design post ESR and BAER management to ensure long term persistence of seeded or pre-burn native plants. This may require temporary or long-term changes in livestock grazing, wild horse and burro, and travel management, etc., to achieve and maintain the desired condition of ESR and BAER projects to benefit Greater Sage-Grouse (Eiswerth and Shonkwiler 2006).</p> <p>GHMA: —.</p>	C-VG-18: PHMA: Same as Alternative B.	<p>D-VG-18: PHMA: Design post fuel, restoration, and ESR management to ensure long term persistence of seeded or pre-burn native plants. Use chemical, mechanical, and seeding treatments with appropriate plant materials to attempt to stabilize sites and prevent dominance of invasive, annual vegetation, and noxious weeds. Use native plant materials were determined to be appropriate and practical at the project-implementation level. This may require temporary or long-term changes in livestock grazing, wild horse and burro, and travel management, fuels and rehabilitation, etc., to achieve and maintain the desired condition of ESR projects to benefit Greater Sage-Grouse (Eiswerth and Shonkwiler 2006).</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: Same as PHMA.</p>	<p>E-VG-18: Idaho – Common to All Habitats: —.</p> <p>Utah Habitat: —.</p>	<p>F-VG-18: PHMA: Same as Alternative B.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-VG-19: —.	B-VG-19: PHMA: Consider potential changes in climate (Miller et al. 2011) when proposing post-fire seedings using native plants. Consider seed collections from the warmer component within a species' current range for selection of native seed. (Kramer and Havens 2009). GHMA: —.	C-VG-19: PHMA: Same as Alternative B.	D-VG-19: PHMA: Consider utilizing the warmer component of a species' current range where feasible (financially, seed availability, etc.) when selecting native species for restoration and when such a strategy would not jeopardize the success of the seeding. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-VG-19: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-VG-19: PHMA: Same as Alternative B. GHMA: —. RHMA: —.
A-VG-20: —.	B-VG-20: PHMA: —. GHMA: —.	C-VG-20: PHMA: —.	D-VG-20: PHMA: —. IHMA: —. GHMA: —.	E-VG-20: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-VG-20: PHMA: Establish and strengthen networks with seed growers to assure availability of native seed for ESR projects. GHMA: —. RHMA: —.
A-VG-21: All LUPs, which are written in accordance with applicable program direction, include management actions that allow the administering agency to make adjustments to livestock grazing, wild horse and burro management, and travel management on a case-by case basis following restoration activities.	B-VG-21: PHMA: —. GHMA: —.	C-VG-21: PHMA: —.	D-VG-21: PHMA: —. IHMA: —. GHMA: —.	E-VG-21: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-VG-21: PHMA: Post fire recovery must include establishing adequately sized exclosures (free of livestock grazing) that can be used to assess recovery. GHMA: —. RHMA: —.
A-VG-22: All LUPs, which are written in accordance with applicable program direction, include management actions that allow the administering agency to make adjustments to livestock grazing, wild horse and burro management, and travel management on a case-by case basis following restoration activities.	B-VG-22: PHMA: —. GHMA: —.	C-VG-22: PHMA: —.	D-VG-22: PHMA: —. IHMA: —. GHMA: —.	E-VG-22: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-VG-22: PHMA: Livestock grazing should be excluded from burned areas until woody and herbaceous plants achieve Greater Sage-Grouse habitat objectives. GHMA: —. RHMA: —.
A-VG-23: All LUPs, which are written in accordance with applicable program direction, include management actions that allow the administering agency to make adjustments to livestock grazing, wild horse and burro management, and travel management on a case-by case basis following restoration activities.	B-VG-23: PHMA: —. GHMA: —.	C-VG-23: PHMA: —.	D-VG-23: PHMA: —. IHMA: —. GHMA: —.	E-VG-23: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-VG-23: PHMA: Where burned Greater Sage-Grouse habitat cannot be fenced from other unburned habitat, the entire area (e.g., allotment/pasture) should be closed to grazing until recovered. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
<p>A-VG-24: Most LUPs do not include specific management actions related to seedings.</p> <p>Plans do include generic decisions that allow maintenance of existing range improvements, which includes maintenance of historical seedings.</p> <p>Recently completed LUPs promote use of native species when conducting restoration activities. This would include restoration projects conducted in areas that have perennial grass cover.</p> <p>Older plans do not include a similar management action.</p>	<p>B-VG-24: PHMA: Evaluate the role of existing seedings that are currently composed of primarily introduced perennial grasses in and adjacent to PHMA to determine if they should be restored to sagebrush or habitat of higher quality for Greater Sage-Grouse. If these seedings are part of an AMP/Conservation Plan or if they provide value in conserving or enhancing the rest of PHMA, then no restoration would be necessary. Assess the compatibility of these seedings for Greater Sage-Grouse habitat or as a component of a grazing system during the land health assessments (or other analyses [Forest Service only]) (Davies et al. 2011).</p> <p>GHMA: —.</p>	<p>C-VG-24: PHMA: —.</p>	<p>D-VG-24: PHMA: Assess the compatibility of existing nonnative seedings for Greater Sage-Grouse habitat or as a component of a grazing system or forage reserve during land health assessments (Davies et al. 2011). Evaluate existing seedings currently dominated by introduced perennial grasses in and adjacent to PHMA to determine if they should be diversified with native grasses, forbs, and shrubs, including sagebrush. If these seedings are part of an AMP/Conservation Plan and if they provide value in conserving or enhancing the rest of PHMA, restoration may not be appropriate.</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: Same as PHMA.</p>	<p>E-VG-24: Idaho – Common to All Habitats: —.</p> <p>Utah Habitat: —.</p>	<p>F-VG-24: PHMA: Evaluate the role of existing seedings that are currently composed of primarily introduced perennial grasses in and adjacent to PHMA to determine if they should be restored to sagebrush or habitat of higher quality for Greater Sage-Grouse. If these seedings are part of an AMP/Conservation Plan or if they provide value in conserving or enhancing the rest of PHMA, then no restoration would be necessary. Assess the compatibility of these seedings for Greater Sage-Grouse habitat or as a component of a grazing system during the land health assessments (Davies et al. 2011).</p> <p>GHMA: —.</p> <p>RHMA: —.</p>
<p>A-VG-25: —.</p>	<p>B-VG-25: PHMA: —.</p> <p>GHMA: —.</p>	<p>C-VG-25: PHMA: —.</p>	<p>D-VG-25: PHMA: —.</p> <p>IHMA: —.</p> <p>GHMA: —.</p>	<p>E-VG-25: Idaho – Common to All Habitats: —.</p> <p>Utah Habitat: —.</p>	<p>F-VG-25: PHMA: Any vegetation treatment plan must include pretreatment data on wildlife and habitat condition, establish non-grazing exclosures, and include long-term monitoring where treated areas are monitored for at least three years before grazing returns. Continue monitoring for five years after livestock are returned to the area, and compare to treated, ungrazed exclosures, as well as untreated areas.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>
<p>A-VG-26: Many older LUPs include specific objectives for vegetation treatments that increased desirable forage species for livestock, usually focusing on reducing the sagebrush overstory. More recent LUPs generally prescribe management that moves rangeland communities toward historical vegetative conditions.</p>	<p>B-VG-26: PHMA: —.</p> <p>GHMA: —.</p>	<p>C-VG-26: PHMA: —.</p>	<p>D-VG-26: PHMA: —.</p> <p>IHMA: —.</p> <p>GHMA: —.</p>	<p>E-VG-26: Idaho – CHZ: Initiate vegetative manipulation projects where sagebrush canopy cover exceeds optimal characteristics to promote grass and forb understory growth only where the project can be achieved without negatively impacting Greater Sage-Grouse.</p> <p>Idaho – IHZ: Same as Idaho - CHZ.</p> <p>Idaho – GHZ: —.</p> <p>Utah Habitat: —.</p>	<p>F-VG-26: PHMA: —.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-VG-27: All LUPs address vegetation treatments for improvement of wildlife habitat overall or to provide increased forage for wildlife, livestock, and wild horses and burros.	B-VG-27: PHMA: —. GHMA: —.	C-VG-27: PHMA: —.	D-VG-27: PHMA: Implement rehabilitation projects in areas that have the potential to provide for Greater Sage-Grouse habitat. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-VG-27: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-VG-27: PHMA: —. GHMA: —. RHMA: —.
A-VG-28: —.	B-VG-28: PHMA: —. GHMA: —.	C-VG-28: PHMA: —.	D-VG-28: PHMA: Make progress toward desired future condition in the Low-elevation Shrub, Perennial Grass, Invasive Annual Grass, Mid-Elevation Shrub, Mountain Shrubs, and Juniper vegetation types. Use chemical, mechanical, seeding, and prescribed fire treatments as appropriate to enhance and restore habitats that are currently in Fire Regime Condition Class (FRCC) 2 and FRCC3. In Perennial Grass, Invasive Annual Grass, and juniper-invaded cover types, restore sagebrush steppe with an aggressive sagebrush seeding effort, using the appropriate sagebrush subspecies for the treatment area. Conduct vegetation treatments in areas that pose a wildland fire risk to Greater Sage-Grouse habitats. Treat areas within Greater Sage-Grouse habitats that have low resiliency to disturbance (i.e., areas characterized by lower native plant species diversity than expected for the site, undesirable plant species composition, and dead or decadent sagebrush) to improve long-term habitat suitability for Greater Sage-Grouse. Treat Greater Sage-Grouse habitat and potential restoration areas to expand PHMA. Improve Greater Sage-Grouse potential restoration habitats (perennial grassland, annual grassland, conifer encroachment areas) and maintain or improve sagebrush portions of PHMA. Conduct vegetation treatments (including fuel breaks) in restoration and key habitats to reduce risk of wildland fire and reconnect PHMA. Make progress toward Desired Future Condition in historically frequent fire regimes (Aspen/Conifer, Dry Conifer, Mid-Elevation Shrub encroached by juniper, Mountain Shrub by increasing wildfire managed for LUP objectives and prescribed fire to create a fire regime within the historical range of variability.	E-VG-28: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-VG-28: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
(see above)	(see above)	(see above)	Use mechanical and chemical treatments to prepare areas in FRCC2 and FRCC3 for prescribed fire. Monitor and control invasive vegetation post-treatment. Rest treated areas from grazing or modify grazing until vegetation objectives have been met. Ensure that any proposed sagebrush treatment acreage is conservative in the context of surrounding seasonal habitats and landscape. Monitor and if necessary control invasive vegetation post-treatment. IHMA: Same as PHMA. GHMA: Same as PHMA.	(see above)	(see above)
A-VG-29: Allow treatments that provide benefits for multiple resources. Additional forage will be appropriated to livestock, wild horses and burros (where applicable), and wildlife.	B-VG-29: PHMA: Only allow treatments that conserve, enhance or restore Greater Sage-Grouse habitat (this includes treatments that benefit livestock as part of an AMP/Conservation Plan to improve Greater Sage-Grouse habitat). GHMA: —.	C-VG-29: PHMA: —.	D-VG-29: PHMA: —. IHMA: —. GHMA: —.	E-VG-29: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-VG-29: PHMA: Ensure that vegetation treatments Restore native (or desirable) plants and create landscape patterns which most benefit Greater Sage-Grouse. Only allow treatments that conserve, enhance, or restore Greater Sage-Grouse habitat are demonstrated to benefit Greater Sage-Grouse and retain sagebrush height and cover consistent with Greater Sage-Grouse habitat objectives (this includes treatments that benefit livestock as part of an AMP/Conservation Plan to improve Greater Sage-Grouse habitat). GHMA: —. RHMA: —.
A-VG-30: —.	B-VG-30: PHMA: —. GHMA: —.	C-VG-30: PHMA: —.	D-VG-30: PHMA: —. IHMA: —. GHMA: —.	E-VG-30: Idaho – Common to All Habitats: The State will establish a mitigation bank of Greater Sage-Grouse habitation restoration projects that future development projects would repay through compensatory mitigation requirements. Utah Habitat: —.	F-VG-30: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Integrated Invasive Species					
<p>A-IIS-1: Implement noxious weed and invasive species control using integrated weed management actions per national guidance and local weed management plans in cooperation with State and Federal agencies, affected counties, and adjoining private lands owners. In most LUPs, either no priorities are established or prioritization is given to projects that benefit multiple resources (e.g., livestock, wildlife, wild horses and burros, special status species).</p> <p>Montana BLM: Implement noxious weed and invasive species control, using integrated weed management, in cooperation with state and federal agencies, counties, and private landowners (ROD, p. 49, Action 11.). Emphasize control of invasive weeds in occupied Greater Sage-Grouse breeding habitat</p>	<p>B-IIS-1: PHMA: Integrated Vegetation Management would be used to control, suppress, and eradicate, where possible, noxious and invasive species per BLM Handbook H-1740-2.</p> <p>GHMA: —.</p>	<p>C-IIS-1: PHMA: —.</p>	<p>D-IIS-1: PHMA: Implement integrated weed management actions for noxious and invasive weed populations that are impacting or threatening Greater Sage-Grouse habitat quality. In concert with partners and/or weed management areas as appropriate apply education, inventory, prevention, control, rehabilitation, and monitoring strategies that protect or enhance Greater Sage-Grouse habitat.</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: Same as PHMA.</p>	<p>E-IIS-1: Idaho – CHZ: Actively manage exotic undesirable species sufficiently to limit presence and prevent invasion.</p> <p>Idaho – IHZ: Actively manage exotic undesirable species to limit presence and prevent invasion in CHZ without impairing Greater Sage-Grouse populations.</p> <p>Idaho – GHZ: Aggressively manage exotic undesirable species in conjunction with coordinated weed management areas to limit presence and prevent invasion into other management zones.</p> <p>Montana Habitat: Same as Alternative A.</p> <p>Utah Habitat: Aggressively respond to new infestations to keeping invasive species from spreading. Every effort should be made to identify and treat new infestations before they become larger problems. Containment of known infestations in or near sagebrush habitats should be a high priority for all land management agencies.</p>	<p>F-IIS-1: PHMA: —.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>
<p>A-IIS-2: —.</p>	<p>B-IIS-2: PHMA: —.</p> <p>GHMA: —.</p>	<p>C-IIS-2: PHMA: —.</p>	<p>D-IIS-2: PHMA: —.</p> <p>IHMA: —.</p> <p>GHMA: —.</p>	<p>E-IIS-2: Idaho – CHZ: Control invasive vegetation within post-wildfire treatment areas for at least three years post treatment.</p> <p>Idaho – IHZ: Same as Idaho - CHZ.</p> <p>Idaho – GHZ: —.</p> <p>Utah Habitat: Immediate, proactive means to reduce or eliminate the spread of invasive species, particularly cheatgrass, after a wildfire, is a high priority.</p>	<p>F-IIS-2: PHMA: —.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-IIS-3: Implement noxious weed and invasive species control using integrated weed management actions per national guidance and local weed management plans in cooperation with State and Federal agencies, affected counties, and adjoining private lands owners.	B-IIS-3: PHMA: —. GHMA: —.	C-IIS-3: PHMA: —.	D-IIS-3: PHMA: —. IHMA: —. GHMA: —.	E-IIS-3: Idaho – CHZ: —. Idaho – IHZ: Eradicate or control noxious weeds and/or invasive species posing a risk to Greater Sage-Grouse habitats using a variety of chemical, mechanical and other appropriate means in coordination with the local Cooperative Weed Management Area. Idaho – GHZ: Same as IHZ. Utah Habitat: —.	F-IIS-3: PHMA: —. GHMA: —. RHMA: —.
A-IIS-4: Implement noxious weed and invasive species control using integrated weed management actions per national guidance and local weed management plans in cooperation with State and Federal agencies, affected counties, and adjoining private lands owners.	B-IIS-4: PHMA: Monitor for, and treat invasive species associated with existing range improvements (Gelbard and Belnap 2003; Bergquist et al. 2007). GHMA: —.	C-IIS-4: PHMA: —.	D-IIS-4: PHMA: —. IHMA: —. GHMA: —.	E-IIS-4: Idaho – CHZ: Treat and monitor invasive species associated with existing range improvements. Idaho – IHZ: Same as Idaho - CHZ. Idaho – GHZ: —. Utah Habitat: —.	F-IIS-4: PHMA: Same as Alternative B. GHMA: —. RHMA: —.
A-IIS-5: —.	B-IIS-5: PHMA: —. GHMA: —.	C-IIS-5: PHMA: —.	D-IIS-5: PHMA: Following project construction treat noxious weeds and invasive species, establish desirable perennial vegetation to compete with invasive species on disturbed areas, and monitor and continue treating the project area for noxious weed and invasive species for at least 3 years, unless control is achieved earlier. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-IIS-5: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-IIS-5: PHMA: —. GHMA: —. RHMA: —.
Wild Horse and Burro					
A-WHB-I: Prepare or amend herd management area plans on an as-needed basis.	B-WHB-I: PHMA: Develop or amend BLM Herd Management Area Plans and Forest Service Wild Horse Territory Plans to incorporate Greater Sage-Grouse habitat objectives and management considerations for all BLM HMAs) and Forest Service Wild Horse Territories. GHMA: —.	C-WHB-I: PHMA: Same as Alternative A.	D-WHB-I: PHMA: Same as Alternative B. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-WHB-I: Idaho – Common to All Habitats: —. Utah Habitat: Same as Alternative A.	F-WHB-I: PHMA: Reduce AMLs within HMAs within occupied Greater Sage-Grouse habitat by 25 percent to meet habitat objectives. GHMA: Same as PHMA RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-WHB-2: Periodically evaluate and make adjustments to AMLs based on monitoring data.	B-WHB-2: PHMA: For all BLM HMAs and Forest Service Wild Horse Territories within PHMA, prioritize the evaluation of all AMLs based on indicators that address structure/condition/composition of vegetation and measurements specific to achieving Greater Sage-Grouse habitat objectives. GHMA: —.	C-WHB-2: PHMA: Same as Alternative A.	D-WHB-2: PHMA: When evaluating AML on HMAs within PHMA, evaluate indicators that address structure/condition/composition of vegetation and measurements specific to achieving Greater Sage-Grouse habitat objectives. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-WHB-2: Idaho – Common to All Habitats: —. Utah Habitat: Same as Alternative A.	F-WHB-2: PHMA: —. GHMA: —. RHMA: —.
A-WHB-3: —.	B-WHB-3: PHMA: Coordinate with other resources (Range, Wildlife, and Riparian) to conduct land health assessments to determine existing structure/condition/composition of vegetation within all BLM HMAs and Forest Service Wild Horse Territories. GHMA: —.	C-WHB-3: PHMA: Same as Alternative A.	D-WHB-3: PHMA: Utilize interdisciplinary land health assessments in HMAs containing Greater Sage-Grouse habitat to determine whether vegetation characteristics are meeting appropriate seasonal habitat objectives. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-WHB-3: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-WHB-3: PHMA: Same as Alternative B. GHMA: —. RHMA: —.
A-WHB-4: —.	B-WHB-4: PHMA: —. GHMA: —.	C-WHB-4: PHMA: —.	D-WHB-4: PHMA: Do not expand HMAs. IHMA: Analysis of proposed additions to existing HMA boundaries should consider the direct, indirect and cumulative impacts on Greater Sage-Grouse habitat, including the need for additional infrastructure such as boundary fencing, and consider alternative areas outside of PHMA and IHMA. GHMA: —.	E-WHB-4: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-WHB-4: PHMA: —. GHMA: —. RHMA: —.
A-WHB-5: —.	B-WHB-5: PHMA: When conducting NEPA analysis for wild horse and burro management activities, water developments or other rangeland improvements for wild horses in PHMA, address the direct and indirect effects on Greater Sage-Grouse populations and habitat. Implement any water developments or rangeland improvements using the criteria identified for domestic livestock identified above in PHMA. GHMA: —.	C-WHB-5: PHMA: —.	D-WHB-5: PHMA: Refer to livestock grazing actions for guidance on water and rangeland developments for wild horse management. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-WHB-5: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-WHB-5: PHMA: Same as Alternative B. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Wildland Fire					
General					
A-WFM-1: Follow BMPs for fire and fuels (BLM Washington Office IM 2013-128, see Appendix B [of the 2015 Final EIS]).	B-WFM-1: PHMA: Follow RDFs for fire and fuels (BLM Washington Office IM 2013-128 and Forest Service Washington Office letter 5100, see Appendix B [of the 2015 Final EIS]). GHMA: —.	C-WFM-1: PHMA: Same as Alternative B.	D-WFM-1: PHMA: Same as Alternative B. IHMA: BMPs in PHMA would apply to both IHMA and GHMA. GHMA: BMPs in PHMA would apply to both IHMA and GHMA.	E-WFM-1: Idaho – CHZ: Reduce the number and size of wildfires in Greater Sage-Grouse habitat through incorporation of the BLM Washington Office IM 2013-128. Idaho – IHZ: Same as Idaho - CHZ. Idaho – GHZ: Same as Idaho - CHZ. Utah Habitat: —.	F-WFM-1: PHMA: Same as Alternative B. GHMA: —. RHMA: —.
A-WFM-2: —.	B-WFM-2: PHMA: —. GHMA: —.	C-WFM-2: PHMA: Lands will be managed to be in good or better ecological condition to help minimize adverse impacts of fire.	D-WFM-2: PHMA: —. IHMA: —. GHMA: —.	E-WFM-2: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-WFM-2: PHMA: —. GHMA: —. RHMA: —.
A-WFM-3: —.	B-WFM-3: PHMA: —. GHMA: —.	C-WFM-3: PHMA: —..	D-WFM-3: PHMA: —. IHMA: —. GHMA: —.	E-WFM-3: Idaho – CHZ: Decrease wildfire response time through: a. Prioritizing, maintaining and improving a high initial attack success rate in suppression response and staging decisions; b. Utilizing available Sage-Grouse Management Area maps and spatial data depicting Greater Sage-Grouse habitats within this zone in accordance with action 31 (Appendix Q [of the 2015 Final EIS]); c. Redeploying firefighting resources not being fully utilized outside the SGMA to the extent such redeployment will not cause harm to human safety and structure protection; and d. Requesting the necessary federal appropriations to achieve this objective. Develop a consistent wildfire suppression plan that improves upon the current baseline, and a fuel and restoration strategy within 1 year of the ROD. Idaho – IHZ: Same as Idaho- CHZ. Idaho – GHZ: —. Utah Habitat: —.	F-WFM-3: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-WFM-4: —.	B-WFM-4: PHMA: —. GHMA: —.	C-WFM-4: PHMA: —.	D-WFM-4: PHMA: Use knowledgeable resource advisors during extended attack. Resource Advisors should also be available on short notice during red flag conditions. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-WFM-4: Idaho Common to All Habitats: —. Utah Habitat: —.	F-WFM-4: PHMA: —. GHMA: —. RHMA: —.
A-WFM-5: —.	B-WFM-5: PHMA: —. GHMA: —.	C-WFM-5: PHMA: —.	D-WFM-5: PHMA: During high fire danger conditions, stage initial attack and secure additional resources closer to the Idaho Desert, Southern Idaho, and Owyhee populations to ensure quicker response times in or near Greater Sage-Grouse habitat. IHMA: —. GHMA: —.	E-WFM-5: Idaho -- Common to All Habitats: —. Utah Habitat: —.	F-WFM-5: PHMA: —. GHMA: —. RHMA: —.
A-WFM-6: —.	B-WFM-6: PHMA: —. GHMA: —.	C-WFM-6: PHMA: —.	D-WFM-6: PHMA: —. IHMA: Follow Standard procedures described in Fire Management Plan. GHMA: —.	E-WFM-6: Idaho -- Common to All Habitats: —. Utah Habitat: —.	F-WFM-6: PHMA: —. GHMA: —. RHMA: —.
A-WFM-7: —.	B-WFM-7: PHMA: —. GHMA: —.	C-WFM-7: PHMA: —.	D-WFM-7: PHMA: Consider conifer (juniper) encroachment areas as areas to manage wildfire for resource benefit. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-WFM-7: Idaho -- Common to All Habitats: —. Utah Habitat: —.	F-WFM-7: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-WFM-8: —.	B-WFM-8: PHMA: —. GHMA: —.	C-WFM-8: PHMA: —.	D-WFM-8: PHMA: —. IHMA: —. GHMA: —.	E-WFM-8: Idaho – Common to All Habitats: Reduce the number and size of wildfires, especially in the West Owyhee CA, by marshaling existing and targeting future federal resources. Idaho – CHZ: Utilize and employ more aggressive wildfire and invasive species management practices to prevent further encroachment of these two primary threats into CHZ on Federal lands. Idaho – IHZ: Same as Idaho - CHZ. Idaho – GHZ: —. Utah Habitat: Create and implement a statewide fire agency agreement(s) that will eliminate jurisdictional boundaries and allow for immediate response to natural fire in PHMA. These should include fire suppression actions recommended locally, including, but not limited to: <ul style="list-style-type: none">• first strike agreements that allow aggressive fire control on an all-land jurisdictional basis;• allocation of resources to maintain enhanced abilities of all fire agencies to combat ignitions in PHMA.• allocation of resources to immediately commence restoration of habitats impacted by wildfire by all responsible agencies; and• removal or establishment of waiver provisions for procedural barriers that may impact the ability of responsible agencies to respond to wildfire with effective reclamation or rehabilitation, such as federal raptor stipulations, cultural assessments, and the like.	F-WFM-8: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-WFM-9: —.	B-WFM-9: PHMA: —. GHMA: —.	C-WFM-9: PHMA: —.	D-WFM-9: PHMA: BLM and Forest Service planning units (Districts and Forests), in coordination with the USFWS and relevant state agencies, would complete and continue to update Greater Sage-Grouse Landscape Wildfire and Invasive Species Habitat Assessments to prioritize at risk habitats, and identify fuels management, preparedness, suppression and restoration priorities necessary to maintain sagebrush habitat to support interconnecting Greater Sage-Grouse populations. These assessments and subsequent assessment updates would also be a coordinated effort with an interdisciplinary team to take into account other Greater Sage-Grouse priorities identified in this plan. Appendix D [of the 2015 Final EIS] describes a minimal framework example and suggested approach for this assessment. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-WFM-9: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-WFM-9: PHMA: —. GHMA: —. RHMA: —.
A-WFM-10: —.	B-WFM-5: PHMA: —. GHMA: —.	C-WFM-10: PHMA: —.	D-WFM-10: PHMA: Implementation actions will be tiered to the Local (District/Forest) Greater Sage-Grouse Landscape Wildfire and Invasive Species Assessment described in D-WFM-1, utilizing best available science related to the conservation of Greater Sage-Grouse. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-WFM-10: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-WFM-10: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-WFM-11: —.	B-WFM-11: PHMA: —. GHMA: —.	C-WFM-11: PHMA: —.	D-WFM-11: PHMA: In coordination with the USFWS and relevant state agencies, BLM and Forest Service planning units (Districts/Forests) will identify annual treatment needs for wildfire and invasive species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments. Annual treatment needs will be coordinated across state/regional scales and across jurisdictional boundaries for long-term conservation of Greater Sage-Grouse. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-WFM-11: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-WFM-11: PHMA: —. GHMA: —. RHMA: —.
A-WFM-12: —.	A-WFM-12: PHMA: —. GHMA: —.	C-WFM-12: PHMA: —.	D-WFM-12: PHMA: Annually complete a review of landscape assessment implementation efforts with appropriate USFWS and state agency personnel. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-WFM-12: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-WFM-12: PHMA: —. GHMA: —. RHMA: —.
Fuels Management					
A-FM-1: Under current management, there is no designated Greater Sage-Grouse habitat. Design projects to minimize the size of wildfire and prevent the further loss of sagebrush. Existing LUPs typically do not include specific management decisions regarding implementation of fuels treatments in sagebrush habitat. In general, both prescribed fire and non-fire fuels treatments are allowed. Montana BLM: Restore and maintain desired ecological conditions and fuel loadings. Evaluate benefits against loss of sagebrush in EA process. Do not burn Wyoming sagebrush.	B-FM-1: PHMA: Design and implement fuels treatments with an emphasis on protecting existing sagebrush ecosystems. Do not reduce sagebrush canopy cover to less than 15% (Connelly et al. 2000, Hagen et al. 2007) unless a fuels management objective requires additional reduction in sagebrush cover to meet strategic protection of PHMA and conserve habitat quality for the species. Closely evaluate the benefits of the fuel break against the additional loss of sagebrush cover in future NEPA documents. Apply appropriate seasonal restrictions for implementing fuels management treatments according to the type of seasonal habitats present in PHMA. Allow no fuels treatments in known winter range unless the treatments are designed to strategically reduce wildfire risk around or in the winter range and will maintain winter range habitat quality. Do not use fire to treat sagebrush in less than 12-inch precipitation zones (e.g., Wyoming big sagebrush or other xeric sagebrush	C-FM-1: PHMA: Same as Alternative B.	D-FM-1: PHMA: Design and implement fuels treatments with an emphasis on maintaining, protecting, and expanding sagebrush ecosystems and successfully rehabilitated areas and strategically and effectively reduce wildfire threats in the greatest area. Enhance (or maintain/retain) sagebrush canopy cover and community structure to match expected potential for the ecological site and consistent with Greater Sage-Grouse habitat objectives unless fuels management objectives requires additional reduction in sagebrush cover to meet strategic protection of Greater Sage-Grouse habitat. Closely evaluate the benefits of the fuel management treatments against the additional loss of sagebrush cover on the local landscape in the NEPA process. Apply appropriate seasonal restrictions for implementing fuels management treatments according to the type of seasonal habitats present in PHMA. Allow no treatments in known winter range unless the treatments are designed to strategically reduce wildfire	E-FM-1: Idaho – CHZ: Implementation of specific, more aggressive wildlife and invasive species management practices to prevent further encroachment into CHZ should be driven by local planning efforts at the field office and ranger district level. Idaho – IHZ: Same as Idaho - CHZ. Idaho – GHZ: —. Montana Habitat: Same as Alternative A. Utah Habitat: Habitat loss due to fire and replacement of (burned) native vegetation by invasive plants is the single greatest threat to Greater Sage-Grouse in Utah. While unscheduled fires may occur, response to fire can have a large impact on the severity of the effects, especially over time as rehabilitation or restoration continues. Implement the following:	F-FM-1: PHMA: Design and implement fuels treatments with an emphasis on protecting existing sagebrush ecosystems. Do not reduce sagebrush canopy cover to less than 15% (Connelly et al. 2000, Hagen et al. 2007) unless a fuels management objective requires additional reduction in sagebrush cover to meet strategic protection of PHMA and conserve habitat quality for the species. Closely evaluate the benefits of the fuel break against the additional loss of sagebrush cover in the EA process. Apply appropriate seasonal restrictions for implementing fuels management treatments according to the type of seasonal habitats present in PHMA. Allow no fuels treatments in known winter range unless the treatments are designed to strategically reduce wildfire risk around or in the winter range and will maintain winter range habitat quality. Do not use fire to treat sagebrush in less than 12-inch precipitation zones (e.g., Wyoming big sagebrush or other xeric sagebrush species; Connelly et al. 2000,

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
(see above)	<p>species; Connelly et al. 2000, Hagen et al. 2007, Beck et al. 2009). However, if as a last resort and after all other treatment opportunities have been explored and site specific variables allow, the use of prescribed fire for fuel breaks that would disrupt the fuel continuity across the landscape could be considered, in stands where cheatgrass is a very minor component in the understory (Brown 1982). Monitor and control invasive vegetation post-treatment. Rest treated areas from grazing for two full growing seasons unless vegetation recovery dictates otherwise (WGFD 2011). Require use of native seeds for fuels management treatment based on availability, adaptation (site potential), and probability of success (Richards et al. 1998). Where probability of success or native seed availability is low, nonnative seeds may be used as long as they meet Greater Sage-Grouse habitat objectives (Pyke 2011). Design post fuels management projects to ensure long term persistence of seeded or pre-treatment native plants. This may require temporary or long-term changes in livestock grazing management, wild horse and burro management, travel management, or other activities to achieve and maintain the desired condition of the fuels management project (Eiswerth and Shonkwiler 2006).</p> <p>GHMA: —.</p>	(see above)	<p>risk around and/or in the winter range and will maintain, increase, or enhance winter range habitat quality. Ensure chemical applications are utilized where they would assist in success of fuels treatments. Strategically place treatments on a landscape scale to prevent fire from spreading into PHMA or WUI.</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: Same as PHMA.</p>	<ul style="list-style-type: none"> • Create and implement a statewide fire agency agreement(s) that will eliminate jurisdictional boundaries and allow for immediate response to natural fire in PHMA. • Allow use of fire-retardant vegetation that will buffer areas of high quality Greater Sage-Grouse habitat from catastrophic fire. • Use prescriptive fire with caution in sagebrush habitat. The WAFWA has prepared information that explains the risks from using prescribed fire in xeric sagebrush habitats. • Prescribed fire should only be used at higher elevations and in a manner designed prescriptively to benefit Greater Sage-Grouse. • Conduct effective research into controlling fire size and protecting remaining Greater Sage-Grouse areas that are adjacent to high-risk cheatgrass areas. • Focus research efforts on effective reclamation and restoration of landscapes altered by wildfire. • Within winter habitat, manage to maintain maximum amount of sagebrush, especially tall sagebrush, which would be available to Greater Sage-Grouse above snow during a severe winter. Tall sagebrush is capable of standing above heavier than normal snowfall. • Sagebrush treatment projects within winter habitat need pre-approval by the appropriate regulatory agency in coordination with the Utah Department of Wildlife Resources. Sagebrush treatment projects within winter habitat should maintain 80% of the available habitat as tall sagebrush; 20% of the habitat can be managed for younger age classes, if appropriate. • Coordinate the needs and efforts related to Greater Sage-Grouse with the State of Utah committee that was formed to develop a collaborative process to protect the health and welfare by reducing the size and frequency of catastrophic fires. 	<p>Hagen et al. 2007, Beck et al. 2009). However, if as a last resort and after all other treatment opportunities have been explored and site specific variables allow, the use of prescribed fire for fuel breaks that would disrupt the fuel continuity across the landscape could be considered, in stands where cheatgrass is a very minor component in the understory (Brown 1982). Monitor and control invasive vegetation post-treatment. Rest treated areas from grazing for two full growing seasons unless vegetation recovery dictates otherwise (WGFD 2011). Require use of native seeds for fuels management treatment based on availability, adaptation (site potential), and probability of success (Richards et al. 1998). Where probability of success or native seed availability is low, nonnative seeds may be used as long as they meet Greater Sage-Grouse habitat objectives (Pyke 2011). Design post fuels management projects to ensure long term persistence of seeded or pre-treatment native plants, including sagebrush. This may require temporary or long-term changes in livestock grazing management, wild horse and burro management, travel management, or other activities to achieve and maintain the desired condition of the fuels management project (Eiswerth and Shonkwiler 2006).</p> <p>GHMA: —.</p> <p>RHMA: —.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-FM-2: Design projects to minimize the size of wildfire and prevent the further loss of sagebrush.	B-FM-2: PHMA: Design fuels management projects in PHMA to strategically and effectively reduce wildfire threats in the greatest area. This may require fuels treatments implemented in a more linear versus block design (Launchbaugh et al. 2007). GHMA: —.	C-FM-2: PHMA: Same as Alternative B.	D-FM-2: PHMA: —. IHMA: —. GHMA: —.	E-FM-2: Idaho – CHZ: Fuel break prioritization should be in areas within the WUI where human life and safety are at risk. Fuel break projects should be designed to secure the WUI and free up firefighting resources to be focused on providing initial attack on wildfires in areas that have the potential to impact Greater Sage-Grouse within CHZ and IHZ. Prioritization of fuel breaks should then go to areas of high human ignition. Idaho – IHZ: Same as Idaho - CHZ. Idaho – GHZ: —. Utah Habitat: —.	F-FM-2: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-FM-3: —.	B-FM-3: PHMA: —. GHMA: —.	C-FM-3: PHMA: —.	D-FM-3: PHMA: —. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-FM-3: Idaho – CHZ: —. Idaho – IHZ: Create and maintain effective fuel breaks in strategic locations that will modify fire behavior and increase fire suppression effectiveness through: a. Establishing fuel breaks along existing roads or other disturbances. b. Identifying and targeting higher-risk roads for fuel break construction and maintenance based on fire history maps. c. Implementing a strategic approach to using these roads for rapid fire response. d. Closely evaluating the benefits of the fuel break against the additional loss of sagebrush cover and risk of invasive weeds. e. Maintaining fire breaks properly. Idaho – GHZ: Create and maintain effective fuel breaks in strategic locations that will modify fire behavior and increase fire suppression effectiveness through targeting areas necessary to provide a buffer between GHZ and the other management zones: a. Establishing fuel breaks along existing roads or other disturbances. b. Identifying and targeting higher-risk roads for fuel break construction and maintenance based on fire history maps. c. Implementing a strategic approach for using these roads to enable rapid fire response. d. Maintaining fuel breaks properly and siting with consideration of active leks and risk of invasive weeds. Utah Habitat: —.	F-FM-3: PHMA: —. GHMA: —. RHMA: —.
A-FM-4: —.	B-FM-4: PHMA: —. GHMA: —.	C-FM-4: PHMA: —.	D-FM-4: PHMA: —. IHMA: —. GHMA: —.	E-FM-4: Idaho – CHZ: —. Idaho – IHZ: Coordinate with Federal, State and local jurisdictions on fire and litter prevention programs to reduce human caused ignitions. Idaho – GHZ: —. Utah Habitat: —.	F-FM-4: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-FM-5: Design fuels treatment projects to minimize the size of wildfire and prevent the further loss of sagebrush.	B-FM-5: PHMA: —. GHMA: —.	C-FM-5: PHMA: Mowing of grass will be used in any fuel break fuels reduction project (roadsides or other areas).	D-FM-5: PHMA: —. IHMA: —. GHMA: —.	E-FM-5: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-FM-5: PHMA: —. GHMA: —. RHMA: —.
A-FM-6: —.	B-FM-6: PHMA: During fuels management project design, consider the utility of using livestock to strategically reduce fine fuels (Diamond et al. 2009), and implement grazing management that will accomplish this objective (Davies et al. 2011, Launchbaugh et al. 2007). Consult with ecologists to minimize impacts on native perennial grasses. GHMA: —.	C-FM-6: PHMA: Same as Alternative B.	D-FM-6: PHMA: Grazing to achieve fuels management objectives should conform to the following criteria: <ul style="list-style-type: none"> Grazing management should be implemented strategically on the landscape, and directly involve the minimum footprint and grazing intensity required to meet fuels management objectives. Conform to the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management in areas where the Standards apply. Coordinate with the permittee to coordinate fuels reduction by livestock within the Mandatory Terms and Conditions of the applicable grazing authorizations. However, in some cases targeted grazing may be authorized or contracted to a non-permit holder to achieve desired fuels reduction. Use the appropriate kind and number of animals at the appropriate season, considering vegetation palatability and livestock preferences, to reduce targeted fuels types. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-FM-6: Idaho – CHZ: Prescribe or target livestock grazing where demonstrated to be appropriate as a tool for reducing fuel loads, reducing invasive species populations and maintaining functional fire breaks and testing the effectiveness and monitoring the results on a site-specific basis through stewardship contracting. Idaho – IHZ: Same as Idaho – CHZ. Idaho – GHZ: Prescribe or target livestock grazing as a primary tool for reducing fuel loads, reducing invasive species populations and maintaining functional fire breaks to the extent such activities do not adversely affect breeding habitats (i.e., occupied leks, nesting and early brood-rearing). Utah Habitat: Consider the use of prescriptive grazing to specifically reduce fire size and intensity on all types of landownership, where appropriate. This could be particularly effective in areas where cheatgrass is encroaching on sagebrush habitat. This will require cooperation and coordination among different land managers and owners and livestock owners. In some cases feed supplementation and water hauling may need to be utilized to obtain the desired results.	F-FM-6: PHMA: —. GHMA: —. RHMA: —.
A-FM-7: —.	B-FM-7: PHMA: —. GHMA: —.	C-FM-7: PHMA: —.	D-FM-7: PHMA: Existing and proposed linear ROWs could be considered for use and maintenance as vegetated fuel breaks in appropriate areas to meet fire management goals and objectives. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-FM-7: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-FM-7: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-FM-8: —.	B-FM-8: PHMA: —. GHMA: —.	C-FM-8: PHMA: —.	D-FM-8: PHMA: Where appropriate fuel breaks would incorporate existing vegetation treatments (seedings) or be located adjacent to existing linear disturbance areas. Fuel breaks should be placed in areas with the greatest likelihood of intersecting a fire and protecting existing intact habitat. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-FM-8: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-FM-8: PHMA: —. GHMA: —. RHMA: —.
A-FM-9: —.	B-FM-9: PHMA: —. GHMA: —.	C-FM-9: PHMA: —.	D-FM-9: PHMA: Strategically pre-treat areas to reduce fine fuels through mechanical treatments, grazing strategies, chemical or biological application (brown stripping). IHMA: Same as PHMA. GHMA: Same as PHMA.	E-FM-9: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-FM-9: PHMA: —. GHMA: —. RHMA: —.
A-FM-10: —.	B-FM-10: PHMA: —. GHMA: —.	C-FM-10: PHMA: —.	D-FM-10: PHMA: —. IHMA: —. GHMA: —.	E-FM-10: Idaho – CHZ: —. Idaho – IHZ: Develop more aggressive strategies to reduce fuel loads, where appropriate. Idaho – GHZ: —. Utah Habitat: —.	F-FM-10: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-FM-11: —.	B-FM-11: PHMA: —. GHMA: —.	C-FM-11: PHMA: Any fuels treatments will focus on interfaces with human habitation or significant existing disturbances.	D-FM-11: PHMA: Fuel treatments will be designed though an interdisciplinary process to expand, enhance, maintain, and protect Greater Sage-Grouse habitat. Use green strips and/or fuel breaks, where appropriate, to protect seeding efforts from subsequent fire events. In coordination with the USFWS and relevant state agencies, BLM and Forest Service planning units (Districts/Forests) with large blocks of Greater Sage-Grouse habitat will develop, using the assessment process described in Appendix D [of the 2015 Final EIS], a fuels management strategy which considers an up-to-date fuels profile, land use plan direction, current and potential habitat fragmentation, sagebrush and Greater Sage-Grouse ecological factors, and active vegetation management steps to provide critical breaks in fuel continuity, where appropriate. When developing this strategy, planning units will consider the risk of increased habitat fragmentation from a proposed action versus the risk of large scale fragmentation posed by wildfires if the action is not taken. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-FM-11: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-FM-11: PHMA: —. GHMA: —. RHMA: —.
A-FM-12: —.	B-FM-12: PHMA: —. GHMA: —.	C-FM-12: PHMA: —.	D-FM-12: PHMA: Utilizing an interdisciplinary approach, a full range of fuel reduction techniques will be available. Fuel reduction techniques such as grazing, prescribed fire, chemical, biological and mechanical treatments are acceptable. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-FM-12: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-FM-12: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-FM-13: —.	B-FM-13: PHMA: —. GHMA: —.	C-FM-13: PHMA: —.	D-FM-13: PHMA: Prioritize the use of native seeds for fuels management treatment based on availability, adaptation (site potential), and probability of success. Where probability of success or native seed availability is low, nonnative seeds may be used to meet Greater Sage-Grouse habitat objectives to trend toward restoring the fire regime. When reseeding, use fire resistant native and nonnative species, as appropriate, to provide for fuel breaks. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-FM-13: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-FM-13: PHMA: —. GHMA: —. RHMA: —.
A-FM-14: —.	B-FM-14: PHMA: —. GHMA: —.	C-FM-14: PHMA: —.	D-FM-14: PHMA: Upon project completion, monitor and manage fuels projects to ensure long-term success, including persistence of seeded species and/or other treatment components. Control invasive vegetation post-treatment. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-FM-14: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-FM-14: PHMA: —. GHMA: —. RHMA: —.
A-FM-15: —.	B-FM-15: PHMA: —. GHMA: —.	C-FM-15: PHMA: —.	D-FM-15: PHMA: Apply seasonal restriction, as needed, for implementing fuels management treatments according to the type of seasonal habitat present. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-FM-15: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-FM-15: PHMA: —. GHMA: —. RHMA: —.
Preparedness					
A-PRE-1: —.	B-PRE-1: PHMA: —. GHMA: —.	C-PRE-1: PHMA: —.	D-PRE-1: PHMA: Implement a coordinated inter-agency approach to fire restrictions based upon National Fire Danger Rating System thresholds (fuel conditions, drought conditions and predicted weather patterns) for Greater Sage-Grouse habitat. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-PRE-1: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-PRE-1: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-PRE-2: —.	B-PRE-2: PHMA: —. GHMA: —.	C-PRE-2: PHMA: —.	D-PRE-2: PHMA: Develop wildfire prevention plans that explain the resource value of Greater Sage-Grouse habitat and include fire prevention messages and actions to reduce human-caused ignitions. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-PRE-2: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-PRE-2: PHMA: —. GHMA: —. RHMA: —.
Fire Management (Suppression)					
A-SUP-1: Firefighter and public safety are the highest priority. Greater Sage-Grouse habitat will be prioritized commensurate with property values and other critical habitat to be protected, with the goal to restore, enhance, and maintain areas suitable for Greater Sage-Grouse. Montana BLM: Emphasis on firefighter and public safety. Decisions based on relative values to be protected commensurate with fire management costs.	B-SUP-1: PHMA: Same as Alternative A. GHMA: Same as PHMA.	C-SUP-1: PHMA: Same as Alternative A.	D-SUP-1: PHMA: Same as Alternative A. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-SUP-1: Idaho – Common to All Habitats: Same as Alternative A. Montana Habitat: Same as Alternative A. Utah Habitat: Same as Alternative A.	F-SUP-1: PHMA: Same as Alternative A. GHMA: Same as PHMA. RHMA: Same as PHMA.
A-SUP-2: Montana BLM: Approximately 777,000 acres managed with considerations to wildlife habitat, air quality and threatened and endangered species.	B-SUP-2: PHMA: —. GHMA: —.	C-SUP-2: PHMA: —.	D-SUP-2: PHMA: Within Greater Sage-Grouse, PHMAs (and PACs, if so determined by individual LUP efforts) are the highest priority for conservation and protection during fire operations and fuels management decision making. The PHMAs will be viewed as more valuable than GHMAs when priorities are established. When suppression resources are widely available, maximum efforts will be placed on limiting fire growth in GHMAs polygons as well. These priority areas will be further refined following completion of the Greater Sage-Grouse Landscape Wildfire and Invasive Species Habitat Assessments described in Appendix D [of the 2015 Final EIS]. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-SUP-2: Idaho – Common to All Habitats: —. Montana Habitat: Same as Alternative A. Utah Habitat: —.	F-SUP-2: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-SUP-3: —.	B-SUP-3: PHMA: —. GHMA: —.	C-SUP-3: PHMA: —.	D-SUP-3: PHMA: Within acceptable risk levels utilize a full range of fire management strategies and tactics, including the management of wildfires to achieve resource objectives, across the range of Greater Sage-Grouse habitat consistent with land use plan direction. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-SUP-3: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-SUP-3: PHMA: —. GHMA: —. RHMA: —.
A-SUP-4: Prioritize fire suppression to protect firefighter and public safety. Each LUP supports the development and adherence to a more detailed fire management plan that outlines priorities and levels of suppression for particular vegetation classes or resource protection. Montana BLM: Emphasis on firefighter and public safety. Decisions based on relative values to be protected commensurate with fire management costs.	B-SUP-4: PHMA: In PHMA, prioritize suppression, immediately after life and property, to conserve the habitat. GHMA: In GHMA, prioritize suppression where wildfires threaten PHMA.	C-SUP-4: PHMA: Same as Alternative B.	D-SUP-4: PHMA: Prioritize firefighter and public safety, followed by suppression of fires in PHMA, with consideration given to threatened and endangered species habitat. IHMA: Prioritize suppression of fires in IHMA and threatened and endangered species habitat after PHMA. GHMA: Prioritize suppression of fires in GHMA and threatened and endangered species habitat after PHMA and IHMA.	E-SUP-4: Idaho – CHZ: Prioritize protection of Greater Sage-Grouse habitat after human safety and structure protection. Idaho – IHZ: Prioritize protection of Greater Sage-Grouse habitat after human safety and structure protection and Greater Sage-Grouse habitat in CHZ. Idaho – GHZ: Emphasize aggressive fire suppression techniques and efforts, recognizing that other local, regional, and national fire suppression priorities may take precedence. Montana Habitat: Same as Alternative A. Utah Habitat: Address fire by natural ignition as a serious threat.	F-SUP-4: PHMA: Same as Alternative B. GHMA: —. RHMA: —.
A-SUP-5: —.	B-SUP-5: PHMA: —. GHMA: —.	C-SUP-5: PHMA: —.	D-SUP-5: PHMA: Ensure firefighter personnel receive orientation regarding Greater Sage-Grouse/sagebrush management issues as related to wildfire suppression. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-SUP-5: Idaho Common to All Habitats: —. Utah Habitat: —.	F-SUP-5: PHMA: —. GHMA: —. RHMA: —.
A-SUP-6: No similar action for sub-region. Montana BLM: Approximately 777,000 acres managed with considerations to wildlife habitat, air quality, and threatened and endangered species.	B-SUP-6: PHMA: —. GHMA: —.	C-SUP-6: PHMA: —.	D-SUP-6: PHMA: Suppress wildland fires in intact Greater Sage-Grouse habitats and use managed wildfire where needed to improve Greater Sage-Grouse habitat. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-SUP-6: Idaho – Common to All Habitats: —. Montana Habitat: Same as Alternative A. Utah Habitat: —.	F-SUP-6: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-SUP-7: —.	B-SUP-7: PHMA: —. GHMA: —.	C-SUP-7: PHMA: —.	D-SUP-7: PHMA: —. IHMA: —. GHMA: —.	E-SUP-7: Idaho – CHZ: Prioritize funding for fire suppression. Idaho – IHZ: —. Idaho – GHZ: —. Utah Habitat: —.	F-SUP-7: PHMA: —. GHMA: —. RHMA: —.
A-SUP-8: During suppression, protect Greater Sage-Grouse habitats from fire through strategic wildfire suppression planning. Planning measures may include: <ul style="list-style-type: none"> Conducting burnout/backfiring operations in a manner that minimizes the loss of sagebrush when possible The agency administrator or duty officer will prioritize the assignment of resources for suppression in the event of multiple wildfire starts in PHMA Retain all unburned sagebrush islands unless firefighter safety and the success of the suppression operations are compromised 	B-SUP-8: PHMA: —. GHMA: —.	C-SUP-8: PHMA: —.	D-SUP-8: PHMA: Same as Alternative A. IHMA: Same as Alternative A. GHMA: Same as Alternative A.	E-SUP-8: Idaho – CHZ: Develop a consistent wildfire suppression plan that improves on the current wildfire suppression baseline within 1 year of the ROD through: <ol style="list-style-type: none"> Ensuring close coordination with federal and state firefighters, local fire departments, and local expertise to create the best possible network of strategic fuel breaks and road access to minimize and reduce the size of a wildfire following ignition Developing consistent fire response plans and mutual aid agreements Requesting and placing additional firefighting resources and establish new incident attack centers, with particular emphasis in the West Owyhee CA; Creating and maintaining effective fuel breaks in strategic locations that will modify fire behavior and increase fire suppression effectiveness according to the following criteria: <ul style="list-style-type: none"> Targeting establishment of fuel breaks along existing roads or other disturbances Identifying and targeting higher-risk roads for fuel break construction and maintenance based on fire history maps Implementing a strategic approach to using these roads for rapid fire response Analyzing the benefits of the fuel break against the additional loss of sagebrush cover and risk on invasive weeds Maintaining fire breaks to meet objectives Requesting the necessary federal appropriations to achieve this objective 	F-SUP-8: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
(see above)	(see above)	(see above)	(see above)	<p>Idaho – IHZ: Develop a wildfire suppression plan that improves on the fire suppression baseline through:</p> <p>a. Ensuring close coordination with federal and state firefighters, local fire departments, and local expertise (e.g., livestock grazing permittees and road maintenance personnel) to create the best possible network of strategic fuel breaks and road access to minimize and reduce the size of a wildfire following ignition</p> <p>b. Developing consistent fire response plans and mutual aid agreements</p> <p>c. Requesting the necessary federal appropriations to achieve this objective.</p> <p>Idaho – GHZ: —.</p> <p>Utah Habitat: —.</p>	(see above)
Emergency Stabilization and Rehabilitation (ESR-BLM) and Burned Area Emergency Response (BAER-FS)					
A-ESR-I: —.	B-ESR-I: PHMA: —. GHMA: —.	C-ESR-I: PHMA: —.	D-ESR-I: PHMA: Incorporate measurable groundcover and vegetation objectives (e.g., density and cover) into ESR/BAER plans. Qualitative objectives, such as plant vigor, seed production, and growing season conditions, should also be considered. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-ESR-I: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-ESR-I: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-ESR-2: —.	B-ESR-2: PHMA: —. GHMA: —.	C-ESR-2: PHMA: —.	D-ESR-2: PHMA: Ensure that appropriate Greater Sage-Grouse seasonal habitat objectives are considered in ESR (BLM) and BAER (Forest Service) plans that contain PHMA, IHMA, or GHMA. The primary short-term objective is to establish or recover shrubs, grasses, and forbs appropriate for the ecological site. In seedings, native plant material is preferred but introduced species may also be required to compete with invasives, especially on harsher sites. The longer-term objective (i.e., 10 years-plus) is to achieve a robust perennial herbaceous understory with at least 10% sagebrush canopy cover that provides functional Greater Sage-Grouse habitat. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-ESR-2: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-ESR-2: PHMA: —. GHMA: —. RHMA: —.
A-ESR-3: —.	B-ESR-3: PHMA: —. GHMA: —.	C-ESR-3: PHMA: —.	D-ESR-3: PHMA: In the short term, ensure an appropriate rest period from livestock grazing to allow natural recovery of existing seedings or the establishment of new seedings that are within PHMA, IHMA, or GHMA. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-ESR-3: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-ESR-3: PHMA: —. GHMA: —. RHMA: —.
A-ESR-4: —.	B-ESR-4: PHMA: —. GHMA: —.	C-ESR-4: PHMA: —.	D-ESR-4: PHMA: Once seeded or naturally recovered areas within PHMA, IHMA, or GHMA can be reopened to livestock grazing, incorporate long-term management that will maintain the seeding investment, promote long-term plant community health, and promote the achievement of Greater Sage-Grouse habitat objectives. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-ESR-4: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-ESR-4: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-ESR-5: —.	B-ESR-5: PHMA: —. GHMA: —.	C-ESR-5: PHMA: —.	D-ESR-5: PHMA: Consider adjusting livestock management on adjacent unburned areas to mitigate the effect of the burn on local Greater Sage-Grouse populations. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-ESR-5: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-ESR-5: PHMA: —. GHMA: —. RHMA: —.
Livestock Grazing					
<p>A-LG/RM-I: Continue to make Greater Sage-Grouse habitat available for livestock grazing (see Table 2-9). Active AUMs for livestock grazing would remain the same, though the number of AUMs on a permit may be adjusted during site-specific evaluations conducted during term permit renewals, AMP development, or other appropriate implementation activity. Additionally, temporary adjustments can be made annually to livestock numbers, the number of AUMs, season of use, and other aspects of grazing within the terms and conditions of the permit based on the permittees livestock operation and/or an evaluation of a variety of forage and resource site-specific conditions.</p> <p>Montana BLM: Continue to manage under current guidance. Consider changes in grazing management on a case-by-case basis. 456,100 acres PPH available for livestock grazing and 212,200 acres PGH available for grazing</p>	<p>B-LG/RM-I: PHMA: Same as Alternative A (see Table 2-9). GHMA: Same as PHMA.</p>	<p>C-LG/RM-I: PHMA: No grazing will be allowed in occupied Greater Sage-Grouse habitat (see Table 2-9). Grazing will remain unchanged in areas outside of occupied Greater Sage-Grouse habitat.</p>	<p>D-LG/RM-I: PHMA: Same as Alternative A (see Table 2-9). IHMA: Same as PHMA. GHMA: Same as PHMA.</p>	<p>E-LG/RM-I: Idaho – Common to All Habitats: Same as Alternative A (see Table 2-9). Montana Habitat: Same as Alternative A. Utah Habitat: Same as Alternative A (see Table 2-9).</p>	<p>F-LG/RM-I: PHMA: Grazing would be reduced by 25% (see Table 2-9). Reductions by allotment will occur by Field Office based on a review of the site-specific information (e.g., range condition, utilization levels, type and condition of Greater Sage-Grouse habitat). Based on the Field Office review, the reductions in AUMs would occur in allotments that overlap occupied Greater Sage-Grouse habitat, whether partial reductions in active use or closing specific allotments. The reductions would be implemented during renewal of term grazing permits. GHMA: Grazing would be reduced by 25% (see Table 2-9). RHMA: Same as Alternative A.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LG/RM-2: —.	B-LG/RM-2: PHMA: Incorporate Greater Sage-Grouse habitat objectives and management considerations into all BLM and Forest Service grazing allotments through AMPs or permit renewals and/or Forest Service Annual Operating Instructions. GHMA: —.	C-LG/RM-2: PHMA: —.	D-LG/RM-2: PHMA: Within grazing allotments containing Greater Sage-Grouse habitat, incorporate grazing management measures designed to meet Greater Sage-Grouse habitat objectives through AMPs, grazing permit renewal or permit modification processes. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-LG/RM-2: Idaho – CHZ: Prioritize permit renewal and land health assessment processes for allotments with declining Greater Sage-Grouse populations in conjunction with scheduled term grazing permit renewals, or where the adaptive regulatory trigger has been tripped and livestock grazing has been identified as a potential causal factor. Idaho – IHZ: Prioritize permit renewal and land health assessment processes for allotments with declining Greater Sage-Grouse populations. Idaho – GHZ: —. Utah Habitat: —.	F-LG/RM-2: PHMA: Same as Alternative B. GHMA: Same as Alternative B. RHMA: Same as Alternative B.
A-LG/RM-3: Consider adjustments to allotment boundaries that provide for single unit or landscape level grazing approaches to habitat improvement on a case-by-case basis.	B-LG/RM-3: PHMA: Work cooperatively on integrated ranch planning within Greater Sage-Grouse habitat so operations with deeded/BLM and/or Forest Service allotments can be planned as single units. GHMA: —.	C-LG/RM-3: PHMA: —.	D-LG/RM-3: PHMA: Work cooperatively with other land managers to allow livestock operations that utilize mixed federal, private and/or state land to be managed at the landscape scale to benefit Greater Sage-Grouse and their habitat. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-LG/RM-3: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-LG/RM-3: PHMA: Same as Alternative B. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
<p>A-LG/RM-4: Complete rangeland health assessments for each allotment at least once every ten years for consideration during the permit renewal process.</p> <p>Monitor vegetation trends (including composition, cover, and age class), noxious weeds, riparian Proper Functioning Condition (PFC), etc. as part of the grazing management program.</p> <p>BLM plans do not contain grazing management decisions specific to conserving Greater Sage-Grouse habitat.</p> <p>Forest Service LUPs contain specific management actions for permitted livestock grazing that take in to consideration established habitat management objectives.</p>	<p>B-LG/RM-4: PHMA: Prioritize completion of land health assessments (Forest Service may use other analyses) and processing grazing permits within PHMA. Focus this process on allotments that have the best opportunities for conserving, enhancing or restoring habitat for Greater Sage-Grouse. Utilize BLM Ecological Site Descriptions (Forest Service may use other methods) to conduct land health assessments to determine if standards of range-land health are being met.</p> <p>GHMA: —.</p>	<p>C-LG/RM-4: PHMA: —.</p>	<p>D-LG/RM-4: PHMA: PHMA is the highest priority for BLM land health assessments and processing of BLM grazing permits with consideration for threatened and endangered species. Where possible, conduct land health assessments at the watershed, or other meaningful landscape-scale.</p> <p>IHMA: Prioritize BLM land health assessments and processing of BLM grazing permits after PHMA with consideration for threatened and endangered species. Where possible, conduct land health assessments at the watershed, or other meaningful landscape-scale.</p> <p>GHMA: Prioritize BLM land health assessments and processing of BLM grazing permits after IHMA, with consideration for threatened and endangered species. Where possible, conduct land health assessments at the watershed, or other meaningful landscape-scale.</p>	<p>E-LG/RM-4: Idaho – Common to All Habitats: Complete the allotment assessment process in conjunction with scheduled term grazing permit renewals (i.e., every ten years), giving priority to areas that have the potential to provide the greatest benefit to Greater Sage-Grouse.</p> <p>Idaho – CHZ: Prioritize and concentrate allocation of resources for assessment and permit renewal on allotments within CHZ that have declining Greater Sage-Grouse populations, with secondary priority given to stable or increasing populations within CHZ.</p> <p>Idaho – IHZ: Prioritize allotments within IHZ containing breeding habitats that have decreasing lek counts after permits within CHZ. Greater Sage-Grouse populations that are stable or trending upward will be a lower priority for permit renewal and the assessment process.</p> <p>Idaho – GHZ: —.</p> <p>Utah Habitat: —.</p>	<p>F-LG/RM-4: PHMA: Same as Alternative B.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LG/RM-5: —.	B-LG/RM-5: PHMA: Conduct land health assessments that include (at a minimum) indicators and measurements of structure/condition/composition of vegetation specific to achieving Greater Sage-Grouse habitat objectives (Doherty et al. 2011a). If local/state seasonal habitat objectives are not available, use Greater Sage-Grouse habitat recommendations from Connelly et al. 2000 and Hagen et al. 2007. GHMA: —.	C-LG/RM-5: PHMA: —.	D-LG/RM-5: PHMA: During the land health assessment process determine whether vegetation structure, condition and composition are meeting Greater Sage-Grouse habitat objectives in sagebrush cover types through implementation of the habitat assessment framework, (Stiver et al. 2010 as amended/replaced) or other BLM or Forest Service approved methodology, in accordance with current policy and guidance. IHMA: Same as PHMA. GHMA: —.	E-LG/RM-5: Idaho – Common to All Habitats: Utilize a variety of information sources, when available, in the allotment assessment process, including: published characteristics of Greater Sage-Grouse habitat; Ecological Site Descriptions; existing vegetation; habitat inventories/assessments (Stiver et al. 2010); and state and transition models that describe vegetation and other physical attributes for Greater Sage-Grouse. Include discussion of whether the allotment (or any pasture/significant area therein) has the existing vegetation and/or existing ecological condition (seral state) to provide Greater Sage-Grouse habitat (Category 1); or whether the allotment (or any pasture/significant area therein) has the ecological potential to provide Greater Sage-Grouse habitat (Category 2). When either of these categories applies, incorporate Greater Sage-Grouse habitat management objectives as the desired conditions for the applicable allotment and pasture. Utah Habitat: —.	F-LG/RM-5: PHMA: Same as Alternative B. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
<p>A-LG/RM-6: Consider range improvements and/or adjust permit terms and conditions on a case-by-case basis as necessary to meet land health standards or habitat objectives identified in individual LUPs. Changes may include, but are not limited to:</p> <ol style="list-style-type: none"> 1) Rotation systems (e.g., rest rotation, deferred rotation) 2) Season or timing of use 3) Distribution of livestock use 5) Type of livestock 6) Class of livestock 7) Duration of grazing use and rest periods 	<p>B-LG/RM-6: PHMA: Implement management actions (grazing decisions, Annual Operating Instructions [Forest Service only], AMP/Conservation Plan development, or other agreements) to modify grazing management to meet seasonal Greater Sage-Grouse habitat requirements (Connelly et al. 2011). Consider singly, or in combination, changes in:</p> <ol style="list-style-type: none"> 1) Season or timing of use; 2) Numbers of livestock (includes temporary non-use or livestock removal); 3) Distribution of livestock use; 4) Intensity of use; and 5) Type of livestock (e.g., cattle, sheep, horses, llamas, alpacas and goats) (Briske et al. 2011). <p>GHMA: —.</p>	<p>C-LG/RM-6: PHMA: —.</p>	<p>D-LG/RM-6: PHMA: When livestock management practices determined to not be compatible with meeting or making progress towards habitat objectives, implement changes in grazing management through grazing authorization modifications, or AMP implementation. Potential considerations include, but are not limited to, changes in:</p> <ol style="list-style-type: none"> 1) Season or timing of use; 2) Numbers of livestock; 3) Distribution of livestock use; 4) Duration and/or level of use; 5) Kind of livestock (e.g., cattle, sheep, horses, or goats) (Briske et al. 2011); 6) Voluntary measures such as temporary non-use; and 7) Grazing schedules (including rest or deferment). <p>IHMA: Same as PHMA.</p> <p>GHMA: Same as PHMA.</p>	<p>E-LG/RM-6: Idaho – CHZ: Adjust grazing permits during the renewal process to include measures (including but not limited to measures described in Appendix Q [of the 2015 Final EIS]) to achieve desired habitat conditions, if through the assessment process, livestock grazing is found to be limiting the achievement of the habitat characteristics (Appendix Q [of the 2015 Final EIS]). Measures must be tailored to address the specific management issues.</p> <p>Where population and habitat triggers are being maintained within a CA, this provides that the current grazing system is adequate to maintain viable Greater Sage-Grouse populations and therefore absent compelling information, no further changes to BLM grazing systems would be required pursuant to Standard 8 of the Idaho Rangeland Health Standards with respect to Greater Sage-Grouse.</p> <p>Idaho – IHZ: Same as Idaho - CHZ.</p> <p>Idaho – GHZ: —.</p> <p>Utah Habitat: —.</p>	<p>F-LG/RM-6: PHMA: Same as Alternative B.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>
<p>A-LG/RM-7: —.</p>	<p>B-LG/RM-7: PHMA: Maintain retirement of grazing privileges as an option in PHMA when the current permittee is willing to retire grazing on all or part of an allotment. Analyze the adverse impacts of no livestock use on wildfire and invasive species threats (Crawford et al. 2004) in evaluating retirement proposals.</p> <p>GHMA: —.</p>	<p>C-LG/RM-7: PHMA: —.</p>	<p>D-LG/RM-7: PHMA: Consider retiring an allotment if grazing privileges are relinquished or if an allotment becomes vacant. When grazing privileges are relinquished the associated allotment(s) may be retired from grazing, or converted to a forage reserve/buffer to use during fire rehabilitation or restoration efforts elsewhere (Adopted from Idaho State Plan page 4.64, Appendix Q [of the 2015 Final EIS]), when such actions are determined to result in a net benefit to Greater Sage-Grouse habitat and other priority resources.</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: Same as PHMA.</p>	<p>E-LG/RM-7: Idaho – Common to All Habitats: —.</p> <p>Utah Habitat: —.</p>	<p>F-LG/RM-7: PHMA: Same as Alternative B.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LG/RM-8: —.	B-LG/RM-8: PHMA: —. GHMA: —.	C-LG/RM-8: PHMA: —.	D-LG/RM-8: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-8: Idaho – CHZ: Establish strategically located forage reserves focusing on areas unsuitable for Greater Sage-Grouse habitat restoration or lower priority habitat restoration areas when feasible. Idaho – IHZ: Same as Idaho – CHZ. Idaho – GHZ: —. Utah Habitat: —.	F-LG/RM-8: PHMA: —. GHMA: —. RHMA: —.
A-LG/RM-9: —.	B-LG/RM-9: PHMA: —. GHMA: —.	C-LG/RM-9: PHMA: —.	D-LG/RM-9: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-9: Idaho – CHZ: Implement grazing management systems that ensure adequate nesting and early brood rearing habitat within the breeding landscape. Manage allotments only for the primary seasonal habitat that it has the potential to support. BLM will conduct fine and site scale habitat assessments based on these habitat characteristics. Idaho – IHZ: Same as Idaho - CHZ. Idaho – GHZ: —. Utah Habitat: —.	F-LG/RM-9: PHMA: —. GHMA: —. RHMA: —.
A-LG/RM-10: Consider changes in grazing management on a case-by-case basis. Changes may include, but are not limited to: 1) Rotation systems (e.g., rest rotation and deferred rotation) 2) Season or timing of use 3) Distribution of livestock use 5) Type of livestock 6) Class of livestock 7) Duration of grazing use and rest periods.	B-LG/RM-10: PHMA: —. GHMA: —.	C-LG/RM-10: PHMA: —.	D-LG/RM-10: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-10: Idaho – CHZ: Modify grazing management through appropriate herding, salting, and water-source management (e.g., turning troughs/pipelines on/off, extending pipelines/moving troughs) when use-pattern mapping or monitoring demonstrates an opportunity to adjust livestock distribution to benefit occupied Greater Sage-Grouse breeding habitat. Idaho – IHZ: Same as Idaho - CHZ. Idaho – GHZ: —. Utah Habitat: —.	F-LG/RM-10: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LG/RM-11: —.	B-LG/RM-11: PHMA: —. GHMA: —.	C-LG/RM-11: PHMA: —.	D-LG/RM-11: PHMA: Coordinate with the permittee to schedule grazing use to avoid the Greater Sage-Grouse breeding and nesting period when practical. If a lek is located at a water trough, turn off the trough during the breeding and nesting period to minimize potential impacts on Greater Sage-Grouse when possible. IHMA: —. GHMA: —.	E-LG/RM-11: Idaho – CHZ: Graze exotic perennial grass seedings and/or annual grasslands to avoid grazing during breeding season in occupied Greater Sage-Grouse habitat if available and feasible. Idaho – IHZ: Same as Idaho - CHZ. Idaho – GHZ: —. Utah Habitat: —.	F-LG/RM-11: PHMA: —. GHMA: —. RHMA: —.
A-LG/RM-12: Consider changes in grazing management on a case-by-case basis. Changes may include, but are not limited to: 1) Rotation systems (e.g., rest rotation and deferred rotation) 2) Season or timing of use 3) Distribution of livestock use 5) Type of livestock 6) Class of livestock 7) Duration of grazing use and rest periods	B-LG/RM-12: PHMA: —. GHMA: —.	C-LG/RM-12: PHMA: —.	D-LG/RM-12: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-12: Idaho – CHZ: Modify authorized seasons of use within grazing permits to provide greater flexibility in managing livestock for the benefit of Greater Sage-Grouse. Idaho – IHZ: Same as Idaho - CHZ. Idaho – GHZ: —. Utah Habitat: —.	F-LG/RM-12: PHMA: —. GHMA: —. RHMA: —.
A-LG/RM-13: —.	B-LG/RM-13: PHMA: —. GHMA: —.	C-LG/RM-13: PHMA: —.	D-LG/RM-13: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-13: Idaho – CHZ: Maintain residual herbaceous vegetation at the end of the growing/grazing season to contribute to nesting and brood-rearing habitat during the coming nesting season consistent with conditions described in Appendix Q [of the 2015 Final EIS]). Idaho – IHZ: Same as Idaho - CHZ. Idaho – GHZ: —. Utah Habitat: —.	F-LG/RM-13: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
<p>A-LG/RM-14: Consider changes in grazing management on a case-by-case basis. Changes may include, but are not limited to:</p> <p>1) Rotation systems (e.g., rest rotation and deferred rotation) 2) Season or timing of use 3) Distribution of livestock use 5) Type of livestock 6) Class of livestock 7) Duration of grazing use and rest periods</p>	<p>B-LG/RM-14: PHMA: —.</p> <p>GHMA: —.</p>	<p>C-LG/RM-14: PHMA: —.</p>	<p>D-LG/RM-14: PHMA: —.</p> <p>IHMA: —.</p> <p>GHMA: —.</p>	<p>E-LG/RM-14: Idaho – CHZ: Modify grazing management to meet seasonal Greater Sage-Grouse habitat requirements (Appendix Q [of the 2015 Final EIS]). Provide flexibility in grazing management through scheduling the intensity, timing, duration and frequency of grazing use over time that best promotes management objectives. The Implementation Task Force would provide recommendations throughout the process and would be given the ability to review proposed management changes and the implementation of conservation measures to ensure that the measures are being appropriately applied.</p> <p>Idaho – IHZ: Same as Idaho – CHZ.</p> <p>Idaho – GHZ: —.</p> <p>Utah Habitat: —.</p>	<p>F-LG/RM-14: PHMA: —.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
<p>A-LG/RM-15: —.</p>	<p>B-LG/RM-15: PHMA: Develop specific objectives to conserve, enhance or restore PHMA based on BLM Ecological Site Descriptions (Forest Service may use other methods) and assessments (including within wetlands and riparian areas). If an effective grazing system that meets Greater Sage-Grouse habitat requirements is not already in place, analyze at least one alternative that conserves, restores or enhances Greater Sage-Grouse habitat in the NEPA document prepared for the permit renewal (Doherty et al. 2011b, Williams et al. 2011).</p> <p>GHMA: —.</p>	<p>C-LG/RM-15: PHMA: —.</p>	<p>D-LG/RM-15: PHMA: Use monitoring information and rangeland health assessments to develop specific management objectives and grazing management plans designed to maintain, enhance or restore Greater Sage-Grouse habitat. Prioritize implementation of grazing systems or permit modifications that make progress towards meeting habitat objectives, in areas that are not meeting these objectives.</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: Same as PHMA.</p>	<p>E-LG/RM-15: Idaho – CHZ: Conduct rangeland health assessments utilizing published characteristics of Greater Sage-Grouse habitat and the Ecological Site Descriptions, and Appendix Q [of the 2015 Final EIS], and where available and applicable, rangeland health determinations made in accordance with 43 C.F.R. 4180.2(c).</p> <p>Idaho – IHZ: Same as Idaho – CHZ.</p> <p>Idaho – GHZ: —.</p> <p>Utah Habitat: Consider Greater Sage-Grouse seasonal habitat requirements when managing sagebrush rangelands. Considerations to be taken into account include the following:</p> <p>Leks Be cautious of man-made structures on lek sites. Reduce shrub encroachment and maintain the “open” area that characterizes a typical lek site. Identify the location of leks through discussions with DWR biologists.</p> <p>Nesting/Early Brood-Rearing Maintain and enhance the existing sagebrush/plant communities. Manage these areas to increase herbaceous cover by sustaining a mosaic of sagebrush and open areas. Avoid repeated, annual heavy use of these areas by implementing periodic rest and/or deferment periods during the critical growing season.</p> <p>Late Brood-Rearing Avoid continuous (season-long) grazing of wet meadows and riparian habitats, especially under drought conditions when temperatures are high.</p> <p>Winter Carefully manage levels of browsing or activities in sagebrush areas that constitute Greater Sage-Grouse habitat that would reduce Greater Sage-Grouse access to these areas for food and cover. The potential impact of livestock grazing on winter habitat can be positive or negative depending on scale and location of use.</p>	<p>F-LG/RM-15: PHMA: —.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
<p>A-LG/RM-16: —.</p>	<p>B-LG/RM-16: PHMA: In PHMA, manage for vegetation composition and structure consistent with ecological site potential and within the reference state to achieve Greater Sage-Grouse seasonal habitat objectives.</p> <p>GHMA: —.</p>	<p>C-LG/RM-16: PHMA: —.</p>	<p>D-LG/RM-16: PHMA: Manage for vegetation composition (including riparian and lentic areas) and structure consistent with appropriate Greater Sage-Grouse seasonal habitat objectives relative to site potential.</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: Same as PHMA.</p>	<p>E-LG/RM-16: Idaho – CHZ: Maintain existing grazing management absent substantial and compelling information, if, based on the assessment, the current grazing system achieves the habitat characteristics (Appendix Q [of the 2015 Final EIS]).</p> <p>Idaho – IHZ: Same as Idaho – CHZ.</p> <p>Idaho – GHZ: —.</p> <p>Utah Habitat: Address incompatible grazing strategies through established rangeland management practices consistent with the maintenance or enhancement of habitat. Carefully manage the “time,” “timing,” and “intensity” of grazing in sagebrush/Greater Sage-Grouse habitats to provide for the seasonal needs of Greater Sage-Grouse. Specific prescriptions can be applied through more intensive management to address special needs or weak links in the biological year of Greater Sage-Grouse production. Where time-controlled grazing is not an option, moderate use of occupied Greater Sage-Grouse habitats will usually leave mosaic or patchy areas where some plants are ungrazed. Managing for moderate utilization levels (40%) after the period of rapid vegetation growth may provide enough residual cover for Greater Sage-Grouse nesting and early brood-rearing the subsequent spring. Evaluation of Greater Sage-Grouse nesting and escape cover must be determined on a site-specific basis. Livestock operations with a small amount of nesting habitat should consider special management activities to protect nesting and early brood-rearing areas. Lighter use of areas may be warranted. In areas with large tracts of contiguous habitat, livestock producers should manage the vegetation on a rotational grazing basis, which may leave 10 - 20 % of the area ungrazed periodically in combination with deferring or altering timing of grazing in other areas. In areas where Greater Sage-Grouse nesting is common, managing for moderate use of plant</p>	<p>F-LG/RM-16: PHMA: Manage for vegetation composition and structure consistent with ecological site potential and within the reference state to achieve Greater Sage-Grouse habitat objectives.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
(see above)	(see above)	(see above)	(see above)	growth across the landscape would be appropriate. Well-managed ranches with comprehensive grazing strategies that include short-term or duration grazing, higher levels of use may be acceptable, provided these higher levels of use include rested vegetation in nearby areas.	(see above)
A-LG/RM-17: —.	B-LG/RM-17: PHMA: —. GHMA: —.	C-LG/RM-17: PHMA: —.	D-LG/RM-17: PHMA: Outside of occupied or potential bighorn sheep habitat, allow temporary or permanent conversion of cattle AUMs to sheep and/or goat grazing to allow for fuels management opportunities using domestic livestock. Sheep and goat grazing areas must be reviewed and modified as bighorn sheep habitat maps are updated or refined. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-LG/RM-17: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-LG/RM-17: PHMA: —. GHMA: —. RHMA: —.
A-LG/RM-18: —.	B-LG/RM-18: PHMA: —. GHMA: —.	C-LG/RM-18: PHMA: —.	D-LG/RM-18: PHMA: Incorporate Terms and Conditions in crossing permits to limit disturbance of leks when trailing livestock across BLM- and Forest Service-administered lands in the spring. Appropriate Terms and Conditions include, but are not limited to: required herding practices, permitted routes, timing of livestock movements during lekking season, watering, overnighting, and sheep bedding locations. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-LG/RM-18: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-LG/RM-18: PHMA: No action. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LG/RM-19: —.	B-LG/RM-19: PHMA: —. GHMA: —.	C-LG/RM-19: PHMA: —.	D-LG/RM-19: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-19: Idaho – Common to All Habitats: Consider additional options for scheduled grazing based on the three habitat zones in light of unintended consequences of altering grazing use, such as a possible increased risk of wildfire, before adjusting management. Idaho – CHZ: Altering grazing schemes in allotments within CHZ, where needed and appropriate, through enhanced grazing opportunities utilizing introduced seedings or areas with lower value to Greater Sage-Grouse (e.g., GHZ). Idaho – IHZ: Enhance grazing opportunities through utilization of areas with introduced seedings or areas with lower value to Greater Sage-Grouse. Idaho – GHZ: Same as Idaho – IHZ. Utah Habitat: —.	F-LG/RM-19: PHMA: —. GHMA: —. RHMA: —.
A-LG/RM-20: —.	B-LG/RM-20: PHMA: —. GHMA: —.	C-LG/RM-20: PHMA: —.	D-LG/RM-20: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-20: Idaho – Common to All Habitats: Include measures tailored to address specific management issues (Appendix Q [of the 2015 Final EIS]), when livestock grazing is limiting achievement of the habitat characteristics (Appendix Q [of the 2015 Final EIS]), within renewed permits. Utah Habitat: —.	F-LG/RM-20: PHMA: —. GHMA: —. RHMA: —.
A-LG/RM-21: Consider changes in grazing management on a case-by-case basis. Changes may include, but are not limited to: 1) Rotation systems (e.g., rest rotation and deferred rotation) 2) Season or timing of use 3) Distribution of livestock use 5) Type of livestock 6) Class of livestock 7) Duration of grazing use and rest periods.	B-LG/RM-21: PHMA: —. GHMA: —.	C-LG/RM-21: PHMA: —.	D-LG/RM-21: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-21: Idaho – Common to All Habitats: Maintain flexibility in grazing management and the opportunity to schedule and adjust intensity, timing, duration, and frequency of grazing use over time in a manner that maintains rangeland health and habitat quality. Utah Habitat: —.	F-LG/RM-21: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LG/RM-22: —.	B-LG/RM-22: PHMA: —. GHMA: —.	C-LG/RM-22: PHMA: —.	D-LG/RM-22: PHMA: Utilize existing and appropriate rangeland health assessment and Greater Sage-Grouse habitat assessment (currently the Habitat Assessment Framework) processes to quantify Greater Sage-Grouse habitat quality. Prioritize assessment completion in PHMA. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-LG/RM-22: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-LG/RM-22: PHMA: —. GHMA: —. RHMA: —.
A-LG/RM-23: —.	B-LG/RM-23: PHMA: —. GHMA: —.	C-LG/RM-23: PHMA: —.	D-LG/RM-23: PHMA: Monitor vegetation utilizing techniques that quantify Greater Sage-Grouse habitat attributes to determine if vegetation management objectives are being achieved. This monitoring would occur consistent with appropriate BLM and Forest Service direction which current utilizes the Habitat Assessment Framework and BLM Technical Reference 1734-4. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-LG/RM-23: Idaho – Common to All Habitats: Conduct fine and site scale-habitat assessments to help inform grazing management based on habitat characteristics described in Appendix Q [of the 2015 Final EIS]. Utah Habitat: —.	F-LG/RM-23: PHMA: —. GHMA: —. RHMA: —.
A-LG/RM-24: Implement noxious weed and invasive species control using integrated weed management actions per national guidance and local weed management plans in cooperation with State and Federal agencies, affected counties, and adjoining private lands owners.	B-LG/RM-24: PHMA: —. GHMA: —.	C-LG/RM-24: PHMA: —.	D-LG/RM-24: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-24: Idaho – CHZ: —. Idaho – IHZ: Monitor weed eradication program to evaluate the success of weed control efforts in conjunction with the Cooperative Weed Management Areas. Idaho – GHZ: Same as Idaho – IHZ. Utah Habitat: —.	F-LG/RM-24: PHMA: No action. GHMA: —. RHMA: —.
A-LG/RM-25: —.	B-LG/RM-25: PHMA: —. GHMA: —.	C-LG/RM-25: PHMA: —.	D-LG/RM-25: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-25: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-LG/RM-25: PHMA: Encourage partners to monitor effects of retiring grazing permits in Greater Sage-Grouse habitat. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LG/RM-26: —.	B-LG/RM-26: PHMA: —. GHMA: —.	C-LG/RM-26: PHMA: —.	D-LG/RM-26: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-26: Idaho – Common to All Habitats: Conduct a determination of factors causing any failure to achieve the habitat characteristics (Appendix Q [of the 2015 Final EIS]) at a resolution sufficient to document the habitat condition, including consideration of local spatial and inter-annual variability. Determination must utilize data from multiple years or multiple locations within an allotment. Utah Habitat: —.	F-LG/RM-26: PHMA: —. GHMA: —. RHMA: —.
Drought Management					
A-LG/RM-27: —. Livestock grazing program/policy direction allows the BLM and Forest Service to make changes to livestock grazing in response to drought conditions. Changes may include adjusting livestock numbers based on available forage or shortening the season of use.	B-LG/RM-27: PHMA: During drought periods, prioritize evaluating effects of the drought in PHMA relative to their needs for food and cover. Since there is a lag in vegetation recovery following drought (Thurow and Taylor 1999; Cagney et al. 2010), ensure that post-drought management allows for vegetation recovery that meets Greater Sage-Grouse needs in PHMA. GHMA: —.	C-LG/RM-27: PHMA: —.	D-LG/RM-27: PHMA: Adjust grazing management (i.e., delay turnout, adjust pasture rotations, adjust the amount and/or duration of grazing) as appropriate during drought to provide for adequate food and cover for Greater Sage-Grouse during drought periods. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-LG/RM-27: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-LG/RM-27: PHMA: During drought periods, prioritize evaluating effects of the drought in PHMA relative to their biological needs for food and cover, as well as drought effects on ungrazed reference areas. Since there is a lag in vegetation recovery following drought (Thurow and Taylor 1999; Cagney et al. 2010), ensure that post-drought management allows for vegetation recovery that meets Greater Sage-Grouse needs in PHMA based on Greater Sage-Grouse habitat objectives. GHMA: —. RHMA: —.
A-LG/RM-28: —.	B-LG/RM-28: PHMA: —. GHMA: —.	C-LG/RM-28: PHMA: —.	D-LG/RM-28: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-28: Idaho – CHZ: Prioritize evaluation of CHZ during drought periods relative to Greater Sage-Grouse needs for food and cover. Ensure that post-drought management allows for vegetation recovery that meets Greater Sage-Grouse needs in priority Greater Sage-Grouse habitat areas. Idaho – IHZ: Same as Idaho – CHZ. Idaho – GHZ: Utah Habitat: —.	F-LG/RM-28: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Riparian					
A-LG/RM-29: Manage, maintain, protect, and restore riparian and wetland areas to PFC.	B-LG/RM-29: PHMA: Manage riparian areas and wet meadows for proper functioning condition or other similar methodology (Forest Service only) within PHMA. GHMA: —.	C-LG/RM-29: PHMA: —.	D-LG/RM-29: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-29: Idaho – CHZ: Implement grazing management adjustments, where management changes are determined necessary (Appendix Q [of the 2015 Final EIS]), that are narrowly tailored to address the specific habitat objective applied at the allotment and/or activity plan level, including but not limited to the actions outlined in (Appendix Q [of the 2015 Final EIS]). Idaho – IHZ: Same as Idaho – CHZ. Idaho – GHZ: —. Utah Habitat: Design water developments to enhance mesic habitat for use by Greater Sage-Grouse and maintain adequate vegetation in wet meadows. Within PHMA, Greater Sage-Grouse stipulations should take precedence over stipulations for other species if conflicts occur, if otherwise allowable by law.	F-LG/RM-29: PHMA: Same as Alternative B. GHMA: —. RHMA: —.
A-LG/RM-30: Manage, maintain, protect, and restore riparian and wetland areas to PFC.	B-LG/RM-30: PHMA: Within Greater Sage-Grouse habitats, manage wet meadows to maintain a component of perennial forbs with diverse species richness relative to site potential (e.g., reference state) to facilitate brood rearing. Also conserve or enhance these wet meadow complexes to maintain or increase amount of edge and cover within that edge to minimize elevated mortality during the late brood rearing period (Hagen et al. 2007; Kolada et al. 2009; Atamian et al. 2010). GHMA: Same as PHMA.	C-LG/RM-30: PHMA: —.	D-LG/RM-30: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-30: Idaho – Common to All Habitats: —. Utah Habitat: Design water developments to enhance mesic habitat for use by Greater Sage-Grouse and maintain adequate vegetation in wet meadows. Within PHMA, Greater Sage-Grouse stipulations should take precedence over stipulations for other species if conflicts occur, if otherwise allowable by law.	F-LG/RM-30: PHMA: Same as Alternative B. GHMA: —. RHMA: —.
A-LG/RM-31: —.	B-LG/RM-31: PHMA: Where riparian areas and wet meadows meet proper functioning condition or meet standards using other similar methodology (Forest Service only), strive to attain reference state vegetation relative to the ecological site description. GHMA: Same as PHMA.	C-LG/RM-31: PHMA: —.	D-LG/RM-31: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-31: Idaho – Common to All Habitats: —. Utah Habitat: Same as E-LG/RM-30.	F-LG/RM-31: PHMA: Same as Alternative B. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LG/RM-32: Manage rangeland resources to maintain healthy, sustainable, rangeland ecosystems and to restore degraded rangelands in accordance with Idaho's Standards for Rangeland Health or standards or guidelines established in individual Forest Service LRMPs. Rangeland health standards require that riparian areas be managed for PFC.	B-LG/RM-32: PHMA: Reduce hot season grazing on riparian and meadow complexes to promote recovery or maintenance of appropriate vegetation and water quality. Utilize fencing/herding techniques or seasonal use or livestock distribution changes to reduce pressure on riparian or wet meadow vegetation used by Greater Sage-Grouse in the hot season (summer) (Aldridge and Brigham 2002; Crawford et al. 2004; Hagen et al. 2007). GHMA: —.	C-LG/RM-32: PHMA: —.	D-LG/RM-32: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-32: Idaho – Common to All Habitats: —. Utah Habitat: Continue livestock grazing strategies that have proven effective in maintaining and enhancing Greater Sage-Grouse habitat, unless compelling and credible cause-and-effect evidence indicates a disturbance exists. Address incompatible grazing strategies through established rangeland management practices consistent with the maintenance or enhancement of habitat. Design water developments to enhance mesic habitat for use by Greater Sage-Grouse and maintain adequate vegetation in wet meadows. Within PHMA, Greater Sage-Grouse stipulations should take precedence over stipulations for other species if conflicts occur, if otherwise allowable by law.	F-LG/RM-32: PHMA: —. GHMA: —. RHMA: —.
A-LG/RM-33: Manage, maintain, protect, and restore riparian and wetland areas to PFC.	B-LG/RM-33: PHMA: —. GHMA: —.	C-LG/RM-33: PHMA: —.	D-LG/RM-33: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-33: Idaho – CHZ: Manage grazing of riparian areas, meadows, springs, and seeps in a manner that promotes vegetative structure and composition appropriate to the site. Idaho – IHZ: Same as Idaho – CHZ. Idaho – GHZ: —. Utah Habitat: —.	F-LG/RM-33: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Range Improvements					
<p>A-LG/RM-34: Consider structural range improvements on a case-by-case basis to provide for livestock grazing while maintaining rangeland health.</p>	<p>B-LG/RM-34: PHMA: Design any new structural range improvements and location of supplements (salt or protein blocks) to conserve, enhance, or restore Greater Sage-Grouse habitat through an improved grazing management system relative to Greater Sage-Grouse objectives. Structural range improvements, in this context, include but are not limited to: cattle guards, fences, exclosures, corrals or other livestock handling structures; pipelines, troughs, storage tanks (including moveable tanks used in livestock water hauling), windmills, ponds/reservoirs, solar panels and spring developments. Potential for invasive species establishment or increase following construction must be considered in the project planning process and monitored and treated post-construction.</p> <p>GHMA: —.</p>	<p>C-LG/RM-34: PHMA: —.</p>	<p>D-LG/RM-34: PHMA: Design any new structural range improvements to conserve, enhance, or restore Greater Sage-Grouse habitat. Structural range improvements, in this context, include but are not limited to: cattle guards, fences, exclosures, corrals or other livestock handling structures; pipelines, troughs, storage tanks (including moveable tanks used in livestock water hauling), windmills, ponds/reservoirs, solar panels and spring developments. Potential for an increase in invasive species establishment or increase following construction must be considered in the project planning process and monitored and treated post-construction.</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: Same as PHMA.</p>	<p>E-LG/RM-34: Idaho – Common to All Habitats: —.</p> <p>Utah Habitat: Locate livestock fences away from leks and employ the NRCS fence standards (NRCS 2012).</p>	<p>F-LG/RM-34: PHMA: Avoid all new structural range developments in PHMA unless independent peer-reviewed studies show that the range improvement structure benefits Greater Sage-Grouse. Design any new structural range improvements and location of supplements (salt or protein blocks) to conserve, enhance, or restore Greater Sage-Grouse habitat through an improved grazing management system relative to Greater Sage-Grouse objectives. Structural range improvements developments, in this context, include but are not limited to cattle guards, fences, exclosures, corrals or other livestock handling structures; pipelines, troughs, storage tanks (including moveable tanks used in livestock water hauling), windmills, ponds/reservoirs, solar panels and spring developments. Potential for invasive species establishment or increase following construction must be considered in the project planning process and monitored and treated post-construction. Consider the comparative cost of changing grazing management instead of constructing additional range developments.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>
<p>A-LG/RM-35: Consider modifications to existing structural range improvements on a case-by-case basis taking into consideration impacts on other resources.</p>	<p>B-LG/RM-35: PHMA: Evaluate existing structural range improvements and location of supplements (salt or protein blocks) to make sure they conserve, enhance or restore Greater Sage-Grouse habitat.</p> <p>GHMA: —.</p>	<p>C-LG/RM-35: PHMA: —.</p>	<p>D-LG/RM-35: PHMA: During project inspections, evaluate the design and location of existing structural range improvements with respect to their effect on Greater Sage-Grouse habitat, including, but not limited to:</p> <ul style="list-style-type: none"> • Potential for Greater Sage-Grouse collisions with infrastructure. • Avian predation due to creation of roosting, perching or nesting sites. • Introduction of weeds, West Nile Virus and effects on vegetation structure or composition. • Assess existing livestock management fences within PHMA for risk of Greater Sage-Grouse collisions based on proximity to leks, 	<p>E-LG/RM-35: Idaho – CHZ: Place salt or mineral supplements to improve management of livestock in existing disturbed sites (areas with reduced sagebrush cover—e.g., seedings or cheatgrass sites) to reduce impacts on Greater Sage-Grouse breeding habitat.</p> <p>Idaho – IHZ: Same as Idaho – CHZ.</p> <p>Idaho – GHZ: —.</p> <p>Utah Habitat: —.</p>	<p>F-LG/RM-35: PHMA: Same as Alternative B.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
(see above)	(see above)	(see above)	<p>lek size, and topography (Christiansen 2009; Stevens 2011) or existing collision risk models (Stevens et al. 2012).</p> <ul style="list-style-type: none">• Prioritize fence removal, modification or marking in areas of high collision risk to reduce the incidence of Greater Sage-Grouse mortality due to fence strikes (Stevens et al. 2012).• Avoid building new permanent fences within 2 km of occupied leks or high density fence areas (Stevens 2011). If this is not feasible, ensure that high risk segments are marked with collision diverter devices or as latest science indicates.• Utilize temporary fencing (e.g., ESR, drop down fencing) where applicable and appropriate to meet management objectives. <p>Evaluate the locations where salt/supplements are placed. In coordination with the permittee, have salt/supplements moved to areas which would conserve or improve habitat for Greater Sage-Grouse.</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: During project inspections, evaluate the design and location of existing structural range improvements and location of supplements (salt or protein blocks) with respect to their effect on Greater Sage-Grouse habitat, including, but not limited to:</p> <ul style="list-style-type: none">• Potential for Greater Sage-Grouse collisions.• Avian predation due to creation of roosting, perching or nesting sites.• Introduction of weeds, West Nile Virus and effects on vegetation structure or composition.• Avoid building new fences within 2 km of occupied leks or winter concentration areas. If this is not feasible, ensure that high risk segments are marked with collision diverter devices or as latest science indicates.	(see above)	(see above)

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LG/RM-36: —.	B-LG/RM-36: PHMA: To reduce outright Greater Sage-Grouse strikes and mortality, remove, modify or mark fences in high risk areas within PHMA based on proximity to lek, lek size, and topography (Christiansen 2009, Stevens 2011). GHMA: —.	C-LG/RM-36: PHMA: —.	D-LG/RM-36: PHMA: Design and locate fences to minimize the potential for Greater Sage-Grouse strikes. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-LG/RM-36: Idaho – CHZ: Mark fences on flat to gently rolling terrain in areas of moderate to high fence densities (i.e., more than one kilometer of fence per square kilometer) located within two kilometers of occupied leks with permanent flagging or other suitable device to reduce Greater Sage-Grouse collisions. Idaho – IHZ: Same as CHZ. Idaho – GHZ: —. Utah Habitat: Fences should not be located on or adjacent to leks where bird collisions would be expected to occur. Employ NRCS fence collision risk tool (NRCS 2012).	F-LG/RM-36: PHMA: To reduce outright Greater Sage-Grouse strikes and mortality, remove, modify or mark fences in high risk areas of moderate or high risk of Greater Sage-Grouse strikes within PHMA based on proximity to lek, lek size, and topography (Christiansen 2009; Stevens 2011). GHMA: —. RHMA: —.
A-LG/RM-37: —.	B-LG/RM-37: PHMA: —. GHMA: —.	C-LG/RM-37: PHMA: —.	D-LG/RM-37: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-37: Idaho – CHZ: Avoid constructing new fences within 2 km of occupied leks. Place new, taller structures, such as corrals, loading facilities, water-storage tanks, windmills, etc., at least 2 km from occupied leks to reduce opportunities for perching raptors based on careful consideration of local conditions near other important seasonal habitats (winter-use areas, movement corridors etc.) to reduce potential impacts. Idaho – IHZ: Same as CHZ. Idaho – GHZ: —. Utah Habitat: —.	F-LG/RM-37: PHMA: —. GHMA: —. RHMA: —.
A-LG/RM-38: —.	B-LG/RM-38: PHMA: —. GHMA: —.	C-LG/RM-38: PHMA: —.	D-LG/RM-38: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-38: Idaho – CHZ: Reduce the impacts of fences and livestock management facilities on Greater Sage-Grouse, to the extent practicable. Idaho – IHZ: Same as CHZ. Idaho – GHZ: —. Utah Habitat: —.	F-LG/RM-38: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LG/RM-39: —.	B-LG/RM-39: PHMA: —. GHMA: —.	C-LG/RM-39: PHMA: —.	D-LG/RM-39: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-39: Idaho – CHZ: Remove unnecessary fences. Idaho – IHZ: Same as CHZ. Idaho – GHZ: Same as CHZ. Utah Habitat: —.	F-LG/RM-39: PHMA: —. GHMA: —. RHMA: —.
A-LG/RM-40: —.	B-LG/RM-40: PHMA: —. GHMA: —.	C-LG/RM-40: PHMA: —.	D-LG/RM-40: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-40: Idaho – CHZ: Consider impacts on Greater Sage-Grouse when placing new fences and livestock management facilities, including corrals, loading facilities, water tanks and windmills. Idaho – IHZ: Same as CHZ. Idaho – GHZ: —. Utah Habitat: —.	F-LG/RM-40: PHMA: —. GHMA: —. RHMA: —.
A-LG/RM-41: —.	B-LG/RM-41: PHMA: —. GHMA: —.	C-LG/RM-41: PHMA: —.	D-LG/RM-41: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-41: Idaho – CHZ: Construct new fences further than one kilometer (0.6 miles) from occupied leks. Idaho – IHZ: Same as CHZ. Idaho – GHZ: —. Utah Habitat: —.	F-LG/RM-41: PHMA: —. GHMA: —. RHMA: —.
A-LG/RM-42: —.	B-LG/RM-42: PHMA: —. GHMA: —.	C-LG/RM-42: PHMA: —.	D-LG/RM-42: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-42: Idaho – CHZ: Place new, taller structures, including corrals, loading facilities, water storage tanks, windmills, at least one kilometer from occupied leks, to the extent practicable. Idaho – IHZ: Same as CHZ. Idaho – GHZ: —. Utah Habitat: —.	F-LG/RM-42: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Water Development					
A-LG/RM-43: Consider authorization of new water developments on a case-by-case basis taking into consideration impacts on other resources and resource values.	B-LG/RM-43: PHMA: Authorize new water development for diversion from spring or seep source only when PHMA would benefit from the development. This includes developing new water sources for livestock as part of an AMP/conservation plan to improve Greater Sage-Grouse habitat. GHMA: Same as PHMA.	C-LG/RM-43: PHMA: —.	D-LG/RM-43: PHMA: Limit authorization of new water developments to projects that would benefit, maintain, or have a neutral effect on PHMA (such as by shifting livestock use away from critical areas). New developments that divert surface water must be designed to maintain integrity and functionality riparian or wetland vegetation and hydrology. New developments should also be sited in lower quality habitats or, disturbed areas where possible, and avoid areas that have not had significant prior grazing use (Adopted from Idaho State Plan page 4.64, Appendix Q [of the 2015 Final EIS]). Ensure that troughs are fitted with wildlife escape ramps to facilitate use of and escape by animals, including Greater Sage-Grouse. IHMA: Same as PHMA. GHMA: New water developments that divert surface water must be designed to maintain integrity and functionality of riparian or wetland vegetation and hydrology. New developments should also be sited in lower quality habitats or disturbed areas where possible (Adopted from Idaho State Plan page 4.64, Appendix Q [of the 2015 Final EIS]). Ensure that troughs are fitted with wildlife escape ramps to facilitate use of and escape by animals, including Greater Sage-Grouse.	E-LG/RM-43: Idaho – CHZ: Place and design new water developments in Greater Sage-Grouse breeding habitat that provide the greatest enhancement for Greater Sage-Grouse and Greater Sage-Grouse habitat. Idaho – IHZ: Same as CHZ. Idaho – GHZ: —. Utah Habitat: Design water developments to enhance mesic habitat for use by Greater Sage-Grouse and maintain adequate vegetation in wet meadows. Within PHMA, Greater Sage-Grouse stipulations should take precedence over stipulations for other species if conflicts occur, if otherwise allowable by law.	F-LG/RM-43: PHMA: Authorize no new water developments for diversion from spring or seep sources only when within PHMA would benefit from the development. This includes developing new water sources for livestock as part of an AMP/conservation plan to improve Greater Sage-Grouse habitat. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
<p>A-LG/RM-44: Consider modifications to existing water developments on a case-by-case basis taking into consideration impacts on other resources.</p>	<p>B-LG/RM-44: PHMA: Analyze springs, seeps and associated pipelines to determine if modifications are necessary to maintain the continuity of the predevelopment riparian area within PHMA. Make modifications where necessary, considering impacts on other water uses when such considerations are neutral or beneficial to Greater Sage-Grouse.</p> <p>GHMA: —.</p>	<p>C-LG/RM-44: PHMA: —.</p>	<p>D-LG/RM-44: PHMA: During project inspections, evaluate the design and condition of existing water developments (headboxes, exclosures, pipelines, ponds, and troughs) at springs, wetlands, or playas to determine if modification, repair or retrofitting or removal is needed to maintain or restore the integrity and functionality of the riparian/lentic areas to current site potential within priority Greater Sage-Grouse habitat. Modifications may include, but are not limited to:</p> <ul style="list-style-type: none"> • Installing float valves on troughs • Reconfiguring exclosure fencing • Moving troughs out of riparian/lentic areas • Modifying the slope at the edge of ponds to reduce mosquito breeding habitat and West Nile virus. <p>Ensure that troughs are fitted with functional wildlife escape ramps to facilitate use of and escape by animals, including Greater Sage-Grouse.</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: Same as PHMA.</p>	<p>E-LG/RM-44: Idaho – Common to All Habitat: —.</p> <p>Utah Habitat: —.</p>	<p>F-LG/RM-44: PHMA: Analyze springs, seeps and associated water developments pipelines to determine if modifications are necessary to maintain the continuity of the predevelopment riparian area within PHMA. Make modifications where necessary, including dismantling water developments considering impacts on other water uses when such considerations are neutral or beneficial to Greater Sage-Grouse.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>
<p>A-LG/RM-45: Manage, maintain, protect, and restore riparian and wetland areas to PFC.</p>	<p>B-LG/RM-45: PHMA: —.</p> <p>GHMA: —.</p>	<p>C-LG/RM-45: PHMA: —.</p>	<p>D-LG/RM-45: PHMA: —.</p> <p>IHMA: —.</p> <p>GHMA: —.</p>	<p>E-LG/RM-45: Idaho – CHZ: Design new spring developments in Greater Sage-Grouse habitat to maintain or enhance the free-flowing characteristics of springs and wet meadows. Modify developed springs, seeps and associated pipelines to maintain the continuity of the predevelopment riparian area within priority Greater Sage-Grouse habitat where necessary.</p> <p>Idaho – IHZ: Same as CHZ.</p> <p>Idaho – GHZ: —.</p> <p>Utah Habitat: —.</p>	<p>F-LG/RM-45: PHMA: —.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LG/RM-46: —.	B-LG/RM-46: PHMA: —. GHMA: —.	C-LG/RM-46: PHMA: —.	D-LG/RM-46: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-46: Idaho – CHZ: Install ramps in new and existing livestock troughs and open water storage tanks to facilitate the use of and escape from troughs by Greater Sage-Grouse and other wildlife. Idaho – IHZ: Same as Idaho - CHZ. Idaho – GHZ: —. Utah Habitat: —.	F-LG/RM-46: PHMA: —. GHMA: —. RHMA: —.
A-LG/RM-47: —.	B-LG/RM-47: PHMA: —. GHMA: —.	C-LG/RM-47: PHMA: —.	D-LG/RM-47: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-47: Idaho – CHZ: Avoid installation of new water developments in higher quality native breeding/early brood habitats that have not had significant prior grazing use except in situations in which water developments may aid in better livestock distribution across the allotment and will not adversely impact the species. Idaho – IHZ: Same as CHZ. Idaho – GHZ: —. Utah Habitat: —.	F-LG/RM-47: PHMA: —. GHMA: —. RHMA: —.
West Nile Virus					
A-LG/RM-48: —.	B-LG/RM-48: PHMA: When developing or modifying water developments in PHMA, use applicable best management practices (BMPs, see Appendix B [of the 2015 Final EIS]) to mitigate potential impacts from West Nile virus (Clark et al. 2006; Doherty 2007; Walker et al. 2007; Walker and Naugle 2011). GHMA: —.	C-LG/RM-48: PHMA: —.	D-LG/RM-48: PHMA: When developing or modifying water developments in PHMA, use BMPs (Appendix B [of the 2015 Final EIS]) to mitigate potential impacts from West Nile virus (Clark et al. 2006, Doherty 2007, Walker et al. 2007, Walker and Naugle 2011). IHMA: Same as PHMA. GHMA: Same as PHMA.	E-LG/RM-48: Idaho – Common to All Habitat: —. Utah Habitat: —.	F-LG/RM-48: PHMA: Same as Alternative B. GHMA: —. RHMA: —.
A-LG/RM-49: —.	B-LG/RM-49: PHMA: —. GHMA: —.	C-LG/RM-49: PHMA: —.	D-LG/RM-49: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-49: Idaho – CHZ: Return water to the original water source, to the extent practicable, to reduce suitable habitat for mosquitoes. Idaho – IHZ: Same as CHZ. Idaho – GHZ: —. Utah Habitat: —.	F-LG/RM-49: PHMA: No action. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LG/RM-50: —.	B-LG/RM-50: PHMA: —. GHMA: —.	C-LG/RM-50: PHMA: —.	D-LG/RM-50: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-50: Idaho – CHZ: Minimize creation of breeding habitat for mosquitoes in Greater Sage-Grouse habitat to reduce the risk of transmission of West Nile virus to Greater Sage-Grouse. Idaho – IHZ: Same as CHZ. Idaho – GHZ: Same as CHZ. Utah Habitat: —.	F-LG/RM-50: PHMA: —. GHMA: —. RHMA: —.
A-LG/RM-51: —.	B-LG/RM-51: PHMA: —. GHMA: —.	C-LG/RM-51: PHMA: —.	D-LG/RM-51: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-51: Idaho – CHZ: Permit and design new ponds or reservoirs to reduce the potential impacts of West Nile Virus transmission. Idaho – IHZ: Same as CHZ. Idaho – GHZ: Same as CHZ. Utah Habitat: —.	F-LG/RM-51: PHMA: —. GHMA: —. RHMA: —.
A-LG/RM-52: —.	B-LG/RM-52: PHMA: —. GHMA: —.	C-LG/RM-52: PHMA: —.	D-LG/RM-52: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-52: Idaho – CHZ: Minimize the construction of new ponds or reservoirs except as needed to meet important resource management and/or restoration objectives. Idaho – IHZ: Same as CHZ. Idaho – GHZ: —. Utah Habitat: —.	F-LG/RM-52: PHMA: —. GHMA: —. RHMA: —.
A-LG/RM-53: —.	B-LG/RM-53: PHMA: —. GHMA: —.	C-LG/RM-53: PHMA: —.	D-LG/RM-53: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-53: Idaho – CHZ: Develop and maintain non-pond/reservoir watering facilities, such as troughs and bottomless tanks, to provide high quality water that minimizes the development of habitat for mosquitoes. Idaho – IHZ: Same as CHZ. Idaho – GHZ: Same as CHZ. Utah Habitat: —.	F-LG/RM-53: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LG/RM-54: —.	B-LG/RM-54: PHMA: —. GHMA: —.	C-LG/RM-54: PHMA: —.	D-LG/RM-54: PHMA: —. IHMA: —. GHMA: —.	E-LG/RM-54: Idaho – CHZ: Construct water return features and maintain functioning float valves to prohibit water from being spilled on the ground surrounding the trough and/or tank. Idaho – IHZ: Same as CHZ. Idaho – GHZ: —. Utah Habitat: —.	F-LG/RM-54: PHMA: —. GHMA: —. RHMA: —.
Recreation and Visitor Services					
A-RC-1: Consider BLM SRPs and Forest Service Recreation SUAs on a case-by-case basis. Consider measures that will minimize impacts on important resources or resource values. Montana BLM: Authorize SRPs in accordance with SRPH 2930-I. No acres are excluded from SRPs (Pg. 54 ROD/RMP).	B-RC-1: PHMA: Only allow BLM SRPs and Forest Service Recreation SUAs in PHMA that have neutral or beneficial effects on PHMA. GHMA: —.	C-RC-1: PHMA: Same as Alternative A.	D-RC-1: PHMA: SRPs and Forest Service Recreation SUAs would be analyzed on a case-by-case basis per BLM Special Recreation Permit Manual 2930, FSH 2709.11 and through the NEPA process to minimize impacts on Greater Sage-Grouse and/or habitat by directing use away from sensitive seasons and/or areas. Coordinate issuance of recreation permits with IDFG and Idaho Outfitter and Guide licensing board when relevant and appropriate. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-RC-1: Idaho – Common to All Habitats: —. Montana Habitat: Same as Alternative A. Utah Habitat: Limit or ameliorate impacts from recreation activities through the use of the general stipulations identified in the Greater Sage-Grouse section.	F-RC-1: PHMA: Same as Alternative B. GHMA: —. RHMA: —.
A-RC-2: —.	B-RC-2: PHMA: —. GHMA: —.	C-RC-2: PHMA: Action: Same as Alternative A.	D-RC-2: PHMA: Designate or design developed recreation sites and associated facilities to direct use away from sensitive areas and provide sustainable recreational opportunities. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-RC-2: Idaho – Common to All Habitat: —. Utah Habitat: —.	F-RC-2: PHMA: Seasonally prohibit camping and other non-motorized recreation within 4 miles of active Greater Sage-Grouse leks. GHMA: —. RHMA: —.
A-RC-3: —.	B-RC-3: PHMA: —. GHMA: —.	C-RC-3: PHMA: —.	D-RC-3: PHMA: Incorporate seasonal restrictions for authorized activities to minimize impacts on Greater Sage-Grouse and/or their habitat. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-RC-3: Idaho – Common to All Habitat: —. Utah Habitat: —.	F-RC-3: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-RC-4: —.	B-RC-4: PHMA: —. GHMA: —.	C-RC-4: PHMA: —.	D-RC-4: PHMA: Recreation activities and developed recreation sites and facilities within lands not designated as a recreation management area would be managed and designed to minimize adverse effects on Greater Sage-Grouse by directing use away from sensitive areas. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-RC-4: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-RC-4: PHMA: —. GHMA: —. RHMA: —.
Travel Management					
<p>A-TM-1: OHV use will be managed as open, closed, or limited to existing roads, primitive roads, and trails as identified in Table 2-9.</p> <p>Montana BLM: All OHV travel is restricted to designated routes. There are 920 miles of designated routes in PPH and 400 miles in PGH. No off-road travel allowed by the public.</p> <p>Forest Service-administered lands: Travel planning is complete and all National Forest System lands with a designated route system are considered the same as the limited designation on BLM-administered lands.</p>	<p>B-TM-1: PHMA: Limit OHV travel to existing roads, primitive roads, and trails at a minimum, until such time as travel management planning is complete and routes are either designated or closed (see Table 2-9).</p> <p>Same as Alternative A for National Forest System lands.</p> <p>GHMA: Same as Alternative A.</p>	<p>C-TM-1: PHMA: Same as Alternative B (see Table 2-9).</p> <p>Same as Alternative A for National Forest System lands.</p>	<p>D-TM-1: PHMA: Limit OHV travel to existing roads, primitive roads, and trails at a minimum until such time as travel management planning is complete and routes are either designated or closed. Existing designated OHV open “play” areas would remain open (see Table 2-9).</p> <p>Same as Alternative A for National Forest System lands.</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: Same as PHMA.</p>	<p>E-TM-1: Idaho – Common to All Habitats: Same as Alternative B (see Table 2-9).</p> <p>Same as Alternative A for National Forest System lands.</p> <p>Montana Habitat: Same as Alternative A.</p> <p>Utah Habitat: PHMA with nesting and winter habitat that do not have designated routes in a Travel Management Plan would be managed at least as limited to existing roads and trails (i.e., could maintain existing OHV closures) until a Travel Management Plan designates routes. PHMA with nesting and winter habitat that have undergone Travel Management Planning with route designation would be managed at least as limited to designated routes (i.e., could maintain existing OHV closures). In these areas, existing route designations would be reviewed and adjusted where impacts on Greater Sage-Grouse from route presence or use may exist.</p>	<p>F-TM-1: PHMA: Same as Alternative B (see Table 2-9).</p> <p>Same as Alternative A for National Forest System lands.</p> <p>GHMA: Same as PHMA.</p> <p>RHMA: Same as Alternative A.</p>
A-TM-2: All LUPs include management actions that encourage the administering agency to follow best management practices that reduce or minimize the impacts of development, including use of existing roads where possible.	B-TM-2: PHMA: —. GHMA: —.	C-TM-2: PHMA: Same as Alternative B.	D-TM-2: PHMA: —. IHMA: —. GHMA: —.	E-TM-2: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-TM-2: PHMA: During travel management planning, prohibit new road construction within 4 miles of active Greater Sage-Grouse leks, and avoid new road construction in PHMA. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-TM-3: —. Under current policy, the need for permanent or seasonal road closures is evaluated during travel management planning.	B-TM-3: PHMA: Travel management should evaluate the need for permanent or seasonal road closures. GHMA: —.	C-TM-3: PHMA: Same as Alternative B.	D-TM-3: PHMA: Travel management planning would evaluate the need for permanent or seasonal road closures as per Travel Management Handbook 8342.1. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-TM-3: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-TM-3: PHMA: Same as Alternative B. GHMA: —. RHMA: —.
A-TM-4: Consider route and trail modifications (new or existing) on a case-by-case basis. Identify travel management areas and prioritize travel management planning in areas where it would provide the most resource benefit.	B-TM-4: PHMA: Complete activity level travel plans within five years of the ROD. During activity level planning, where appropriate, designate routes in PHMA with current administrative/agency purpose or need to administrative access only. GHMA: —.	C-TM-4: PHMA: Same as Alternative B.	D-TM-4: PHMA: Prioritize areas for complete transportation management plans as per Travel Management Handbook 8342.1. IHMA: Complete Transportation management plans as per Travel Management Handbook 8342.1. GHMA: Same as PHMA.	E-TM-4: Idaho – Common to All Habitats: —. Utah Habitat: Counties should adopt and enforce travel management plans that include consideration for greater Greater Sage-Grouse.	F-TM-4: PHMA: Same as Alternative B. GHMA: —. RHMA: —.
A-TM-5: Consider route and trail modifications (new or existing) on a case-by-case basis using the designation criteria.	B-TM-5: PHMA: Limit route construction to realignments of existing designated routes if that realignment has a minimal impact on Greater Sage-Grouse habitat, eliminates the need to construct a new road, or is necessary for motorist safety. GHMA: —.	C-TM-5: PHMA: Same as Alternative B.	D-TM-5: PHMA: Consider Greater Sage-Grouse objectives during subsequent travel management planning. Design and designate a travel system to minimize adverse effects on Greater Sage-Grouse (i.e., designate or design routes to direct use away from sensitive areas and still provide for high-quality and sustainable travel routes and administrative access, legislatively mandated requirements, and commercial needs). Allow for route upgrade, closure of existing routes, and creation of new routes to help protect habitat and meet user group needs, thereby reducing the potential for pioneering unauthorized routes. The emphasis of the comprehensive travel and transportation planning within PHMA would be placed on having a neutral or positive effect on Greater Sage-Grouse habitat. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-TM-5: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-TM-5: PHMA: Limit route construction to realignments of existing designated routes if that realignment has a minimal impact on Greater Sage-Grouse habitat, eliminates the need to construct a new road, or is necessary for motorist safety. Mitigate any impacts with methods that have been demonstrated to be effective to offset the loss of Greater Sage-Grouse habitat. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-TM-6: All LUPs include management actions that encourage the administering agency to follow best management practices that reduce or minimize the impacts of development, including use of existing roads where possible.	B-TM-6: PHMA: Use existing roads or realignments as described above to access valid existing rights that are not yet developed. If valid existing rights cannot be accessed via existing roads, then build any new road constructed to the absolute minimum standard necessary, and add the surface disturbance to the total disturbance in PHMA. If that disturbance exceeds 3 % for that area, then evaluate and implement additional, effective mitigation necessary to offset the resulting loss of Greater Sage-Grouse habitat (see Objectives, Table 2-10). GHMA: —.	C-TM-6: PHMA: Same as Alternative B.	D-TM-6: PHMA: —. IHMA: —. GHMA: —.	E-TM-6: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-TM-6: PHMA: Same as Alternative B using a 4-mile buffer from leks to determine road route. GHMA: —. RHMA: —.
A-TM-7: —. The need for restoration of linear disturbances (unauthorized routes) is identified during the implementation level travel management process or on a case-by-case basis.	B-TM-7: PHMA: Conduct restoration of roads, primitive roads and trails not designated in travel management plans. This also includes primitive route/roads that were not designated in Wilderness Study Areas and within lands with wilderness characteristics that have been selected for protection in previous LUPs. GHMA: —.	C-TM-7: PHMA: Same as Alternative B.	D-TM-7: PHMA: During subsequent travel management planning, prioritize restoration of linear disturbances (those routes not designated in a Travel Management Plan) in PHMA. IHMA: During subsequent travel management planning, prioritize restoration of linear disturbances (those routes not designated in a Travel Management Plan) after PHMA. GHMA: During subsequent travel management planning, prioritize restoration of linear disturbances (those routes not designated in a Travel Management Plan) after IHMA.	E-TM-7: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-TM-7: PHMA: Same as Alternative B. GHMA: —. RHMA: —.
A-TM-8: —.	B-TM-8: PHMA: When reseeding roads, primitive roads and trails in PHMA, use appropriate seed mixes and consider the use of transplanted sagebrush. GHMA: —.	C-TM-8: PHMA: Same as Alternative B.	D-TM-8: PHMA: During subsequent travel management planning, consider using seed mixes or transplant techniques that will maintain or enhance Greater Sage-Grouse habitat when rehabilitating linear disturbances. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-TM-8: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-TM-8: PHMA: When reseeding closed roads, primitive roads and trails, use appropriate native seed mixes and require consider the use of transplanted sagebrush. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-TM-9: —.	B-TM-9: PHMA: —. GHMA: —.	C-TM-9: PHMA: —.	D-TM-9: PHMA: During subsequent travel management planning, schedule road maintenance to avoid disturbance during sensitive periods and times to the extent practicable. Use time of day limits (After 10:00 AM to 7:00 PM) to reduce impacts on Greater Sage-Grouse during breeding and nesting. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-TM-9: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-TM-9: PHMA: No action. GHMA: —. RHMA: —.
A-TM-10: —.	B-TM-10: PHMA: —. GHMA: —.	C-TM-10: PHMA: —.	D-TM-10: PHMA: During subsequent travel management planning, limit snow machine travel to existing routes in Greater Sage-Grouse wintering areas from November 1 through March 31. Assess routes during subsequent travel management planning. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-TM-10: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-TM-10: PHMA: —. GHMA: —. RHMA: —.
A-TM-11: —.	B-TM-11: PHMA: —. GHMA: —.	C-TM-11: PHMA: —.	D-TM-11: PHMA: —. IHMA: —. GHMA: —.	E-TM-11: Idaho – Common to All Habitats: —. Utah Habitat: Develop an educational process to advise OHV users of the potential for conflict with Greater Sage-Grouse.	F-TM-11: PHMA: —. GHMA: —. RHMA: —.
Lands and Realty					
Wind and Solar Energy					
A-LR-1: ROW grants are issued for wind and solar energy development on a case-by-case basis.	B-LR-1: PHMA: —. GHMA: —.	C-LR-1: PHMA: —.	D-LR-1: PHMA: Solar and wind energy development is not allowed. IHMA: Wind and solar energy development would be restricted where adverse effects could not be mitigated. Ancillary facilities such as roads, electric lines, etc. could potentially be authorized provided there is no net loss of Greater Sage-Grouse habitat through mitigation. GHMA: Lands shall be considered avoidance areas for wind and solar development.	E-LR-1: Idaho – Common to All Habitats: See Action E-LR-3. Utah Habitat: —.	F-LR-1: PHMA: Do not site wind energy development in PHMA (Jones 2012). GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LR-2: —.	B-LR-2: PHMA: —. GHMA: —.	C-LR-2: PHMA: —.	D-LR-2: PHMA: —. IHMA: —. GHMA: —.	E-LR-2: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-LR-2: PHMA: Site wind energy development at least five miles from active Greater Sage-Grouse leks. GHMA: —. RHMA: —.
Rights-of-way					
<p>A-LR-3: Continue to manage existing ROW avoidance and exclusion areas (see Table 2-9).</p> <p>Montana BLM: Manage designated ROW avoidance areas on 123,300 acres and ROW exclusion areas on 6,470 acres</p>	<p>B-LR-3: PHMA: Make PHMA an exclusion area for new BLM ROW or Forest Service SUA permits (see Table 2-9). Consider the following exceptions:</p> <ul style="list-style-type: none"> Within designated ROW or SUA corridors encumbered by existing ROW or SUA authorizations: new ROWs or SUAs may be co-located only if the entire footprint of the proposed project (including construction and staging), can be completed within the existing disturbance associated with the authorized ROWs or SUAs. Subject to valid existing rights: where new ROWs or SUAs associated with valid existing rights are required, co-locate new ROWs or SUAs within existing ROWs or SUAs or where it best minimizes Greater Sage-Grouse impacts. Use existing roads, or realignments as described above, to access valid existing rights that are not yet developed. If valid existing rights cannot be accessed via existing roads, then build any new road constructed to the absolute minimum standard necessary, and add the surface disturbance to the total disturbance in PHMA. If that disturbance exceeds 3% for that area, then evaluate and implement additional effective mitigation on a case-by-case basis to offset the resulting loss of Greater Sage-Grouse habitat. <p>GHMA: Make GHMA an avoidance area for new ROWs or SUAs.</p>	<p>C-LR-3: PHMA: New corridors/facilities will be sited in non-habitat and bundled with existing corridors to the maximum extent possible (see Table 2-9).</p>	<p>D-LR-3: PHMA: Designate PHMA as ROW Avoidance areas and exclusion areas for wind and solar development (see Table 2-9). New authorizations for the following uses are not allowed: Transmission facilities (greater than 50kV in size), wind energy testing and development, commercial solar development, nuclear development, airports, and ancillary facilities associated with any of the aforementioned development; paved roads and graded gravel roads, landfills, airports, and hydroelectric projects. Communication sites would be allowed.</p> <p>IHMA: Designate IHMA as ROW Avoidance areas. Access roads or loop roads would be addressed during the ROW authorization processing and on a case-by-case basis.</p> <p>GHMA: Same as IHMA.</p>	<p>E-LR-3: Idaho – CHZ: Designate CHZ as ROW avoidance areas with limited exceptions permissible and subject to BMPs. Compensatory mitigation would be required (see Table 2-9).</p> <p>Idaho – IHZ: Designate IHZ as ROW avoidance areas. New ROWs and infrastructure are permissible subject to certain criteria and BMPs similar to those required for habitat in Utah. Mitigate unavoidable impacts.</p> <p>Idaho – GHZ: Manage new ROWs consistent with local resource management plans.</p> <p>There are no special conservation measures for Greater Sage-Grouse in addition to those measures contained within existing land use plans regarding infrastructure development within GHZ.</p> <p>Montana Habitat: Same as Alternative A.</p> <p>Utah Habitat: Management stipulations and conditions should focus on mitigating direct disturbance during construction for all ROWs in PHMA. Should new research demonstrate indirect impacts on Greater Sage-Grouse production, additional mitigation measures may be required. PHMA would be designated as an avoidance area for new ROWs.</p> <p>Limit or ameliorate impacts from ROW location, including from wind and solar energy development, through the use of the general stipulations identified in the Greater Sage-Grouse section, as well as</p>	<p>F-LR-3: PHMA: PHMA shall be an exclusion area for new ROWs permits (see Table 2-9). Consider the following exceptions:</p> <ul style="list-style-type: none"> Within designated ROW corridors encumbered by existing ROW authorizations: new ROWs may be co-located only if the entire footprint of the proposed project (including construction and staging), can be completed within the existing disturbance associated with the authorized ROWs. Subject to valid existing rights: where new ROWs associated with valid existing rights are required, co-locate new ROWs within existing ROWs or where it best minimizes Greater Sage-Grouse impacts. Use existing roads, or realignments as described above, to access valid existing rights that are not yet developed. If valid existing rights cannot be accessed via existing roads, then build any new road constructed to the absolute minimum standard necessary, and add the surface disturbance to the total disturbance in PHMA. If that disturbance exceeds 3% for that area, then make additional effective mitigation necessary that has been demonstrated to be effective to offset the resulting loss of Greater Sage-Grouse habitat. <p>GHMA: Same as Alternative A.</p> <p>RHMA: Same as Alternative A.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
(see above)	(see above)	(see above)	(see above)	<p>best management practices accepted by industry and state and federal agencies.</p> <p>For electrical transmission lines, and where feasible and consistent with federally required electrical separation standards, site new linear transmission features in existing corridors, or at a minimum, in concert with existing linear features in Greater Sage-Grouse habitat. Siting linear features accordingly shall be deemed to be mitigation for the siting of that linear feature. Mitigation for the direct effects of construction is still required. PHMA would be available for wind energy development, though it would be designated as an avoidance area for wind energy development.</p>	(see above)
A-LR-4: The presence of sensitive resources, such as sagebrush habitat, is typically examined before a ROW grant is issued.	B-LR-4: PHMA: —. GHMA: —.	C-LR-4: PHMA: ROWs will be amended to require features that enhance Greater Sage-Grouse habitat security.	D-LR-4: PHMA: —. IHMA: —. GHMA: —.	E-LR-4: Idaho – CHZ: Maintain and improve Greater Sage-Grouse populations within CHZ, while allowing, and mitigating, for new and limited infrastructure development identified by the Implementation Commission as high value and where the proposed action can meet certain criteria. Idaho – IHZ: Infrastructure is generally permissible, but requires analysis of whether it can be reasonably accomplished outside IHZ. Idaho – GHZ: —. Utah Habitat: —.	F-LR-4: PHMA: —. GHMA: —. RHMA: —.
A-LR-5: —.	B-LR-5: PHMA: —. GHMA: —.	C-LR-5: PHMA: —.	D-LR-5: PHMA: New ROW and land use authorizations, unless otherwise excluded, would be avoided whenever possible. Any new ROW and land use authorizations would not result in a net loss of Greater Sage-Grouse habitat of the respective PHMA. IHMA: Same as PHMA. GHMA: New ROW and land use authorizations would be avoided whenever possible.	E-LR-5: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-LR-5: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LR-6: —.	B-LR-6: PHMA: —. GHMA: —.	C-LR-6: PHMA: —.	D-LR-6: PHMA: New authorizations and amendments to existing ROW and land use authorizations would be subject to siting prescriptions and design features considered on a case-by-case basis, in subsequent NEPA analysis. This could include amendments to the types of uses that are excluded from consideration as new authorizations. For example upgrade of an existing 50-kV power line to a 115-kV power line, to eliminate the need for an additional line could be considered. IHMA: New authorizations and amendments to existing ROW and land use authorizations would be considered subject to siting prescriptions and design features considered on a case-by-case basis, in subsequent NEPA analysis. GHMA: Same as IHMA.	E-LR-6: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-LR-6: PHMA: —. GHMA: —. RHMA: —.
A-LR-7: —.	B-LR-7: PHMA: —. GHMA: Where new ROWs or SUAs are necessary in GHMA, co-locate new ROWs or SUAs within existing ROWs or SUAs where possible.	C-LR-7: PHMA: —.	D-LR-7: PHMA: New authorizations or amendments to existing ROW and land use authorizations should be sited substantially within an existing disturbance or minimum necessary adjacent to the existing footprint, where feasible. IHMA: New authorizations or amendments to existing ROW and land use authorizations should be sited substantially within the existing disturbance footprints where feasible. GHMA: Same as IHMA.	E-LR-7: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-LR-7: PHMA: —. GHMA: —. RHMA: —.
A-LR-8: —.	B-LR-8: PHMA: —. GHMA: —.	C-LR-8: PHMA: —.	D-LR-8: PHMA: When reauthorizing transmission or authorizing and/or reauthorizing distribution lines, incorporate RDFs into the authorization. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-LR-8: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-LR-8: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LR-9: —.	B-LR-9: PHMA: —. GHMA: —.	C-LR-9: PHMA: —.	D-LR-9: PHMA: Site new authorizations or facilities, not otherwise excluded, outside the 3 km (1.86 miles) occupied lek avoidance buffer areas unless NEPA analysis suggests that a greater or lesser distance is required, based on topographic features or other mitigating factors. If new distribution lines (50 kV or less) cannot be sited outside the 3 km buffer, they should be buried or designed to minimize use by avian predators. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-LR-9: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-LR-9: PHMA: —. GHMA: —. RHMA: —.
A-LR-10: —.	B-LR-10: PHMA: Evaluate and take advantage of opportunities to remove, bury, or modify existing power lines within PHMA. GHMA: —.	C-LR-10: PHMA: Same as Alternative B.	D-LR-10: PHMA: New power and communication lines (50 kV or less), outside of existing ROWs, would be buried, where physically feasible, and associated above-ground disturbance areas would be seeded with perennial vegetation as per vegetation management. IHMA: Same as PHMA. GHMA: Same as IHMA.	E-LR-10: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-LR-10: PHMA: Same as Alternative B. GHMA: —. RHMA: —.
A-LR-11: All LUPs include management actions that require reclamation/restoration of disturbed areas that are no longer used in support of authorized actions.	B-LR-11: PHMA: Where existing leases or ROWs or SUAs have had some level of development (road, fence, well, etc.) and are no longer in use, reclaim the site by removing these features and restoring the habitat. GHMA: —.	C-LR-11: PHMA: Same as Alternative B.	D-LR-11: PHMA: —. IHMA: —. GHMA: —.	E-LR-11: Idaho – CHZ: Prohibit the development of infrastructure, except if developed pursuant to valid existing rights or incremental upgrade and/or capacity increase of existing development (authorized prior to the ROD) subject to best management practices in Appendix Q [of the 2015 Final EIS]. a. Limit impacts of proposed actions to the existing authorized footprint with no more than a fifty percent (50%), depending on industry practice, increase in footprint size and associated impacts; and b. Include compensatory mitigation if new significant and unavoidable impacts are demonstrated to be associated with the project. c. Any exceptions to ROW development in CHZ would conform to the standards set forth for IHZ within the same CA.	F-LR-11: PHMA: Same as Alternative B. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
(see above)	(see above)	(see above)	(see above)	<p>Idaho – IHZ: Authorize new infrastructure development where the following circumstances exist.</p> <p>a. The project cannot reasonably be achieved, technically or economically, outside of this management zone; and</p> <p>b. The project is co-located within the footprint for existing infrastructure, to the extent practicable. In the event co-location is not practicable, the siting should best reduce cumulative impacts and/or impacts on other high value natural, cultural, or societal resources; and</p> <p>c. The project does not result in unnecessary and undue habitat fragmentation or other impacts causing a decline in the population of the species within the relevant CA; and</p> <p>d. The project design mitigates unavoidable impacts through an appropriate compensatory mitigation plan; and</p> <p>e. The project complies with the applicable best management practices in Appendix Q [of the 2015 Final EIS].</p> <p>Idaho – GHZ: Authorize infrastructure construction consistent with the relevant land management components as provided for in Appendix Q [of the 2015 Final EIS].</p> <p>Utah Habitat: —.</p>	(see above)

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LR-12: —.	B-LR-12: PHMA: Planning Direction Note: Relocate existing designated ROW corridors crossing PHMA void of any authorized ROWs, outside of PHMA. If relocation is not possible, undesignate that entire corridor during the planning process. GHMA: —.	C-LR-12: PHMA: Same as Alternative B.	D-LR-12: PHMA: —. IHMA: —. GHMA: —.	E-LR-12: Idaho – CHZ: Prohibit the development of infrastructure with limited exceptions analyzed by the Implementation Task Force as part of the site-specific NEPA analysis. The following criteria would be used in those assessments: a. The project is developed pursuant to a valid existing authorization; b. The project is an incremental upgrade/capacity increase of existing development; c. Cannot be reasonably accomplished outside of CHZ; d. Can be co-located within the existing infrastructure; e. Demonstrates the population trend for the species within the relevant CA is stable or increasing over a three-year period; f. Project would benefit the state of Idaho g. Shall mitigate unavoidable impacts according to Idaho's Mitigation Framework (Appendix Q [of the 2015 Final EIS]). The Governor would consult with the BLM and Forest Service on the Implementation Task Force's recommendation, which the BLM and Forest Service must consider during the project's permit application. Idaho – IHZ: —. Idaho – GHZ: —. Utah Habitat: —.	F-LR-12: PHMA: Same as Alternative B. GHMA: —. RHMA: —.
A-LR-13: —.	B-LR-13: PHMA: —. GHMA: —.	C-LR-13: PHMA: —.	D-LR-13: PHMA: —. IHMA: —. GHMA: —.	E-LR-13: Idaho – CHZ: Allow for exemptions to new infrastructure development where a project proponent can satisfy all of the stringent criteria identified in the regulatory language and provide compensatory mitigation.	F-LR-13: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LR-14: —.	B-LR-14: PHMA: —. GHMA: —.	C-LR-14: PHMA: —.	D-LR-14: PHMA: —. IHMA: —. GHMA: —.	E-LR-14: Idaho – CHZ: In allowing for new infrastructure development exemptions, the project proponent must demonstrate that the project would provide a high-value benefit to meet critical existing needs or important societal objectives to the State of Idaho. Coordinate exemptions with the State Implementation Commission.	F-LR-14: PHMA: —. GHMA: —. RHMA: —.
A-LR-15: —.	B-LR-15: PHMA: —. GHMA: —.	C-LR-15: PHMA: —.	D-LR-15: PHMA: Process unauthorized use. If the unauthorized use does not serve the best interest of the public, reclaim the site by removing these features and restoring the habitat. If the use needs to be authorized, management actions for new authorizations would need to be consistent with objectives for conserving Greater Sage-Grouse. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-LR-15: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-LR-15: PHMA: —. GHMA: —. RHMA: —.
A-LR-16: —.	B-LR-16: PHMA: —. GHMA: —.	C-LR-16: PHMA: —.	D-LR-16: PHMA: Land authorizations that are temporary in nature (e.g., film permits, apiaries), that do not result in loss of Greater Sage-Grouse habitat would be subject to seasonal or timing restrictions and are otherwise exempt from mitigation requirements regarding habitat loss. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-LR-16: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-LR-16: PHMA: —. GHMA: —. RHMA: —.
A-LR-17: —.	B-LR-17: PHMA: —. GHMA: —.	C-LR-17: PHMA: —.	D-LR-17: PHMA: Guy wires will be avoided where feasible. Where guy wires are necessary and appropriate without causing a human safety risk, bird collision diverters will be required. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-LR-17: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-LR-17: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LR-18: —.	B-LR-18: PHMA: —. GHMA: —.	C-LR-18: PHMA: —.	D-LR-18: PHMA: Design structures and facilities to reduce perching and nesting opportunities for avian predators. Follow APLIC guidelines to minimize electrocution and collision risks. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-LR-18: Idaho – Common to All Habitats: —. Utah Habitat: Predation control and management should be managed by Wildlife Services, Department of Agriculture and Food, in coordination with the Division of Wildlife Resources. Eliminate or minimize external food sources for corvids, particularly dumps, waste transfer facilities, and road kill. Apply habitat management practices (e.g., grazing management, vegetation treatments) that decrease the effectiveness of predators.	F-LR-18: PHMA: —. GHMA: —. RHMA: —.
Land Tenure					
A-LR-19: In order to be considered for any form of land tenure adjustment, all lands not specifically identified for disposal must meet criteria included in FLPMA and in each LUP. Montana BLM: Retention Lands identified on 31,600 acres of PPH; 25,400 acres of PGH. Disposal Lands identified on 426 acres of PPH and 2,191 acres of PGH.	B-LR-19: PHMA: Retain public ownership of PHMA. Consider exceptions where: There is mixed ownership, and land exchanges would allow for additional or more contiguous federal ownership patterns within PHMA. In PHMA with minority federal ownership, include an additional, effective mitigation agreement for any disposal of federal land. As a final preservation measure, consideration should be given to pursuing a permanent conservation easement. GHMA: —.	C-LR-19: PHMA: All BLM-administered lands in ACECs, occupied habitats, and identified restoration and rehab land areas will be retained in public ownership.	D-LR-19: PHMA: Acquire habitat when possible and retain ownership of habitat, including lands identified for disposal in current land use plans, except if a disposal would allow for additional or more contiguous federal ownership patterns within PHMA. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-LR-19: Idaho – Common to All Habitats: —. Montana Habitat: Same as Alternative A. Utah Habitat: —.	F-LR-19: PHMA: Same as Alternative B, without exceptions for disposal to consolidate ownership that would be beneficial to Greater Sage-Grouse. GHMA: —. RHMA: —.
A-LR-20: —.	B-LR-20: PHMA: —. GHMA: —.	C-LR-20: PHMA: —.	D-LR-20: PHMA: Lands currently identified for retention within PHMA would be retained unless disposal of those lands would increase the extent or provide for connectivity of PHMA. IHMA: —. GHMA: —.	E-LR-20: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-LR-20: PHMA: No action. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-LR-21: —.	B-LR-21: PHMA: —. GHMA: —.	C-LR-21: PHMA: —.	D-LR-21: PHMA: Evaluate potential land exchanges containing historically low-quality Greater Sage-Grouse habitat that may be too costly to restore in exchange for lands of higher quality habitat, lands that connect seasonal Greater Sage-Grouse habitats or lands providing for threatened and endangered species. These potential exchanges should lead to an increase in the extent or continuity of or provide for improved connectivity of PHMA. Higher priority will be given to exchanges for those intact areas of sagebrush that will contribute to the expansion of PHMA sagebrush areas currently in public ownership. Lower priority will be given to those lands that will promote enhancement the other PHMA and GHMA areas. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-LR-21: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-LR-21: PHMA: No action. GHMA: —. RHMA: —.
A-LR-22: Most LUPs include a management action that allows for acquisition of lands that have important resource values including crucial wildlife habitat and land tenure adjustments to improve the manageability of BLM- and Forest Service-administered lands. In order to be considered for any form of land tenure adjustment, all lands not specifically identified for disposal must meet criteria included in the LUPs.	B-LR-22: PHMA: Where suitable conservation actions cannot be achieved in PHMA, seek to acquire state and private lands with intact subsurface mineral estate by donation, purchase or exchange in order to best conserve, enhance or restore Greater Sage-Grouse habitat. GHMA: —.	C-LR-22: PHMA: Acquisition will be prioritized over easements.	D-LR-22: PHMA: —. IHMA: Identify lands for acquisition that increase the extent of or provide for connectivity of PHMA. Acquisition of Greater Sage-Grouse PHMA will have priority over the acquisition of land for other program purposes subject to the approval of the Authorized officer. GHMA: —.	E-LR-22: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-LR-22: PHMA: —. GHMA: —. RHMA: —.
A-LR-23: Most LUPs include a management action that allows for acquisition of lands that have important resource values including crucial wildlife habitat and land tenure adjustments to improve the manageability of BLM- and Forest Service-administered lands. In order to be considered for any form of land tenure adjustment, all lands not specifically identified for disposal must meet criteria included in the LUPs.	B-LR-23: PHMA: Conservation Measure: Identify areas where acquisitions (including subsurface mineral rights) or conservation easements, would benefit Greater Sage-Grouse habitat. GHMA: —.	C-LR-23: PHMA: Conservation Measure: Same as Alternative B.	D-LR-23: PHMA: —. IHMA: —. GHMA: —.	E-LR-23: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-LR-23: PHMA: Conservation Measure: Same as Alternative B. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Withdrawal					
A-LR-24: —.	B-LR-24: PHMA: Recommend lands within PHMA for mineral withdrawal. GHMA: —.	C-LR-24: PHMA: Same as Alternative B.	D-LR-24: PHMA: —. IHMA: —. GHMA: —.	E-LR-24: Idaho – CHZ: —. Idaho – IHZ: —. Idaho – GHZ: —. Utah Habitat: Do not propose additional federal lands or non-federal lands with federal mineral interests within PHMA for locatable mineral withdrawal. PHMA that is not already withdrawn or recommended for withdrawal would be available for locatable mineral entry. To the extent allowable by laws and regulations and to the extent the claimant would be willing to apply the standards, limit or ameliorate impacts through the use of the general stipulations identified in the Greater Sage-Grouse section. Recognize that surface vents associated with underground mining are essential for human safety, and must be permitted under the provisions of this alternative.	F-LR-24: PHMA: Same as Alternative B. GHMA: —. RHMA: —.
A-LR-25: —.	B-LR-25: PHMA: In PHMA, do not recommend withdrawal proposals not associated with mineral activity unless the land management is consistent with Greater Sage-Grouse conservation measures (e.g., in a recommended withdrawal for a military training range buffer area, manage the buffer area with Greater Sage-Grouse conservation measures). GHMA: —.	C-LR-25: PHMA: Same as Alternative B.	D-LR-25: PHMA: —. IHMA: —. GHMA: —.	E-LR-25: Idaho – CHZ: —. Idaho – IHZ: —. Idaho – GHZ: —. Utah Habitat: —.	F-LR-25: PHMA: Do not approve withdrawal proposals not associated with mineral activity unless the land management is consistent with Greater Sage-Grouse conservation measures (e.g., in a recommended withdrawal for a military training range buffer area, manage the buffer area with Greater Sage-Grouse conservation measures that have been demonstrated to be effective). GHMA: —. RHMA: —.
Utility Corridors					
A-LR-26: Continue to manage 85,600 acres of utility corridors, including 64,200 acres of West-Wide Energy Corridors.	B-LR-26: PHMA: Same as Alternative A. GHMA: Manage 39,200 acres of utility corridors.	C-LR-26: PHMA: Manage 83,800 acres of utility corridors.	D-LR-26: PHMA: Manage 39,800 acres of utility corridors. IHMA: Manage 4,750 acres of utility corridors. GHMA: Same as Alternative A.	E-LR-26: Idaho – CHZ: Manage 31,000 acres of utility corridors. Idaho – IHZ: Manage 12,800 acres of utility corridors. Idaho – GHZ: Manage 40,000 acres of utility corridors. Utah Habitat: Same as Alternative A.	F-LR-26: PHMA: Same as Alternative A. GHMA: Manage 39,200 acres of utility corridors. RHMA: Manage 6,450 acres of utility corridors.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Fluid Minerals - Leased Federal Fluid Mineral Estate					
<p>A-MLS-I: No similar action for sub-region.</p> <p>Montana BLM: When leases expire, apply oil and gas stipulations listed in Table 5 pg. 44 of Dillon Field Office ROD/RMP also refer to Appendix K and M of the Dillon ROD/RMP.</p>	<p>B-MLS-I: PHMA: Apply the following nine conservation measures through LUP implementation decisions (e.g., approval of an Application for Permit to Drill, Sundry Notice, etc.) and upon completion of the environmental record of review (43 CFR 3162.5), including appropriate documentation of compliance with NEPA. In this process evaluate, among other things:</p> <ul style="list-style-type: none"> Whether the conservation measure is “reasonable” (43 CFR 3101.1-2) with the valid existing rights; and Whether the action is in conformance with the approved LUP. <p>GHMA: —.</p>	<p>C-MLS-I: PHMA: Same as Alternative B.</p>	<p>D-MLS-I: PHMA: Use RDFs as COAs for post-leasing actions, such as surface use plan of operations, application for permit to drill, or master development plan.</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: Same as PHMA.</p>	<p>E-MLS-I: Idaho – CHZ: All valid existing rights are protected. In CHZ and IHZ, projects to develop an existing fluid mineral lease (i.e., implementation decisions) would be subject to the following BMPs:</p> <ol style="list-style-type: none"> Utilize existing roads, or realignments of existing routes to the extent possible. Construct new roads to minimum design standards needed for production activities. To the extent possible, micro-site linear facilities to reduce impacts on Greater Sage-Grouse habitats. Locate staging areas outside CHZ to the extent possible. To the extent possible, co-locate linear facilities within one kilometer of existing linear facilities. New transmission lines, excluding those lines under (viii), will be deemed co-located and/or permissible if construction occurs between July 1 and March 14 (or between July 1 and November 30 in winter concentration areas) and within one kilometer either side of existing 115-kilovolt (kV) or larger transmission lines to create a corridor no wider than two kilometers. New transmission lines, excluding those lines under (viii), outside of this two kilometer corridor can only be constructed where it can be demonstrated that the activity will not cause declines in Greater Sage-Grouse populations or if the activity reduces cumulative impacts and/or avoids other important natural, cultural or societal resources. Locate essential public services, including but not limited to, distribution lines, domestic water lines and gas lines, at least one kilometer from active Greater Sage-Grouse leks. If one kilometer avoidance is not possible, construct lines outside of March 15 to June 30. <p>Idaho – IHZ: Same as Idaho – CHZ.</p> <p>Idaho – GHZ: —.</p>	<p>F-MLS-I: PHMA: Apply the following conservation measures as COAs at the project and well permitting stages, and through LUP implementation decisions and upon completion of the environmental record of review (43 CFR § 3162.5), including appropriate documentation of compliance with NEPA. In this process evaluate, among other things:</p> <ul style="list-style-type: none"> Whether the conservation measure is “reasonable” (43 CFR § 3101.1-2) with the valid existing rights; and Whether the action is in conformance with the approved LUP. <p>GHMA: —.</p> <p>RHMA: —.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
(see above)	(see above)	(see above)	(see above)	Montana Habitat: Same as Alternative A. Utah Habitat: All existing uses are explicitly recognized by this alternative and shall not be affected by the implementation of this alternative. The Greater Sage-Grouse conservation measures identified in the associated NEPA documents for each of these projects would continue to be implemented to protect Greater Sage-Grouse and its habitat. Provisions of this plan would not be added to the measures identified each specific project.	(see above)
A-MLS-2: —. Measures that reduce or eliminate impacts on Greater Sage-Grouse are considered on a case-by-case basis during implementation level planning.	B-MLS-2: PHMA: Provide the following conservation measures as terms and conditions of the approved LUP: Do not allow new surface occupancy on federal leases within PHMA, this includes winter concentration areas (Doherty et al. 2008, Carpenter et al. 2010) during any time of the year. Consider an exception: If the lease is entirely within PHMA, apply a 4-mile NSO around the lek, and limit permitted disturbances to 1 per section with no more than 3% surface disturbance in that section. If the entire lease is within the 4-mile lek perimeter, limit permitted disturbances to 1 per section with no more than 3% surface disturbance in that section. Require any development to be placed at the most distal part of the lease from the lek, or, depending on topography and other habitat aspects, in an area that is less demonstrably harmful to Greater Sage-Grouse. GHMA: —.	C-MLS-2: PHMA: Same as Alternative B.	D-MLS-2: PHMA: —. IHMA: —. GHMA: —.	E-MLS-2: Idaho – Common to All Habitats: —. Utah Habitat: All existing uses are explicitly recognized by this alternative and shall not be affected by the implementation of this alternative. The Greater Sage-Grouse conservation measures identified in the associated NEPA documents for each of these projects would continue to be implemented to protect Greater Sage-Grouse and its habitat. Provisions of this plan would not be added to the measures identified each specific project.	F-MLS-2: PHMA: Conservation Measure: Same as Alternative B. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-MLS-3: Most LUPs include a management action that prohibits surface disturbing or other disruptive within Greater Sage-Grouse breeding and nesting habitat within a certain distance and between certain dates. The protect buffers around leks vary.	B-MLS-3: PHMA: Conservation Measure: Apply a seasonal restriction on exploratory drilling that prohibits surface-disturbing activities during the nesting and early brood-rearing season in PHMA during this period. GHMA: —.	C-MLS-3: PHMA: Timing avoidance periods will be required.	D-MLS-3: PHMA: See D-MLS-1. IHMA: See D-MLS-1. GHMA: See D-MLS-1.	E-MLS-3: Idaho – Common to All Habitats: —. Utah Habitat: Allow exploratory drilling within PHMA, subject to the same seasonal and controlled surface use stipulations as would be applied to leases within PHMA.	F-MLS-3: PHMA: Conservation Measure: Apply a seasonal restriction on exploratory drilling that prohibits surface-disturbing activities during the nesting and brood-rearing season in PHMA during this period. This seasonal restriction shall also to apply to related activities that are disruptive to Greater Sage-Grouse, including vehicle traffic and other human presence. GHMA: —. RHMA: —.
A-MLS-4: —.	B-MLS-4: PHMA: Conservation Measure: Complete Master Development Plans in lieu of Application for Permit to Drill (APD)-by-APD processing for all but wildcat wells. GHMA: —.	C-MLS-4: PHMA: Conservation Measure: Same as Alternative B.	D-MLS-4: PHMA: Conservation Measure: For leases where a producing field is proposed to be developed, complete a Master Development Plan in lieu of APD-by-APD processing. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-MLS-4: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-MLS-4: PHMA: Conservation Measure: Same as Alternative B. GHMA: —. RHMA: —.
A-MLS-5: —.	B-MLS-5: PHMA: Conservation Measure: When permitting APDs on existing leases that are not yet developed, the proposed surface disturbance cannot exceed 3% for that area. Consider an exception if: Additional, effective mitigation is demonstrated to offset the resulting loss of Greater Sage-Grouse (see Objectives, Table 2-10). When necessary, conduct additional, effective mitigation in 1) PHMA or – less preferably – 2) GHMA (dependent upon the area-specific ability to increase Greater Sage-Grouse populations). Conduct additional, effective mitigation first within the same population area where the impact is realized, and if not possible then conduct mitigation within the same Management Zone as the impact, per Stiver et al. (2006), pg. 2-17. GHMA: —.	C-MLS-5: PHMA: Conservation Measure: Same as Alternative B.	D-MLS-5: PHMA: Conservation Measure: When approving a Master Development Plan on a lease, if on-site mitigation is inadequate to restore habitat, consider off-site mitigation to improve habitat, in accordance with Stiver et al. (2006), pg. 2-17, and current BLM and/or Forest Service policy regarding compensatory mitigation. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-MLS-5: Idaho – Common to All Habitats: —. Utah Habitat: All existing uses are explicitly recognized by this alternative and shall not be affected by the implementation of this alternative. The Greater Sage-Grouse conservation measures identified in the associated NEPA documents for each of these projects would continue to be implemented to protect Greater Sage-Grouse and its habitat. Provisions of this plan would not be added to the measures identified each specific project.	F-MLS-5: PHMA: Same as Alternative B. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-MLS-6: —. Current policy allows unitization to occur on a case-by-case basis.	B-MLS-6: PHMA: Conservation Measure: Require unitization when deemed necessary for proper development and operation of an area (with strong oversight and monitoring) to minimize adverse impacts on Greater Sage-Grouse according to the Federal Lease Form, 3100-11, Sections 4 and 6. GHMA: —.	C-MLS-6: PHMA: Conservation Measure: Same as Alternative B.	D-MLS-6: PHMA: Conservation Measure: Require unitization when deemed necessary for proper development and operation of an area (with strong oversight and monitoring). The unitization must be designed in a manner to minimize adverse impacts on Greater Sage-Grouse according to the Federal Lease Form, 3100-11, Sections 4 and 6. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-MLS-6: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-MLS-6: PHMA: Conservation Measure: Same as Alternative B. GHMA: —. RHMA: —.
A-MLS-7: —. Reclamation bonds are currently required under 43 CFR 3104 for all fluid mineral leases.	B-MLS-7: PHMA: Conservation Measure: For future actions, require a full reclamation bond specific to the site in accordance with 43 CFR 3104.2, 3104.3, and 3104.5. Insure bonds are sufficient for costs relative to reclamation (Connelly et al. 2000, Hagen et al. 2007) that would result in full restoration of the lands to the condition it was found prior to disturbance. Base the reclamation costs on the assumption that contractors for the BLM or Forest Service will perform the work. GHMA: —.	C-MLS-7: PHMA: Conservation Measure: Same as Alternative B.	D-MLS-7: PHMA: Conservation Measure: If surface disturbing activities are proposed on a future lease, require a full reclamation bond specific to the site. Ensure reclamation bonds are sufficient to cover costs that would result in full rehabilitation. Base the reclamation costs on the assumption that contractors for the BLM will perform the work. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-MLS-7: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-MLS-7: PHMA: Conservation Measure: Same as Alternative B. GHMA: —. RHMA: —.
A-MLS-8: —. Individual land use plans may contain an appendix that outlines BMPs that are applied on a case-by-case basis.	B-MLS-8: PHMA: Conservation Measure: Make applicable BMPs (Appendix B [of the 2015 Final EIS]) mandatory as COAs within PHMA. GHMA: —.	C-MLS-8: PHMA: Conservation Measure: Same as Alternative B.	D-MLS-8: PHMA: Conservation Measure: When an APD is submitted for approval on a lease, make applicable BMPs (Appendix B [of the 2015 Final EIS]) mandatory as COAs. IHMA: Same as PHMA. GHMA: Conservation Measure: When an APD is submitted for approval on a lease, consider making applicable BMPs mandatory as COAs.	E-MLS-8: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-MLS-8: PHMA: Conservation Measure: Same as Alternative B. GHMA: —. RHMA: —.
A-MLS-9: —.	B-MLS-9: PHMA: —. GHMA: —.	C-MLS-9: PHMA: Include conditions that require relinquishment of leases/authorizations if doing so will: 1) mitigate the impact of a proposed development, or 2) mitigate the unanticipated impacts of an approved development.	D-MLS-9: PHMA: —. IHMA: —. GHMA: —.	E-MLS-9: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-MLS-9: PHMA: —. GHMA: —. RHMA: —.
A-MLS-10: —.	B-MLS-10: PHMA: —. GHMA: —.	C-MLS-10: PHMA: No waivers will be issued.	D-MLS-10: PHMA: —. IHMA: —. GHMA: —.	E-MLS-10: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-MLS-10: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
A-MLS-11: —.	B-MLS-11: PHMA: —. GHMA: —.	C-MLS-11: PHMA: Any oil, gas, geothermal activity will be conducted to maximize avoidance of impacts, based on evolving scientific knowledge of impacts.	D-MLS-11: PHMA: —. IHMA: —. GHMA: —.	E-MLS-11: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-MLS-11: PHMA: —. GHMA: —. RHMA: —.
Unleased Federal Fluid Mineral Estate					
<p>A-MLS-12: Fluid mineral leasing in Greater Sage-Grouse habitat will be managed as shown in Table 2-9.</p> <p>Additional stipulations, such as CSU, TL, or NSO, may be attached to a lease if the standard lease stipulations do not adequately protect a sensitive resource. If a resource cannot be adequately protected through the use of stipulations, the BLM may close that area to leasing. The Forest Service may choose not to consent to leasing on the lands it administers.</p> <p>Most LUPs include a management action that prohibits surface disturbing or other disruptive within Greater Sage-Grouse breeding and nesting habitat within a certain distance and between certain dates. The protect buffers around leks vary.</p> <p>Montana BLM: Current oil and gas stipulations listed in Table 5 pg. 44 of Dillon Field Office ROD/RMP. Conservation actions also in Appendix X of Dillon ROD/RMP.</p>	<p>B-MLS-12: PHMA: Close PHMA to fluid mineral leasing (see Table 2-9). Upon expiration or termination of existing leases, do not accept nominations/expressions of interest for parcels within PHMA.</p> <p>GHMA: Same as Alternative A.</p>	<p>C-MLS-12: PHMA: No new leases or permits will be issued (see Table 2-9).</p>	<p>D-MLS-12: PHMA: Areas of no and low potential for the discovery of fluid minerals are closed to leasing (see Table 2-9).</p> <p>Areas of moderate and high potential for the discovery of fluid minerals are open to leasing subject to CSU, timing restrictions in breeding and winter habitat, disturbance density not to exceed 1/640 acres, maximum 3% disturbance/section, NSO within 0.6 mile of occupied or undetermined status leks. Consider use of low profile structures/facilities.</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: GHMA is open to leasing subject to timing limitations in breeding and winter habitat, 0.6 mile NSO near occupied and undetermined status leks, and implementation of appropriate BMPs.</p>	<p>E-MLS-12: Idaho – CHZ: Fluid mineral leases in CHZ and IHZ shall be subject to an NSO stipulation. The BLM State Director may waive the stipulation only in situations where the development will not accelerate and/or cause declines in Greater Sage-Grouse populations within the relevant CA, based on the application of the following criteria-:</p> <ol style="list-style-type: none"> The development cannot be reasonably accomplished outside of the management zone. Demonstrates the population trend for the species within the relevant Conservation Area is stable or increasing over a 3-year period. Demonstrates the individual or cumulative exceptions under this provision will not result in habitat fragmentation or other impacts causing a decline of the species within the relevant Conservation Area. Can be co-located with existing infrastructure to the maximum extent practicable. Shall mitigate unavoidable impacts through an appropriate compensatory mitigation plan. If the NSO stipulation is waived, any proposed development would be subject to the following BMPs: <ol style="list-style-type: none"> Evaluate the affected area in accordance with the process outlined in the State of Wyoming's Executive Order 2011-5. In PHMA, surface disturbance will be limited to three percent of suitable habitat per an average of 640 acres. Development within IHZ will be limited to five percent of suitable habitat per an average of 640 acres. NSO within one kilometer of the perimeter of occupied Greater Sage-Grouse leks. This distance may be modified, provided it is supported by the best available science at the time 	<p>F-MLS-12: PHMA: Upon expiration or termination of existing leases, do not accept nominations/expressions of interest for parcels within PHMA (see Table 2-9).</p> <p>GHMA: Same as Alternative A.</p> <p>RHMA: Same as Alternative A.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
(see above)	(see above)	(see above)	(see above)	<p>the development undergoes site-specific environmental analysis.</p> <p>4. Activity (production and maintenance activity exempted) will be allowed from July 1 to March 14 outside of the one kilometer perimeter of a lek where brood-rearing, nesting, and early brood-rearing habitat is present.</p> <p>5. In areas solely used as winter concentration areas, exploration and development activity will be allowed March 14 to December 1.</p> <p>6. Locate main roads used to transport production and/or waste products over 1.5 kilometers from the perimeter of occupied Greater Sage-Grouse leks. Locate other roads used to provide facility site access and maintenance over 1.5 kilometers from the perimeter of occupied Greater Sage-Grouse leks. Construct roads to minimum design standards needed for production activities.</p> <p>7. New noise levels, at the perimeter of a lek, should not exceed 10dBA above ambient noise (existing activity included) from 6:00 PM to 8:00 AM during the initiation of breeding (March 1-May 15). Ambient noise level should be determined by measurements taken at the perimeter of a lek at sunrise.</p> <p>8. Absent some demonstration to the contrary, the proposed sagebrush treatment associated with this activity will not reduce canopy cover to less than 15 percent.</p> <p>Idaho – IHZ: Same as Idaho – CHZ.</p> <p>Idaho – GHZ: —.</p> <p>Montana Habitat: Same as Alternative A.</p> <p>Utah Habitat: Unleased Areas within PHMA: PHMA would be designated as open to oil and gas leasing subject to controlled surface use stipulations (see list below) and the timing stipulations (see Table 2-9). Avoid activities</p>	(see above)

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
(see above)	(see above)	(see above)	(see above)	(construction, vehicle noise, etc.) in the following seasons and habitats (specific time and distance determinations for seasonal stipulations would be based on site-specific conditions, in coordination with the local UDWR biologist): <ul style="list-style-type: none"> • Winter habitat from Nov 15 – Mar 15 • Nesting and brood-rearing areas from Apr 1 – Aug 15 • On leks from Feb 15 – May 15 Where leasing/development is allowed within PHMA, Within PHMA, limit or ameliorate impacts from development through the use of the general stipulations identified in the Greater Sage-Grouse section.	(see above)
A-MLS-13: Allow geophysical exploration in areas that are not closed to fluid mineral leasing.	B-MLS-13: PHMA: Allow geophysical exploration within PHMA to obtain exploratory information for areas outside of and adjacent to PHMA. Allow geophysical operations only by helicopter-portable drilling methods and in accordance with seasonal timing restrictions and/or other restrictions that may apply. GHMA: —.	C-MLS-13: PHMA: Same as Alternative B.	D-MLS-13: PHMA: Allow geophysical exploration subject to seasonal timing restrictions. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-MLS-13: Idaho – Common to All Habitats: —. Utah Habitat: Allow geophysical exploration within PHMA to obtain exploratory information. Geophysical exploration would be subject to the same seasonal and controlled surface use stipulations as would be applied to leases within PHMA.	F-MLS-13: PHMA: Allow geophysical exploration within PHMA to obtain exploratory information for areas outside of and adjacent to PHMA. Only allow geophysical operations by helicopter-portable drilling methods and in accordance with seasonal timing restrictions and/or other restrictions that may apply. Geophysical exploration shall be subject to seasonal restrictions that preclude activities in breeding, nesting, brood rearing and winter habitats during their season of use by Greater Sage-Grouse. GHMA: —. RHMA: —.
A-MLS-14: —.	B-MLS-14: PHMA: —. GHMA: —.	C-MLS-14: PHMA: —.	D-MLS-14: PHMA: When a surface disturbing activity is proposed on a future fluid mineral lease, include in the NEPA analysis an alternative that sites the activity at the most distal part of the lease from any lek, or in an area that is less harmful to Greater Sage-Grouse habitat. IHMA: Same as PHMA. GHMA: Same as PHMA.	E-MLS-14: Idaho – Common to All Habitats: —. Utah Habitat: —.	F-MLS-14: PHMA: —. GHMA: —. RHMA: —.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Locatable Minerals					
<p>A-MLM-1: Locatable minerals would be managed as shown in Table 2-9.</p> <p>Procedures and standards are established to ensure that operators and mining claimants meet their obligation to prevent undue or unnecessary degradation and to reclaim disturbed areas.</p> <p>The existing land use plans identify areas that are closed to mineral entry but are silent on mitigation measures to be taken in Greater Sage-Grouse habitat.</p> <p>Montana BLM: 2,520 acres of PPH recommended for withdrawal, 320 acres of PGH recommended for withdrawal.</p>	<p>B-MLM-1: PHMA: Recommend withdrawal from mineral entry based on risk to the Greater Sage-Grouse and its habitat from conflicting locatable mineral potential and development (see Table 2-9). Make any existing claims within the withdrawal area subject to validity exams or buy out. Include claims that have been subsequently determined to be null and void in the recommended withdrawal. In plans of operations required prior to any proposed surface disturbing activities, include the following: Additional, effective mitigation in perpetuity for conservation (In accordance with existing policy, WO IM 2008-204). Example: purchase private land and mineral rights or severed subsurface mineral rights within PHMA and deed to US Government). Consider seasonal restrictions if deemed effective.</p> <p>GHMA: Same as Alternative A.</p>	<p>C-MLM-1: PHMA: Same as Alternative B (see Table 2-9).</p>	<p>D-MLM-1: PHMA: Lands would remain open to locatable mineral entry (see Table 2-9).</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: Same as PHMA.</p>	<p>E-MLM-1: Idaho – Common to All Habitats: Same as Alternative A (see Table 2-9).</p> <p>Montana Habitat: Same as Alternative A.</p> <p>Utah Habitat: Same as Alternative A.</p>	<p>F-MLM-1: PHMA: Same as Alternative B (see Table 2-9).</p> <p>GHMA: Same as Alternative A.</p> <p>RHMA: Same as Alternative A.</p>
<p>A-MLM-2: The existing land use plans do not identify mitigation measures to be taken in Greater Sage-Grouse habitat.</p>	<p>B-MLM-2: PHMA: Make applicable BMPs (see Appendix B [of the 2015 Final EIS]) mandatory as COAs within PHMA.</p> <p>GHMA: —.</p>	<p>C-MLM-2: PHMA: Same as Alternative B.</p>	<p>D-MLM-2: PHMA: —.</p> <p>IHMA: —.</p> <p>GHMA: —.</p>	<p>E-MLM-2: Idaho – Common to All Habitats: —.</p> <p>Utah Habitat: —.</p>	<p>F-MLM-2: PHMA: Same as Alternative B.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>
<p>A-MLM-3: The existing land use plans do not identify mitigation measures to be taken in Greater Sage-Grouse habitat.</p>	<p>B-MLM-3: PHMA: —.</p> <p>GHMA: —.</p>	<p>C-MLM-3: PHMA: —.</p>	<p>D-MLM-3: PHMA: Ensure compliance with regulations in 43 CFR 3809 and 36 CFR 228 to prevent unnecessary and undue degradation (from WO IM 2012-044).</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: Same as PHMA.</p>	<p>E-MLM-3: Idaho – Common to All Habitats: —.</p> <p>Utah Habitat: —.</p>	<p>F-MLM-3: PHMA: No action.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Salable Minerals					
<p>A-MSM-1: Salable minerals in Greater Sage-Grouse habitat will be managed as shown in Table 2-9.</p> <p>Most BLM- and Forest Service-administered land in Idaho is available for consideration of mineral material disposal, however existing guidance in many of the LUPs in the planning area encourages the use of existing disposal sites until the material is depleted.</p> <p>Montana BLM: See Appendix N, SOP of Dillon ROD/RMP for Mineral material sites on pg. 169 of ROD/RMP. 30,300 acres of PPH are closed to mineral material disposal; 22,600 acres of PGH are closed to mineral material disposal.</p>	<p>B-MSM-1: PHMA: Close PHMA to mineral material sales (see Table 2-9).</p> <p>GHMA: Same as Alternative A.</p>	<p>C-MSM-1: PHMA: Same as Alternative B (see Table 2-9).</p>	<p>D-MSM-1: PHMA: No new authorizations would be approved within 3 km of an occupied lek (see Table 2-9). Newly authorized disposals would be subject to seasonal timing restrictions and BMPs, as appropriate. Sales from existing community pits within PHMA would be subject to seasonal timing restrictions.</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: No new authorizations would be approved within 3 km of an occupied lek. Disposals would be subject to seasonal timing restrictions, as appropriate.</p>	<p>E-MSM-1: Idaho – Common to All Habitats: Same as Alternative A (see Table 2-9).</p> <p>Montana Habitat: Same as Alternative A.</p> <p>Utah Habitat: PHMA would be open to mineral materials (see Table 2-9). Limit or ameliorate impacts through the use of the general stipulations identified in the Greater Sage-Grouse section.</p>	<p>F-MSM-1: PHMA: Same as Alternative B (see Table 2-9).</p> <p>GHMA: Same as Alternative A.</p> <p>RHMA: Same as Alternative A.</p>
<p>A-MSM-2: —.</p>	<p>B-MSM-2: PHMA: Restore salable mineral pits no longer in use to meet Greater Sage-Grouse habitat conservation objectives.</p> <p>GHMA: —.</p>	<p>C-MSM-2: PHMA: Same as Alternative B.</p>	<p>D-MSM-2: PHMA: Restore salable mineral pits no longer in use to meet Greater Sage-Grouse habitat conservation objectives.</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: Same as PHMA.</p>	<p>E-MSM-2: Idaho – Common to All Habitats: —.</p> <p>Utah Habitat: —.</p>	<p>F-MSM-2: PHMA: Same as Alternative B.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>
<p>A-MSM-3: —.</p>	<p>B-MSM-3: PHMA: —.</p> <p>GHMA: —.</p>	<p>C-MSM-3: PHMA: —.</p>	<p>D-MSM-3: PHMA: Reclamation bonding will be required on new authorizations for mineral material sales in PHMA (this would not apply to free use permits issued to a government entity such as a county road district, but would apply to non-profit entities).</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: Same as PHMA.</p>	<p>E-MSM-3: Idaho – Common to All Habitats: —.</p> <p>Utah Habitat: —.</p>	<p>F-MSM-3: PHMA: —.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Non-Energy Leasable Minerals					
<p>A-MNL-1: Manage non-energy leasable minerals on federal lands and non-federal lands with federal mineral interests within Greater Sage-Grouse habitat as shown in Table 2-9.</p> <p>Montana BLM: All BLM-administered lands in Dillon Field Office are available for development of leasable solid minerals except 124,200 acres of Bear Trap Wilderness and 9 WSA's (see ROD/RMP pg. 44).</p>	<p>B-MNL-1: PHMA: Close PHMA to non-energy leasable mineral leasing (see Table 2-9). This includes not permitting any new leases to expand an existing mine.</p> <p>GHMA: Same as Alternative A.</p>	<p>C-MNL-1: PHMA: Same as Alternative B (see Table 2-9).</p>	<p>D-MNL-1: PHMA: Future leasing and prospecting of non-energy minerals in PHMA is closed (see Table 2-9). Exceptions may be made for lease modifications and fringe leases where valid existing rights may be affected. Consider offsite mitigation, CSU and timing restrictions, as appropriate.</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: Lands are available for leasing subject to applicable timing restrictions (seasonal and daily) for exploration activities and initial mine development, subject to mandatory lease stipulations, timing restrictions and CSU. Consider offsite mitigation opportunities.</p>	<p>E-MNL-1: Idaho – Common to All Habitats: Same as Alternative A (see Table 2-9).</p> <p>Montana Habitat: Same as Alternative A.</p> <p>Utah Habitat: Manage non-energy leasable minerals on federal lands and non-federal lands with federal mineral interests within Greater Sage-Grouse habitat as shown in Table 2-9.</p> <p>Consider leasing federal lands and non-federal lands with federal mineral interests within PHMA for non-energy leasable minerals. Limit or ameliorate impacts from mineral leasing and development through the use of the general stipulations identified in the Greater Sage-Grouse section. Recognize that surface vents associated with underground mining are essential for human safety, and must be permitted under the provisions of this alternative.</p> <p>Commercial prospecting activities associated with non-energy leasable minerals would be required to comply with the same stipulations identified for leasing and development, above.</p>	<p>F-MNL-1: PHMA: Same as Alternative B (see Table 2-9).</p> <p>GHMA: Same as Alternative A.</p> <p>RHMA: Same as Alternative A.</p>
<p>A-MNL-2: Individual land use plans may contain an appendix that outlines BMPs that are applied on a case-by-case basis.</p> <p>The 2011 Pocatello RMP establishes operational standards and guidelines for reclamation plans; identifies interagency standards for contaminant levels in vegetation, surface, and groundwater; and implements best management practices to control sedimentation and contaminant release.</p>	<p>B-MNL-2: PHMA: For existing non-energy leasable mineral leases in PHMA, in addition to the solid minerals BMPs (Appendix B [of the 2015 Final EIS]), follow the same BMPs applied to Fluid Minerals (Appendix B [of the 2015 Final EIS]), when wells are used for solution mining.</p> <p>GHMA: —.</p>	<p>C-MNL-2: PHMA: Same as Alternative B.</p>	<p>D-MNL-2: PHMA: For existing undeveloped non-energy mineral leases, require timing restrictions (seasonal and daily) when exploration activities or initial mine development is proposed, as appropriate. Also require appropriate BMPs (Appendix B [of the 2015 Final EIS]) as COAs to the mine plan, and require restoration of habitat or off-site mitigation, if on-site restoration is not feasible.</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: Same as PHMA.</p>	<p>E-MNL-2: Idaho – Common to All Habitats: —.</p> <p>Utah Habitat: —.</p>	<p>F-MNL-2: PHMA: Same as Alternative B.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Mineral Split Estate					
<p>A-MSE-1: Under current management, there is no designated Greater Sage-Grouse habitat. Decisions included in current management plans apply to both federal surface and mineral estate.</p>	<p>B-MSE-1: PHMA: Where the federal government owns the mineral estate in PHMA, and the surface is in non-federal ownership, apply the conservation measures applied on BLM- and Forest Service-administered lands.</p> <p>GHMA: —.</p>	<p>C-MSE-1: PHMA: Same as Alternative B.</p>	<p>D-MSE-1: PHMA: Where the federal government owns the mineral estate in PHMA and the surface is in non-federal ownership, apply stipulations, conservation measures, and design features consistent with those applied to BLM- and Forest Service-administered lands in PHMA in the area.</p> <p>IHMA: Same as PHMA.</p> <p>GHMA: Same as PHMA.</p>	<p>E-MSE-1: Idaho – Common to All Habitats: —.</p> <p>Utah Habitat: Because the surface estate is the key to conservation of habitat, the Greater Sage-Grouse habitat has been mapped according to surface ownership. However, implementation of his alternative will have to accommodate the dominant nature of the mineral estate, and react accordingly.</p>	<p>F-MSE-1: PHMA: Same as Alternative B.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>
<p>A-MSE-2: —.</p> <p>Under current management, there is no designated Greater Sage-Grouse habitat. Decisions included in current management plans apply to both federal surface and mineral estate.</p> <p>Individual land use plans may contain an appendix that outlines BMPs that are applied on a case-by-case basis.</p>	<p>B-MSE-2: PHMA: Where the federal government owns the surface, and the mineral estate is in non-federal ownership in PHMA, apply appropriate Fluid Mineral RDFs (Appendix B [of the 2015 Final EIS]) to surface development.</p> <p>GHMA: —.</p>	<p>C-MSE-2: PHMA: Same as Alternative B.</p>	<p>D-MSE-2: PHMA: Where the federal government owns the surface, and the mineral estate is in non-federal ownership in PHMA, recommend to the state regulatory entity to apply a timing restriction stipulation, COAs, and restrict activities within 3 km (1.86 miles) of an occupied lek, when concurring to the approval of authorizations for mineral-related surface disturbance on lands in PHMA.</p> <p>IHMA: Where the federal government owns the surface, and the mineral estate is in non-federal ownership in IHMA, recommend to the state regulatory agency to apply a timing restriction stipulation and restrict activities within 3 km (1.86 miles) of an occupied lek, when concurring to the approval of authorizations for mineral-related surface disturbance on lands in IHMA.</p> <p>GHMA: Recommend to the state regulatory agency to apply a timing restriction stipulation and restrict activities within 3 km (1.86 miles) of an occupied lek, when concurring to the approval of authorizations for mineral-related surface disturbance on lands in GHMA.</p>	<p>E-MSE-2: Idaho – Common to All Habitats: —.</p> <p>Utah Habitat: —.</p>	<p>F-MSE-2: PHMA: Same as Alternative B.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
ACECs					
<p>A-SD-1: No existing ACECs include Greater Sage-Grouse as a relevant and important value. The acres of existing ACECs are shown in Table 2-9.</p> <p>Montana BLM: No existing ACECs include Greater Sage-Grouse as a relevant and important value. Maintain designation of existing ACECs, including 35,361 acres overlapping PPH and 1,476 acres overlapping PGH.</p>	<p>B-SD-1: PHMA: Same as Alternative A (see Table 2-9).</p> <p>GHMA: Same as Alternative A.</p>	<p>C-SD-1: PHMA: Designate and manage ACECs (BLM) and Greater Sage-Grouse Zoological Areas (Forest Service) to function as sagebrush reserves to conserve Greater Sage-Grouse (see Table 2-9).</p>	<p>D-SD-1: PHMA: Same as Alternative A (see Table 2-9).</p> <p>IHMA: Same as Alternative A.</p> <p>GHMA: Same as Alternative A.</p>	<p>E-SD-1: Idaho – Common to All Habitats: Same as Alternative A (see Table 2-9).</p> <p>Montana Habitat: Same as Alternative A.</p> <p>Utah Habitat: Same as Alternative A.</p>	<p>F-SD-1, Sub-alternative 1: PHMA: Designate and manage all PPH as ACECs (BLM) and Greater Sage-Grouse Zoological Areas (Forest Service) to function as sagebrush reserves to conserve Greater Sage-Grouse (see Table 2-9).</p> <p>F-SD-1, Sub-alternative 2: PHMA: Designate and manage a system of ACECs (BLM) and Greater Sage-Grouse Zoological Areas (Forest Service) to function as sagebrush reserves to conserve Greater Sage-Grouse (see Table 2-9). This area is a subset of the acreage under sub-alternative 1.</p>
A-SD-2: —.	<p>B-SD-2: PHMA: —.</p> <p>GHMA: —.</p>	<p>C-SD-2: PHMA: Industrial solar projects will be prohibited in ACECs and occupied habitats.</p>	<p>D-SD-2: PHMA: —.</p> <p>IHMA: —.</p> <p>GHMA: —.</p>	<p>E-SD-2: Idaho – Common to All Habitats: —.</p> <p>Utah Habitat: —.</p>	<p>F-SD-2: PHMA: —.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>
A-SD-3: —.	<p>B-SD-3: PHMA: —.</p> <p>GHMA: —.</p>	<p>C-SD-3: PHMA: New transmission corridors, ROWs for corridors (oil, gas, water/aquifer mining), and communication or other towers are prohibited in ACECs and occupied habitats.</p>	<p>D-SD-3: PHMA: —.</p> <p>IHMA: —.</p> <p>GHMA: —.</p>	<p>E-SD-3: Idaho – Common to All Habitats: —.</p> <p>Utah Habitat: —.</p>	<p>F-SD-3: PHMA: —.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>
A-SD-4: —.	<p>B-SD-4: PHMA: —.</p> <p>GHMA: —.</p>	<p>C-SD-4: PHMA: BLM and Forest Service will strive to acquire important private lands in BLM-designated ACECs and Forest Service Sage-Grouse Special Areas.</p>	<p>D-SD-4: PHMA: —.</p> <p>IHMA: —.</p> <p>GHMA: —.</p>	<p>E-SD-4: Idaho – Common to All Habitats: —.</p> <p>Utah Habitat: —.</p>	<p>F-SD-4: PHMA: —.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>
A-SD-5: —.	<p>B-SD-5: PHMA: —.</p> <p>GHMA: —.</p>	<p>C-SD-5: PHMA: Existing designated corridors in BLM ACECs and Forest Service Special Areas may be accessed for maintenance.</p>	<p>D-SD-5: PHMA: —.</p> <p>IHMA: —.</p> <p>GHMA: —.</p>	<p>E-SD-5: Idaho – Common to All Habitats: —.</p> <p>Utah Habitat: —.</p>	<p>F-SD-5: PHMA: —.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>
A-SD-6: —.	<p>B-SD-6: PHMA: —.</p> <p>GHMA: —.</p>	<p>C-SD-6: PHMA: Agencies will explore options to amend, cancel, or buy out leases in ACECs and occupied habitats.</p>	<p>D-SD-6: PHMA: —.</p> <p>IHMA: —.</p> <p>GHMA: —.</p>	<p>E-SD-6: Idaho – Common to All Habitats: —.</p> <p>Utah Habitat: —.</p>	<p>F-SD-6: PHMA: —.</p> <p>GHMA: —.</p> <p>RHMA: —.</p>

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Chapter 3. Affected Environment

3.1 INTRODUCTION

The purpose of this chapter is to describe the existing biological, physical, and socioeconomic characteristics of the planning area, including human uses that could be affected by implementing the alternatives described in **Chapter 2**. The affected environment provides the context for assessing the potential impacts described in **Chapter 4**. The resource topics in this chapter reflect those that are identified in **Table 1-1** as corresponding to an issue carried forward for detailed analysis in the 2015 (**Table 3-1**) and the 2019 planning processes.

The BLM analyzed the management situation in full compliance with its regulations and policies. The BLM evaluated inventory and other data and information, partnering with USGS and coordinating extensively with States, to help provide a basis for formulating reasonable alternatives. The BLM described this process in its Report to the Secretary in response to SO 3353 (Aug. 4, 2017). Among other things, the Report describes how the BLM coordinated “with each State to gather information related to the [Secretary’s] Order, including State-specific issues and potential options for actions with respect to the 2015 Greater Sage-Grouse Plans and IMs to identify opportunities to promote consistency with State plans.” (Report to the Secretary at 3.)

The geographic extent of this environmental analysis is the same as that in the 2015 Final EIS. The BLM acknowledges that there have been changes to the landscape since 2015; however, because this analysis covers nearly 12 million acres of BLM-administered lands and approximately 36.5 million (subsurface) acres of federal mineral estate, and additional federal, state, and private lands, the data collected consistently across the range indicate that the extent of these changes is relatively minimal. For example, BLM monitoring data collected and analyzed annually at the biologically significant unit (BSU) scale, as outlined in the Greater Sage-Grouse Monitoring Framework (Appendix D of the 2015 ARMPA/ROD), indicate that there has been a less than 1 percent range-wide overall increase in estimated disturbance from 2015 through 2017. Moreover, there has been an overall decrease of less than 1 percent range-wide from 2012 through 2015 in sagebrush availability in PHMA within BSUs.

Planning Area Overview – Description of the Planning Area and Current Management

In general, Greater Sage-Grouse habitats in Idaho are composed of a variety of species and subspecies of sagebrush, including mountain big sagebrush, Wyoming big sagebrush, Great Basin big sagebrush, low sagebrush, black sagebrush, three-tip sagebrush, and early sagebrush. Conifer encroachment into Greater Sage-Grouse habitats, mainly from Utah juniper and western juniper, occurs primarily in south-central and southwestern Idaho, although encroachment of Douglas-fir and other conifers also occurs at higher elevations. Large areas of native, introduced, or mixed native/introduced perennial grasslands as well as annual grasslands are also present in portions of the Snake River Plain in southern Idaho as a result of recent wildfires and associated rehabilitative efforts or from other rangeland seeding efforts during the 20th century. The general condition and trend of habitats on BLM-administered lands is a result of various threats that are currently occurring or that have occurred historically. In Idaho, threats to Greater Sage-Grouse were ranked by an independent science panel and addressed in the Conservation Plan for the Greater Sage-Grouse in Idaho (Idaho Sage-grouse Advisory Committee

2006). Highest ranking threats, in order of relative score, included wildfire, infrastructure, annual grasslands, livestock impacts, human disturbance, and West Nile virus.

In 2006, the WAFWA used floristic characteristics to organize the diverse sagebrush habitat areas into seven Greater Sage-Grouse management zones within the species' distribution (Stiver et al. 2006). Idaho contains portions MZs II and IV. The vast majority of Idaho lies within WAFWA's Greater Sage-Grouse MZ IV (Stiver et al. 2006); a small portion of southeastern Idaho occurs within MZ II and is associated with the Wyoming Basin population. Populations of Greater Sage-Grouse in MZ IV are projected to decline by 55 percent from 2007 to 2037 and by 66 percent in MZ II if current trends in populations and habitat activities continue (USFWS 2010a; Garton et al. 2011).

Greater Sage-Grouse populations have declined range-wide since the late 1800s (USFWS 2010, p. 13921). More recently, Connelly et al. (2004) reported long-term declines (1965 to 2004) for Greater Sage-Grouse in MZs II and IV. WAFWA (2008) reported declines from 1965 to 2007 of 2.7 percent in MZ II and 3.8 percent, in MZ IV. Garton et al. (2011) reported annual rates of decline of 3.5 percent in MZ II and 4 percent in MZ IV.

USGS Reports

As part of the consideration of whether to amend some, all, or none of the 2015 Greater Sage-Grouse land use plans, the BLM requested the USGS to develop an annotated bibliography of Greater Sage-Grouse science published since January 2015 (Carter et al. 2018) and a report that synthesizes and outlines the potential management implications of this new science (Hanser et al. 2018).

Following the 2015 ROD/ARMPAs, the scientific community has continued to improve the knowledge available to inform management actions and an overall understanding of Greater Sage-Grouse populations, habitat requirements, and their response to human activity. The review discussed the science related to six major topics identified by USGS and BLM, as follows:

- Multiscale habitat suitability and mapping tools
- Discrete human activities
- Diffuse activities
- Fire and invasive species
- Restoration effectiveness
- Population estimation and genetics

Multiscale Habitat Suitability and Mapping Tools

The science developed since 2015 corroborates previous knowledge about Greater Sage-Grouse habitat selection. Advances in modeling and mapping techniques at the landscape scale can help inform allocations and targeting of land management resources to benefit Greater Sage-Grouse conservation. Similar improvements at the site scale facilitate a better understanding of the importance of grass height to nest success, which indicates the potential need for a reevaluation of the existing habitat objectives (Hanser et al. 2018, p. 2).

The BLM has completed a plan maintenance action whereby the agency has clarified its ability to modify the habitat objective indicator values based upon local, site-specific information.

Discrete Human Activities

The science developed since 2015 corroborates prior knowledge about the impact of discrete human activities on Greater Sage-Grouse. New science suggests that strategies to limit surface disturbance may be successful at limiting range-wide population declines; however, it is not expected to reverse the declines, particularly in areas of active oil and gas operations (Hanser et al. 2018, p. 2). This information may have relevance when considering the impact of changes to management actions designed to limit discrete disturbances.

Diffuse Activities

The science developed since 2015 does not appreciably change prior knowledge about diffuse activities, such as livestock grazing, predation, hunting, wild horses and burros, fences, recreation, and noise; however, some study authors questioned current assumptions, provided refinements, or corroborated existing understanding.

Studies have shown that the impacts of livestock grazing vary with grazing intensity and season. Predation from ravens can limit Greater Sage-Grouse populations in areas with overabundant predator numbers or degraded habitats. Applying predator control has potential short-term benefits in small, declining populations; however, reducing human subsidies may be necessary to generate long-term changes in raven numbers. This is because raven control has produced only short-term declines in local raven populations.

Refinements to the current hunting seasons used by State wildlife agencies may minimize potential impacts on Greater Sage-Grouse populations; however, none of the studies singled out current application of hunting seasons and timings as a plausible cause for Greater Sage-Grouse declines.

Finally, no new insights into the impacts of wild horses and burros, fence collision, recreation, or noise on Greater Sage-Grouse have been developed (Hanser et al. 2018, p. 2).

This information was considered when determining the 2018 scoping issues addressed in **Chapter I, Section I.4.1.**

Fire and Invasive Species

Science since 2015 indicates that wildfire will continue to threaten Greater Sage-Grouse through loss of available habitat, reductions in multiple vital rates, and declining population trends, especially in the western part of its range. The concepts of resilience after wildfire and resistance to invasion by nonnative annual grasses have been mapped across the sagebrush ecosystem. These concepts inform restoration and management strategies and help prioritize application of Greater Sage-Grouse management resources (Hanser et al. 2018, p. 2).

Restoration Effectiveness

Since 2015, tools have been developed to help managers strategically place and design restoration treatments where they will have the greatest benefit for Greater Sage-Grouse. Studies (Hanser et al. 2018, p. 3) indicate that Greater Sage-Grouse populations did not benefit from, or were negatively affected by, prescribed fire and mechanical sagebrush removal.

Restoration activities occur mainly at the implementation level, and the BLM maintains the flexibility to incorporate new tools in the agency's project planning for restoration actions.

Population Estimation and Genetics

The accuracy of estimating Greater Sage-Grouse populations has increased. This is because of improved sampling procedures used to complete count surveys at leks and the development of correction factors for potential bias in lek count data. In addition, techniques have also improved to map Greater Sage-Grouse genetic structure at multiple spatial scales. These genetic data are used in statistical models to increase understanding of how landscape features and configuration affect gene flow. This understanding emphasizes the importance of maintaining connectivity between populations to ensure genetic diversity and distribution (Hanser et al. 2018, p. 3).

New information continues to reaffirm BLM's understanding that Greater Sage-Grouse is a species that selects for large, intact landscapes and habitat patches.

3.2 RESOURCES AFFECTED

In accordance with **Chapter 1, Section 1.4.1**, the following resources may have potentially significant impacts based on the actions considered in **Chapter 2. Table 3-1**, below, provides a list of issues and affected resource(s), the location of baseline information in the 2015 Final EIS, as well as additional information contained in the 2016 Draft Sagebrush Focal Area Withdrawal EIS (BLM 2016). See the 2015 Final EIS baseline information.

Table 3-1
Affected Environment Incorporated by Reference

Issue Number	Issue	Resource Topic
1	Modifying Management Area Designations	Greater Sage-Grouse, Section 3.2, pg. 3-5 (BLM 2015)
2	Sagebrush Focal Area Designations	Mineral Resources, Section 3.12, pg. 3-98 Greater Sage-Grouse, Section 3.2, pg. 3-5 Livestock Grazing, Section 3.8, pg. 3-65 Wild Horse and Burro, Section 3.6, pg. 3-54 In addition to the 2015 Final EIS, additional information can be found in the 2016 Draft Locatable Mineral Withdrawal EIS in Section 2.3.1 (No Action Alternative; page 2-4) and Section 3.4 (Geology and Mineral Resources; page 3-7)
3	Adjusting Disturbance and Density Caps	Greater Sage-Grouse, Section 3.2, pg. 3-5 Mineral Resources, Section 3.12, pg. 3-98 Lands and Realty, Section 3.11, pg. 3-84 Socioeconomics, Section 3.22, pg. 3-164
4	Modifying Lek Buffers	Greater Sage-Grouse, Section 3.2, pg. 3-5 Mineral Resources, Section 3.12, pg. 3-98 Lands and Realty, Section 3.11, pg. 3-84 Socioeconomics, Section 3.22, pg. 3-164 Livestock Grazing, Section 3.8, pg. 3-65 Recreation, Section 3.9, pg. 3-71
5	Including Waivers, Exceptions, and Modifications on NSO Stipulations	Greater Sage-Grouse, Section 3.2, pg. 3-5 Mineral Resources (fluids), Section 3.12, pg. 3-98

Issue Number	Issue	Resource Topic
6	Changing Requirements for Design Features	Greater Sage-Grouse, Section 3.2, pg. 3-5 Mineral Resources, Section 3.12, pg. 3-98 Lands and Realty, Section 3.11, pg. 3-84 Socioeconomics, Section 3.22, pg. 3-164 Livestock Grazing, Section 3.8, pg. 3-65
7	Modifying Habitat Objectives	Greater Sage-Grouse, Section 3.2, pg. 3-5
8	Modifying Livestock Grazing Commensurate with the Threat Posed	Livestock Grazing, Section 3.8, pg. 3-65 Greater Sage-Grouse, Section 3.2, pg. 3-5
9	Modifying the Mitigation Strategy to Align with the State Mitigation Strategy, including Standard for No Net Loss	Greater Sage-Grouse, Section 3.2, pg. 3-5 Mineral Resources, Section 3.12, pg. 3-98 Lands and Realty, Section 3.11, pg. 3-84 Socioeconomics, Section 3.22, pg. 3-164 Livestock Grazing, Section 3.8, pg. 3-65 Recreation, Section 3.9, pg. 3-71

3.3 GREATER SAGE-GROUSE

The existing condition of Greater Sage-Grouse in the planning area is described in the 2015 Final EIS in Section 3.2 (pp. 3-5 through 3-23). Since 2015, designated Greater Sage-Grouse habitat in Idaho has been managed according to the 2015 ROD/ARMPA. In 2015, the Greater Sage-Grouse Approved Resource Management Plan Amendment (2015 ROD/ARMPA) designated approximately 8,809,326 acres of Greater Sage-Grouse habitat management areas (BLM only) with 4,177,624 acres of PHMA, 2,675,251 acres of IHMA, and 1,956,451 acres of GHMA. The 2015 ROD/ARMPA also used a key habitat map to identify areas with at least 10 percent sagebrush canopy cover, and in 2015 there were approximately 9,158,175 acres mapped as key habitat. The total acres of key habitat on BLM-administered land (acres with estimated 10 percent sagebrush cover) in Idaho has decreased an estimated 53,379 acres from 5,164,998 in 2015 to 5,111,619 at the end of 2017.

In 2015 the Soda Fire burned 279,144 acres, 228,077 acres of which were in Idaho. The West Owyhee Conservation Area lost approximately 5 percent (approximately 74,127 acres) of its priority habitat BSU and approximately 21 percent (approximately 63,383 acres) of its important habitat BSU. This resulted in a hard trigger being tripped; currently all of the IHMA within the West Owyhee Conservation Area is being managed as PHMA, as per the 2015 ROD/ARMPA.

On Aug. 8, 2018 Idaho Department of Fish and Game Idaho informed Idaho BLM of Greater Sage-Grouse population declines. The declines include two “hard trigger” population trips, in the Mountain Valley PHMA and Desert IHMA. Idaho Fish and Game also detected hard trigger population trips in 2019 for the Desert (PHMA) Southern (PHMA) Conservation Areas. Currently, the reasons for the declines are unknown. These tripped triggers initiated an adaptive management response, as described in the 2015 ARMPA (the 2018 Final EIS carried the 2015 hard trigger adaptive management strategy forward unchanged). The response includes managing all IHMA in the conservation area as PHMA and convening the interagency adaptive management team to conduct a causal factor analysis of the population declines. The BLM will work closely with IDFG and other partners to work through processes in place to address the situation and take appropriate actions to reverse the trigger.

BLM Idaho continues to implement the 2015 Adaptive Management Strategy as the foundation for addressing recent population declines. The 2015 Decision anticipated possible declining habitat and

populations and included a strategy for BLM and partners to: identify declines, determine the cause, and take action to address the causal factors. This process was carried forward into the 2019 Decision and is working as anticipated.

Wildland Fire

Wildfire was identified and considered as a primary threat to Greater Sage-Grouse habitat within the Great Basin in the 2015 Final EIS (Wildland Fire Management, Section 3.7, pp. 3-57 through 3-65). Ongoing efforts for fuel treatments are described in Executive Order 13855, *Promoting Active Management of America's Forests, Rangelands, and other Federal Lands to Improve Conditions and Reduce Wildfire Risk* (December 21, 2018), and Secretary's Order 3372, *Reducing Wildlife Risks on Department of Interior Land through Active Management* (January 2, 2019), which provide direction to the BLM to address wildfire prevention and suppression, which the BLM has implemented by setting ambitious fuel treatment targets to protect and restore sagebrush ecosystems.

Between 2015 and 2017 wildfires burned approximately 129,842 acres of key habitat and 534,744 acres of Greater Sage-Grouse habitat (160,520 acres of priority habitat, 240,079 acres of important habitat, and 134,145 acres of general habitat). Since 2015, the BLM has completed 431,295 acres of treatments to restore or improve potential Greater Sage-Grouse habitat. Since the 2015 ROD/ARMPA, more habitat has been lost to wildfire than has been gained through treatment; however, the BLM intends to implement more habitat improvements per decisions in the 2015 ROD/ARMPA. Projects such as the Great Basin Ecosystem Strategy, under which two programmatic EISs will be prepared for fuel breaks and fuels reduction and rangeland restoration, will further define the tools and priorities for these activities.

Between 2017 and September 2018 approximately 238,588 acres of key habitat burned in Idaho. In 2019 55,000 acres of Key habitat burned in Idaho. Idaho BLM treated approximately 140,000 acres of Greater Sage-Grouse habitat in 2018. Although 2019 was a slow fire year, Idaho continued to address this threat by treating 208,000 acres. The same area may receive multiple treatments, but even when treatments are successful it may take years before an area returns to being key habitat.

3.4 LANDS AND REALTY

The condition of land use and realty in the planning area is described in the 2015 Final EIS in Section 3.11 (Lands and Realty, pp. 3-84 through 3-98). Land use authorization requests are customer driven. In the planning area most authorizations processed are primarily for roads, electric distribution lines, and communications sites. Major ROWs are those large-scale utility projects, such as for 500 kV electric transmission, wind, and solar development. The BLM has received a number of applications for major transmission line projects to traverse the state; it has not received any applications for utility-scale solar production in the planning area, nor are there solar resources comparable to the areas where utility-scale solar production projects are being proposed or built.

Since 2015, lands and realty actions were authorized, following the 2015 ROD/ARMPA direction. Management for the lands and realty program is described in Sections 2.2.1 and 2.2.8 of the 2015 ROD/ARMPA. The BLM continues to manage the lands and realty program following the management direction in the 2015 decision. Since September 2015, the Idaho BLM has issued 97 new ROWs and has 123 ROWs pending approval. The lands and realty program is essentially the same as was described in the 2015 Final EIS, and the program's impacts on Greater Sage-Grouse are also essentially the same.

3.5 MINERALS

The existing conditions of minerals development in the planning area are described in the 2015 Final EIS in Section 3.12.1 for fluid leasable minerals (pp. 3-98 through 3-103), mineral materials (pp. 3-103 through 3-106), locatable minerals (pp. 3-106 through 3-111), and trends (pp. 3-112 through 3-117). The management of minerals is described in Sections 2.2.1 and 2.2.6. In addition, this Proposed RMPA/EIS incorporates resources affected by the 2016 Draft SFA Withdrawal EIS completed for the mineral withdrawal recommendation (Chapter 3, Section 3.4, Geology and Mineral Resources, p. 3-7 and Chapter 2, Section 2.3.1, No Action Alternative, p. 2-4 [BLM 2016]).

Little has changed in minerals development in Idaho since 2015. Most notably there is now one producing natural gas well near Weiser. This natural gas well is on private land but is removing some gas from adjacent leased public land. The public land is not designated as Greater Sage-Grouse habitat. The geothermal power plant in the Raft River Valley in Idaho has also expanded onto public land in GHMA. One new phosphate mine plan was approved in Idaho since 2015. Additionally, only four new free use (county use) mineral material pits have been authorized in Idaho since 2015. Based on these minimal changes, the existing conditions are essentially the same as described in the 2015 Final EIS.

3.6 LIVESTOCK GRAZING

The existing condition of livestock grazing in the planning area is described in the 2015 Final EIS in Section 3.8 (pp. 3-65 through 3-71). Since 2015, the BLM has continued to manage livestock according to the grazing regulations (43 CFR 4100) and in Sections 2.2.1 and 2.2.4 of the 2015 ROD/ARMPA. In general, the existing conditions of livestock grazing in Idaho remain the same as described in the 2015 Final EIS. The BLM has continued to issue grazing permit renewals consistent with the 2015 ARMPA. Since September 2015, the Idaho BLM has issued 69 grazing permits.

3.7 SOCIOECONOMICS

The socioeconomic conditions in the planning area are described in the 2015 Final EIS in Section 3.22 (pp. 3-164 through 3-200). BLM-administered lands provide a range of goods and services that benefit society in a variety of ways. Some of these goods and services, such as timber and minerals, are bought and sold in markets and hence have a readily observed economic value (as documented in the sections above); others have a less clear connection to market activity, even though society derives benefits from them. In some cases, goods and services have both a market and a nonmarket component value to society. The socioeconomic conditions in Idaho are essentially the same as described in the 2015 Final EIS.

3.8 WILD HORSES AND BURROS

The condition of wild horses and burros in the planning area is described in the 2015 Final EIS in Section 3.6 (pp. 3-54 through 3-57). In the planning area, the BLM manages six herd management areas, all in Idaho: four in the Boise District, one in the Twin Falls District, and one in the Idaho Falls District. The herd management areas encompass approximately 361,900 acres of BLM-administered lands. The Idaho BLM continues to manage wild horses in AML statewide. In 2015, the Hardtrigger, Black Mountain, and Sand Basin Herd Management Areas were burned in the Soda Fire, and horses were gathered off these herd management areas until vegetation had recovered sufficiently to provide reliable forage. The BLM also gathered horses in the Challis Herd Management Area in 2017. The horses gathered after the Soda Fire were returned to those herd management areas in 2018; this is because monitoring data has shown

that the vegetation has recovered sufficiently to provide reliable forage and would continue to be managed according to the applicable regulations and the 2015 ROD/ARMPA.

3.9 RECREATION

The condition of recreation in the planning area is described in the 2015 Final EIS in Section 3.9 (pp. 3-71 through 3-78). Currently recreation in Idaho remains essentially the same as described in the 2015 Final EIS and is managed as described in the 2015 ROD/ARMPA. In 2012, the BLM had 341 active special recreation permits. Of those permits, 241 were commercial river permits and 24 were commercial big game hunting permits. The remaining permits were for organized groups, competitive events, or other types of commercial recreation outfitters, such as bike tours. The Idaho BLM has continued to issue special recreation permits at levels commensurate with the 2015 numbers. The Idaho BLM's biggest recreation undertaking, after the signing the 2015 ARMPA, has been in travel management planning. It initiated six travel plans on the Boise District, five plans on the Idaho Falls District, and two plans on the Twin Falls District.

Chapter 4. Environmental Consequences

4.1 INTRODUCTION

This chapter presents the direct, indirect, and cumulative impacts on the environment from implementing the alternatives in **Chapter 2**. The purpose of this chapter is to describe to the decision-maker and the public the differences between the entire range of alternatives considered in 2018, including the 2018 Draft Plan (Management Alignment Alternative), the 2018 Proposed Plan Amendment, as well as the range of alternatives incorporated by reference from the 2015 plan amendments. It is meant to clarify that Greater Sage-Grouse management was comprehensively analyzed in 2018 through multiple NEPA and planning processes.

The impact analyses and conclusions are based on the following:

- The BLM planning team's knowledge of resources and the planning area
- Literature reviews
- Information provided by experts in the BLM, other agencies, cooperating agencies, interest groups, and concerned citizens

The baseline used for the impact analysis is the current condition or situation, as described in **Chapter 3**. Impacts on resources and resource uses are analyzed and discussed in detail, commensurate with resource issues and concerns identified through the process. At times, impacts are described in qualitative terms or using ranges of potential impacts.

This SEIS describes more explicitly the full range of alternatives that the BLM has evaluated, summarizing each action alternative contained in the 2015 and 2018 EISs.

4.2 ANALYTICAL ASSUMPTIONS

Several overarching assumptions were made during the 2019 planning process in order to facilitate the analysis of the impacts. These assumptions set guidelines and provide reasonably foreseeable projected levels of development that would occur in the planning area during the planning period.

In 2012 Governor C. L. "Butch" Otter proposed an approach that divided Greater Sage-Grouse habitat in Idaho into three MZs. These three zones provide a management continuum, where the highest priority habitats have the most protections and the lowest priority habitats have the fewest protections and the most flexibility for multiple use management. This approach allows land management agencies to focus future disturbance in lower quality habitat or non-habitat areas.

In the 2015 Final EIS, the BLM adopted this strategy and identified the habitat MZs as PHMA, IHMA, and GHMA; The 2012 Governor's plan uses the terminology of core habitat zone, important habitat zone, and general habitat zone; these are equivalent to PHMA, IHMA, and GHMA, respectively. These MZs were developed based on their overall importance to Greater Sage-Grouse, considering the densities of breeding birds, habitat quality and connectivity as a result of decades of research and monitoring. PHMA contains approximately 67 percent of known occupied leks in Idaho, IHMA contains 25 percent, and GHMA contains 6 percent.

The following general assumptions apply to the analysis in the 2018 Final EIS; any specific resource assumptions are provided in the methods of analysis section for that resource:

- Sufficient funding and personnel would be available for implementing the final decision
- Implementation-level actions necessary to execute the RMP-level decisions would be subject to further environmental review, including that under NEPA
- Direct and indirect impacts of implementing the planning alternatives would primarily occur on public lands administered by the BLM in the planning area
- The BLM would carry out appropriate maintenance for the functional capability of all developments
- The discussion of impacts is based on best available data; knowledge of the planning area and decision area and professional judgment, based on observation and analysis of conditions and responses in similar areas, are used for environmental impacts where data are limited
- Restrictions (such as siting, design, and mitigation measures) would apply, where appropriate, to surface-disturbing activities associated with land use authorizations and permits issued on BLM-administered lands and federal mineral estate
- Geographic information system data have been used in developing acreage calculations and to generate the figures in this DSEIS. Calculations depend on the quality and availability of data. Acreage figures and other numbers are approximate projections for comparison and analysis only; readers should not infer that they reflect exact measurements or precise calculations. In the absence of quantitative data, best professional judgment was used. Impacts were sometimes described using ranges of potential impacts, or they were described qualitatively, when appropriate.

Table 4-I, below, shows where the effects analysis can be found in the 2015 Final EIS or, where noted, the 2016 Draft Sagebrush Focal Area Withdrawal EIS (BLM 2016). Resource topics displayed below are the resource topics identified in **Table I-1** as potentially being affected by the issues. This table is included to help the reader track issues and resource topics.

Table 4-I
Environmental Consequences Incorporated by Reference

Potentially Impacted Resource Topic	Location in 2015 Final EIS	Related Issues Tracking
Greater Sage-Grouse	Section 4.2: Sage-Grouse and Sage-Grouse Habitat, pg. 4-5 Section 4.5, Wildlife, Including Special Status Species and Greater Sage-Grouse, pg. 4-82 (BLM 2016)	1-9
Minerals and Energy	Section 4.9, Leasable Minerals (Leased and Unleased), Including Fluid Minerals and Nonenergy Solid Leasable Minerals, pg. 4-224 Section 4.10, Locatable Minerals, pg. 4-249 Section 4.11, Mineral Materials (Salable), pg. 4-254 Section 4.12, Nonenergy Leasable Minerals, pg. 4-259 Section 4.2, Geology and Mineral Resources, pg. 4-7 (BLM 2016)	2, 3, 4, 5, 6, 9

Potentially Impacted Resource Topic	Location in 2015 Final EIS	Related Issues Tracking
Land Use and Realty	Section 4.8, Lands and Realty: pg. 4-208	4, 6, 9
Socioeconomics	Section 4.15, Social and Economic Conditions (Including Environmental Justice), pg. 4-290 Section 4.3, Social and Economic, pg. 4-20 (BLM 2016)	3, 4, 6, 9
Livestock Grazing	Section 4.6, Livestock Grazing/Range Management, pg. 4-173	2, 4, 6, 8, 9
Wild Horses and Burros	Section 4.4.10, pgs. 4-151–4-154	2,
Recreation	Section 4.8.3, pg. 4-211 Section 4.6.3, pg. 4-179 Section 4.4.3, pg. 4-142 Section 4.5.2, pg. 4-159	4, 9

4.3 IMPACTS OF THE 2018 PROPOSED RMPA/FINAL EIS NO-ACTION ALTERNATIVE

The impacts of the 2018 Proposed RMPA/Final EIS No-Action Alternative, or current management, were analyzed as the Proposed Plan in the 2015 Final EIS; therefore, impacts from implementing the No-Action Alternative in 2018 were the same as those analyzed in the 2015 Final EIS. As Stated in the Final EIS “The Proposed Plan would provide a higher level of Greater Sage-Grouse habitat protection compared to current management, while allowing flexibility for resource uses when there would be no impacts to Greater Sage-Grouse (Section 5.1.11).”

Table 4-2, below, shows where information on the impacts of the 2018 Proposed RMPA/Final EIS No-Action Alternative can be found.

Table 4-2
Environmental Consequences for the No-Action Alternative Incorporated by Reference

Decision Topic	Related Resource Topic	Location in 2015 Final EIS or 2016 Draft Sagebrush Focal Area Withdrawal EIS
Modifying habitat management area boundaries	Greater Sage-Grouse	Section 4.2, Sage-Grouse and Sage-Grouse Habitat, pg. 4-5 Section 4.5, Wildlife, Including Special Status Species and Greater Sage-Grouse, pg. 4-82 (BLM 2016)
Removing sagebrush focal area designations	Greater Sage-Grouse	Section 4.2, Sage-Grouse and Sage-Grouse Habitat, pg. 4-5 Section 4.5, Wildlife, Including Special Status Species and Greater Sage-Grouse, pg. 4-82 (BLM 2016)
	Minerals and Energy	Section 4.9, Leasable Minerals (Leased and Unleased), Including Fluid Minerals and Nonenergy Solid Leasable Minerals, pg. 4-224 Section 4.10, Locatable Minerals, pg. 4-249 Section 4.11, Mineral Materials (Salable), pg. 4-254 Section 4.12, Nonenergy Leasable Minerals, pg. 4-259 Section 4.2, Geology and Mineral Resources, pg. 4-7 (BLM 2016)
	Livestock Grazing	Section 4.6, Livestock Grazing/Range Management, pg. 4-173
	Wild Horse and Burro	Section 4.4.10, pgs. 4-151–4-154
Adjusting disturbance and density caps	Greater Sage-Grouse	Section 4.2, Sage-Grouse and Sage-Grouse Habitat, pg. 4-5 Section 4.5, Wildlife, Including Special Status Species and Greater Sage-Grouse, pg. 4-82 (BLM 2016)

Decision Topic	Related Resource Topic	Location in 2015 Final EIS or 2016 Draft Sagebrush Focal Area Withdrawal EIS
Adjusting disturbance and density caps (continued)	Minerals and Energy	Section 4.9, Leasable Minerals (Leased and Unleased), Including Fluid Minerals and Nonenergy Solid Leasable Minerals, pg. 4-224 Section 4.10, Locatable Minerals, pg. 4-249 Section 4.11, Mineral Materials (Salable), pg. 4-254 Section 4.12, Nonenergy Leasable Minerals, pg. 4-259 Section 4.2, Geology and Mineral Resources, pg. 4-7 (BLM 2016)
	Socioeconomics	Section 4.15, Social and Economic Conditions (Including Environmental Justice), pg. 4-290 Section 4.3, Social and Economic, pg. 4-20 (BLM 2016)
	Lands and Realty	Section 4.8, Lands and Realty, pg. 4-208
Modifying lek buffers	Greater Sage-Grouse	Section 4.2, Sage-Grouse and Sage-Grouse Habitat, pg. 4-5 Section 4.5, Wildlife, Including Special Status Species and Greater Sage-Grouse, pg. 4-82 (BLM 2016)
	Minerals and Energy	Section 4.9, Leasable Minerals (Leased and Unleased), Including Fluid Minerals and Nonenergy Solid Leasable Minerals, pg. 4-224 Section 4.10, Locatable Minerals, pg. 4-249 Section 4.11, Mineral Materials (Salable), pg. 4-254 Section 4.12, Nonenergy Leasable Minerals, pg. 4-259 Section 4.2, Geology and Mineral Resources, pg. 4-7 (BLM 2016)
	Socioeconomics	Section 4.15, Social and Economic Conditions (Including Environmental Justice), pg. 4-290 Section 4.3, Social and Economic, pg. 4-20 (BLM 2016)
	Lands and Realty	Section 4.8, Lands and Realty, pg. 4-208
	Livestock Grazing	Section 4.6, Livestock Grazing/Range Management, pg. 4-173
	Recreation	Section 4.8.3, pg. 4-211; Section 4.6.3, pg. 4-179; Section 4.4.3, pg. 4-142, Section 4.5.2, pg. 4-159
Including waivers, exceptions, and modifications on NSO stipulations	Greater Sage-Grouse	Section 4.2, Sage-Grouse and Sage-Grouse Habitat, pg. 4-5 Section 4.5, Wildlife, Including Special Status Species and Greater Sage-Grouse, pg. 4-82 (BLM 2016)
	Minerals and Energy	Section 4.9, Leasable Minerals (Leased and Unleased), Including Fluid Minerals and Nonenergy Solid Leasable Minerals, pg. 4-224 Section 4.10, Locatable Minerals, pg. 4-249 Section 4.11, Mineral Materials (Salable), pg. 4-254 Section 4.12, Nonenergy Leasable Minerals, pg. 4-259 Section 4.2, Geology and Mineral Resources, pg. 4-7 (BLM 2016)
Changing requirements for design features	Greater Sage-Grouse	Section 4.2, Sage-Grouse and Sage-Grouse Habitat, pg. 4-5 Section 4.5, Wildlife, Including Special Status Species and Greater Sage-Grouse, pg. 4-82 (BLM 2016)
	Land Use and Realty	Section 4.8, Lands and Realty, pg. 4-208
	Minerals and Energy	Section 4.9, Leasable Minerals (Leased and Unleased), Including Fluid Minerals and Nonenergy Solid Leasable Minerals, pg. 4-224 Section 4.10, Locatable Minerals, pg. 4-249 Section 4.11, Mineral Materials (Salable), pg. 4-254 Section 4.12, Nonenergy Leasable Minerals, pg. 4-259 Section 4.2, Geology and Mineral Resources, pg. 4-7 (BLM 2016)
	Socioeconomics	Section 4.15, Social and Economic Conditions (Including Environmental Justice), pg. 4-290 Section 4.3, Social and Economic, pg. 4-20 (BLM 2016)
	Livestock Grazing	Section 4.6, Livestock Grazing/Range Management, pg. 4-173

Decision Topic	Related Resource Topic	Location in 2015 Final EIS or 2016 Draft Sagebrush Focal Area Withdrawal EIS
Modifying habitat objectives	Greater Sage-Grouse	Section 4.2, Sage-Grouse and Sage-Grouse Habitat, pg. 4-5 Section 4.5, Wildlife, Including Special Status Species and Greater Sage-Grouse, pg. 4-82 (BLM 2016)
Modifying decisions for livestock grazing commensurate with the threat posed	Greater Sage-Grouse	Section 4.2, Sage-Grouse and Sage-Grouse Habitat, pg. 4-5 Section 4.5: Wildlife, Including Special Status Species and Greater Sage-Grouse, pg. 4-82 (BLM 2016)
	Livestock Grazing	Section 4.6, Livestock Grazing/Range Management, pg. 4-173
Modifying the mitigation strategy to align with the state mitigation strategy, including standard for no net loss	Greater Sage-Grouse	Section 4.2, Sage-Grouse and Sage-Grouse Habitat, pg. 4-5 Section 4.5, Wildlife, Including Special Status Species and Greater Sage-Grouse, pg. 4-82 (BLM 2016)
	Socioeconomics	Section 4.15, Social and Economic Conditions (Including Environmental Justice), pg. 4-290 Section 4.3, Social and Economic, pg. 4-20 (BLM 2016)
	Livestock Grazing	Section 4.6, Livestock Grazing/Range Management: pg. 4-173
	Minerals and Energy	Section 4.9, Leasable Minerals (Leased and Unleased), Including Fluid Minerals and Nonenergy Solid Leasable Minerals, pg. 4-224 Section 4.10, Locatable Minerals, pg. 4-249 Section 4.11, Mineral Materials (Salable), pg. 4-254 Section 4.12, Nonenergy Leasable Minerals, pg. 4-259 Section 4.2, Geology and Mineral Resources, pg. 4-7 (BLM 2016)
	Land Use and Realty	Section 4.8, Lands and Realty. pg. 4-208
	Recreation	Section 4.8.3, pg. 4-211; Section 4.6.3, pg. 4-179; Section 4.4.3, pg. 4-142; Section 4.5.2, pg. 4-159

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This table is a summary of the environmental consequences of the 2015 alternatives that were incorporated by reference into the 2019 planning effort and considered throughout the process. **Table 4-3**, presents a comparison summary of impacts from management actions proposed for the alternatives considered in 2015.

Table 4-3
Summary of Environmental Consequences

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan (2015)
Vegetation (Including Noxious Weeds; Riparian and Wetlands)						
<p>In general, Alternative A would rely on management guidance that would not reflect the most up-to-date science regarding Greater Sage-Grouse, and older land use plans would be implemented that often would lack a landscape-level approach to land planning. However, several LUPs do contain guidance for specific areas that address Greater Sage-Grouse (e.g., Dillon, Pocatello, and Beaverhead-Deerlodge).</p> <p>There is no consistently applied vegetation management across all land use plans, though many incorporate objectives for maintaining, improving, or restoring vegetation communities, particularly sagebrush and riparian and wetland habitats. As a result, there is general direction to preserve and improve vegetation communities; however, discrete anthropogenic disturbances to vegetation, such as road construction, mineral development, and development of ROWs, would continue.</p>	<p>The BLM and Forest Service would manage lands to conserve, enhance, and restore sagebrush ecosystems. Direct protection of sagebrush habitat to support Greater Sage-Grouse would limit or modify uses in this habitat type, improving the acreage and condition of desired vegetation communities. Use restrictions would reduce damage to native vegetation communities and individual native plant species in areas that are important for regional vegetation diversity and quality. Likewise, use restrictions would minimize loss of connectivity and would be more likely to retain existing age class distribution within these specific areas. Use restrictions could also minimize the spread of invasive species by limiting human activities that cause soil disturbance or seed introductions.</p> <p>PHMA and GHMA would be designated and the BLM and Forest Service would apply a three percent anthropogenic disturbance cap on discrete activities in PHMA and would implement numerous conservation measures to reduce impacts from human activities, which would reduce the likelihood for vegetation removal, degradation, or fragmentation, and maintain the acreage and condition of sagebrush vegetation.</p>	<p>The BLM and Forest Service would manage lands to conserve, enhance, and restore sagebrush ecosystems. Management actions would be applied to all occupied Greater Sage-Grouse habitats, a larger area than covered by Alternative B. Management would focus on removing livestock grazing from occupied habitats, with most other management similar to Alternative B.</p>	<p>The BLM and Forest Service would manage lands to conserve, enhance and restore sagebrush ecosystems. Management and impacts would be similar to Alternative B, though Alternative D would incorporate more flexibility and adaptive management to account for sub-regional conditions. PHMA, IHMA, and GHMA would be designated and the BLM and Forest Service would require a no net unmitigated loss of PHMA and IHMA and would implement conservation measures to reduce impacts from human activities in PHMA, which would reduce the likelihood for vegetation removal, degradation, or fragmentation.</p>	<p>The BLM and Forest Service would manage lands to protect, maintain, improve and enhance sagebrush ecosystems. CHZ, IHZ and GHZ would be designated. CHZ would restrict further infrastructure development with narrow exceptions to permit high value infrastructure. This alternative would designate fewer acres of CHZ as compared to Alternatives B, C, D & F designations of PHMA, resulting in fewer acres of sagebrush vegetation preserved from removal, degradation, or fragmentation.</p>	<p>Management under Alternative F would be largely similar to that described for Alternative B, though with more stringent guidance and restrictive management in sagebrush ecosystems. PHMA and GHMA would be the same as for Alternative B.</p> <p>Under Alternative F, RHMA would also be designated. Impacts from implementing the three percent disturbance cap would be similar to those described for Alternative B, but under Alternative F all surface disturbances would count towards the disturbance cap. This would further reduce the acreage of vegetation that would be removed or fragmented within all occupied habitat over the long term.</p>	<p>Management under the Proposed Plan would be similar to that described for Alternative D.</p> <p>Under the Proposed Plan, SFAs would be managed where additional restrictions on resource uses would be applied. Additional measures, such as management to attain vegetation objectives; specified vegetation treatment acres; and a comprehensive mitigation strategy would be implemented and would reduce the likelihood for vegetation removal, degradation, or fragmentation.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan (2015)
Wild Horse and Burro Management						
<p>All HMAs would continue to be managed for AML and all adjustments would be based on site-specific conditions as reported in monitoring data.</p> <p>Wild horse management would not be based on Greater Sage-Grouse habitat needs. Levels of resource conflict with wild horse would depend on management under individual RMPs.</p> <p>Restrictions on energy and mineral development would be least restrictive under Alternative A, which would result in the greatest impact to horses from energy and mineral development under this alternative.</p>	<p>Under Alternative B vegetation restoration projects to benefit Greater Sage-Grouse would likely improve forage conditions and water quality for wild horses in the long term. Restrictions placed on mineral development could also benefit wild horses and burros by reducing disturbance.</p> <p>Greater Sage-Grouse management requiring increased fences or prohibiting new water development could limit wild horse access to water. Restrictions on transportation would be greater under this alternative than under Alternative A, which could increase the time and costs required to conduct gathers for population control.</p> <p>AMLs and wild horse management could be impacted if found to not align with Greater Sage-Grouse management objectives. However, in general, efforts to improve Greater Sage-Grouse habitat would also improve wild horse rangeland conditions.</p>	<p>Vegetation restoration impacts would be similar under Alternative C to those under Alternative B, but would also remove water developments, which could reduce water availability and result in the need to reduce AML within HMAs in occupied habitat.</p> <p>Livestock grazing would be eliminated under this alternative, resulting in additional forage for wild horses. However, this could also result in reduced water availability through the elimination of livestock watering sites.</p> <p>Restrictions on travel management and energy development would result in impacts similar to those described under Alternative B. Lands and realty management under this alternative would reduce disturbance to wild horses.</p> <p>In general, efforts to improve Greater Sage-Grouse habitat would also improve wild horse rangeland conditions.</p>	<p>Vegetation management under this alternative would likely improve wild horse forage in the long term. AMLs in some HMAs would be reduced if wild horse management was found to conflict with Greater Sage-Grouse objectives. HMA expansion would be prohibited in PHMA, potentially limiting the ability to sustainably manage for increasing horse populations and increasing the need for gathers and cost of the program.</p> <p>Eliminating livestock watering sites could reduce water availability for wild horses and could result in the need to reduce wild horse numbers.</p> <p>Restrictions on transportation, lands and realty, and minerals would result in reduced disturbance to wild horses as compared to Alternative A, but greater disturbance than would be experienced under some of the other action alternatives.</p>	<p>Impacts from vegetation management, wild horse management, and mineral and energy development would be the same as those under Alternative A.</p> <p>Livestock grazing management changes would be applied on a site-specific level and would result in limited impacts to wild horse management. Limitations on new water development could result in a need to reduce AMLs in HMAs where alternative water sources are not available.</p> <p>Restrictions on recreation and lands and realty management could limit disturbance to wild horses.</p>	<p>Under this alternative, AMLs would be directly reduced by 25 percent for all HMAs within PHMA and GHMA, resulting in increased costs for wild horse management due to a need for additional horse gathers and population growth suppression treatments. Under Alternative F, 25 percent of the areas in PHMA and GHMA open to livestock grazing would be rested each year as well, which could reduce the availability of water to wild horses and impact the ability to manage for AML, particularly for HMAs with no alternative water source.</p> <p>Vegetation, wildland fire, and recreation management would have impacts similar to those under Alternative B. Impacts from energy and minerals management would be the same as those under Alternative A.</p>	<p>Under the Proposed Plan restrictions on disturbance would be greatest in SFAs, followed by PHMAs, and IHMAs. This would result in reduced disturbance and additional protections of wild horse forage and water supplies in SFAs, and could result in increased disturbance to wild horses in HMAs within GHMA.</p> <p>Vegetation management would likely improve forage conditions in the long term. Wildland fire management would also be expected to benefit wild horses, though fencing to protect post-burn areas could impact the ability of horses to roam freely and access water. Changes to livestock watering could impact water availability for wild horses and result in the need to reduce wild horse numbers or develop alternative water sources within HMAs.</p> <p>AMLs may be required to change to meet Greater Sage-Grouse habitat objectives. The number of gathers needed may need to be increased along with other intensive management actions to maintain AML, potentially increasing disturbance to populations and the cost of the program.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan (2015)
Wildland Fire Ecology and Management						
<p>Current impacts would continue and there would continue to be a high risk of human-caused ignitions associated with human uses.</p> <p>Vegetation management and weed treatments would continue to decrease fuels across the planning area, which would decrease the intensity of wildland fires and allow fires to be more easily controlled. Similarly, treatments for habitat improvement and forage would reduce fuels and reduce the likelihood for stand-replacing fire.</p> <p>The wildland fire management program would continue to be impacted by the spread of invasive annuals, which results in a longer fire season and the need for more resources to respond to wildfire. There would also be a continued decrease in the capability of the proactive hazardous fuels reduction program to maintain reactive suppression and rehabilitation efforts in the wildland-urban interface (WUI).</p>	<p>Long-term frequency and intensity of wildland fire would be similar to historic conditions because post fuel and restoration management would be designed to ensure long-term persistence of seeded or pre-burn native plants.</p> <p>Greater Sage-Grouse management in PHMA would focus on fire suppression and limitations on fuels treatments, resulting in higher level of protection from wildland fire, but reduced wildland fire and fuels management options.</p> <p>Managing PHMA so that discrete anthropogenic disturbances cover less than 3 percent of the total PHMA regardless of ownership would decrease the chance of human-caused ignition in PHMA. In addition, managing or restoring PHMA so that at least 70 percent of the land cover provides adequate sagebrush habitat to meet Greater Sage-Grouse needs would promote a shift towards historic fire regimes in sagebrush ecosystems.</p> <p>Limiting OHV travel in PHMA to existing roads and trails until travel management planning is complete, as well as limiting road upgrades or new roads in this area, would reduce the risk of human-caused ignition in PHMA on BLM-administered and Forest Service-administered lands.</p>	<p>Under Alternative C, no livestock grazing would be permitted within occupied Greater Sage-Grouse habitat. As a result, fine fuels would increase throughout occupied habitat and size, intensity, and occurrence of fire would potentially increase. However, because the prohibition on grazing could reduce weed spread, some areas may experience a shorter fire season and less frequent and/or intense wildfires.</p>	<p>Alternative D contains a defined set of tools for wildland fire management. Alternative D would allow for management flexibility in designing fuels treatments and response to wildland fire.</p> <p>Strategic wildfire suppression planning would help return PHMA to natural fire intensities and intervals.</p> <p>Impacts from limiting OHV travel to existing roads would be the same as those described for Alternative B.</p>	<p>Developing a fuels break strategy, response time analysis and water availability analysis would help focus suppression activities in areas with the greatest likelihood of reducing wildfire spread.</p> <p>Use of native vegetation for restoration and controlling invasive species for three years after wildfire treatments would reduce the likelihood for weed invasion in burned or treated areas, thus reducing the frequency and intensity of wildland fires.</p> <p>This alternative promotes active and aggressive control of invasive species, which would likely result in a reduced likelihood of large-scale wildland fires.</p> <p>Targeted grazing would be allowed to reduce fine fuels, resulting less need for mechanical or chemical fuels treatments.</p>	<p>Impacts from fire management would be the same as those described under Alternative B.</p>	<p>Impacts from fire management would be similar to those under Alternatives B and D. Because anthropogenic disturbance excludes habitat disturbance from wildfire and fuels management activities, the wildland fire and fuels program will retain management flexibility and a greater chance to meet goals and objectives over the life of the plan. The 3 percent anthropogenic disturbance cap should limit human-caused ignitions in Greater Sage-Grouse habitat over the long-term and decrease the probability of wildfire occurrence and the need for fire-suppression activities. Coordination with other land management agencies and landowners may promote improved habitat conditions across land management boundaries, thus improving the efficiency and effectiveness of fire and fuels treatments across the landscape. Additionally, implementation of the Wildfire, Invasive Annual Grasses and Conifer Expansion Assessment will improve wildland fire management across the landscape via improved coordination across agencies.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan (2015)
Wilderness Characteristics						
Management actions to protect other resources and special designation areas offer some protection of wilderness characteristics. Alternative A includes the fewest Greater Sage-Grouse protections and is least restrictive of surface-disturbing activities that have the potential to alter the natural setting, as well as reduce opportunities for solitude or primitive recreation, of lands with wilderness characteristics. Therefore, degradation of wilderness characteristics is most likely under this alternative.	Under Alternative B, restrictions on resource uses, such as ROW exclusion and closure to mineral exploration and development, would offer more protection of lands with wilderness characteristics compared to Alternative A.	Impacts from Alternative C would be similar those described for Alternative B, but would be applied across a larger geographic area. As such, Alternative C would provide greater protection from surface- disturbing activities on lands with wilderness characteristics. In addition, livestock grazing would be prohibited in PHMA (i.e., all occupied habitat). This would eliminate the need for livestock developments (e.g., fences, cattle guards, guzzlers, stock ponds, and access roads) and would enhance wilderness characteristics.	Under Alternative D, the BLM and Forest Service would apply restrictions on resource uses similar to, though less than, Alternative B. Restrictions would include ROW avoidance areas and stipulations on mineral leasing. Such restrictions would provide more protection to lands with wilderness characteristics compared to Alternative A.	Under Alternative E, impacts from restrictions on resource uses would be similar to Alternative B, though restrictions would apply to a smaller area of lands with wilderness characteristics.	Impacts would be the same as those described for Alternative B.	Under the Proposed Plan, wilderness characteristics would receive indirect, incidental protections from the restrictions placed on management actions. Areas in PHMA and IHMA would remain open to fluid mineral leasing, with fewer acres closed leasing than any other alternative, including Alternative A. Any indirect protections wilderness characteristics might experience from closing acres to fluid mineral leasing would be experienced the least under the Proposed Plan.
Livestock Grazing/Range Management						
In general, Alternative A would be the least restrictive on livestock grazing. Under Alternative A, livestock grazing would continue to be managed under current guidance, with AUMs and acres open to grazing remaining at current levels. Grazing allotments would continue to be subject to permit renewals and assessments of rangeland health.	Acres open to grazing and permitted AUMs would be the same as for Alternative A. PHMA would be managed so that at least 70 percent of the land cover provides adequate sagebrush habitat to meet Greater Sage-Grouse needs. Where cover requirements do not meet forage objectives for livestock grazing, this would result in the need to modify grazing practices with increased costs for permittees. Consideration of Greater Sage-Grouse habitat objectives and management would be required in grazing management in PHMA and incorporated into grazing allotments through BLM AMPs or permit renewals or BLM and Forest Service NEPA processes. As a result, impacts would occur over time at a site- specific level as measures are incorporated into individual allotments. Land Health assessment and permit renewals would be prioritized in PHMA, but there is potential for further degradation of lands outside of PHMA that are not meeting land	Under Alternative C, grazing would be eliminated from all allotments completely or partially within occupied habitat. Closures would impact permittees' current seasonal rotations or other management strategies that utilize both federal and private lands. The elimination of permitted grazing in PHMA under Alternative C may result in permittees' going out of business, with impacts on both individual permittees as well as local communities as a whole. Additional details of the economic impacts are discussed in Section 4.14, Social and Economic Conditions. Beneficial or adverse impacts on range management from other resource uses (e.g., ROW or fluid mineral development) would be diminished in scale and intensity because of the elimination of grazing in all allotments intersecting occupied habitat.	Acres open to grazing and permitted AUMs would be the same as for Alternative A. Impacts from management actions would be similar to those described under Alternative B. A moderate decline in permitted grazing would be anticipated over time as grazing permits are modified to incorporate Greater Sage-Grouse objectives at renewal or allotment analysis. Coordination with the state should decrease conflicts in standards and provide a location appropriate framework, assisting permittees' ability to adopt these standards and reducing impacts. Reconnection and expansion of native plant communities would be an objective across all Greater Sage-Grouse habitat types and restoration of seasonal habitats would be emphasized in both priority and medial habitats. Should treatments in this habitat not match with vegetation objectives for livestock grazing, forage quality would decrease. However, in most cases, treatment (e.g., conifer removal)	Under Alternative E, allotment renewal in CHZ and IHZ would be prioritized where populations are declining. Alternative E would allow for greater flexibility in management options, limiting impacts on range management. Changes could be required to grazing timing and intensity to meet Greater Sage-Grouse habitat requirements, with the potential for some increased time and costs to permittees as compared to Alternative A. However, due to the increased flexibility in management actions under this alternative, permittees would have more options to address Greater Sage-Grouse habitat requirements, and impacts on range management would be limited.	In areas where grazing is permitted, management would be similar to that described in Alternative B but increased in intensity due to increased restrictions on prohibitions to grazing after fire and the prohibition on all new range improvements. These actions are likely to further limit the abilities of permittees/lessees to fully utilize permitted AUMs and result in increased time and cost for management.	Acres open to grazing and permitted AUMs would be the same as for Alternative A. Grazing management actions and impacts are similar to those described in Alternatives B and D. Greater Sage-Grouse habitat objectives would be incorporated into grazing allotments through allotment management plans or permit renewals, or Forest Service NEPA processes, a moderate decline in permitted grazing is anticipated over time as permits are modified to meet objectives. In the proposed plan, specific guideline for Greater Sage-Grouse seasonal habitat with impacts determined at implementation level for BLM lands. Priority for land health assessment and permit renewal would include SFAs first followed by PHMAs outside the SFAs. Changes in management would follow this priority order. The Proposed Plan would also include additional vegetation treatment measures such as conifer removal, and annual grass treatment, with specific vegetation objectives in PHMA. FIAT

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan (2015)
	health standards or desired conditions.		would improve forage conditions in the long term.			assessments will also be used at implementation to determine site specific fire management measures. Where vegetation and fire management objectives do not meet forage objectives for livestock grazing, this would result in the need to modify grazing practices. However, in most cases, treatments (e.g., conifer removal) would improve forage conditions in the long term. Disturbance of livestock grazing and livestock forage from development activities would be minimized in the Proposed Plan due to the inclusion of a cap on anthropogenic disturbance, mitigation for conservation gain to Greater Sage-Grouse, and conservation measures such as adaptive management and defined monitoring, RDFs, and lek buffers.
Travel Management						
Areas currently designated as open to cross-country OHV use would continue to be managed as such. There would be no new restrictions related to Greater Sage-Grouse habitat management and no change in current levels of access under Alternative A. All Forest Service-administered lands would be limited to designated routes.	The BLM and Forest Service would limit OHV travel to existing roads and trails in PHMA. This would reduce cross-country access in those portions of PHMA that were previously managed as open for cross-country travel. Applications for the upgrading or realignment of existing routes would be required to meet certain design, location, and mitigation criteria intended to protect Greater Sage-Grouse habitat. These requirements may preclude the construction of some new routes, but would be unlikely to reduce access across the decision area. Impacts on Forest Service-administered lands would be the same as for Alternative A.	The BLM and Forest Service would limit OHV travel to existing roads and trails in PHMA. Additionally, in PHMA, new road construction within 4 miles of active leks would be prohibited. Upgrading of existing routes in occupied habitat where such action would damage Greater Sage-Grouse habitat would also be precluded. Together, these actions would result in site-specific losses of opportunity for motorized travel and future route construction and improved access. Impacts on Forest Service-administered lands would be the same as for Alternative A.	All BLM lands in Field Offices containing Greater Sage-Grouse habitat would be limited to existing routes and off-road OHV travel prohibited with the exception of specific areas managed as open for recreation purposes. Impacts on Forest Service-administered lands would be the same as for Alternative A.	Impacts under Alternative E would be similar to Alternative D, with fewer acres identified as limited to existing routes in Greater Sage-Grouse habitat.	Impacts under Alternative F on BLM-administered lands would be the same as Alternative B. Impacts on Forest Service-administered lands would be the same as for Alternative A.	Impacts under the Proposed Plan would be the same as Alternative D

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan (2015)
Lands and Realty						
<p>ROW avoidance and exclusion restrictions would not be applied in Greater Sage-Grouse habitat, thus, not preventing the BLM or Forest Service from accommodating future demand for ROW development within the planning area.</p> <p>Existing transportation routes would continue to provide motorized access to ROW infrastructure and communication sites for construction and maintenance with no additional impacts on lands and realty from travel and transportation management.</p> <p>Greater Sage-Grouse habitat would remain available for withdrawal or disposal as needed to serve BLM or other agency objectives.</p>	<p>Managing PHMA as ROW exclusion would prevent the BLM and Forest Service from accommodating new ROW development in those areas. With a continuing demand for new ROWs in the planning area, including major inter- and intra-state electrical transmission and pipeline ROW developments would be prevented or diverted to adjacent non-federal lands. Development on adjacent lands could result in more extensive direct and indirect impacts on Greater Sage-Grouse populations and habitat (e.g., vehicle traffic on roads crossing public lands), especially if the development is within close proximity to Greater Sage-Grouse habitat on BLM-administered or Forest Service-administered lands, or the ROW route is longer to avoid federal lands.</p> <p>Within exclusion areas, BLM and Forest Service would only consider new ROW authorizations where the proposed infrastructure could be co-located entirely within the footprint of an existing ROW. BLM and Forest Service would require co-location in GHMAs where possible. Impacts on the lands and realty program under Alternative B would include the need to locate proposed facilities outside exclusion areas or within existing ROWs, which limits the BLM's ability to accommodate the demand for new infrastructure development, including wind energy development.</p> <p>PHMA lands would not be available for disposal or withdrawal, limiting BLM's ability to accommodate other management objectives with land tenure changes.</p>	<p>The BLM would not authorize new ROWs in exclusion areas unless the infrastructure could be located in an existing ROW authorization footprint. Impacts under Alternative C would be similar to Alternative B, but over a greater area.</p> <p>Alternative C would further limit opportunities for communication facilities, pipelines, fiber optic cables, electrical transmission lines, and similar ROW development in response to ongoing needs.</p> <p>Impacts on land tenure would be the same as Alternative B but cover a wider area (all occupied habitat).</p>	<p>Lands and Realty management under Alternative D would establish avoidance areas in Greater Sage-Grouse habitat, impacting the BLM- and Forest Service-administered lands and realty programs by reducing the BLM and Forest Service's ability to authorize above-ground linear ROWs, such as electrical transmission lines in PHMA.</p> <p>Within avoidance areas, additional stipulations for the development of electrical transmission lines could result in the denial of projects that cannot meet ROW grant requirements for the protection of Greater Sage-Grouse habitat. Limitations on electrical transmission line development, renewable energy development, and new roadways under Alternative D would be less than Alternative C which creates exclusion areas,</p> <p>Impacts from travel management would be the same as those described above under Alternative B.</p> <p>Impacts on land tenure would be the same as Alternative B.</p>	<p>Stipulations associated with ROW avoidance areas under Alternative E would limit the BLM's ability to accommodate the demand for new infrastructure development in Greater Sage-Grouse habitat, but less than establishing exclusion areas. With demand for new ROWs in the planning area, including major inter- and intra-state electrical transmission and pipeline ROW developments, expected to continue and increase over time, new ROW development would be diverted to adjacent non-federal lands or blocked. If new ROW development could not be feasibly developed, the result would be reduced energy and communication opportunities to meet growing needs.</p> <p>Impacts from travel management would be the same as those described under Alternative A.</p> <p>Impacts on land tenure would be the same as Alternative A.</p>	<p>With establishment of ROW exclusion areas, neither the BLM nor Forest Service would authorize new ROW development in occupied habitat. Therefore, Alternative F would further reduce opportunities for renewable energy, communication facilities, pipelines, fiber optic cables, electrical transmission lines, and similar ROW development from occurring in the planning area, to meet growing energy and communication needs, similar to Alternative B.</p> <p>Impacts from Travel and Transportation Management under Alternative F would be the same as Alternative A.</p> <p>Impacts on land tenure would be the same as Alternative B.</p>	<p>Similar to Alternative D, the Proposed Plan would reduce the amount of land within Greater Sage-Grouse habitat available to ROW/SUA development without restrictions, compared to Alternative A. Within avoidance areas, additional stipulations for the development of electrical transmission lines could result in the denial of projects that cannot meet ROW/SUA grant requirements for the protection of Greater Sage-Grouse habitat. Limitations on electrical transmission line development, renewable energy development, and new roadways under the Proposed Plan would be less than other alternatives, such as Alternative C, which creates exclusion areas. Greater Sage-Grouse conservation measures under the Proposed Plan, such as the requirement for activities to promote net conservation gain for Greater Sage-Grouse, RDFs, buffers, and tall structure limitations, would likely discourage limit future development PHMA and IHMA. Projects that are proposed in PHMA or IHMA would incur added costs and more complex and lengthy review periods.</p> <p>Restrictions on surface activities for fluid minerals, closure of PHMA to mineral materials, and the proposed withdrawal of SFAs for locatable minerals would reduce the short- and long-term demand for ROWs/SUAs to support mineral development.</p> <p>By allowing land tenure actions that result in the net conservation gain of Greater Sage-Grouse habitat, the BLM and Forest Service could carry out actions that consolidate land ownership or acquire lands with higher quality Greater Sage-Grouse habitat.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan (2015)
Minerals						
Fluid Minerals (Oil and Gas)						
<p>Under Alternative A, 289,500 unleased medium potential acres would continue to be closed to fluid mineral leasing.</p> <p>New leases in most BLM field offices and Forest Service districts within the decision area would continue to be subject to TLs, and NSO buffers would be applied for varying distances around leks.</p> <p>Acres closed have the greatest impact on the fluid minerals program by prohibiting oil and gas development on portions of federal mineral estate with high potential for such development.</p> <p>In areas closed to leasing, oil and gas operations would be restricted in their choice of project locations and may be forced to develop in areas that are challenging to access or have less economic resources because more ideal areas could be closed to leasing. This could raise the cost of fluid mineral development in the planning area and could result in operators moving to nearby private or state minerals that are open to leasing.</p>	<p>All federal mineral estate within PHMA, including 496,300 unleased medium potential acres, would be closed to oil and gas leasing. Closure of these acres would directly impact the fluid minerals program as described under Alternative A. However, because the acreage closed would increase under Alternative B, the magnitude of these impacts would also increase.</p> <p>Existing leases would remain valid through their term but could not be renewed, resulting in further long-term restrictions on the development of fluid mineral resources.</p> <p>Conservation measures in addition to RDFs would be applied as COAs to existing leases on PHMA overlying federal mineral estate. Application of these requirements would impact fluid mineral operations by increasing costs if it resulted in the application of additional requirements and/or use of more expensive technology. To avoid these costs, operators may move to nearby state or private minerals, resulting in lost royalties for the BLM and Forest Service.</p>	<p>All federal mineral estate in the decision area, including 601,000 unleased medium potential acres, would be closed to oil and gas leasing. Closure of these acres would directly impact the fluid minerals program as described under Alternative A; however, because Alternative C would close the most acres out of any alternative, the magnitude of these impacts would also increase.</p> <p>Management actions applicable to existing leases under Alternative C would be similar to those under Alternative B, but they would apply to all existing leases in the decision area. Alternative C would also call for COAs implementing seasonal restrictions on vehicle traffic and human presence associated with exploratory drilling. This alternative also would limit new surface disturbance on existing leases to 3 percent per section, with some exceptions. Impacts of these operating and siting restrictions would be the same type as those described under Alternative B, although the magnitude of the impacts would increase.</p>	<p>Fluid mineral allocations in PHMA and IHMA would vary depending on oil and gas development potential. 289,500 unleased medium potential acres would be closed to oil and gas leasing. An NSO stipulation would apply within 0.6 mile of leks to 176,900 acres.</p> <p>New leases within PHMA and IHMA would be subject to density limitations and a 3-percent disturbance cap for each section.</p> <p>Management of existing fluid mineral leases under Alternative D would be the same as that under Alternative B except that all management actions other than RDFs would apply to all 101 existing leases within Greater Sage-Grouse habitat.</p>	<p>Within the planning area, 289,500 unleased medium potential acres would be closed to fluid mineral leasing under this alternative.</p> <p>Management existing leases in the decision area would be similar to that under Alternative A. Unleased areas in CHZ and IHZ would be open to leasing subject to an NSO stipulation.</p>	<p>Impacts of closures under Alternative F would be the same as under Alternative B.</p> <p>Management actions applicable to existing leases under Alternative F would be similar to those under Alternative C. However, under Alternative F, TLs would prohibit human presence as well as surface-disturbing activities during the nesting and brood-rearing season. This management would be the most restrictive management out of all the alternatives.</p>	<p>Within the planning area, 257,400 unleased medium potential acres would be closed to oil and gas leasing. Closure of these acres would directly impact the fluid minerals program as described under Alternative A; however, because more acres would be closed under the proposed plan, the magnitude of these impacts would increase.</p> <p>The same RDFs would be applied to the same acreage as under Alternative B. However, the only conservation measures applied would relate to master development plans and unitization.</p> <p>Application of the three percent disturbance cap and NSO with limited exception in PHMA and IHMA, and lek buffers in GHMA could impact both new and existing fluid mineral activities by preventing or restricting new surface development.</p> <p>Management of existing fluid mineral leases under the Proposed Plan would be the same as that under Alternative B with the same impacts.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan (2015)
Fluid Minerals (Geothermal)						
<p>Under Alternative A, 12,513,900 acres of the planning area would be closed to geothermal leasing. This includes 2,939,400 acres of available moderate to high potential areas and 9,574,600 acres of available low to no potential areas.</p> <p>New leases in most BLM field offices and Forest Service districts within the decision area would continue to be subject to TLs, CSUs, and NSO buffers would be applied for varying distances around leks.</p>	<p>Under Alternative B, 19,598,800 acres of the planning area would be closed to geothermal leasing. This includes 5,287,800 acres of available moderate to high potential areas and 14,311,000 of available low to no potential areas.</p> <p>Existing leases would remain valid through their term but could not be renewed, resulting in further long-term restrictions on the development of fluid mineral resources.</p> <p>Conservation measures in addition to RDFs would be applied as COAs to existing leases on PHMA overlying federal mineral estate. Application of these requirements would impact fluid mineral operations by increasing costs if it resulted in the application of additional requirements and/or use of more expensive technology. To avoid these costs, operators may move to nearby state or private minerals, resulting in lost royalties for the BLM and Forest Service.</p>	<p>Under Alternative C, 21,901,100 acres of the planning area would be closed to geothermal leasing. This includes 6,137,200 acres of available moderate to high potential areas and 15,763,900 acres of available low to no potential areas.</p> <p>Management actions applicable to existing leases under Alternative C would be similar to those under Alternative B, but they would apply to all existing leases in the decision area. Alternative C would also call for COAs implementing seasonal restrictions on vehicle traffic and human presence associated with exploratory drilling. This alternative also would limit new surface disturbance on existing leases to 3 percent per section, with some exceptions. Impacts of these operating and siting restrictions would be the same type as those described under Alternative B, although the magnitude of the impacts would increase.</p>	<p>Under Alternative D, 17,526,500 acres of the planning area would be closed to geothermal leasing. This includes 3,215,600 acres of available moderate to high potential areas and 14,311,000 acres of available low to no potential areas.</p> <p>New leases within PHMA and IHMA would be subject to density limitations and a 3-percent disturbance cap for each section.</p> <p>Management of existing fluid mineral leases under Alternative D would be the same as that under Alternative B except that all management actions other than RDFs would apply to all 101 existing leases within Greater Sage-Grouse habitat.</p>	<p>Acres of moderate to high and low to no potential areas closed to geothermal leasing would be the same as Alternative A. Acres subject to types of stipulations would differ; more acres would be open subject to NSO stipulations, less acres would be open subject to CSU/TL stipulations, and less acres would be open subject to standard terms and conditions.</p> <p>Unleased areas in CHZ and IHZ would be open to leasing subject to an NSO stipulation.</p>	<p>Under Alternative F, 12,513,900 acres of the planning area would be closed to geothermal leasing. This includes 2,939,400 acres of available moderate to high potential areas and 9,574,600 acres of available low to no potential areas.</p> <p>Management actions applicable to existing leases under Alternative F would be similar to those under Alternative C. However, under Alternative F, TLs would prohibit human presence as well as surface-disturbing activities during the nesting and brood-rearing season.</p>	<p>Under the Proposed Plan 11,296,800 acres of the planning area would be closed to geothermal leasing. This includes 2,832,800 acres of available moderate to high potential areas and 8,464,000 acres of available low to no potential areas.</p> <p>Under the proposed plan, RDFs and BMPs would be applied as COAs when a geothermal drilling permit or other post-lease activity is approved. In addition to affecting new leases, the COAs would be applied to the 25,571 acres of existing leases within Greater Sage-Grouse habitat, consistent with existing lease terms and special stipulations. These RDFs and conservation measures would include such requirements as noise restrictions, structure height limitations, design requirements, water development standards, remote monitoring requirements, and reclamation standards as described in Appendix A [of the 2015 Final EIS]. This alternative also would limit new surface disturbance on existing leases to 3 percent per section, with some exceptions.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan (2015)
Nonenergy Leasables						
<p>Under Alternative A, no changes would be made to the acres open and closed to leasing consideration. Currently, 11,799,500 acres are closed to non-energy mineral leasing.</p> <p>Existing federal non-energy leasable mineral leases in the decision area would continue to be subject to any stipulations or BMPs contained in those leases. Application of BMPs could alter how mineral resources are accessed and extracted and result in the use of different technology than would otherwise have been used.</p> <p>Non-energy leasable mineral development operations may also move to nearby private or state minerals containing non-energy leasable mineral resources within Greater Sage-Grouse habitat. This change would result in lost royalties for the BLM and Forest Service.</p>	<p>Under Alternative B, PHMA would be closed to prospecting and leasing (19,167,400 acres). Management under this alternative would close more federal mineral estate to non-energy leasable mineral prospecting and leasing than management under Alternative A. Closing areas to non-energy mineral prospecting and leasing would result in the same type of impacts as under Alternative A, but over a larger area.</p> <p>However, the majority of acres in unleased KPLAs, where interest in non-energy leasable mineral development is most likely, would remain open to leasing. Therefore, impacts would be mitigated.</p> <p>Existing federal non-energy leasable mineral leases in PHMA would be subject to RDFs. Application of RDFs would increase costs of non-energy leasable development if it delayed resource development or resulted in the use of more expensive technology or less efficient development than would otherwise have been used.</p>	<p>Impacts under Alternative C would be the same as those described under Alternative B except that more acres would be closed (21,629,700 acres). As a result, the magnitude of impacts under this alternative would increase.</p> <p>However, similar to Alternative B, the majority of unleased acres in KPLAs would remain open to leasing. Therefore, impacts would be mitigated.</p>	<p>Under Alternative D, PHMA and IHMA would be closed to prospecting and leasing. Management under this alternative would close more federal mineral estate (8,308,600 acres) to non-energy leasable mineral prospecting and leasing than management under Alternative A.</p> <p>Impacts in unleased KPLAs would be similar to those under Alternative A except that CSUs and seasonal and daily TLs would be applied to all lands available for leasing in GHMA. Additionally, TLs would be applied to the ten federal phosphate leases within Greater Sage-Grouse habitat.</p> <p>Applying BMPs as Conditions of Approval on any new mine plan and requiring restoration of habitat or off-site mitigation could alter how mineral resources are accessed and extracted and result in the use of different (potentially more expensive) technology than would otherwise have been used.</p>	<p>Non-energy leasable mineral allocations under Alternative E would be the same as those under Alternative A and would result in the same impacts.</p> <p>Impacts in unleased KPLAs would be similar to those under Alternative A except that lands open to leasing would be subject to several stipulations that include prohibiting permanent structures within occupied leks, prohibiting tall structures within one mile of leks, restrictions on noise disturbances, and various TLs specific to protecting leks. Stipulations would restrict the ability of mineral resources to be developed or extracted.</p>	<p>Impacts under Alternative F would be the same as those described under Alternative C, but would impact a smaller area (19,167,400 acres).</p> <p>However, similar to Alternative B, the majority of unleased acres in KPLAs would remain open to leasing. Therefore, impacts would be mitigated.</p>	<p>Impacts under the Proposed Plan would be similar to those described under Alternative B except that fewer acres would be closed (16,270,500 acres) and the disturbance cap and lek buffers would apply. Because more acres would be closed compared to Alternative A and additional restrictions would be added, impacts would increase under the Proposed Plan.</p> <p>Because KPLAs would remain open to nonenergy solid mineral leasing, impacts on federal nonenergy solid leasable mineral development would be mitigated.</p> <p>Application of RDFs and TLs to existing phosphate leases in Greater Sage-Grouse habitat would result in the same impacts described under Alternative D.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan (2015)
Locatable Minerals						
<p>Under Alternative A, no change would be made to the acres of federal mineral estate with high potential that are withdrawn or petitioned for withdrawal (currently 5,380,200 acres). Withdrawal or closure of an area to mining development eliminates the ability to access and extract the mineral resources in that area under new claims. This represents an impact on the potential discovery, development, and use of those resources by decreasing the availability of mineral resources. In addition, validity exams must be completed on all existing claims in withdrawn areas. The need for these exams adds costs and delays for the BLM, Forest Service, and claimant.</p> <p>This alternative would be the least restrictive to locatable minerals because a larger percentage of the decision area would be open to locatable mineral entry and no additional restrictions would be applied to mining operations.</p>	<p>Under Alternative B, PHMA (7,928,700 acres) would be recommended for withdrawal in addition to the 5,380,200 acres currently withdrawn. The large increase in areas petitioned for withdrawal under this alternative compared with Alternative A would increase the development delays and costs of validity exams on the BLM, Forest Service, or claimant. Accessing and extracting locatable minerals of federal mineral estate would not be impacted by applying BMPs; however, mining operations and practices could be affected and costs increased if an operator agrees to apply any of the BMPs on a project-specific basis.</p>	<p>Impacts under Alternative C would be the same as those described under Alternative B except that more acres (11,555,000 acres) would be recommended for withdrawal. The magnitude of impacts under this alternative would increase since more acreage would be affected.</p> <p>Impacts from applying BMPs would be the same as those described under Alternative B.</p>	<p>Impacts under Alternative D would be the same as those described under Alternative A, except that additional measures to avoid or minimize adverse effects on Greater Sage-Grouse and their habitat would be required for 3809 notices and plans of operations in all habitat types. A total of 11,555,000 acres would be recommended for withdrawal under this alternative. Impacts from these additional measures would be highly variable depending on the extent of the additional requirements. If these measures resulted in the mineral resource not being able to be accessed or extracted, an impact on the potential discovery, development, and use of those resources would occur because the availability of mineral resource would decrease.</p> <p>Impacts from applying BMPs would be the same as those described under Alternative B.</p>	<p>Impacts under Alternative E would be the same as those described under Alternative A.</p>	<p>Impacts under Alternative F would be the same as those described under Alternative B.</p>	<p>Under the Proposed Plan 2,968,200 acres would be recommended for withdrawal. The increase in areas petitioned for withdrawal compared with Alternative A would result in the types of impacts described under Alternative B.</p> <p>Impacts from applying BMPs would be the same as those described under Alternative B.</p>
Salable Minerals (Mineral Materials)						
<p>Under Alternative A, no change would be made to the acres that would open or closed (currently 10,707,600 acres closed) to mineral material disposal.</p>	<p>Under Alternative B, all PHMA would be closed to mineral material disposal (18,589,300 acres). Closing these acres would prevent access to the mineral resources underlying them and reduce mineral material development in the decision area.</p> <p>Management of mineral materials on federal mineral estate outside of PHMA would be the same as that under Alternative A.</p>	<p>Under Alternative C, all Greater Sage-Grouse habitat would be closed to mineral material disposal (21,174,000 acres). This alternative would close the most acres to mineral material disposal of all the alternatives. Therefore, impacts on mineral materials would be the highest under Alternative C.</p>	<p>Under Alternative D, areas within 3 km of occupied leks would be closed to mineral materials disposal (13,211,100 acres).</p> <p>All other areas in Greater Sage-Grouse habitat would be subject to TLs.</p>	<p>Alternative E would close the same acres as under Alternative A (10,707,600 acres).</p> <p>Under Alternative E, mineral materials management would differ between portions of the decision area in Idaho and Montana and portions in Utah.</p> <p>Within Idaho and southwest Montana, CHZ would be closed to mineral material disposal. Closure of the 114 existing community pits in CHZ (23 percent of existing community pits in Greater Sage-Grouse habitat) would also be recommended.</p> <p>Within Utah, mineral material operations within PHMA would be subject to TLs and other restrictions.</p>	<p>Under Alternative F, 18,589,300 acres would be closed to mineral materials disposal. Impacts of these closures would be the same type as those described under Alternative B. Because more acres would be closed under Alternative F than under Alternative A, impacts on the mineral materials programs would increase.</p>	<p>Under the Proposed Plan, all PHMA would be closed to mineral material disposal (15,529,000 acres). The impacts described under Alternative B would be mitigated in the Montana portion of the decision area because new free use permits would still be allowed and existing pits would be able to expand. Because 45 percent more acres of federal mineral estate would be closed under the Proposed Plan compared with Alternative A, the magnitude of these impacts would increase.</p> <p>Application of the disturbance threshold in IHMA and RDFs, buffers, and timing restrictions in IHMA and GHMA would increase restrictions on mineral material activities compared with Alternative A, thereby increasing impacts.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Proposed Plan (2015)
Special Designations						
Areas of Critical Environmental Concern						
The BLM would continue managing the 53 existing ACECs containing 325,000 acres of occupied Greater Sage-Grouse habitat to protect the identified relevant and important values. Sagebrush habitat is not identified as a relevant and important value in any of these existing ACECs.	No new ACECs would be designated. Impacts would be similar to those described under Alternative A, however existing ACECs and the identified relevant and important values for which they were designated could experience indirect, beneficial impacts from restrictions placed on Greater Sage-Grouse habitat within or adjacent to ACECs.	Under Alternative C, 39 new BLM ACECs encompassing approximately 4,200,000 acres of occupied Greater Sage-Grouse habitat would be designated as sagebrush reserves, for the relevant and important value of conserving Greater Sage-Grouse.	No new ACECs would be designated. Impacts would be the same as those described under Alternative B.	No new ACECs would be designated. Impacts would be the same as those described under Alternative B.	Under Alternative F, up to 18 new BLM ACECs and Forest Service Greater Sage-Grouse Zoological Areas encompassing up to 8.3 million acres of occupied Greater Sage-Grouse habitat would be designated as sagebrush reserves for the relevant and important value of conserving Greater Sage-Grouse.	No new ACECs would be designated. Impacts would be the same as those described under Alternative B.
Socioeconomic Impacts						
<p>Under Alternative A, current management would continue for grazing, mineral leasing and development, and other activities in Greater Sage-Grouse habitat areas.</p> <p>The economic benefits of these activities would be maintained, and communities would not suffer losses in income or jobs associated with Greater Sage-Grouse conservation efforts.</p>	<p>Under Alternative B, grazing would not be restricted on Greater Sage-Grouse habitat, so permittees would not suffer economic losses.</p> <p>Under Alternative B, mineral leasing for fluid minerals, salable minerals and mineral materials would be closed or restricted in PHMA. These restrictions would reduce the opportunity to develop minerals on federal land and reduce the revenue and jobs to local communities.</p>	<p>Alternative C would eliminate grazing from all allotments in occupied habitat. The elimination of permitted grazing in PHMA under Alternative C may result in permittees' going out of business, with impacts on both individual permittees as well as local communities as a whole.</p> <p>Socioeconomic impacts from reduced mineral leasing and development would be similar to Alternative B but would cover a wider area, all occupied habitat.</p>	<p>Under Alternative D, grazing would be maintained at current levels, maintaining the economic benefits of grazing to permittees and communities.</p> <p>Mineral leasing acreage would not be reduced under Alternative D, but would be subject to stipulations regarding timing and proximity to Greater Sage-Grouse lek sites. Maintaining current acreage open to leasing would minimize economic harm to workers and communities from Greater Sage-Grouse conservation measures.</p>	<p>Under Alternative E, grazing would be maintained at current levels, maintaining the economic benefits of grazing to permittees and communities.</p> <p>Mineral leasing acreage would not be reduced under Alternative E, but limited areas would be subject to stipulations regarding timing and proximity to Greater Sage-Grouse lek sites. Maintaining current acreage open to leasing would minimize economic harm to workers and communities from Greater Sage-Grouse conservation measures.</p>	<p>Alternative F restrictions on grazing could also harm permittees' economic well-being and may drive some out of business, causing harm to individuals and communities in Greater Sage-Grouse habitat areas.</p> <p>Socioeconomic impacts from reduced mineral leasing and development would be similar to Alternative B.</p>	<p>Under the Proposed Plan, grazing would be maintained at current levels, maintaining the economic benefits of grazing to permittees and communities.</p> <p>Mineral leasing acreage would not be reduced under the Proposed Plan, but would be subject to stipulations regarding timing and proximity to Greater Sage-Grouse lek sites. Maintaining current acreage open to leasing would minimize economic harm to workers and communities from Greater Sage-Grouse conservation measures.</p>

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4.4 IMPACTS OF THE 2018 FINAL EIS MANAGEMENT ALIGNMENT ALTERNATIVE

Table 4-4, below, summarizes if and how decisions in the 2018 Final EIS Management Alignment Alternative were considered in the 2015 Final EIS. Issues needing further analysis are analyzed further in this chapter.

Table 4-4
Consideration of Management Alignment Alternative Components in the 2015 Final EIS

Management Alignment Alternative (2018)	Considered in 2015
Modifying habitat management areas	Various habitat management area configurations were proposed in 2015, Section 2.9, pg. 2-83.
Removing SFA designations	All alternatives in 2015 considered the absence of SFA designation.
Adjusting density caps	Density caps of an average of one energy and mining facility per 640 acres in PHMA were considered as the Proposed Plan (pg. 2-30).
Modifying disturbance caps	Human disturbance cap of 3 percent within PHMA in any BSU, excluding disturbance from wildfire and fuels management activities, was considered as the Proposed Action (pg. 2-29). The Proposed Action in the 2015 Final EIS considered human disturbance criteria and development prioritization (pg. 2-31).
Modifying lek buffers	The application of lek buffers was considered as the Proposed Plan (pg. 2-34), except for the buffers' inapplicability to vegetation treatments specifically designed to improve or protect Greater Sage-Grouse habitat. Various lek buffers were considered among the alternatives in Chapter 2.
Including waivers, exceptions, and modifications on NSO stipulations	Under the Proposed Plan in the 2015 Final EIS, areas within PHMA and IHMA would be open to development and leasing and subject to an NSO stipulation, with a limited exception (pg. 2-51). Under the Proposed Plan in the 2015 Final EIS, nominated parcels would be evaluated for development feasibility prior to lease offering (pg. 2-51). The Proposed Plan in the 2015 Final EIS considered criteria for the granting of exceptions to the NSO stipulation (pg. 2-52), except that the criteria were based on a different conservation standard (i.e., conservation gain versus no net loss). Alternative D in the 2015 Final EIS considered a no net loss standard. Alternatives A and E in the 2015 Final EIS considered the absence of written orders of the BLM Authorized Officer, requiring reasonable protective measures for Greater Sage-Grouse.

Management Alignment Alternative (2018)	Considered in 2015
Changing requirements for design features	<p>The Proposed Plan in the 2015 Final EIS considered the incorporation of RDFs in PHMA and IHMA (p. 2-33) but did not consider the application of RDFs as best management practices (BMPs) in GHMA.</p> <p>The Proposed Plan in the 2015 Final EIS considered closures or limitations on mineral materials development in PHMA and IHMA (p. 2-54); however, it did not consider GMHA open to mineral materials development, subject to BMPs.</p> <p>The Proposed Plan in the 2015 Final EIS considered closures or limitations on leasing within known phosphate leasing areas (p. 2-55); however, it did not consider GMHA open prospecting and subsequent leasing, subject to BMPs.</p> <p>Alternative E in the 2015 Final EIS considered the management of new ROWs in GHMA for utility-scale energy developments without RDFs or BMPs (p. 2-176).</p> <p>Management of new ROWs in GHMA subject to BMPs was not analyzed in 2015.</p>
Modifying habitat objectives	All action alternatives considered the application of habitat objectives as informative metrics but not as land health standards.
Modifying decisions for livestock grazing commensurate with the threat posed	<p>The prioritization of review and processing of grazing permits/leases based on land health conditions or concerns in PHMA and IHMA was not considered in 2015.</p> <p>The prioritization of HMAs for rangeland health assessments with known land health issues or where local populations of Greater Sage-Grouse are in decline was not considered in 2015.</p>
Modifying the mitigation strategy to align with the state mitigation strategy, including standard for no net loss	<p>Alternative D in the 2015 Final EIS considered the application of a no net loss mitigation standard.</p> <p>Alternative E in the 2015 Final EIS considered not acquiring habitat or generally retaining habitat within PHMA and IHMA.</p> <p>Alternative E in the 2015 Final EIS considered the development of an in lieu fee mitigation program.</p> <p>The Proposed Plan in the 2015 Final EIS considered the application of a mitigation hierarchy for fluid mineral development (pg. 2-51) but not its inapplicability to GHMA.</p>

I. Modifying Habitat Designations

MD SSS 6: Habitat conditions and our understanding of Greater Sage-Grouse can change over time as new science emerges and the climate changes; therefore, it may be necessary to modify habitat boundaries and designations within Idaho. To effectively respond to changes, the BLM and cooperating agencies have developed a two-team approach, detailed in the management alignment alternative, which would become Appendix K [of the 2018 Final EIS]. The process and sideboards identified in the two-team approach should reduce the risk of habitat adjustments being made that disregard the science and the needs of Greater Sage-Grouse.

If HMA habitat boundary changes were more than minor mapping error fixes, then determining the environmental consequences would not be determined at this time. This is because the context and intensity of the effects are unknown. Impacts should be further assessed at the time a change to the habitat management areas is proposed. The BLM anticipates that any impact resulting from a change in map boundaries would be consistent with those described in 2015.

MD SSS 9: Removal of the requirement to apply RDFs and buffers in existing Greater Sage-Grouse habitat outside of designated habitat management areas would reduce protections to Greater Sage-Grouse and its habitat; however, PHMA and IHMA designations were designed to protect approximately 90 percent of occupied Greater Sage-Grouse leks. Approximately 6 percent of occupied leks occur within GHMA. This leaves approximately 2 percent of occupied leks occurring outside of designated Greater Sage-Grouse habitat. Approximately 377,347 acres of key habitat were identified outside of designated habitats in 2017 and 27 occupied leks are known to occur outside of designated habitat management areas. These areas are typically more scattered and of lower quality than even GHMA. This suggests that a very small portion of Greater Sage-Grouse habitat in Idaho would be not be actively managed for Greater Sage-Grouse. Discrete developments would require site specific NEPA analysis and at a minimum would require avoidance and minimization measures to ensure no undue or unnecessary degradation. For more diffuse land uses, the Idaho Standards for Rangeland Health would still be applied. This action is not expected to have any measurable population level effects to Greater Sage-Grouse in Idaho.

The changes in designated habitat management area boundaries proposed in this document fix minor errors in the 2015 maps and remove some areas of non-habitat that were added to PHMA as part of the SFA designation, but do not benefit Greater Sage-Grouse (e.g., the forested portion of the Donkey Hills ACEC). These changes should have no impact to Greater Sage-Grouse conservation. Changing the Brown's Creek Area from PHMA to IHMA would not reduce protections in this area for the next 5-20 years. Currently all IHMA in the West Owyhee Conservation area is being managed as PHMA because of the hard trigger trip from the Soda Fire. These areas would be managed as PHMA until the habitat returns to the 2011 baseline (this could be 20 or more years). So effectively, this change has no impact. The Browns Creek area includes two lek routes that could be used to monitor the population changes within IHMA in the West Owyhee Conservation Area which currently does not have a lek route. This ability to track population changes within IHMA in this Conservation area would allow for full implementation of the adaptive management process. Currently a population trigger cannot be assessed in the IHMA in the West Owyhee Conservation Area because there is inadequate data. Adding these two lek routes would provide adequate data to fully implement the population trigger review.

New* MD SSS 44: Both 2018 Final EIS alternatives include the use of interagency teams to facilitate responsible management flexibility regarding Greater Sage-Grouse habitat. The 2015 ROD/ARMPA and the Management Alignment Alternative refer to these teams using several different names, but the intent was similar. MD SSS 44 serves to formally identify this two-team interagency approach and the Appendix K [of the 2018 Final EIS] describes the responsibilities and sideboards for the actions these teams would take. This approach is expected to improve the consistency of Greater Sage-Grouse management across property ownership and improve

interagency coordination and collaboration in Idaho. Overall this approach is expected to improve Greater Sage-Grouse management above what BLM could do alone. The makeup of the teams and the sideboards identified should help ensure responsible implementation of the flexibility that the Management Alignment Alternative allows.

2. Removing Sagebrush Focal Area Designation

MD SSS 10, MD MR 10, MD WHB 3-6: SFAs were a subset of PHMA and were managed as PHMA with some additional management, however that additional management overlaps significantly with management of PHMA. The proposed mineral withdrawal was canceled with a Notice of Cancellation published in the Federal Register on October 11, 2017. Both SFA and PHMA are managed as 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 as described in MD MR 3. Finally, both SFA and PHMA are the top two priorities for vegetative treatments, permit renewals, monitoring, and compliance checks. The removal of SFA designations would have no measurable effect on the conservation of Greater Sage-Grouse in Idaho because the Management Direction proposed for PHMA would remain in place and continue to protect Greater Sage-Grouse habitat. SFA removal would add flexibility for responsible development with stringent requirements including mitigation to achieve a no net loss to Greater Sage-Grouse habitat in PHMA.

3. Modifying Disturbance and Density Caps

MD SSS 27: Removal of the 3 percent project level disturbance cap would allow BLM to intentionally cluster developments within areas already degraded by discrete anthropogenic activities in Greater Sage-Grouse habitat as long as the overall disturbance within the BSU remains below 3 percent. The 3 percent project scale disturbance cap has the potential to spread development into undeveloped areas of Greater Sage-Grouse habitat just to avoid reaching the 3 percent project scale disturbance cap in already fragmented areas. All 8 BSUs in Idaho are well under the 3 percent BSU scale Disturbance Cap (most are less than 1 percent) and are expected to remain low because of the no-net-loss mitigation standard and the other restrictions to development in PHMA and IHMA. Some areas, especially those with existing development, may be further developed even though compensatory mitigation would offset those impacts for the statewide Greater Sage-Grouse habitat.

Most development is centered along population centers in Idaho and most Greater Sage-Grouse habitat is located away from habitat. This reduces the current potential for development related habitat loss or disturbance but as Idaho's population continues to grow, development in the future may be pushed more and more into Greater Sage-Grouse habitat. Idaho issued a total of 123 new ROWs since the 2015 ROD/ARMPA was implemented. Most of these ROWs were for small scale projects like power line adjustments or access roads that disturb very few acres and are outside of Greater Sage-Grouse HMAs.

Removal of the one energy or mining facility per 640 acres on average density cap would have little effect on Greater Sage-Grouse conservation in PHMA in Idaho because Idaho has limited energy or mining development in Sage-grouse habitat. To date BLM Idaho only has one producing natural gas well that is associated with a BLM lease. The well is located on private

land but is drawing from gas reserves partially on federal mineral rights. There is also one oil and gas lease proposed in the Pocatello Field Office in Southeastern Idaho. The Pocatello Proposed RMP EIS describes the proposed lease area as having a high potential for occurrence of oil and gas resources, but describes the potential for oil and gas development such as drilling and completion of wells for fluid minerals production as low (USDOI BLM, 2010). This is due to the highly complex geology and to the fact that, despite the drilling of numerous exploration wells, there are no producing oil and gas wells or fields within the BLM Pocatello Field Office administrative boundary. The lease nomination area occurs within a geologic province called the Wyoming Thrust Belt Province. The Wyoming Thrust Belt was developed by east-directed compression during the Late Jurassic to Late Cretaceous Sevier Orogeny which resulted in a series of highly folded and faulted stacked thrust sheets that are progressively younger in age to the east. Major thrust faults in the Wyoming Thrust Belt Province include the Paris-Willard, Meade, Crawford, Absaroka, Hogsback-Darby, and Prospect. Thrust loading and structural deformation in the Wyoming Thrust Belt has resulted in a complex evolution of petroleum systems making exploration difficult and limiting drilling success (USDOI USGS, 2017).

Two recent wildcat wells have been drilled on lands in close proximity to the lease sale and have been drilled to depths at approximately 7000 feet targeting the Jurassic Stump – Preuss Sandstone. The CPC 17-1 Well was drilled in 2007 within Township 3 South, Range 43 East, Boise Meridian, NWSW of Section 17 and the Federal 20-3 Well was drilled in 2017 within Township 3 South, Range 43 East, Boise Meridian, S $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ and NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 20. Neither of the wells resulted in the discovery of an oil or gas resource, and were plugged and abandoned following drilling.

Based on the area's geology, the lack of access to some of the tracts in the parcel, and the steep topography of the individual tracts that comprise the parcel, combined with the exploration history of the area, BLM concludes it is reasonably foreseeable that, if the lease is sold, only one wildcat well would be drilled within the lease area. The well is unlikely to be productive, and would be plugged and abandoned after testing. The estimated surface disturbance, from well pad and access road construction, would be approximately 14 acres.

This proposed disturbance caps is unlikely to impact Oil and Gas Development in Idaho unless significant oil gas resources were discovered within Idaho which appears unlikely.

Additionally, there are restrictions on where and how energy facilities and salable mineral mining facilities are developed in PHMA and IHMA as well as requirements for offsetting impacts through mitigation to achieve a no net loss to Greater Sage-Grouse. The 2015 ROD/ARMPA's density cap did not apply to locatable minerals development, which is authorized under the Mining Law of 1872.

Appendix E: Removal of extraneous portions of Appendix E as described in **Chapter 2** [of the 2018 Final EIS] would not have any impact on Greater Sage-Grouse conservation or on development in Idaho above what is described in MD SSS 27 above.

4. Modifying Lek Buffers

MD SSS 35: Lek Buffers would remain the same in PHMA, which includes approximately 67 percent of the known occupied leks. There would be no effect to Greater Sage-Grouse in PHMA.

IHMA, which has approximately 25 percent (279) of the known occupied leks, would use the USGS Literature Minimum Buffers which are smaller than the buffers identified for use in the 2015 ROD/ARMPA. Little IHMA would be protected by the proposed buffers (Maximum of 25 percent for the largest buffer). Other restrictions in IHMA such as RDFs, Mitigation, Disturbance cap, and NSO with limited exception would serve to ensure responsible development; however, infrastructure and development would be allowed much closer to leks, subject to the before mentioned restrictions. The energy and infrastructure development threat to Greater Sage-Grouse habitat loss is inconsequential in Idaho when compared to the wildfire and invasive species threat. There is very little new development of energy and infrastructure in PHMA or IHMA. The reduction of buffers in IHMA would not result in increased development around every or even most leks because disturbance in BLM HMAs is limited and not the major threat to Greater Sage-Grouse habitat, however where development occurs nearer than the buffers identified in the No Action those leks would be at an increased risk of being abandoned.

Removing the lek buffers in GHMA would affect approximately 6 percent (approximately 62) of the known occupied leks in Idaho. These leks are scattered across almost 2 million acres of GHMA. The currently implemented buffers protect a maximum of 261,683 (approximately 13 percent) acres of GHMA from certain types of development. On a project specific basis BLM would continue to avoid and minimize impacts to the extent practicable within GHMA. Removing buffers from GHMA should encourage development outside of PHMA or IHMA but only a maximum of 13 percent of GHMA was unavailable for development based on the largest buffers in the 2015 ARMPA. This represents a very small percentage of the total Greater Sage-Grouse habitat in Idaho. As mentioned above GHMA is of lower quality or connectivity when compared to PHMA and IHMA.

The reduced buffer distance in IHMA and the removal of buffers in GHMA would improve alignment with the Governor's Plan by having the most restrictive management in PHMA and reducing those restrictions in IHMA and further reducing restrictions in GHMA. As can be seen in **Table 4-5** below, the amount of habitat protected under the buffers in the Management Alignment Alternative is lower compared to the No Action Alternative.

Appendix B: Changes to Appendix B [of the 2018 Final EIS] reflect the changes made in MD SSS 35. No additional impacts above what is described in this section are anticipated.

Table 4-5 displays the proposed buffers for each alternative along with the percent of the respective habitat protected by each buffer. Percentages have been rounded to the nearest whole percent for simplicity. Total Public Land acres for each designated habitat type are shown.

**Table 4-5
Habitat Protected by Lek Buffers**

Action	PHMA (4,177,624 acres)		IHMA (2,675,251 acres)		GHMA (1,956,451 acres)	
	Buffer	Percent Protected	Buffer	Percent Protected	Buffer	Percent Protected
No Action Alternative						
Linear Features (roads)	3.1 Miles	71	3.1 Miles	47	3.1 Miles	13
Infrastructure Related to Energy Development	3.1 Miles	71	3.1 Miles	47	3.1 Miles	13
Tall Structures	2 Miles	47	2 Miles	27	2 Miles	5
Low Structures	1.2 Miles	24	1.2 Miles	13	1.2 Miles	2
Surface Disturbance	3.1 Miles	71	3.1 Miles	47	3.1 Miles	13
Noise and Disruptive Activities	0.25 Miles	1	0.25 Miles	1	0.25 Miles	0
Management Alignment Alternative						
Linear Features (roads)	3.1 Miles	71	0.25 Miles	1	No Buffer	0
Infrastructure Related to Energy Development	3.1 Miles	71	2 Miles	27	No Buffer	0
Tall Structures	2 Miles	47	0.6 Miles	4	No Buffer	0
Low Structures	1.2 Miles	24	0.12 Miles	0	No Buffer	0
Surface Disturbance	3.1 Miles	71	2 Miles	27	No Buffer	0
Noise and Disruptive Activities	0.25 Miles	1	0.25 Miles	1	No Buffer	0

5. Including Waivers, Exceptions and Modification on NSO Stipulations

MD MR 1: The removal of the SFA designation would leave those lands with the protections of PHMA. Idaho has very little fluid mineral leasing potential with only one producing oil and gas well and one proposed lease in the state. Idaho has only a couple of operating geothermal energy developments. The change from NSO with no exception to NSO with limited exception should not result in increased habitat loss or degradation because the proposed exception criteria and screening and development criteria require offsetting impacts to achieve a no net loss to Greater Sage-Grouse or its habitat. The limited exception would allow BLM to develop fluid mineral leases in PHMA under limited situations consistent with its multiple use mandate.

MD MR 2: The analysis of removal of requirements to use buffers and RDFs in GHMA is found in this section under numbers 4. Modifying Lek Buffers and 6. Changing Requirements for Design Features.

MD MR 3: The analysis of removal of requirement for a net conservation gain is found in this section under 9. Modifying the Mitigation Strategy to Align with the State Mitigation Strategy. The removal of the requirement for a unanimous finding between BLM, USFWS, and the State of Idaho to grant an exception for NSO in fluid minerals development would be replaced with coordination with the technical and policy team, which would include both USFWS and the State of Idaho, and would still be required under the process described in MD SSS 44. This

change is expected to facilitate improved decision making and a more collaborative process for Greater Sage-Grouse management in Idaho while retaining BLM's decision-making authority.

MD MR 8: This management decision is redundant with MD MR 4 which is not proposed for change. This deletion would have no effect on Greater Sage-Grouse management but would reduce redundancy within the plan.

6. Changing Required Design Features (RDFs)

MD SSS 32, MD MR 12, MD RE 1, MD LR 2: Applicable RDFs would continue to be required in PHMA and IHMA as described in Appendix C of the [2018 Final EIS], however RDFs would be treated as best management practices in GHMA. This would provide a little more flexibility for each field office to consider and select the appropriate BMPs for project authorizations in GHMA. This may result in reduced consistency between projects on which BMPs would be implemented in GHMA. On a project specific basis BLM would continue to avoid and minimize impacts to the extent practicable within GHMA. The analysis of removal of requirements to use buffers in GHMA is found in this section under *4. Modifying Lek Buffers*.

Appendix C [of the 2018 Final EIS] would be reorganized to facilitate easier use of the RDFs in projects. It has been reorganized to better reflect those RDFs that are generally applicable to most or all projects and those that generally apply only to specific projects. It also identifies where an RDF offers several options to achieve a certain outcome. This change is expected to reduce confusion and facilitate more effective implementation of the RDFs.

7. Modifying Habitat Objectives

SSS OBJ 2: The added language only helps to clarify the appropriate context for using the Habitat Objectives in Table 2.2 of the 2015 Final EIS. This change should have no measurable impact on Greater Sage-Grouse conservation but should increase consistency in how Table 2.2 is applied across Idaho.

Adequate residual grass cover: Greater Sage-Grouse require adequate cover to conceal their nests and their movements near the nest. The amount and type of concealment varies, depending on the makeup of the nest site. Areas with densely branched sagebrush and abundant tall statured forbs may not need as much grass cover as areas with sparser sagebrush and low growing forbs. Connelly et al. (2000) recommends that Greater Sage-Grouse habitat be managed to ensure a healthy herbaceous understory that is at least 7 inches in height when chicks are hatching during the nesting season. Holloran et al. (2005) suggest that at least 4 inches of residual grass height is important for successful Greater Sage-Grouse nests. Seven inches is not a threshold where Greater Sage-Grouse nesting success suddenly disappears. Multiple studies have found successful Greater Sage-Grouse nests in areas that averaged less than 7 inches of herbaceous cover (Connelly et al. 2000). Areas with taller or columnar sagebrush or areas with less sagebrush may require grass heights taller than 7 inches in order to provide adequate cover (Connelly et al. 2000).

The predator community makeup of an area may also influence what type of cover is necessary to conceal nests. Greater Sage-Grouse nesting in areas with a low concentration of ravens may

require less overhead cover to allow a successful nest, compared with Greater Sage-Grouse nesting in areas with a high concentration of ravens; therefore, the focus is to develop a healthy and vigorous herbaceous understory that is capable of reproducing and maintaining itself on the landscape. The goal is to improve vigor, allow for reproduction and establishment, ensure properly functioning ecosystems, and then let Greater Sage-Grouse select suitable nesting habitats within those ecosystems.

Some ecological sites are not capable of consistently providing 7 or more inches of perennial grass height as concealment. In those areas, if Greater Sage-Grouse choose to nest there, they would have to rely on other types of concealment cover for their nests.

VEG OBJ 3: This MD is redundant with OBJ SSS 1 and so its deletion would not affect Greater Sage-Grouse conservation but would reduce redundancy in the 2015 Final EIS.

8. Modifying Decisions for Livestock Grazing Commensurate with Threat Posed.

MD LG 15, MD LG 17, MD WHB 2: Modifying the prioritization criteria for permit renewals, monitoring, and compliance helps the BLM focus on areas with current land health issues, instead of potentially spending extra time on areas that are in good condition at the expense of areas that have problems. This change is in line with current BLM policy and therefore would not have a measurable impact on Greater Sage-Grouse management.

MD LG 16: Removing the requirement to consider thresholds and responses during every grazing permit renewals in PHMA would reduce the BLM's NEPA process time by several days. This would be a minimal savings, given that most grazing permit renewal processes take multiple years to complete. The 2015 Final EIS had no requirement for the BLM to select the threshold and response alternative, only to consider it. Additionally, the BLM Grazing Regulations (CFR 4100) provide authority for the BLM to take the appropriate action, which at times may include thresholds and responses; therefore, this change would have no measurable impact on Greater Sage-Grouse conservation or on livestock grazing management.

9. Modifying Mitigation Strategy to Align with the State Mitigation Strategy Including Standards for No Net Loss.

MD MT 3, MD SSS 30, MD LR 14, MD MR 2, MD REC 2: Changing the mitigation standard from a "Net Conservation Gain" to a "No Net Loss" standard would reduce the amount of habitat that would be restored, improved, or protected by the difference between a net gain and a no net loss. This difference has not been defined by the BLM and has varied, based on the proponent's willingness to provide mitigation beyond the minimal net gain standard. Proponents would continue to vary in their willingness to provide mitigation that goes beyond the no net loss standard.

Under either standard, the BLM is ensuring that development projects would not result in a net harm to Greater Sage-Grouse or its habitat. This change would not result in a net loss of current Greater Sage-Grouse habitat; however, a future benefit, based on compensatory mitigation, would not be realized above and beyond current condition.

It is not possible to state how much benefit would be derived from the net conservation gain standard for Greater Sage-Grouse or its habitat. The 2015 Final EIS continues to require extensive vegetation treatment to restore Greater Sage-Grouse habitat. Compensatory mitigation would continue to occur in PHMA and IHMA, which would be additive to the ongoing vegetative treatments.

Since the Final EIS was implemented in 2015, there have been six non-BLM projects subject to the plan that were approved on BLM-administered land. These would result in new habitat loss and degradation of designated Greater Sage-Grouse habitat. These projects had a total of approximately 22 functional acres of new disturbance.

Additionally, there were two large-scale transmission line projects that were specifically exempted from the 2015 Final EIS: Gateway West and Boardman to Hemingway. These two projects would disturb many more functional acres than the other projects combined, but the total calculations for functional acres have not been completed.

Idaho has very few of these large-scale projects occurring each year, and the six projects with new habitat loss in a 2-year period with periodic large-scale projects is likely similar to what would be expected in the future. The acres of habitat not restored because of the reduction in the mitigation standard from net gain to no net loss would be much less than one percent of the vegetation treatments completed each year.

Mitigation would not be required in GHMA, and a primary goal of the Governor's Greater Sage-Grouse plan is to push development out of PHMA and IHMA into GHMA or outside of habitat; therefore, Greater Sage-Grouse in GHMA or outside designated habitat would be at increased risk of habitat loss or displacement; however, this area typically contains lower quality or marginal Greater Sage-Grouse habitat.

The BLM would continue to avoid and minimize impacts in GHMA, but there would be loss and degradation of habitat. This change would encourage proponents to develop in GHMA or outside of Greater Sage-Grouse habitat. This is because it would be less expensive but unlikely to spur a boom of development in GHMA. Six percent of occupied leks in Idaho would be at an increased risk of loss and degradation.

10. Refining Adaptive Management Strategy

MD SSS 15: This change of analyzing the trigger data from twice a year to once a year clarifies that, although there are two different types of adaptive management data collected each year, they are most effectively analyzed at the same time. This would have no measurable effect on Greater Sage-Grouse conservation.

MD SSS 24: This clarifies that actions recommended by the technical and policy teams may have a different time frame or applicable area from the automatic hard trigger responses. No effect to Greater Sage-Grouse conservation is expected.

MD SSS 20: Under the No-Action Alternative, significance is set at the 90 percent confidence interval for both hard and soft population triggers; however, changing the soft trigger to an 80

percent confidence interval would provide the technical and policy teams with an early warning of potential problems and would allow a timely response to prevent a hard trigger trip. This would allow the BLM and the State of Idaho with their partners to do a causal factor analysis and recommend actions to prevent further declines and potential hard trigger trips. This may not make a measurable change in Greater Sage-Grouse conservation, but it would facilitate earlier warning of potential problems.

11. Salable Minerals

MD MR 11: The language in the 2015 Final EIS caused confusion, and this change helps to clarify management around mineral materials in PHMA. No new commercial pits would be allowed, but continued use of existing pits would be allowed. Free-use permits are offered to counties to help maintain county roads. New free-use pits and expansion of existing pits would be allowed only under limited conditions in PHMA. Buffers, RDFs, and a no net loss mitigation standards would apply. This would reduce the counties' costs of hauling gravel, but the restrictions and mitigation should continue to protect Greater Sage-Grouse habitat.

Since the 2015 Final EIS was implemented, Idaho has authorized only four salable mineral projects in the entire state inside and outside of Greater Sage-Grouse habitat. All four of these gravel pit authorizations were for county free-use permits that provide gravel to the counties to maintain county roads. Salable minerals development does remove Greater Sage-Grouse habitat. Most pits in Greater Sage-Grouse habitat in Idaho are free-use pits that tend to be fairly small (compared with commercial pits) and are only periodically active.

According to the 2015 Final EIS, there were 120 salable minerals sites on public land in Idaho, and most gravel pits ranged from 5 to 15 acres (Section 3.12.1). Based on those numbers, there is a maximum of 1,800 acres of Greater Sage-Grouse habitat currently lost due to gravel pits on public land. If the number of gravel pits doubled in the next 20 years there would still be only 3,600 acres, or 0.041 percent, of Greater Sage-Grouse habitat lost to gravel pits. Given the recent rate of development, it is unlikely that gravel pits would double in 20 years within Greater Sage-Grouse habitat in Idaho. The effects on Greater Sage-Grouse would be negligible.

As only four new free-use authorizations have been issued since 2015 in all of Idaho, allowing limited exceptions within PHMA would have little or no measurable effect on Greater Sage-Grouse conservation. The analysis of removal of requirements to use buffers in GHMA is found in 4, *Modifying Lek Buffers*.

4.5 IMPACTS OF THE 2018 PROPOSED PLAN AMENDMENT

The impacts of the 2018 Proposed Plan Amendment are the same as those described in Section 4.4 above for the Management Alignment Alternative, with the exception of the specific changes and their impacts discussed in this section. **The Management Alignment Alternative was changed to address comments raised during the public's review of the Draft EIS.**

4.5.1 Modifying Lek Buffers

The USGS reviewed and summarized the science regarding Greater Sage-Grouse avoidance or lek abandonment related to the proximity of certain types of infrastructure development; this review is

incorporated by reference (USGS Report Conservation Buffer Distance Estimates for Greater Sage-Grouse—A Review [Open File Report 2014-1239]). In the introduction to its report, the USGS indicated that it was not going to make specific recommendations. This was because the variability of impacts across Greater Sage-Grouse habitat suggest that no single distance is appropriate for all populations and habitats. The report indicates that surface disturbance, including linear features, energy development, tall structures, short structures, and noise, are avoided by or reduce survivability of Greater Sage-Grouse to varying extents, depending on local conditions and circumstances.

MD SSS 35: Lek Buffers would remain the same in PHMA, which includes approximately 67 percent of the known occupied leks. There would be no effect to Greater Sage-Grouse in PHMA.

The 2018 Proposed Plan increased the size of some buffers in IHMA as a direct result of public comments received about the Management Alignment Alternative. Under tall structures, the buffer for transmission lines and towers would increase from 0.6 to 2 miles; however, it could be reduced to 1.2 miles through exception criteria (see Appendix B [of the 2018 EIS]). This would increase the portions of IHMA protected from tall structures from about 3.7 percent to at least 12.5 percent (1.2-mile buffer) or 26.9 percent (2-mile buffer). Distribution lines would remain with a 0.6-mile buffer. Communication and meteorological tower buffers would increase to 2 miles, which could increase the portion of IHMA protected from these developments from about 3.7 percent to about 26.9 percent. The buffer for low structures would increase from 0.12 miles to 0.6 miles, which would increase the portion of IHMA protected from these types of developments from about 0.16 percent to about 3.7 percent. The buffer for temporary noise disturbance would increase from 0.12 miles to 0.25 miles, which would increase the portion of IHMA protected from these types of developments from about 0.16 percent to about 0.7 percent. The increase in these buffers expands the protections around leks and should decrease the likelihood of leks being abandoned. IHMA contains approximately 25 percent of the known occupied leks and approximately 22 percent of breeding males in Idaho and so these increases would increase protections for a sizable portion of Greater Sage-Grouse in Idaho, compared with the Management Alignment Alternative.

The 2018 Proposed Plan requires buffers in GHMA. This change was made between draft and final because of public concern about reducing buffer distances in the Management Alignment Alternative analyzed in the 2018 Draft EIS. GHMA contains approximately 6 percent of occupied leks, most of which are small and in fragmented habitat. The buffers increase protections immediately around leks and will result in greater protections, compared with the Management Alignment Alternative.

Overall, the impacts of the changes to lek buffers in GHMA increase protections for Greater Sage-Grouse, compared with what was considered in the Management Alignment Alternative; however, they are not quite as protective as those in the No-Action Alternative.

The 2018 Final EIS changed the RDF related to sustained noise to a 2-mile buffer in all habitat management areas. This restriction in the plan removes the seasonal nature of the restrictions. This increases protections for Greater Sage-Grouse in all habitat management areas from repetitive and sustained noise within 2 miles of leks.

4.5.2 Including Exceptions to NSO Stipulations

MD MR 8 would have been deleted under the Management Alignment Alternative, but it was kept in the 2018 proposed plan because of public comment. The decision required the BLM to include stipulations to avoid and minimize impacts on Greater Sage-Grouse in leases. This decision expresses in general terms what the entire planning process intends to do, that is, to ensure protection of Greater Sage-Grouse. Keeping this decision does not change the impacts on Greater Sage-Grouse.

4.5.3 Changing Requirements for Design Features

The 2018 Final EIS clarifies and strengthens how BMPs are to be implemented in GHMA. They should be applied unless they are technically or economically impracticable. This change would improve the consistency of application of BMPs in GHMA above what is described in the Management Alignment Alternative, but it is less prescriptive than the No-Action Alternative.

4.5.4 Modifying Decisions for Livestock Grazing Commensurate with Threat Posed.

The changes to livestock grazing management decisions are largely editorial and focus on clarifying the need to rely on the 4100 grazing regulations and the Idaho Standards for Rangeland Health. Additionally, the changes clarify that the BLM needs to consider Greater Sage-Grouse population trends and adaptive management triggers when prioritizing grazing permit renewals, monitoring, and compliance checks. These changes do not change the expected impacts from what was described above.

4.5.5 Modifying the Mitigation Strategy to Align with the State Mitigation Strategy

The BLM has determined that FLPMA does not explicitly mandate or authorize the BLM to require public land users to implement compensatory mitigation as a condition of obtaining authorization for the use of the public lands. Consistent with that determination and with BLM IM 2018-093, *Compensatory Mitigation*, the Proposed Plan Amendment clarifies how voluntary compensatory mitigation or a state recommended mitigation should be considered in the management of Greater Sage-Grouse habitat. This clarification simply aligns the Proposed Plan Amendment with BLM policy and the scope of compensatory mitigation authority expressly provided by FLPMA. Any analysis of compensatory mitigation relating to future projects is speculative at this level of land use planning; therefore, analysis of compensatory mitigation is more appropriate for future project-specific NEPA. In other words, it is speculative to assume the impacts from voluntary compensatory mitigation at the planning level without knowing the frequency with which project proponents will proffer voluntary actions. The applicability and overall effectiveness of voluntary actions cannot be fully assessed until the project level when the specific location, design and impacts are known.

However, the effects of the changes to compensatory mitigation in the Proposed Plan will be nominal, in part, because the BLM will continue to ensure consistency of its actions and authorizations with the land use planning level goals and objectives of the Proposed Plans. The implementation of compensatory mitigation actions will be directed by MOAs that describe how the BLM will align with State authorities and incorporated in the appropriate NEPA analysis subsequent to the 2018 Final EIS. While the conservation benefit of compensatory mitigation may be limited when weighed against the threats to Greater Sage-Grouse, particularly in the Great Basin region where wildland fire remains a key threat, the BLM is committed to implementing State recommended mitigation requirements to help minimize the impacts of anthropogenic disturbance and habitat fragmentation throughout the range of Greater Sage-Grouse.

Further, the BLM is committed to implementing beneficial habitat management actions to reduce the threats of fire and invasive species to Greater Sage-Grouse. The BLM has committed resources to habitat restoration and has treated 1.4 million acres of Greater Sage-Grouse habitat range-wide over the past 5 years. In the federal government's fiscal year 2018 specifically, the BLM funded approximately \$29 million in Greater Sage-Grouse management actions resulting in approximately 500,000 acres of treated habitat. The BLM expects to invest nearly \$17 million in fiscal year 2019 through the implementation of habitat management projects.

In 2015, the USFWS determined Greater Sage-Grouse was "not warranted" for listing under the Endangered Species Act. The USFWS found that BLM's 2015 land use plans were adequate regulatory mechanisms and that the species no longer warranted listing under the Act. At the time of that decision, USFWS acknowledged the RMP requirements that compensatory mitigation achieve a net gain standard. The BLM is not proposing any action that would preclude proponents from offering compensatory mitigation; it is clarifying the BLM's reliance on voluntary compensatory mitigation consistent with federal law.

Anecdotally, the existing conservation credit systems, banks, and exchanges designed to offset impacts to Greater Sage-Grouse or its habitat have had mixed success. The BLM is aware of three mitigation banks (one commercial bank agreement in Wyoming and two single-user bank agreements with mining companies in Nevada) and one exchange system in Colorado specific to Greater Sage-Grouse currently in operation. However, the BLM does not have access to data or information that would further assess the relative benefit provided by these systems.

To align with the State of Idaho's Greater Sage-Grouse management goals, in all designated Greater Sage-Grouse habitat, the BLM ensures both mitigation and management actions that achieve the planning-level management goals and objectives identified in this RMPA. The BLM has a variety of tools available to effectively achieve those management goals such as restoration projects and habitat improvements.

The BLM will continue plan effectiveness monitoring to provide the data needed to evaluate BLM actions toward reaching the goals and objectives set forth in the RMPAs. Effectiveness monitoring methods will encompass multiple larger scales, from areas as large as the WAFWA MZ to the scale of this RMPA. Effectiveness data used for these larger-scale evaluations will include all lands in the area of interest, regardless of surface management, and will help inform where finer-scale evaluations are needed.

4.5.6 Appendix C (Required Design Features)

RDF 2: This RDF was moved into Appendix B [of the 2018 EIS] to become a buffer applicable to all habitat management areas. This change has no effect on the impact analysis in the Draft EIS.

RDF 3: This change just clarifies that fuels treatments are not considered anthropogenic disturbance. This does not change the effects analysis from the Management Alignment Alternative.

RDF 9: Removal of this RDF reduces confusion. A more detailed and clear requirement for collocation is already in the portion of the 2015 ARMPA not being changed by this amendment.

RDFs 97 through 104 were replaced by similar actions and direction from the Governor's plan. The New RDFs are numbered 100 to 114. These changes do not change the protections to Greater Sage-Grouse, compared with the Management Alignment Alternative.

4.5.7 Appendix E

The addition of Part 6 that describes the no-net loss criteria for anthropogenic disturbance helps clarify the intent and process for evaluating projects to determine if they meet a no-net loss. These changes do not change the protections to Greater Sage-Grouse, compared with the Management Alignment Alternative.

4.6 CUMULATIVE EFFECTS ANALYSIS

This section presents the anticipated cumulative impacts on the environment that could occur from implementing the alternatives presented in **Chapter 2**. A cumulative impact is the impact on the environment that results from the incremental impact of the action, when added to other past, present, and reasonably foreseeable actions, regardless of what agency (federal or nonfederal) or person undertakes such actions.

Cumulative impacts can result from individually minor, but collectively significant actions taking place over time. The cumulative impacts resulting from the implementation of the alternatives in this DSEIS may be influenced by other actions, as well as activities and conditions on other public and private lands, including those beyond the planning area boundary. These include the concurrent Forest Service planning effort to amend land management plans for National Forests in Idaho, Montana, Nevada, Utah, Colorado, and Wyoming, which were previously amended in September 2015 to incorporate conservation measures to support the continued existence of the Greater Sage-Grouse. As a result, the sum of the effects of these incremental impacts involves determinations that often are complex, limited by the availability of information, and, to some degree, subjective.

This DSEIS incorporates by reference the analysis in the 2015 Final EISs and the 2016 SFA Withdrawal Draft EIS, which comprehensively analyzed the cumulative impacts associated with these planning decisions under consideration in that process. The 2015 EISs, and to some degree the 2016 SFA EIS evaluated the cumulative impacts associated with the No-Action Alternative in this DSEIS. The DSEIS's effects are effectively within the range of effects analyzed by the 2015 and 2016 EISs. The 2015 Final EISs are quite recent, and we have determined that conditions in the Great Basin (Idaho) have not changed significantly based, in part, on the USGS science review (see **Chapter 3**) as well as the BLM's review of additional past, present, and reasonably foreseeable actions in 2018. Conditions on public land have changed little since the 2015 Final EISs, and to the extent that there have been new actions or developments, the impacts associated with those actions or developments are in line with the projections in the 2015 Final EISs regarding reasonably foreseeable actions and effects. Additionally, changes that have occurred on a smaller level, like wildfires, received prompt responses. Since the nature and context of the cumulative effects scenario has not appreciably changed since 2015, and the 2015 analysis covered the entire range of the Greater Sage-Grouse, the BLM's consideration of cumulative effects in the 2015 Final EISs adequately addresses most, if not all, of the planning decisions to be made through this planning effort.

While the cumulative impacts analysis in the 2015 Final EISs thus offers a comprehensive foundation for this planning effort, the BLM is improving upon that analysis by integrating additional quantitative analysis

specific to this planning effort. The purpose of this additional analysis is to facilitate a comparison of allocation decisions between the No-Action Alternative and the Proposed Plan Amendment at scales beyond the individual planning areas associated with the 2018 amendment process. Our analysis focuses on the relevant changes in habitat delineations and allocation decisions each BLM state office is proposing and how those changes may impact our understanding of cumulative effects at the MZ scale.

Conservation and management partners sought to work in advance of the 2015 USFWS listing decision to develop conservation objectives for the Greater Sage-Grouse that could help direct conservation and management actions for the species. Upon further review of the best available science and commercial information, the USFWS concluded in 2010 that the Greater Sage-Grouse warranted protection under the ESA. Two factors leading to the decision to list the species as “warranted but precluded” were threats to habitat and the inadequacy of existing regulatory mechanisms. In 2012, at the request of the Greater Sage-Grouse Task Force, state and federal representatives produced a report that identified the most significant areas for Greater Sage-Grouse conservation, the principal threats within those areas, and the degree to which such threats need to be reduced or ameliorated to conserve the Greater Sage-Grouse so that it would not be in danger of extinction or likely to become so in the foreseeable future.

A principal component of Greater Sage-Grouse management is the implementation of mitigation actions to ameliorate the threats and impacts to Greater Sage-Grouse and its habitats. In 2015, the USFWS determined Greater Sage-Grouse was “not warranted” for listing under the ESA. The USFWS found that BLM’s 2015 land use plans were adequate regulatory mechanisms and that the species no longer warranted listing under the ESA. At the time of that decision, the USFWS acknowledged the RMP requirements that compensatory mitigation achieve a net gain standard. The BLM is not proposing any action that would preclude proponents from offering compensatory mitigation; it is clarifying the BLM’s reliance on voluntary compensatory mitigation consistent with federal law.

While the BLM has more than 90 RMPs, 9 strategies, and 45 agreements in active use that contain or address compensatory mitigation, the BLM has identified only limited implementation of compensatory mitigation consistent with the 2015 Greater Sage-Grouse Plans. Using data gathered in 2017, the BLM identified 13 Greater Sage-Grouse projects across 5 BLM states with a mandatory compensatory mitigation component or net gain standard implemented between October 2008 and June 2017. The most common compensatory actions used by the BLM in those cases were habitat restoration, habitat improvements, rangeland improvements, and invasive species control – actions consistent with the BLM’s own investment in management action described previously. In many cases, it is still too soon in the implementation of these mitigation actions to measure the effectiveness or degree of benefit each action provides.

Currently BLM has six state-specific RMPA efforts that are all aligning mitigation with their relevant State authorities. All of the Proposed Plan Amendments modify the existing standard for compensatory mitigation but maintain that the BLM will pursue conservation efforts as a broader planning goal and objective. Cumulatively, if the BLM is implementing planning decisions across the broader range, such actions would preclude any cumulative impacts from modifying the net conservation gain standard at the project level.

The BLM has updated certain data that it collected and evaluated in the 2015 Final EIS concerning the 2015 plan allocation decisions to reflect maintenance-related changes, adaptive management responses, and refined source data. The BLM used these data to represent the No-Action Alternative for the

current plan analysis. The BLM also identified 2015 data which are not subject to change in any alternatives associated with the 2019 planning process. These data were carried forward as the alternative allocation decision data. The BLM was also able to provide allocation decision data representing changes included in the 2018 Draft EIS alternatives, which were then used in the comparative analysis.

The BLM analyzed cumulative effects at two levels in the 2019 planning process. Each state analyzed cumulative effects across the sage-grouse range by considering, across each state, reasonably foreseeable future actions and their effects in every WAFWA management zone (excluding WAFWA Zone VI). Each state further analyzed cumulative effects at the WAFWA management zone level for their state. See **Section 4.6.1** and **Table I** in **Appendix S-2** for the range-wide analysis, which addresses the cumulative effects from reasonably foreseeable future actions across all WAFWA management zones, including those that do not connect directly to Idaho. See Idaho's WAFWA management zone analysis in Sections 4.6.4 and 4.6.6 below. Both analyses use WAFWA Management Zones. Idaho's WAFWA Zone analysis included Zones IV and II that include Idaho, and parts of Oregon, Utah, Montana, and Wyoming (**Figure 4-1**).

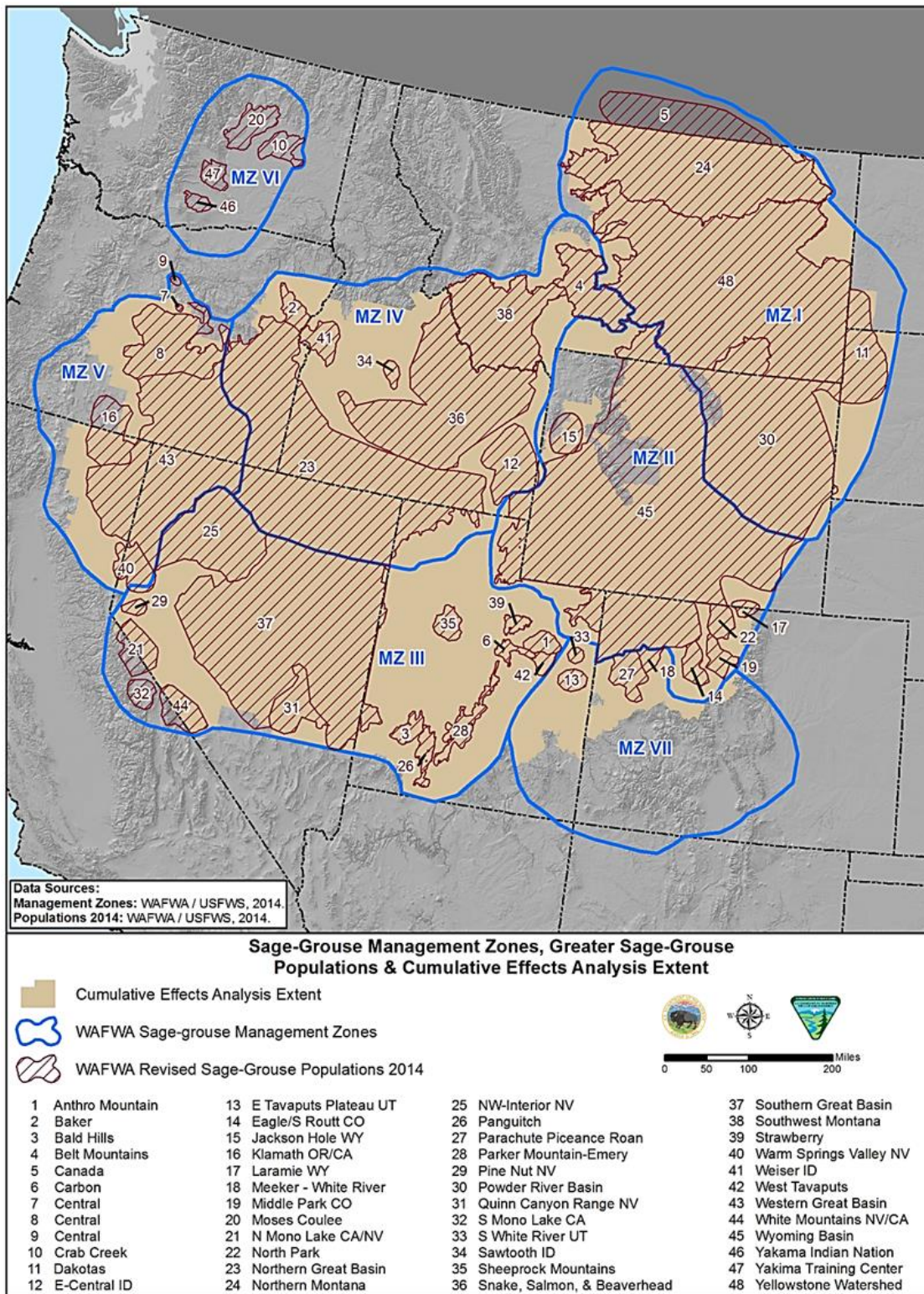
4.6.1 Range-wide Cumulative Effects Analysis – Greater Sage-Grouse

The 2015 ARMPA is the No-Action Alternative in this DSEIS and was part of the cumulative impact analysis for Greater Sage-Grouse at the WAFWA zone scale in the 2015 Final EIS (see **Table 4-1**). Additionally, the cumulative impacts anticipated from the Management Alignment Alternative and the 2018 Proposed Plan Amendment presented in this DSEIS are entirely within the range of effects analyzed by the 2015 Final EIS. While the analysis for the 2015 Final EIS is quite recent, the BLM has reviewed conditions in Idaho to verify that they have not changed significantly. Conditions on BLM-administered lands have changed little since the 2015 Final EIS, and to the extent that there have been new actions or developments, the impacts associated with those actions or developments are in line with the projections in the 2015 Final EIS regarding reasonably foreseeable future actions and effects.

The BLM's assessment that conditions and cumulative impacts have not changed significantly is based, in part, on the USGS science review (see **Chapter 3**) and the BLM's review of additional past, present, and reasonably foreseeable actions in 2018. Since the nature and context of the cumulative effects scenario have not appreciably changed since 2015, and the 2015 plans included analysis by WAFWA MZ across the entire range of the Greater Sage-Grouse, the cumulative effects analysis in the 2015 Final EIS applies to this planning effort and provides a foundation for the BLM to identify any additional cumulative impacts.

The remainder of this chapter and related appendices includes additional quantitative analysis using the existing cumulative impacts across the range and integrating additional quantitative analysis specific to this planning effort to provide a comprehensive range-wide view of cumulative impacts. The purpose of this additional analysis is to facilitate a comparison of allocation decisions between the No-Action and Management Alignment (2018 Proposed Plan Amendment) Alternatives at scales beyond the individual planning areas associated with the 2019 amendment process. The analysis focuses on the relevant changes in habitat delineations and allocation decisions each BLM state office is proposing and how those changes may affect the understanding of cumulative effects at the WAFWA MZ scale across the range of Greater Sage-Grouse.

Figure 4-I – Cumulative Effects Analysis Extent, Sage-Grouse Management Zones and Populations



Under the Management Alignment Alternative, the recommendation to withdraw sagebrush focal areas (SFA) from location and entry under the Mining Law of 1872 would be removed, as the EIS process considering the proposed withdrawal was canceled on October 11, 2017. In its 2016 SFA Withdrawal EIS, the BLM quantified the possible adverse effects from locatable mineral exploration and mining on the approximately 10 million acres of SFAs proposed for withdrawal, finding that they would be limited to approximately 9,000 acres rangewide of surface disturbance over 20 years, with approximately 0.58 percent of Greater Sage-Grouse male birds possibly affected per year. The other action alternatives evaluated in the 2016 SFA Withdrawal Draft EIS similarly demonstrated negligible benefit of the proposed withdrawal to Greater Sage-Grouse and its habitat.¹

The cumulative effects of implementing the Management Alignment Alternative are as described in the 2016 SFA Withdrawal Draft EIS, under the No-Action Alternative, in which SFAs are not carried forward for withdrawal. Greater Sage-Grouse would not be affected as a result of the removal of the recommendation to withdraw SFAs from location and entry under the Mining Law of 1872, as the recommendation itself does not have any on-the-ground effects. Conservation benefits of a future withdrawal would be minimal, as documented in the 2016 SFA Withdrawal Draft EIS and as explained above; therefore, there would be negligible cumulative impacts associated with the decision to remove the SFA designation. The direct and indirect impact analysis specifically enumerates how each BLM allocation decision to apply NSO stipulations and waivers, exceptions, or modifications overlaps with the SFA designation.

4.6.2 Why Use WAFWA Management Zones?

The WAFWA represents state and provincial fish and wildlife agencies and supports sound resource management and building partnerships to conserve wildlife for the use and benefit of all citizens, now and in the future.

The BLM is analyzing habitats and allocation decisions at the scale of the six WAFWA delineated Greater Sage-Grouse MZs within which the plan amendments are occurring to enable the decision maker to understand the impacts on Greater Sage-Grouse at a biologically meaningful scale. The MZs were delineated based on floristic provinces (identified by Connelly et al. 2004) within which the vegetative communities comprising Greater Sage-Grouse habitat as well as the Greater Sage-Grouse populations are responding similarly to environmental factors and management decisions (Stiver et al. 2006).

The cumulative effects analysis area for Greater Sage-Grouse extends beyond a state, political, or planning area boundary to reflect the WAFWA MZs because they encompass areas with similar issues, threats, and vegetative conditions important Greater Sage-Grouse habitat management. Each suite of threats to specific Greater Sage-Grouse populations have been identified in the COT report, 2015 regional RODs, and listing decision]. The 2015 regional RODs identify how planning level allocation decisions address the identified threats to populations, which are aggregated in this analysis by MZs. The

¹Importantly, mining operations that do occur are subject to regulation under the BLM's surface management regulations at 43 CFR 3809. These regulations ensure that operators comply with environmental standards in conducting exploration, mining, and reclamation. For example, the BLM must approve a plan of operations for locatable mining operations on public lands, which includes compliance with the NEPA, National Historic Preservation Act, and ESA. Plans of operation must also include those measures to meet specific performance standards and to prevent unnecessary or undue degradation of the lands (43 CFR 3809.411).

threats vary geographically and may have more or less impact on Greater Sage-Grouse and its habitat in some parts of the MZs, depending on such factors as climate, land use patterns, and topography.

Table 4-6 shows the resource and location of applicable cumulative effects analysis from 2015 Final EIS. Unless otherwise addressed in this chapter, the cumulative effects of the alternatives analyzed in this Draft DSEIS are covered by the 2015 Final EIS and the 2016 SFA Withdrawal Draft EIS. This includes the incremental impacts across the range of BLM- and Forest Service-administered lands being amended in concurrent plan amendment efforts. See the 2015 Final EIS for additional information.

Table 4-6
Cumulative Effects Analysis Incorporated by Reference

Decision Topic	Related Resource Topic	2015 Final EIS, Chapter 5, Locations of Cumulative Effects Analysis
Modifying HMA boundaries	Greater Sage-Grouse	Section 5.1; pp. 1–87
Removing SFA designations	Greater Sage-Grouse	Section 5.1; pp. 1–87
	Minerals and energy	Section 5.3.7; pp. 168–170 Section 5.3.8; pp. 170–171 Section 5.3.9; pp. 171–172
	Livestock grazing	Section 5.3.4; pp. 162–164
	Wild Horse and burro	Section 5.3.2; pp. 159–160
Adjusting disturbance and density caps	Greater Sage-Grouse	Section 5.1; pp. 1–87
	Minerals and energy	Section 5.3.7; pp. 168–170 Section 5.3.8; pp. 170–171 Section 5.3.9; pp. 171–172
	Socioeconomics	Section 5.3.13; pp. 174–177
	Lands and realty	Section 5.3.6; pp. 165–168
Modifying lek buffers	Greater Sage-Grouse	Section 5.1; pp. 1–87
	Minerals and energy	Section 5.3.7; pp. 168–170 Section 5.3.8; pp. 170–171 Section 5.3.9; pp. 171–172
	Socioeconomics	Section 5.3.13; pp. 174–177
	Lands and realty	Section 5.3.6; pp. 165–168
	Livestock grazing	Section 5.3.4; pp. 162–164
	Recreation	Section 5.3.5; pp. 164–165
Including waivers, exceptions, and modifications on NSO stipulations	Greater Sage-Grouse	Section 5.1; pp. 1–87
	Minerals and energy	Section 5.3.7; pp. 168–170 Section 5.3.8; pp. 170–171 Section 5.3.9; pp. 171–172
Changing requirements for design features	Greater Sage-Grouse	Section 5.1; pp. 1–87
	Land use and realty	Section 5.3.6; pp. 165–168
	Minerals and energy	Section 5.3.7; pp. 168–170 Section 5.3.8; pp. 170–171 Section 5.3.9; pp. 171–172
	Socioeconomics	Section 5.3.13; pp. 174–177
	Livestock grazing	Section 5.3.4; pp. 162–164
Modifying habitat objectives	Greater Sage-Grouse	Section 5.1; pp. 1–87
Modifying decisions for livestock grazing commensurate with the threat posed	Greater Sage-Grouse	Section 5.1; pp. 1–87
	Livestock grazing	Section 5.3.4; pp. 162–164

Decision Topic	Related Resource Topic	2015 Final EIS, Chapter 5, Locations of Cumulative Effects Analysis
Modifying the mitigation strategy to align with the state mitigation strategy, including standard for no net loss	Greater Sage-Grouse	Section 5.1; pp. 1–87
	Socioeconomics	Section 5.3.13; pp. 174–177
	Livestock grazing	Section 5.3.4; pp. 162–164
	Minerals and energy	Section 5.3.7; pp. 168–170
		Section 5.3.8; pp. 170–171
		Section 5.3.9; pp. 171–172
	Land use and realty	Section 5.3.6; pp. 165–168
	Recreation	Section 5.3.5; pp. 164–165

Idaho's Management Alignment Alternative identified two types of impacts: a reduction in protections for Greater Sage-Grouse habitat, and an increase in flexibility for other uses within Greater Sage-Grouse habitat. While not every specific change proposed in the Management Alignment Alternative was highlighted and examined for its individual effects in the 2015 Final EIS, the range of protections and flexibility was definitely analyzed among the alternatives (**Appendix I**).

The 2018 Proposed Plan Amendment has moved Greater Sage-Grouse protections closer to the No-Action Alternative by increasing protections for Greater Sage-Grouse habitat as a direct result of Draft EIS comments. The Proposed plan carries forward the increased flexibility described in the Draft EIS.

The increased flexibility carried forward into the 2018 Proposed Plan Amendment would allow for responsible development of other uses in Greater Sage-Grouse habitat. It could reduce costs to proponents but is not expected to result in a flood of development proposals on public land. The increased protections from the 2015 Final EIS have not resulted in a large decrease in ROW applications or an increase in rejected applications; therefore, the changes proposed under the action alternatives are not expected to result in any changes to the rate of development in Idaho or in its economy.

Some 350 species rely on sagebrush steppe ecosystems, coexist with Greater Sage-Grouse, and may be similarly affected by development or disturbance. Nothing in the 2018 Proposed Plan Amendment would lessen the BLM's authority nor responsibility to provide for the needs of special status species, as described in BLM land use plans, policies, and laws, including Manual 6840, the ESA, and FLPMA.

Increased flexibility for other uses within Greater Sage-Grouse habitat does not necessarily increase potential impacts on other wildlife or plant species. A site-specific NEPA analysis, including an evaluation of impacts on special status species, is required for on-the-ground projects within the planning area.

The sum of past, present, and reasonably foreseeable actions listed in **Appendix S-2** represent cumulative effects across the range of Greater Sage-Grouse habitat and management areas. These effects are important to consider for future management of the species as a whole and are not solely being analyzed at the local or state level.

This section also briefly describes the threats to Greater Sage-Grouse and its habitat. The magnitude of change between the No-Action Alternative and Proposed Land Use Plan Amendments, by decision, is represented in pie charts and tables within this section and in **Appendix S-2**. Those effects, in addition to synthesizing the plan decisions and comparing the current condition to the condition that will be in

effect when the proposed plans are finalized, allow for a comparison of the change in management direction within MZs and across planning regions.

The habitat fragmentation and disturbance from energy development, mining, and infrastructure remain the greatest threat to Greater Sage-Grouse in the Rocky Mountain region; the levels of development are within the range of projected wildland fire analyzed in the 2015 Final EIS. Wildfire threat remains a concern in the area as well and is the greatest threat to Greater Sage-Grouse in the Great Basin region. Between 2008 and 2018, wildfires burned an average of 900,000 acres per year in Greater Sage-Grouse habitat management areas range-wide²; this is within the range of projected wildland fire analyzed in the 2015 Final EIS. The BLM has committed resources to habitat restoration and has completed 1.4 million acres of treatments in Greater Sage-Grouse habitat range-wide over the past 5 years. The interagency (including BLM) WAFWA-led Wildfire and Invasive Species Working Group reviewed recent information for their May 2018 Gap Report Update to the Wildfire and Invasive Plant Species in the Sagebrush Biome: Challenges that hinder current and future management and protection report. They found that all of the original challenges related to control and reduction of the invasive annual grass/fire cycle were still relevant (policy, fiscal and science challenges) as well as pointing to three new gaps involving program capacity, resource specialists, and developing guidelines on drought and climate adaption to manage sagebrush ecosystems.

4.6.3 Cumulative Effects on Greater Sage-Grouse: Management Zone I

In addition to the analysis in the 2015 Final EIS other anticipated incremental impacts are discussed below in association with planning issues being analyzed in this DSEIS.

MZ I encompasses portions of Wyoming, Montana, North Dakota, and South Dakota. Montana is currently not undergoing a plan amendment process; therefore, none of the proposed changes described in this section apply to Greater Sage-Grouse in Montana. Under the Proposed Land Use Plan Amendments in WAFWA MZ I, PHMA and GHMA designations would not change from those identified in the No-Action Alternative. In addition, no changes in allocations are proposed in either of the planning areas in this MZ. Approximately 16 percent of the planning area across MZ I is designated as PHMA, and 38 percent is GHMA. Future adjustments to PHMA and GHMA in MZ I would be based on best available science and to align with the respective states' delineations for Greater Sage-Grouse habitat.

Wyoming's current planning effort, and Montana's existing plans, incorporate management flexibility to allow for site specific adjustments to land use plan authorizations for adaptive management strategies, livestock grazing management, and other proposed land uses. The use and application of compensatory mitigation in the planning area would follow the respective State plans, resulting in greater consistency across the MZ. For these actions, cumulative impacts on Greater Sage-Grouse habitat and populations across MZ I would be consistent with those impacts described in the 2015 Final EISs for the then Proposed Plan Amendments. The currently Proposed Land Use Plan Amendment changes from the No-Action Alternative are minor, and still maintain prescriptive management for Greater Sage-Grouse habitat across the MZ for surface disturbing activities. Disturbance from energy development, mining, and infrastructure, as well as the resulting habitat fragmentation, remain the greatest threat to Greater Sage-Grouse in the Rocky Mountain Region. Because the land use prescriptions and allocations are not

²Removing 2012 and 2017, which were above average wildland fire years, the 8-year average is approximately 500,000 acres burned per year.

proposed for change in Wyoming's land use plan amendment, there would be no additional cumulative impact on Greater Sage-Grouse populations or habitat within MZ I.

A summary of potential cumulative impacts by proposed management action is presented below.

Impacts on Greater Sage-Grouse as a result of surface disturbance would likely be greater where development and disturbance is more intense and in areas where development overlaps sensitive habitats. The degree of impact would depend on the timing of development activities and whether the amount of development activity and disruption outpaces successful reclamation and revegetation efforts in disturbed areas. Increased flexibility for updating habitat management areas across MZ I would not result in any additive impacts on Greater Sage-Grouse and could result in beneficial impacts as a result of consistent management across the zone. Any future modifications of habitat management areas would be documented using the appropriate level of NEPA analysis that would, as applicable, provide analysis regarding any potential impacts; however, because the underlying habitat management area allocations and the respective restrictions on those allocations put in place to conserve Greater Sage-Grouse would not change, and any proposed updates would reflect the most recent knowledge concerning Greater Sage-Grouse habitat use and distribution, there would be no appreciable additive impact from the implementation of this aspect on Greater Sage-Grouse habitat or population.

Approximately 99 percent of GHMA and PHMA habitat in MZ I is open to livestock grazing, and this is not proposed for change in Wyoming's proposed land use plan amendment; Montana is also not proposing any changes to livestock management at this time; therefore, no additional cumulative impacts beyond those identified in the 2015 Final EISs are anticipated. In general, livestock can influence habitat by modifying plant biomass, plant height and cover, and plant species composition. As a result, livestock grazing could cause changes in habitat; changes in plant composition could occur in varying degrees and could change vegetative structure, affecting cover for nesting birds; however, grazing can be used to reduce fuel loads and reduce the risk of wildfire and can also be managed to reduce the spread of invasive grasses.

Much of the landscape in MZ I is adapted to withstand grazing disturbance, having been grazed by bison before the West was settled. In addition, the BLM has applied Standards for Rangeland Health since 1997 in order to enhance sustainable livestock grazing and wildlife habitat while protecting watersheds and riparian ecosystems. Under proposed management in MZ I, the BLM would be able to adjust forage levels to meet rangeland health standards based on site-specific information that would inform livestock management decisions. While the Proposed Land Use Plan Amendment in Wyoming would remove the Greater Sage-Grouse specific language Management Action 4 (see Table 2-1, Permit Renewals, in the Wyoming Proposed RMPA/Final EIS), the wildlife/special status species standards are emphasized. As Greater Sage-Grouse would continue to be considered at the implementation level with site-specific analysis, following management prescriptions analyzed in the 2014 and 2015 Final EISs, no additive impact of this change is anticipated.

Adaptive Management, Mitigation, and Prioritization of Leasing

Similarly, no appreciable additive impacts are anticipated from Wyoming establishing a process whereby adaptive management actions are reviewed and reversed once the identified causal factor is resolved. This process would ensure that the BLM is utilizing the best available science and decision support tools

to guide management at the appropriate spatial scale, thus improving the BLM's assessment and response to ever-changing conditions that could affect Greater Sage-Grouse populations and/or habitat, as well as ensuring that once causal factors are resolved, management reverts to pre-adaptive management actions. Because any specific response to tripping a hard or soft trigger would be based on the causal factors responsible, presuming a specific response to unknown future conditions would be speculative at best and not reasonably foreseeable. As Montana is not proposing to change any part of its adaptive management process, and Wyoming did not identify any additional direct or indirect impacts as a result of this proposed change, there are no additional cumulative impacts associated with the proposed changes to adaptive management implementation.

Under the Proposed Land Use Plan Amendment in Wyoming, language would be added to clarify how implementation-level decisions would be guided regarding mitigation and prioritization of fluid mineral leasing to better align with state conservation plans and management strategies. As identified in the direct and indirect effects section of this Final EIS, impacts on Greater Sage-Grouse would be minor as a result of these changes and could include localized detrimental impacts in some areas and beneficial impacts in others, but would not affect Greater Sage-Grouse conservation. As a result, there would be no appreciable additive impact from the implementation of these clarifications on Greater Sage-Grouse habitat or population across MZ I.

BLM's proposed land use plan amendments in MZ I are also unlikely to preclude the reasonably foreseeable actions listed in **Appendix S-2** from proceeding. Some small, localized populations may be at continued risk due to reasonably foreseeable infrastructure and energy development projects over the next 20 years, when combined with unplanned events such as wildfires, drought, and associated decline in Greater Sage-Grouse habitat quality; however, the 2018 proposed plan amendments retained conservation measures that would be applied consistent with state management plans. They would continue proactive habitat restoration efforts being completed by private, local, state, and federal partners across the MZ, to adequately conserve and manage Greater Sage-Grouse habitat.

4.6.4 Cumulative Effects on Greater Sage-Grouse: Management Zone II/VII

In addition to the analysis in the 2015 Final EIS, other anticipated incremental impacts are discussed below in association with planning issues being analyzed in this DSEIS.

MZ II/VII encompass portions of Wyoming, Colorado, Utah, Montana, and Idaho. Under the Proposed Land Use Plan Amendments in this MZ, PHMA would decrease by 1 percent and GHMA would decrease by 1 percent, compared to the acreage values in the No-Action Alternative. The proposed change in habitat management area acres reflects changes in Utah, where PHMA would be reduced by approximately 35,000 acres and GHMA (826,000 acres) would be removed in an effort to align with the Greater Sage-Grouse Management Areas identified by the State of Utah. In Idaho, approximately 50,000 acres would change from PHMA to IHMA for population monitoring purposes; however, as a result of a tripped adaptive management trigger, the habitat would continue to be managed as PHMA, which results in no net change to overall acreages included in the habitat management areas. Across this MZ, no other modifications to habitat management areas are currently proposed. Montana is currently not undergoing a plan amendment process; therefore, none of the proposed changes described in this section apply to Greater Sage-Grouse in Montana.

In Colorado, in the No-Action Alternative, PHMA within 1 mile of active leks is closed to leasing. The proposed action would open 1 mile of active leks to leasing, subject to NSO stipulations with restrictive criteria for waivers, exceptions, and modifications. Although that allocation change would make additional acres available to leasing, the impact on Greater Sage-Grouse is likely to be minimal because surface disturbance, fragmentation, and indirect habitat loss would not be expected to increase due to restrictions on surface disturbance. Additionally, better coordination with the state provides more of an all-lands approach that, due to multiple jurisdictions with regulatory authority over land and mineral ownership, may result in better landscape-scale protections for Greater Sage-Grouse and Greater Sage-Grouse habitat.

For the remainder of the planning areas within MZ II and VII, land use plan allocations tied to habitat management areas did not change between the No-Action Alternative and the Proposed Land Use Plan Amendment.

The decrease in PHMA and GHMA as a result of better alignment with the State of Utah's Greater Sage-Grouse management plan between the No-Action Alternative and the Proposed Land Use Plan Amendment would have negligible to minimal impacts on Greater Sage-Grouse and its habitat in the context of the entire MZ. The reduction of PHMA was associated with timbered mountains that do not include Greater Sage-Grouse habitat. The removal of GHMA in Zones II and VII affects populations where the BLM has very little decision space (surface or mineral estates) or areas with very small populations that are already heavily affected by existing oil and gas development resulting in infrastructure at a density above what science has indicated Greater Sage-Grouse will persist. Additionally, the relevant distribution of land use plan allocations associated with these habitat management area changes would not significantly change (0-3 percent, see **Appendix S-2**).

The planning efforts being undertaken in this MZ would incorporate management flexibility in Colorado, Utah, and Idaho plans that would allow exceptions to allocation decisions similar to flexibility already in the Wyoming and Montana plans. These changes would allow for site-specific adjustments for land use authorizations based on site conditions. In addition, there would be adjustments to existing adaptive management strategies for all plans in this MZ. Within this MZ, all plans would remove the recommendation to withdraw SFAs from location and entry under the 1872 Mining Law, would make slight adjustments to habitat objectives, and Colorado and Idaho plans would identify new exceptions to seasonal timing restrictions to provide for consideration of site-specific conditions already present in the Utah, Wyoming and Montana plans.

Despite these actions, cumulative impacts on Greater Sage-Grouse populations and habitat across MZ II/VII would be consistent with those impacts identified in the 2015 Final EISs for the then Proposed Plan Amendments. The currently Proposed Land Use Plan Amendments change from the No-Action Alternative would be minor. Disturbance from energy development, mining, and infrastructure, as well as the resulting habitat fragmentation, remain the greatest threat to Greater Sage-Grouse in the Rocky Mountain Region. Because the land use prescriptions within designated habitat management areas and the allocations associated with those habitat management areas are not being proposed for change in any plan in MZ II/VII, there would be no additional cumulative impacts on Greater Sage-Grouse across this MZ.

A summary of potential cumulative impacts by proposed management action is presented below.

Impacts on Greater Sage-Grouse as a result of surface disturbance would likely be greater where development and disturbance are more intense and in areas where development overlaps sensitive habitats. The degree of impact would depend on the timing of development activities and whether the amount of development activity and disruption outpaces successful reclamation and revegetation efforts in disturbed areas. Increased flexibility for updating habitat management areas across MZ II/VII would not result in any additive impacts on Greater Sage-Grouse and could result in beneficial impacts as a result of consistent management across these zones. Future modifications of habitat management areas would be documented using the appropriate level of NEPA that would, as applicable, provide analysis regarding any potential impacts; however, because the underlying habitat management area allocations and the respective restrictions on those allocations put in place to conserve Greater Sage-Grouse would not change, and any proposed updates would reflect the most recent knowledge concerning Greater Sage-Grouse habitat use and distribution, there would be no appreciable additive impact from the implementation of this aspect on Greater Sage-Grouse habitat or population.

The allocation exception process would be updated in Colorado, Utah, and Idaho to simplify the various exemptions contained in the 2015 Final EIS. While the availability of exceptions to land use plan allocations attached to PHMA and GHMA could increase the possibility of leasing, permitting, or ground-disturbing activities within a given habitat management area, the established criteria would ensure that projects are either in unsuitable Greater Sage-Grouse habitat; do not result in direct, indirect, or cumulative impacts on Greater Sage-Grouse; benefit Greater Sage-Grouse or its habitat; or can be offset, with the exception of those needed for public health and safety; therefore, there would be no appreciable additive impact from the implementation of this action on Greater Sage-Grouse or the resources/uses analyzed herein, as compared with the No-Action Alternative.

In MZ II/VII, approximately 216,000 acres of PHMA in Wyoming and 164,000 acres of PHMA in Utah were recommended for withdrawal from location and entry under the 1872 Mining Law in the current RMPs. This recommendation, if implemented through a future separate withdrawal action supported by its own NEPA, would apply to approximately 3 percent of the MZ. The proposed change to the withdrawal recommendation itself would not have any on-the-ground effects, and the conservation benefits of a future withdrawal would be minimal, as documented in the 2016 SFA Withdrawal Draft EIS and as explained above.

Approximately 99 percent of GHMA and PHMA in MZ II/VII is open to livestock grazing; this is not proposed for change in any states' land use plan amendments; therefore, no additional cumulative impacts beyond those identified in the 2015 Final EISs are anticipated. In general, livestock can influence habitat by modifying plant biomass, plant height and cover, and plant species composition. Improper livestock grazing could cause changes in habitat; changes in plant composition could occur in varying degrees and could change vegetative structure, affecting cover for nesting birds; however, proper grazing can be used to reduce fuel loads and reduce the risk of wildfire and can also be managed to reduce the spread of invasive grasses. Specific impacts on Greater Sage-Grouse habitat from livestock grazing are incorporated by reference from the 2015 Final EIS. All ongoing planning efforts in MZ II/VII would make slight adjustments to habitat objectives, and, in Wyoming and Utah, would provide for more flexibility

for making site-specific adjustments to livestock grazing management if the site-specific monitoring indicated adjustments were necessary.

Under the Proposed Land Use Plan Amendments, language would be added to clarify how some implementation level decisions, including mitigation, prioritization of fluid mineral leasing, disturbance caps, and clarification of required design features would be guided to better align with state conservation plans and management strategies. As identified in the direct and indirect effects section of this Final EIS, impacts on Greater Sage-Grouse would be minor as a result of these changes and could include localized detrimental impacts in some areas and beneficial impacts in others, but would not cumulatively compromise Greater Sage-Grouse conservation efforts throughout the individual states. As a result, there would be no appreciable additive impact from the implementation of these clarifications on Greater Sage-Grouse habitat or population across this MZ.

Similarly, no appreciable additive impacts are anticipated from updating the adaptive management process as described in the Proposed Land Use Plan Amendments. In Wyoming and Utah, this process would be updated at the implementation level to ensure that adaptive management actions are reviewed and reversed once the identified causal factor is resolved. In all states in this MZ, this update would ensure that the BLM is using the best available science and decision support tools to guide management at the appropriate spatial scale, thus improving the BLM's assessment and response to ever-changing conditions that could affect Greater Sage-Grouse populations and/or habitat. Because any specific response to tripping a hard or soft trigger would be based on the causal factors responsible, presuming a specific response to unknown future conditions would be speculative and not reasonably foreseeable.

In Idaho, removal of the project disturbance cap would not result in any changes to allocation decisions; rather, it would allow the BLM to cluster development in PHMA and IHMA only after meeting the anthropogenic disturbance screening criteria and the disturbance development criteria. Lek buffer modifications would also not result in any allocation changes. Some lek buffers would be increased as a result of the Proposed Land Use Plan Amendment, but, in some cases, the lek buffers may be smaller than those identified in the No-Action Alternative; however, the existing disturbance screening criteria and the disturbance development criteria would restrict development activities in both PHMA and IHMA; therefore, the changes in lek buffers sizes would have no additive effect.

The BLM's Proposed Land Use Plan Amendments in MZ II/VII are also unlikely to preclude the reasonably foreseeable actions listed in **Appendix S-2** from proceeding. Some small, localized populations may be at continued risk due to reasonably foreseeable infrastructure and energy development projects over the next 20 years, when combined with unplanned events such as wildfires, drought, and an associated decline in Greater Sage-Grouse habitat quality; however, the 2018 proposed plan amendments retained conservation measures that would be applied consistent with State management plans, and continued proactive habitat restoration efforts being completed by private, local, state, and federal partners across the MZ, to adequately conserve and maintain Greater Sage-Grouse habitat.

The Rawlins Field Office in Wyoming approved a RMP Amendment for Visual Resource Management (VRM) and the expansion of the Blowout Penstemon ACEC during this Greater Sage-Grouse planning effort. The VRM decisions are implementation level decisions which would be applied on a project-specific basis and do not represent changes in allocations, thus would not have cumulative impacts for Greater Sage-Grouse in MZ II. The Blowout Penstemon ACEC has been expanded from approximately

17,000 acres to 29,000 acres (an increase of approximately 12,000 acres) and was originally established in the 2008 Rawlins RMP to protect the endangered blowout penstemon. The expanded ACEC is closed to new oil and gas leasing and is an exclusion area for wind energy development, as well as being closed to mineral material disposals. These management decisions are the only changes in allocations and would only impact a small portion of the Rawlins Field Office and MZ II. A small portion of the ACEC overlaps with Greater Sage-Grouse PHMA and these more restrictive land uses in the ACEC would serve to further protect Greater Sage-Grouse PHMA. There would be no additional cumulative impacts on Greater Sage-Grouse in MZ II as a result of the Rawlins RMP Amendment.

4.6.5 Cumulative Effects on Greater Sage-Grouse: Management Zone III

In addition to the analysis in the 2015 Final EIS, other anticipated incremental impacts are discussed below in association with planning issues being analyzed in this DSEIS.

This area encompasses portions of California, Nevada, and Utah. Under the Proposed Land Use Plan Amendments in Nevada and Northeastern California and Utah, PHMA would decrease by 1 percent, GHMA would decrease by 2 percent, and for Nevada and Northeastern California only, Occupied Habitat Management Area (OHMA) would decrease by 2 percent, as compared to the acreages identified in the No-Action Alternative. The proposed change in habitat management area acres between the No-Action Alternative and the 2018 Proposed Plan Amendment in Nevada and Northeastern California is based on adjustments made to habitat modeling used to delineate habitat management areas and improve alignment with the State of Nevada's delineations for habitat management areas, which the State of Nevada adopted by in December 2015. In Utah, GHMA (approximately 860,000 acres) was removed in the 2018 Proposed Plan Amendment in an effort to align with the habitat management areas identified by the State of Utah. Following this habitat management area modification, planning-level allocation decisions have also been adjusted in the 2018 Proposed Plan Amendments to reflect the distribution of habitat in Nevada/Northeastern California.

In both planning areas within this MZ, land use plan allocations tied to habitat management areas did not change between the alternatives. The decrease in PHMA, GHMA, and OHMA within WAFWA MZ III between the No-Action Alternative and the 2018 Proposed Plan Amendment would therefore have negligible-to-minimal impacts on Greater Sage-Grouse and its habitat in the context of the entire MZ, as the relevant distribution of land use plan allocations associated with these habitat management areas is not significantly changing (only an overall 0-3 percent decrease, see **Appendix S-2**).

Both planning efforts' 2018 Proposed Plan Amendments in MZ III incorporate management flexibility that would allow exceptions to allocation decisions within PHMA, GHMA, and OHMA in Nevada and Northeastern California, and in both planning areas would allow for site-specific adjustments for land use authorizations and adjustments to existing adaptive management strategies. Under both sets of Proposed Land Use Plan Amendments, the BLM would remove the recommendation to withdraw SFAs from location and entry under the Mining Law of 1872, make slight adjustments to habitat objectives, and identify new exceptions to seasonal timing restrictions. The cumulative impacts of these proposed changes to Greater Sage-Grouse populations across MZ III would be consistent with the cumulative impacts analyzed and disclosed in the 2015 Final EISs. Moreover, these proposed changes, which focus on anthropogenic disturbances, would have only a minor or limited effect on efforts to manage and conserve Greater Sage-Grouse in this MZ, where wildfire, invasive plants, and conifer encroachment are the greater threats to the Greater Sage-Grouse and its habitat.

The BLM's 2018 Proposed Plan Amendments in the MZ are also unlikely to preclude the reasonably foreseeable actions listed in **Appendix S-2** from proceeding. Some small, localized populations may be at continued risk due to the reasonably foreseeable future infrastructure and energy development projects over the next 20 years, when combined with unplanned events such as wildfires, drought, and associated decline in Greater Sage-Grouse habitat quality; however, the 2018 Proposed Plan Amendments retained conservation measures in combination with continued proactive habitat restoration efforts being completed by private, local, state, and federal partners across the MZ to adequately conserve and maintain Greater Sage-Grouse habitat.

A summary of potential cumulative impacts by proposed management action is presented below.

Under the 2018 Proposed Plan Amendment, habitat management area boundaries in Nevada would be adopted or revised to incorporate the best available science (Coates et al. 2016). Because the underlying habitat management area allocations put in place to conserve Greater Sage-Grouse would not change, and these updates reflect the most recent knowledge concerning Greater Sage-Grouse habitat use and distribution, there would be no appreciable additive impact from the implementation of this aspect on Greater Sage-Grouse or the resources/uses analyzed herein.

Similarly, no appreciable additive impacts are anticipated from updating the adaptive management process as described in the 2018 Proposed Plan Amendment. This update would ensure that the BLM is utilizing the best available science and decision support tools to guide management at the appropriate spatial scale, thus improving the BLM's assessment and response to ever-changing conditions that could affect Greater Sage-Grouse populations and/or habitat. Because any specific response to tripping a hard or soft trigger would be based on the causal factors responsible, presuming a specific response to unknown future conditions would be speculative at best and not reasonably foreseeable.

Under the 2018 Proposed Plan Amendment, the allocation exception process would be updated to simplify the various exemptions contained in the 2015 Final EIS. While the availability of exceptions to land use plan allocations attached to PHMA and GHMA could increase the possibility of leasing, permitting, or ground-disturbing activities within a given habitat management area, the established criteria would ensure that projects are either in unsuitable Greater Sage-Grouse habitat; do not result in direct, indirect, or cumulative impacts on Greater Sage-Grouse; or can be offset, with the exception of those needed for public health and safety; therefore, there would be no appreciable additive impact from the implementation of this action on Greater Sage-Grouse or the resources/uses analyzed herein, as compared with the No-Action Alternative.

Under the 2018 Proposed Plan Amendment, language would be added to clarify how implementation-level decisions would be guided regarding mitigation, seasonal timing restrictions, and modifying habitat objectives to better align with state conservation plans and management strategies. As these updates did not result in any new identifiable direct or indirect impacts, there would be no appreciable additive impact from the implementation of this aspect on Greater Sage-Grouse or the resources/uses analyzed herein, as compared with the No-Action Alternative.

4.6.6 Cumulative Effects on Greater Sage-Grouse: Management Zone IV

In addition to the analysis in the 2015 Final EIS, other anticipated incremental impacts are discussed below in association with planning issues being analyzed in this DSEIS.

MZ IV encompasses portions of Idaho, Nevada, Montana, Oregon, Utah, and a small portion of Wyoming. Under the 2018 Proposed Plan Amendment PHMA would decrease by 2 percent, IHMA (Idaho) would decrease by 0 percent, GHMA would decrease by 0 percent, and OHMA (Nevada and California) would decrease by 1 percent, as compared to the acreage identified in the No-Action Alternative (**Appendix S-2**). The proposed change in habitat management area acres between the No-Action Alternative and the 2018 Proposed Plan Amendment in Nevada is based on adjustments made to habitat modeling used to delineate habitat management areas and to improve alignment with the State of Nevada's delineations for habitat management areas. In Idaho, minor proposed changes in habitat management areas are based on cleaning up habitat mapping errors, removing non-Greater Sage-Grouse habitat that is being managed as PHMA as a result of SFA designation in the 2015 Decision, and reallocating an area of PHMA to IHMA because there was no historic lek routes in the PHMA polygon. This made it impossible to apply the adaptive management framework in that polygon. Habitat management areas are not proposed to change in Wyoming, Utah, or Oregon in MZ IV.

The direct and indirect effects of proposed management changes in the Wyoming, Idaho, Utah, Nevada, and Oregon Proposed Land Use Plan Amendments are disclosed in each state's Final EIS. Change in allocation decisions is a better indicator to determine how changes across a MZ will affect Greater Sage-Grouse populations; therefore, this cumulative effects analysis relied on changes in planning allocations as the metric to measure cumulative effects in MZ IV. Idaho comprises 50 percent of the MZ while Wyoming only comprises 0.3 percent.

In all planning areas within MZ IV, land use plan allocations tied to habitat management areas would not change between the No-Action Alternative and 2018 Proposed Plan Amendment. The decrease in PHMA, GHMA, and OHMA within WAFWA MZ IV between the No-Action Alternative and the 2018 Proposed Plan Amendment would therefore have negligible to minimal impacts on Greater Sage-Grouse and its habitat in the context of the entire MZ, as the relevant distribution of land use plan allocations associated with these habitat management areas is not significantly changing (0-2 percent, see **Appendix S-2**).

Each planning efforts' 2018 Proposed Plan Amendment in MZ IV incorporate management flexibility that would allow exceptions to allocation decisions within habitat management areas and would allow for site specific adjustments for land use authorizations and adjustments to existing adaptive management strategies. Under all 2018 Proposed Plan Amendments, the BLM would remove the recommendation to withdraw SFAs from location and entry under the Mining Law of 1872, make slight adjustments to habitat objectives, and identify new exceptions to seasonal timing restrictions. The cumulative impacts of these proposed changes to Greater Sage-Grouse populations across MZ IV would be consistent with cumulative impacts described in the 2015 Final EIS. Moreover, these proposed changes, which focus on anthropogenic disturbances, would have only a minor or limited effect on efforts to manage and conserve Greater Sage-Grouse in these MZ s, where wildfire, invasive plants, and conifer encroachment are greater threats to the grouse and its habitats.

BLM's 2018 Proposed Plan Amendments in the MZ are also unlikely to preclude the reasonably foreseeable actions listed in **Appendix S-2** from proceeding. Some small, localized populations may be at continued risk due to reasonably foreseeable future infrastructure and energy development projects over the next 20 years, when combined with unplanned events such as wildfires, drought, and associated decline in Greater Sage-Grouse habitat quality; however, the 2018 Proposed Plan Amendments retain conservation measures in combination with continued proactive habitat restoration efforts being completed by private, local, state, and federal partners across the MZ to adequately conserve and manage Greater Sage-Grouse habitats.

A summary of potential cumulative impacts by proposed management action is presented below.

The proposed plans vary from state to state as does each state contribution to MZ IV. Montana is not engaging in an amendment process; therefore, Montana will not be contributing to any cumulative effects. Wyoming only has about 4,000 acres of PHMA and about 20,000 acres of GHMA within MZ IV making their potential contribution to cumulative effects within the approximately 80-million-acre MZ IV negligible.

The portion of Utah that is within MZ IV is an isolated area with little or no development potential for fluid minerals and is predominantly used for livestock grazing. The RFDs for the area predicts zero wells. The changes proposed in Utah's proposed plan would have no additive effect Greater Sage-Grouse habitats within MZ IV.

The Oregon RMPA would change livestock grazing on 21,959 acres in all or portions of key Research Natural Areas from unavailable to grazing to available for grazing. No other states within MZ IV are proposing changes to grazing allocation decisions. This change would not add measurably to other actions occurring within the approximately 80-million-acre MZ IV.

The area of MZ IV that includes Utah is extremely isolated. The dominant use is grazing. Grazing management will follow rangeland land health standards, and changes to Utah's Table 2-2 that incorporate local science that will benefit Greater Sage-Grouse and ensure that grazing management is conducted properly and would not add cumulatively to Greater Sage-Grouse effects. The area continues to be a ROW avoidance area and is closed to wind energy development. The RFDs for the area predicts zero wells so the change to limited exceptions waivers and modifications are moot.

The changes proposed in Utah's proposed plan would not add measurably to other actions occurring within the approximately 80-million-acre MZ IV.

Nevada's proposed plan would revise the habitat management area boundaries to incorporate the best available science (Coates et al. 2016) but would not change the allocations associated with each habitat management area. Nevada would also update its adaptive management process to ensure that the BLM is utilizing the best available science and decision support tools to guide management at the appropriate spatial scale. These changes would not add measurably to other actions occurring in MZ IV.

In Idaho, removal of the project disturbance cap would not result in any changes to allocation decisions; rather, it would allow the BLM to cluster development in PHMA and IHMA only after meeting the anthropogenic disturbance screening criteria and the disturbance development criteria. Lek buffer

modifications would also not result in any allocation changes. Some lek buffers would be increased as a result of the Proposed Land Use Plan Amendment, but, in some cases, the lek buffers may be smaller than those identified in the No-Action Alternative; however, the existing disturbance screening criteria and the disturbance development criteria would ensure that impacts from development activities in both PHMA and IHMA would not result in a net loss to Greater Sage-Grouse habitat.

Within MZ IV Oregon would retain its SFA designations, while Idaho and Nevada would remove SFA designations. Under the proposed plan in Idaho and Nevada the NSO stipulations without WEMs would change to NSO with limited Exceptions. The exception criteria could ensure that projects are either in unsuitable Greater Sage-Grouse habitat; do not result in direct, indirect, or cumulative impacts on Greater Sage-Grouse; or can be offset, with the exception of those needed for public health and safety; therefore, there would be no appreciable additive impact from the implementation of this action on Greater Sage-Grouse or the resources/uses analyzed herein, as compared with the No-Action Alternative.

Under the proposed plan, language would be added to clarify how implementation-level decisions would be guided regarding mitigation, seasonal timing restrictions, and modifying habitat objectives to better align with state conservation plans and management strategies. As these updates did not result in any new identifiable direct or indirect impacts, there would be no appreciable additive impact from the implementation of this aspect on Greater Sage-Grouse or the resources/uses analyzed herein, as compared with the No-Action Alternative.

4.6.7 Cumulative Effects on Greater Sage-Grouse: Management Zone V

In addition to the analysis in the 2015 Final EIS, other anticipated incremental impacts are discussed below in association with planning issues analyzed in this DSEIS. All changes in the extent of habitat management areas and areas recommended for withdrawal within the MZ occur under the Nevada/Northeastern California amendment. The Oregon amendment did not propose any changes in the extent of habitat management areas (PHMA and GHMA). Oregon removed the recommendation for a withdrawal in the SFA under a plan maintenance action in May, prior to the start of this amendment process. That action resulted in no difference between the No-Action Alternative and the 2018 Proposed Plan Amendments in terms of withdrawals.

Under the 2018 Proposed Plan Amendments in Nevada and Northeastern California, PHMA would decrease by 1 percent, GHMA would decrease by 2 percent, and for Nevada and Northeastern California only, OHMA would decrease by 2 percent, as compared to the acreages identified in the No-Action Alternative. The proposed change in habitat management area acres between the No-Action Alternative and the 2018 Proposed Plan Amendment in Nevada and Northeastern California is based on adjustments made to habitat modeling used to delineate habitat management areas and improve alignment with the State of Nevada's delineations for habitat management areas, which the State of Nevada adopted by in December 2015. Following this habitat management area modification, planning level allocation decisions have also been adjusted to reflect the distribution of habitat in Nevada/Northeastern California. Future adjustments to habitat management areas in Nevada/Northeastern California would be based on best available science and to align with the respective states' delineations for Greater Sage-Grouse habitat.

In Oregon, the only proposed decision under the Management Alignment Alternative (2018 Proposed Plan Amendment) would retain livestock grazing within key Research Natural Areas in order to provide ungrazed controls and better assess the impacts of grazing on Greater Sage-Grouse habitat elements, such as insects and forbs important to Greater Sage-Grouse, as discussed earlier in this chapter. This modification would result in returning livestock grazing to 21,959 acres within the 2018 Proposed Plan Amendment. In the context of the entire MZ, this change would have negligible to no effects on Greater Sage-Grouse populations. Well-managed grazing practices are compatible with sagebrush ecosystems and Greater Sage-Grouse persistence; however, Greater Sage-Grouse population response to grazing varies with local vegetation productivity, underscoring the need for long-term replicated grazing studies across the sagebrush ecosystem and within different ecological sites across the range of Greater Sage-Grouse to better understand the different effects of grazing on Greater Sage-Grouse habitat selection, vital rates, and population trends (DOI 2016).

A summary of potential cumulative impacts by proposed management action is presented below.

Under the Nevada/Northeastern California amendment, the Management Alignment Alternative (2018 Proposed Plan Amendment) would increase PHMA by less than 1 percent, decrease GHMA by 1 percent, and decrease OHMA by 2 percent. This change in habitat management area acres between the No-Action Alternative and 2018 Proposed Plan Amendment would be the result of improved habitat modeling used to delineate habitat management areas (best available science) and to align with the State of Nevada's delineations for habitat management areas (adopted by the State of Nevada in December 2015). Following this habitat management area modification, planning level allocation decisions have also been adjusted to reflect the distribution of habitat in Nevada/Northeastern California.

The Management Alignment Alternative (2018 Proposed Plan Amendment) for Nevada/Northeastern California would also remove the recommendation for a withdrawal in the SFAs; allow exceptions to allocation decisions within PHMA, GHMA, OHMA; modify the existing adaptive management strategy; make slight adjustments to habitat objectives; and identify new exceptions to seasonal timing restrictions. Removing the recommendation to withdraw SFAs from location and entry under the Mining Law of 1872 would result in a 3 percent decrease of acres recommended for withdrawal (see **Appendix S-2**). The largest percent allocation change between the alternatives within the MZ would be consistent with those impacts described in the 2015 Final EIS for the then Proposed Plan Amendments because the Management Alignment Alternatives (2018 Proposed Plan Amendments) changes from the No-Action Alternative are minor and deal largely with anthropogenic disturbances. The greatest threats to populations in this MZ would remain wildfire, invasive plants, and conifer encroachment.

The decreases in GHMA and OHMA within WAFWA MZ V between the No-Action Alternative and Management Alignment Alternative (2018 Proposed Plan Amendment) would therefore have negligible to no effect on Greater Sage-Grouse populations and their habitat in the context of the entire MZ, as the relevant distribution of land use plan allocations associated with these habitat management areas would result in an estimated 2.5 to 3 percent decrease, all from Nevada and Northeastern California (see **Appendix S-2**).

The BLM's 2018 Proposed Plan Amendments in MZ V are unlikely to preclude the reasonably foreseeable actions listed in **Appendix S-2** from proceeding. Overall, the 2018 Proposed Plan

Amendments retain conservation measures in combination with continued proactive habitat restoration efforts being completed by private, local, state, and federal partners across the MZ; however, smaller populations, particularly those at the edge of the species range, would remain at highest risk of extirpation (Aldridge et al. 2008; Garton et al. 2011.), which the reasonably foreseeable actions may exacerbate as unplanned events such as wildfires, drought, and other natural disturbances lead to declines in Greater Sage-Grouse habitat quality.

Under the 2018 Proposed Plan Amendment, habitat management area boundaries in Nevada/California would be adopted or revised to incorporate the best available science (Coates et al. 2016). Because the underlying habitat management area allocations put in place to conserve Greater Sage-Grouse would not change, and these updates reflect the most recent knowledge concerning Greater Sage-Grouse habitat use and distribution, there would be no appreciable additive impact from the implementation of this aspect on Greater Sage-Grouse or the resources/uses analyzed herein.

Similarly, no appreciable additive impacts are anticipated from updating the adaptive management process as described in the Management Alignment Alternative. This update would ensure that the BLM is utilizing the best available science and decision support tools to guide management at the appropriate spatial scale, thus improving the BLM's assessment and response to ever-changing conditions that could affect Greater Sage-Grouse populations and/or habitat. Because any specific response to tripping a hard or soft trigger would be based on the causal factors responsible, presuming a specific response to unknown future conditions would be speculative at best and not reasonably foreseeable.

Under the 2018 Proposed Plan Amendment, the allocation exception process would be updated to simplify the various exemptions contained in the 2015 Final EIS. While the availability of exceptions to land use plan allocations attached to PHMA and GHMA could increase the possibility of leasing, permitting, or ground-disturbing activities within a given habitat management area, the established criteria would ensure that projects are either in unsuitable Greater Sage-Grouse habitat; do not result in direct, indirect, or cumulative impacts on Greater Sage-Grouse; or can be offset, with the exception of those needed for public health and safety; therefore, there would be no appreciable additive impact from the implementation of this action on Greater Sage-Grouse or the resources/uses analyzed herein, as compared with the No-Action Alternative.

Under the 2018 Proposed Plan Amendment, language would be added to clarify how implementation-level decisions would be guided regarding mitigation, seasonal timing restrictions, and modifying habitat objectives to better align with state conservation plans and management strategies. As these updates did not result in any new identifiable direct or indirect impacts, there would be no appreciable additive impact from the implementation of this aspect on Greater Sage-Grouse or the resources/uses analyzed herein, as compared with the No-Action Alternative.

4.7 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Section 102(2)(C) of NEPA requires a discussion of any irreversible or irretrievable commitments of resources from an alternative, should it be implemented. An irreversible commitment of a resource is one that cannot be reversed, such as the extinction of a species or loss of a cultural resource site without proper documentation. An irretrievable commitment of a resource is one in which the resource or its use is lost for a period of time, such as the extraction of oil and gas. Should oil and gas deposits underlying Greater Sage-Grouse habitat be extracted, that oil and gas resource would be lost.

4.8 UNAVOIDABLE ADVERSE IMPACTS

Section 102(C) of NEPA requires disclosure of any adverse environmental impacts that could not be avoided should the proposal be implemented. Unavoidable adverse impacts are those that remain following the implementation of mitigation measures or impacts for which there are no mitigation measures. Some unavoidable adverse impacts happen from implementing the Proposed RMPA/Final EIS; others are a result of public use of BLM-administered lands in the planning area.

This section summarizes major unavoidable impacts discussions of the impacts of each management action (in the discussion of alternatives) and provides greater information on specific unavoidable impacts.

Surface-disturbing activities would result in unavoidable adverse impacts. Although these impacts would be mitigated to the extent possible, unavoidable damage would be inevitable under both the No-Action Alternative and the 2018 Proposed Plan Amendment.

Impacts from permanent conversion of areas to other uses, such as transportation and mineral and energy development or off highway vehicle (OHV) use, would be greater under the 2018 Proposed Plan Amendment, but overall it would be minimal for both alternatives. Both the No-Action Alternative and the 2018 Proposed Plan Amendment would place restrictions on many types of development, which would most likely result in fewer visual intrusions and fewer instances of unavoidable wildlife habitat loss.

Wildlife, livestock, wild horses and burros, and other herbivores consume vegetation and affect soils through hoof action and possible compaction. When these impacts are kept at appropriate levels, natural processes, such as plant growth and recovery, freeze-thaw periods, and microbial activity in the soil surface, result in recovery from these impacts and maintain site stability and health. Vegetation treatments promoting recovery of Greater Sage-Grouse habitats would destroy the target species, be it annual grasses, noxious weeds, or encroaching juniper. Some level of competition for forage between wildlife, livestock, and wild horses would occur. Displacement, harassment, and injury to these species could also occur. Both the No-Action Alternative and the 2018 Proposed Plan Amendment would place restrictions on development and surface-disturbing activities, which would minimize the likelihood of displacement, harassment, and injury.

Development of mineral resources and general use of the decision area would introduce additional ignition sources into the planning area, which would increase the probability of wildland fire and the need for its suppression. These activities, combined with continued fire suppression, would also affect the overall composition and structure of vegetation communities; this could increase the potential for high-intensity wildland fires. Restrictions on development under both alternatives would decrease the potential for ignitions in the decision. However, the No Action Alternative has greater restrictions on development.

Numerous land use restrictions imposed throughout the decision area to protect Greater Sage-Grouse habitat and other important values, by their nature, affect the ability of operators, individuals, and groups who use the public lands to do so without limitations. Although attempts would be made to minimize these impacts, unavoidable adverse impacts to public land users could occur under the No-Action Alternative or the 2018 Proposed Plan Amendment.

4.9 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

Section 102(C) of NEPA requires a discussion of the relationship between local, short-term uses of the human environment and the maintenance and enhancement of long-term productivity of resources. As described in the introduction to this chapter, short-term is defined as anticipated to occur within the first 5 years of implementation of the activity and long-term as lasting beyond 5 years to the end of or beyond the life of this DSEIS.

Surface-disturbing activities, including transportation and utility corridor construction, and mineral resource development would result in the greatest potential for impacts on long-term productivity. Management prescriptions and RDFs are intended to minimize the effect of short-term commitments and to reverse change over the long term. These prescriptions and the associated reduction of impacts would be greater under the No-Action Alternative for such resources as vegetation and wildlife habitat; however, some impacts on long-term productivity might occur, despite the prescriptions intended to reduce impacts on Greater Sage-Grouse and its habitat.

ROWs and short-term use of an area to foster energy and mineral development would result in long-term loss of soil productivity and vegetation diversity. Impacts would persist as long as surface disturbance and vegetation loss continue. In general, the loss of soil productivity would be directly at the point of disturbance; even so, long-term vegetation diversity and habitat value could be reduced due to fragmentation and the increased potential for invasive species to spread from the developments or disturbances. Both the No-Action Alternative and the 2018 Proposed Plan Amendment would provide for long-term productivity through restrictive allocations that limit development in many areas and through the application of other restrictions on development, such as disturbance caps, RDFs, and other management prescriptions.

ROWs and the short-term use of Greater Sage-Grouse habitat for energy and mineral development could impair the long-term productivity of Greater Sage-Grouse and its habitat and that of other species. This would occur by displacing species from primary habitats and removing components of these habitats that might not be restored for 20 years or longer. These short-term uses could also affect the long-term sustainability of some special status species. The potential for these impacts, however, would be minimal under both the No-Action Alternative and the 2018 Proposed Plan Amendment. The short-term resource uses associated with mineral development (oil and gas seismic exploration, natural gas test well drilling, and the noise associated with these activities) would have adverse impacts on the long-term productivity of Greater Sage-Grouse and its habitat. This would be the case if these resource uses were to infringe on Greater Sage-Grouse seasonal habitats, such as nesting, brood-rearing, and winter habitats. These activities, though short-term individually, could have collective long-term impacts on Greater Sage-Grouse and its habitat if they were to increase in the long term.

Chapter 5. Consultation and Coordination

5.1 PUBLIC INVOLVEMENT DURING THE 2019 NEPA PROCESS

5.1.1 Public Comments on the 2019 DSEIS

BLM will accept comments on this DSEIS for 45 days after the NOA publishes in the *Federal Register*.

5.1.2 Future Opportunities for Public Involvement on the SFEIS

After receiving comments on the DSEIS, and making any appropriate updates, the BLM will publish a Notice of Availability in the *Federal Register* to notify the public of the availability of the SFEIS.

5.2 AMERICAN INDIAN TRIBAL CONSULTATION

Various federal laws require the BLM to consult with American Indian tribes during the NEPA process. This section documents the specific consultation and coordination undertaken throughout the process of developing the 2018 Final EIS. No new consultation is being initiated because no new decisions are being considered as the DSEIS solely updates NEPA analysis to clarify the approach taken in the 2018 Final EIS.

The Idaho BLM sent out tribal consultation letters in December 2017, inviting the tribes listed in **Table 5-1** to consult with the BLM on the upcoming Greater Sage-Grouse plan amendment process.

Table 5-1
Tribal Consultation Letters

Tribes Invited to Consult	Tribes Consulted
Duck Valley Shoshone-Paiute Tribe	✓
Confederated Salish and Kootenai Tribes	—
Coeur d'Alene Tribe	—
Shoshone-Bannock Tribes	✓
Kootenai Tribe	—
Nez Perce Tribe	—

The Idaho BLM met with the Shoshone-Paiute Tribe on several occasions in late 2017 and early 2018 to keep them updated on the status of the plan amendment. On March 29, 2018, the BLM met with the Shoshone Bannock Tribe's resource staff to invite them to consult and to update them on the status of the plan amendment.

5.3 LIST OF DSEIS PREPARERS

An interdisciplinary team of staff from the BLM, in collaboration with Environmental Management and Planning Solutions, Inc. prepared the DSEIS.

Name	Role/Responsibility
Ryan Hathaway	Team Lead
Vicki Herren	Wildlife Biologist
Jonathan Beck	Greater Sage-Grouse State Implementation Lead

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Glossary

Adaptive management. A type of natural resource management in which decisions are made as part of an ongoing science-based process. Adaptive management involves testing, monitoring, and evaluating applied strategies, and incorporating new knowledge into management approaches that are based on scientific findings and the needs of society. Results are used to modify management policy, strategies, and practices.

Amendment. The process for considering or making changes in the terms, conditions, and decisions of approved Resource Management Plans or management framework plans. Usually only one or two issues are considered that involve only a portion of the planning area.

Avoidance/avoidance area. These terms usually address mitigation of some activity (i.e., resource use). Paraphrasing the Council on Environmental Quality Regulations (40 CFR 1508.20), avoidance means to circumvent, or bypass, an impact altogether by not taking a certain action, or parts of an action. Therefore, the term “avoidance” does not necessarily prohibit a proposed activity, but it may require the relocation of an action, or the total redesign of an action to eliminate any potential impacts resulting from it. Also see “*right-of-way avoidance area*” definition.

Best Management Practices (BMPs). A suite of techniques that guide or may be applied to management actions to aid in achieving desired outcomes. BMPs are often developed in conjunction with land use plans, but they are not considered a planning decision unless the plans specify that they are mandatory.

Biologically Significant Unit (BSU). A geographical/spatial area within Greater Sage-Grouse habitat that contains relevant and important habitats that is used as the basis for comparative calculations to support evaluation of changes to habitat.

Compensatory mitigation. Compensating for the residual impact by replacing or providing substitute resources or environments (40 CFR 1508.20).

Controlled Surface Used (CSU). CSU areas are open to fluid mineral leasing, but the stipulation allows the BLM to require special operational constraints, or the activity can be shifted more than 200 meters (656 feet) to protect the specified resource or value.

Cooperating agency. Assists the lead federal agency in developing an environmental assessment or environmental impact statement. These can be any agency with jurisdiction by law or special expertise for proposals covered by NEPA (40 CFR 1501.6). Any tribe or Federal, State, or local government jurisdiction with such qualifications may become a cooperating agency by agreement with the lead agency.

Council on Environmental Quality (CEQ). An advisory council to the President of the US established by the National Environmental Policy Act of 1969. It reviews federal programs to analyze and interpret environmental trends and information.

Cumulative effects. The direct and indirect effects of a proposed project alternative's incremental impacts when they are added to other past, present, and reasonably foreseeable actions, regardless of who carries out the action.

Decision area. Public lands and mineral estate managed by the US Department of Interior, Bureau of Land Management that are within the planning area and are encompassed by all designated habitat.

Direct impacts. Direct impacts are caused by an action or implementation of an alternative and occur at the same time and place.

Ecological site potential. The natural plant communities that would become established at late or climax stages of successional development in the absence of disturbance based on the climate, soils, slope, and elevation that that plant community occurs on.

Environmental impact statement (EIS). A detailed statement prepared by the responsible official in which a major federal action that significantly affects the quality of the human environment is described, alternatives to the proposed action are provided, and effects are analyzed.

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

General Habitat Management Area (GHMA). Areas of seasonal or year-round Greater Sage-Grouse habitat outside of priority habitat.

Geographic Information System (GIS). A system of computer hardware, software, data, people, and applications that capture, store, edit, analyze, and display a potentially wide array of geospatial information.

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 their life cycle.

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

Important Habitat Management Area (IHMA). High value habitat and populations that provide a management buffer for the PHMAs and connect patches of PHMAs.

Indirect impacts. Indirect impacts result from implementing an action or alternative but usually occur later in time or are removed in distance and are reasonably certain to occur.

Large Scale Anthropogenic Disturbance. Large Scale Anthropogenic disturbance are development projects that include highways, high voltage transmission lines, commercial wind projects, energy development (e.g., oil and gas development, geothermal wells), airports, mines, cell phone towers, landfills, residential, and commercial subdivisions, etc.

Leasable minerals. Those minerals or materials designated as leasable under the Mineral Leasing Act of 1920. 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.

Lease stipulation. A modification of the terms and conditions on a standard lease form at the time of the lease sale.

Lek. An arena where male Greater Sage-Grouse display for the purpose of gaining breeding territories and attracting females. These arenas are usually open areas with short vegetation within sagebrush habitats, usually on broad ridges, benches, or valley floors where visibility and hearing acuity are excellent.

Long-term effect. The effect could occur for an extended period after implementation of the alternative. The effect could last several years or more.

Management decision. A decision made by the BLM to manage public lands. Management decisions include both land use plan decisions and implementation decisions.

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

Mitigation. Includes specific means, measures or practices that could reduce, avoid, or eliminate adverse impacts. 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, rehabilitation, 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. A change to the provisions of a lease stipulation, either temporarily or for the term of the lease. Depending on the specific modification, the stipulation may or may not apply to all sites within the leasehold to which the restrictive criteria are applied.

No surface occupancy (NSO). 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 NSO 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 NSO area.

Planning area. The geographical area for which resource management plans are developed and maintained regardless of jurisdiction.

Planning criteria. The standards, rules, and other factors developed by managers and interdisciplinary teams for their use in forming judgments about decision making, analysis, and data collection during planning. Planning criteria streamlines and simplifies the resource management planning actions.

Planning issues. Concerns, conflicts, and problems with the existing management of public lands. Frequently, issues are based on how land uses affect resources. Some issues are concerned with how land uses can affect other land uses, or how the protection of resources affects land uses.

Policy. This is a statement of guiding principles, or procedures, designed and intended to influence planning decisions, operating actions, or other affairs of the BLM. Policies are established interpretations of legislation, executive orders, regulations, or other presidential, secretarial, or management directives.

Priority Habitat Management Areas (PHMA). Areas that have been identified as having the highest conservation value to maintaining sustainable Greater Sage-Grouse populations; they include breeding, late brood-rearing, and winter concentration areas.

Required Design Features (RDFs). Means, measures, or practices intended to reduce or avoid adverse environmental impacts. A suite of features that would establish the minimum specifications for certain activities (i.e., water developments, mineral development, and fire and fuels management) and mitigate adverse impacts. These design features would be required to provide a greater level of regulatory certainty than through implementation of Best Management Practices. In general, the design features are accepted practices that are known to be effective when implemented properly at the project level.

Resource management plan (RMP). A land use plan as prescribed by the Federal Land Policy and Management Act that establishes, for a given area of land, land-use allocations, coordination guidelines for multiple-use, objectives, and actions to be achieved.

Short-term effect. The effect occurs only during or immediately after implementation of the alternative.

Stipulation (general). A term or condition in an agreement or contract.

Stipulation (oil and gas). A provision that modifies standard oil and gas lease terms and conditions in order to protect other resource values or land uses and is attached to and made a part of the lease. Typical lease stipulations include No Surface Occupancy (NSO), Timing Limitations (TL), and Controlled Surface Use (CSU). Lease stipulations are developed through the land use planning process.

Timing Limitation (TL). Areas identified for timing limitations, a moderate constraint, 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 are not allowed. Intensive maintenance, such as workover wells, is not permitted. TLs can overlap spatially with no surface occupancy and controlled surface use, as well as with areas that have no other restrictions.

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Appendix I

Responses to Substantive Public Comments
on the 2018 Draft EIS

Appendix I. Responses to Substantive Public Comments on the 2018 Draft EIS

This appendix is split up into four sections: Rangewide Comment Responses; Idaho-Specific Comment Responses; Rangewide Comments; and Idaho-Specific Comments. The Rangewide Comment Responses section contains a summary of comments received on the 2018 Draft EIS that applied mostly rangewide. The BLM recognized that not all of these comments apply to all states, but they did apply across multiple states. This section also contains a response to the summaries of comments. The Idaho-Specific Comment Responses section contains a summary of comments received specific to Idaho and responses to those comments. The full text of parsed comments received both rangewide and Idaho-specific can be found in the respective sections.

I.1 RANGEWIDE COMMENT RESPONSES

I.1.1 Adaptive Management

Summary: The “hard” and “soft” triggers identified in the 2015 plan amendments should be maintained in the current planning amendments.

Response: BLM is focused on aligning its management with the states. BLM’s stated purpose and need is to promote consistency and alignment with each State’s management for Greater Sage-Grouse. The adaptive management triggers have been maintained. However, they have been modified to align with the State’s management for Greater Sage-Grouse and with consideration for local circumstances. See individual state plans for the modified adaptive management.

Summary: Priority Habitat Management Area (PHMA) should be expanded to include additional areas.

Response: BLM is focused on aligning its management with the states. BLM’s stated purpose and need is to promote consistency and alignment with each State’s management for Greater Sage-Grouse. The habitat areas identified in the Draft RMPAs are based, in part, on the information provided by the State agencies and the latest available science and information regarding habitat for Greater Sage-Grouse. The habitat designations in the plans can be modified based on established criteria to address habitat changes, new information, and site-specific conditions. Core area and winter habitat needs to coordinate response with Wyoming.

I.1.2 Alternatives - Other

Summary: West Nile virus is a material threat to sage-grouse, and retention ponds and infiltration ponds contribute to this risk.

Response: Where West Nile virus has been identified as a threat, the 2015 plans identified required design features specifically designed to reduce the risk of West Nile Virus. Further analyzing impacts of West Nile are outside the scope and do not meet the purpose and need of the 2018 plan amendment.

I.1.3 Assumptions and Methodology

Summary: The analysis assumes that there are sufficient resources to implement the plan, which is not a supported assumption. The analysis makes unrealistic assumptions about the capacity for restoration.

Response: Department workforce reduction actions are speculative at this time and not specific to BLM or Greater Sage-Grouse related staff. To date the BLM has treated 1,505,326 acres; 1,159,247 of those acres since 2015. Further, specific Congressional appropriations have provided the funds allowing the BLM to treat more acres every fiscal year, highlighting both Congressional and the BLM's commitment to Greater Sage-Grouse conservation. BLM is committed to the continued implementation of sage-grouse habitat and sagebrush steppe management.

Summary: The analysis assumes that project-level activities will undergo additional environmental review, but the use of Categorical Exclusions (CXs) and Determinations of NEPA Adequacy contradicts this assumption.

Response: If additional project level analysis is needed the BLM will conduct it at the appropriate stage. If the existing NEPA relevant to future actions is sufficient to support the decision maker, the BLM will document this in a Determination of NEPA Adequacy. If an action is categorically excluded and no extraordinary circumstances are present, the BLM expects to use a Categorical Exclusion. The list of DOI and BLM Categorical Exclusions is included in Appendices 3 and 4 of the BLM NEPA Handbook (H-1790-1). In addition, Section 390 of the Energy Policy Act of 2005 established five statutory Categorical Exclusions that apply only to oil and gas exploration and development pursuant to the Mineral Leasing Act.

Summary: The analysis assumes impacts will primarily occur on federal lands, but there is research that suggests otherwise.

Response: The decisions in the RMPAs apply only to BLM-administered lands and federal mineral estate. To the extent that these decisions affect non-BLM-administered lands, the effects are disclosed in the EIS. However, much of the direct and indirect effects of the decisions are confined to BLM-administered lands and federal mineral estate.

Summary: The analysis assumes use of best available science, but key studies are missing.

Response: The BLM coordinated with states, federal agencies and cooperating agencies to identify how the affected environment for sage-grouse management has changed. BLM specifically partnered with USGS to review the best available information published between January 2015 and January 2018 and incorporate the management implications of that information into this EIS. The report from USGS is available at <https://pubs.er.usgs.gov/publication/ofr20181017> and referenced throughout the EIS. Please review the Data and Science response in this section for more information.

1.1.4 Cumulative Impacts

Summary: Because the scope of the current amendments isn't narrower than the 2015 amendments, tiering isn't appropriate. Incorporation of the Cumulative Effects Analysis (CEA) by reference is allowable, but the summary of the CEA is insufficient as written.

Response: BLM is using incorporation by reference, not tiering, to streamline our analysis consistent with Administrative priorities. Incorporation of the 2015 EIS by reference is allowable under BLM regulations and is appropriate in this circumstance because the purpose of this action builds upon the goals and objectives of the 2015 EIS.

Summary: The incorporation by reference of the 2015 CEA impedes public review.

Response: BLM is adding quantitative analysis of the cumulative impacts from planning decisions for each management zone to the Final EISs to address rangewide issues and trends.

Summary: The CEA failed to account for a number of relevant activities, such as oil and gas projects in Wyoming and other scheduled lease sales.

Response: The BLM will update the past, present, and reasonably foreseeable actions as needed to reflect all current projects in the Final EIS.

1.1.5 Data and Science

Summary: The public submitted studies for consideration by the BLM.

Response: BLM specifically partnered with USGS to review the best available information and incorporate the management implications of that information into this EIS. The report from USGS is available at <https://pubs.er.usgs.gov/publication/ofr20181017> and referenced throughout the EIS.

The BLM places great import on the best available information, including new scientific studies and government reports that indicate a potential change in our assumptions or conditions related to a land use planning effort. The BLM has to balance reviewing new information with determining what information is relevant to a decision in light of the BLM's purpose and need. Many commenters highlighted information and studies to the BLM to consider, and the BLM has reviewed each source submitted. Further, the BLM asked the USGS to participate in the review, and to verify if information was included in the USGS synthesis report that was developed for the Draft EIS. Many suggested articles were already included for analysis in the USGS report and may have been missed by commenters in the initial review of the synthesis report and Draft EIS.

Both known and new studies were reviewed by BLM staff, including scientists and NEPA specialists, and each BLM State Office reviewed each study specific to how it informed their planning decisions and environmental conditions. The BLM has included, where appropriate, updates to analysis in the appropriate EISs. Overall, submitted studies did not offer information that changed the analysis of the plans/EISs and did not offer any new conditions or other information the BLM had not considered already. The BLM has reviewed all new information and suggested studies from comments received rangewide, and in specific states. Further, the BLM takes new information seriously, and identified 11 articles from the studies suggested in comments. These 11 studies are sorted below by whether they were review by the BLM by being cited in the USGS Report, being references in the bibliography of the USGS Report, or by the BLM considering them during the RMP Amendment development and review of comments. Articles not specifically addressed below were still reviewed during comment response development.

Cited in USGS Synthesis Report

Baumgardt, J. A., Reese, K. P., Connelly, J. W., & Garton, E. O. (2017). Visibility bias for sage-grouse lek counts. *Wildlife Society Bulletin*, 41(3), 461-470.

Smith, K. T., Beck, J. L., & Pratt, A. C. (2016). Does Wyoming's Core Area Policy protect winter habitats for greater sage-grouse?. *Environmental Management*, 58(4), 585-596.

Dinkins, J. B., Smith, K. T., Beck, J. L., Kirol, C. P., Pratt, A. C., & Conover, M. R. (2016). Microhabitat conditions in Wyoming's Sage-grouse Core Areas: effects on nest site selection and success. *PloS one*, 11(3), e0150798.

Green, A. W., Aldridge, C. L., & O'donnell, M. S. (2017). Investigating impacts of oil and gas development on greater sage-grouse. *The Journal of Wildlife Management*, 81(1), 46-57.

Edmunds, D. R., Aldridge, C. L., O'Donnell, M. S., & Monroe, A. P. (2018). Greater sage-grouse population trends across Wyoming. *The Journal of Wildlife Management*, 82(2), 397-412.

Gamo, R.S. & Beck, J.L. *Environmental Management* (2017) 59: 189. <https://doi.org/10.1007/s00267-016-0789-9>.

Not cited, but considered and in USGS Synthesis Report Bibliography

Spence, E. S., Beck, J. L., & Gregory, A. J. (2017). Probability of lek collapse is lower inside sage-grouse Core Areas: Effectiveness of conservation policy for a landscape species. *PloS one*, 12(11), e0185885.

Juliussan, L. M., & Doherty, K. E. (2017). Oil and gas development exposure and conservation scenarios for Greater sage-grouse: Combining spatially explicit modeling with GIS visualization provides critical information for management decisions. *Applied geography*, 80, 98-111.

Not included in USGS Report, but considered by BLM in review (this includes the new WAFWA and USFS studies that were not published before the Draft EISs)

WAFWA Gap Analysis 2018

Cross, T. B., Schwartz, M. K., Naugle, D. E., Fedy, B. C., Row, J. R., & Oyler-McCance, S. J. (2018). The genetic network of greater sage-grouse: Range-wide identification of keystone hubs of connectivity. *Ecology and Evolution*, 8(11), 5394-5412.s

Kitzberger, T., Falk, D. A., Westerling, A. L., & Swetnam, T. W. (2017). Direct and indirect climate controls predict heterogeneous early-mid 21st century wildfire burned area across western and boreal North America. *PloS one*, 12(12), e0188486

1.1.6 Disturbance and Density Caps

Summary: NSO in priority habitat should be maintained

Response: BLM is focused on aligning our management with the states. BLM's goal is to promote consistency and alignment with each State's management for Greater Sage-Grouse, including the approach to implementing actions to reduce threats to sage-grouse. The analysis and decisions in the RMPs are based on the information provided by the State agencies and are based on the latest available science and information regarding Greater Sage-Grouse.

Summary: Existing disturbance caps should be maintained

Response: BLM is focused on aligning our management with the states. BLM's goal is to promote consistency and alignment with each State's management for Greater Sage-Grouse, including the approach to implementing actions to reduce threats to sage-grouse. The analysis and decisions in the

RMPs are based on the information provided by the State agencies and are based on the latest available science and information regarding Greater Sage-Grouse.

Summary: Disturbance caps are inadequate because they permit severe localized impacts

Response: The BLM analyzed the impacts of the disturbance cap in 2015 and in 2018, where appropriate, and disclosed the potential for localized impacts. Mitigation is designed to reduce some of these impacts to a level below the thresholds established in the plans.

Summary: Disturbance caps don't account for fragmentation

Response: The BLM recognizes the risk that habitat fragmentation poses to greater sage-grouse and its habitats. The BLM analyzed the impacts, including fragmentation, of the disturbance cap in 2015 and in 2018, where appropriate, and disclosed the potential for fragmentation. Disturbance caps are one tool in a broader management strategy that BLM employs to minimize habitat fragmentation. The density cap is designed to reduce some of these impacts to below the thresholds established in the plans. Further, the BLM also addresses fragmentation through mechanisms other than disturbance caps. For example, the conservation measures that apply in PHMA address threats to Greater Sage-Grouse, including fragmentation. Those measures include, but are not limited to, disturbance and density caps.

1.1.7 Fire and Invasive Species

Summary: The approach to managing noxious and invasive weeds needs to be more specific. The analysis should also include the 2018 Western Association of Fish and Wildlife Agencies (WAFWA) Gap Report.

Response: BLM has comprehensive strategies to address invasive species and has been implementing those strategies. Improving invasive species management did not emerge as an issue during scoping to increase management alignment or flexibility.

1.1.8 General Habitat Management Areas

Summary: The public submitted studies for consideration by the BLM in support of maintaining protections for General Habitat Management Areas (GHMA). The importance of GHMA to genetic conservation was not given sufficient attention in the analysis

Response: Removing GHMA is being evaluated as a potential way to better align federal management with that of the state. The BLM reviewed the best available science and finds that while there is evidence that gene-flow and connectivity is facilitated by GHMA, presents a sufficiently low risk to species persistence that additional analysis of this impact related to GHMA removal, beyond that in the draft EIS, is not warranted.

1.1.9 Guidance and Policy

Summary: Discretionary waivers and modifications create uncertainty in the application of protections that was not adequately analyzed.

Response: Under the Proposed Plan, waivers, exemptions and modifications would be granted only when meeting specific criteria designed to advance the management goals and objectives in the RMPs. BLM's proposed plan balances the risk of uncertainty against the benefits of management flexibility when

considering whether to grant a waiver, exception, or modification. Planning criteria identified for this amendment include consideration of how planning decisions may impact future listing determinations under the ESA.

Summary: BLM should tailor policies closer to state policy rather than providing general discretion.

Response: BLM implementation actions must conform with plan goals and objectives. The details of implementation are guided by current policy which are discretionary and open to change based on amendments to RMPs.

Summary: Secretarial Orders referenced in the Draft EISs need additional clarifying language for how they are guiding the direction of the Draft EISs.

Response: BLM is ensuring this planning effort conforms with the guidance and direction contained in Secretary's Orders, including SO 3353, Greater Sage-Grouse Conservation and Cooperation with Western States. The Proposed Plan explains the relationship between various SOs and this planning process in greater detail. The BLM will continue to manage public lands in conformance with its approved land use plans, while future policies and Secretary's Orders may provide guidance and direction about how BLM implements those plans.

1.1.10 Habitat Boundary/Habitat Management Area Designations

Summary: BLM should use a strict 3% area threshold on administrative boundary changes. Changes to habitat boundaries exceeding 3% in area should require a new plan amendment.

Response: The thresholds for amending plans are defined in BLM's planning handbook and often depend on specific context. The BLM is committed to streamlined and effective processes using plan maintenance and other measures when appropriate. Habitat boundaries are adjusted according to specific criteria and whether modified via plan maintenance or amendment will be determined at the appropriate time. Public participation will be commensurate with the level of planning and BLM policy.

Summary: Discretionary waivers and modifications introduce uncertainty to protections that were not adequately analyzed.

Response: Under the Proposed Plan, waivers, exemptions and modifications would be granted only when meeting specific criteria designed to advance the management goals and objectives in the RMPs. BLM's proposed plan balances the risk of uncertainty against the benefits of management flexibility when considering whether to grant a waiver, exception, or modification. Planning criteria identified for this amendment include consideration of how planning decisions may impact future listing determinations under the ESA.

Summary: Secretarial Orders referenced in the Draft EISs need additional clarifying language for how they are guiding the direction of the Draft EISs

Response: The BLM is ensuring this planning effort conforms with the guidance and direction contained in Secretary's Orders, including SO 3353, Greater Sage-Grouse Conservation and Cooperation with Western States. The Proposed Plan explains the relationship between various SOs and this planning process in greater detail. The BLM will continue to manage public lands in conformance with its

approved land use plans, while future policies and Secretary's Orders may provide guidance and direction about how BLM implements those plans

1.1.11 Habitat Management Areas

Summary: The spatial extent of habitat management areas should not be modified.

Response: HMAs reflect habitat which is mapped based on best available information. If BLM and the state finds that habitat was not reflected correctly in light of new information, plan maintenance or an amendment can be used to update boundaries to reflect the change in information.

Summary: The management prescriptions associated with habitat management areas should not be modified.

Response: The purpose of these plan amendments is to increase consistency with state management. In some cases that may result in changes to management within the HMAs.

Summary: Restoration targets for Priority Habitat Management Areas (PHMA) should be developed and incorporated into the plans.

Response: While BLM has not developed specific restoration targets, the BLM has committed to significant restoration and recovery actions. The BLM spent considerable time and energy on the development of the FIATs that identify specific areas for specific types of actions and used that as a basis for requesting funding from Congress. Some targets have been developed, but are not included in the plans for reasons such as uncertainty of funding to implement the actions to reach the targets.

1.1.12 Habitat Objectives

Summary: BLM should more closely align its specific habitat objectives with the 2018 USGS report.

Response: BLM's habitat objectives reflect the best available information defining habitat conditions that sage-grouse preferentially select. The USGS report confirms BLM's assumption that such understanding may change over time. BLM has developed the flexibility in the plans to modify seasonal habitat objectives based on new science or site-specific information.

1.1.13 Lands and Realty

Summary: BLM should not dispose of lands with sage-grouse because transferring lands out of federal ownership introduces regulatory uncertainty and risks reducing habitat connectivity.

Response: BLM disposes of lands based on programmatic guidance and policy, and following specific criteria. Land and realty actions are often implementation level decisions that must conform with the sage-grouse goals and objectives identified in these RMP amendments.

1.1.14 Lek Buffers

Summary: Lek buffers should be maintained to protect leks.

Response: The BLM agrees that lek buffers are one of many important conservation tools available to manage sagebrush habitat and protect Greater Sage-Grouse. The BLM is retaining, and in some instances modifying/clarifying the application of lek buffers as a management tool.

Summary: Lek buffers should be larger than prescribed in the plan amendments.

Response: As applicable, each RMPA has an appendix that addresses lek buffers and allows the BLM to adjust lek buffers based on the best available science, this would allow the BLM to adjust the buffers based on new information as well. Further, some states are clarifying the approach in this RMPA effort, or adjusting to better align with their individual State's management. For more specific information, please refer to the individual plans and their associated lek buffer appendix.

Summary: The public submitted studies for consideration by the BLM in support of larger lek buffers.

Response: The BLM reviewed all submitted studies, and additional information. Please see the response to Data and Science comments for a response to this study.

1.1.15 Mitigation

Summary: Mitigation provisions in the 2015 plans were relied on in the USFWS 2015 finding. Mitigation should follow consistent principles. Mitigation could benefit from different strategies in different states. Mitigation provides stronger, faster decisions on project authorizations

Response: BLM's Proposed Plan balances the risk of uncertainty against the benefits of management flexibility when considering mitigation strategies. The BLM is committed to applying and enforcing the mitigation hierarchy of actions to avoid, minimize, and otherwise mitigate impacts to the extent that federal law allows. A principal component of Greater Sage-Grouse management is the implementation of mitigation actions to ameliorate the threats and impacts to Greater Sage-Grouse and its habitats. The Proposed Plan clarifies how voluntary compensatory mitigation should be considered in the management of Greater Sage-Grouse habitat and how BLM will work with each state management agency to implement its compensatory mitigation strategy.

Summary: Mandatory net-gain and compensatory mitigation is supported by some commenters, and objected to by others.

Response: BLM's Proposed Plan balances the risk of uncertainty against the benefits of management flexibility when considering mitigation strategies. Following extensive review of FLPMA, including existing regulations, orders, policies, and guidance, the BLM has concluded that FLPMA does not explicitly mandate or authorize the BLM to require public land users to implement compensatory mitigation as a condition of obtaining authorization for the use of the public lands (Instruction Memorandum No. 2018-093, *Compensatory Mitigation*, July 24, 2018). However, the BLM is committed to applying and enforcing the mitigation hierarchy of actions to avoid, minimize, and otherwise mitigate impacts to the extent that federal law allows. A principal component of Greater Sage-Grouse management is the implementation of mitigation actions to ameliorate the threats and impacts to Greater Sage-Grouse and its habitats. The Proposed Plan clarifies how voluntary compensatory mitigation should be considered in the management of Greater Sage-Grouse habitat and how BLM will work with each state management agency to implement its compensatory mitigation strategy.

Summary: Various commenters argued that the "net conservation gain" standard should be retained, modified or eliminated. Many commenters requested clarification of the BLM's authority to impose compensatory mitigation.

Response: Following extensive review of FLPMA, including existing regulations, orders, policies, and guidance, the BLM has concluded that FLPMA does not explicitly mandate or authorize the BLM to require public land users to implement compensatory mitigation to offset environmental effects beyond the proponents level of impact. The Proposed Plan seeks to clarify that the mitigation standard applies not at the project level, but rather as a planning-level goal and objective unless specifically required under a state management authority. The BLM is pursuing agreements with the States of Colorado, Idaho, Nevada, Oregon, Utah and Wyoming to clarify how BLM, project proponents, and state management agencies will collaborate to implement a State's compensatory mitigation plan.

Summary: Various commenters argued that recent changes in mitigation policy and the applicability to sage-grouse warrant additional analysis, public review, or a SEIS.

Response: Public input on implementing mitigation, "including alternative approaches to requiring compensatory mitigation in BLM land use plans," was explicitly requested as part of the public comment period on the 2018 Draft EIS (see page ES-8, Section ES.4.2, last sentence of second paragraph). The Proposed Plan clarifies how voluntary compensatory mitigation should be considered in the management of Greater Sage-Grouse habitat and how BLM will work with each state management agency to implement its compensatory mitigation strategy. Because this clarification simply aligns the Proposed Plan Amendment with BLM policy and with the scope of compensatory mitigation authority expressly provided by FLPMA, and because any analysis of compensatory mitigation relating to future projects would necessarily be fact-specific and evaluated in project-specific NEPA documents, there is limited value in attempting to do so at the level of land use planning.

Summary: Many commenters stated the BLM should clarify how it will implement compensatory mitigation.

Response: The BLM is pursuing agreements with the States of Colorado, Idaho, Nevada, Oregon, Utah and Wyoming to clarify how BLM, project proponents, and state management agencies will collaborate to implement a State's compensatory mitigation plan. The BLM will defer to a state methodology for habitat quantification if such a tool exists and incorporate the state's assessment into the appropriate NEPA documentation. The Proposed Plan Amendment clarifies that BLM will consider compensatory mitigation only as a component of compliance with a state mitigation plan, program, or authority, or when offered voluntarily by a project proponent. The Proposed Plan further clarifies the application of the mitigation standard as a planning-level goal and objective for sage-grouse habitat conservation. BLM commits to cooperating with the State to analyze applicant-proffered or state-imposed compensatory mitigation to offset residual impacts. BLM may then authorize such actions consistent with NEPA analysis and the governing Resource Management Plan.

1.1.16 Modifying Waivers, Exceptions, and Modifications of Fluid Minerals

Summary: One-time exceptions should be preferred over more expansive exceptions

Response: Under the Proposed Plan, waivers, exceptions, and modifications would be granted only when meeting specific criteria designed to advance the management goals and objectives in the RMPs. BLM's proposed plan balances the risk of uncertainty against the benefits of management flexibility when considering whether to grant a waiver, exception, or modification. Planning criteria identified for this

amendment include consideration of how planning decisions may impact future listing determinations under the ESA.

Summary: Waivers should be narrowly defined.

Response: Under the Proposed Plan, waivers, exceptions, and modifications would be granted only when meeting specific criteria designed to advance the management goals and objectives in the RMPs. BLM's proposed plan balances the risk of uncertainty against the benefits of management flexibility when considering whether to grant a waiver, exception, or modification. Planning criteria identified for this amendment include consideration of how planning decisions may impact future listing determinations under the ESA.

Summary: There should be opportunity for public notice and comment for certain types of waivers, exceptions, or modifications.

Response: The BLM will comply with 43 CFR 3101.1-4 regarding public notification of waivers, exceptions, or modifications, which includes a 30-day public notification period. An exception is a limited type of waiver and therefore is subject to 43 CFR 3101.1-4.

1.1.17 Noise Management Outside of PHMA

Summary: Noise restrictions should be stronger. The public submitted studies for consideration by the BLM in support of stronger restrictions on noise. The public suggested changes to the noise measurement methods.

Response: BLM has determined the noise restrictions are adequate to balance best available information with the goals and objectives of the Proposed Plan and to meet the Purpose and Need.

1.1.18 Preferred Alternative

Summary: The preferred alternative should be the No Action Alt because it was relied on for the 2015 listing decisions.

Response: The proposed plan was chosen based on the BLM's stated purpose and need, coordination with cooperating agencies, and public comment. The no action was not the sole factor USFWS relied upon when reaching its 2015 listing determination. BLM's proposed plan balances the risk of uncertainty against the benefits of management flexibility when considering the selection of a proposed plan. Planning criteria identified for this amendment include consideration of how planning decisions may impact future listing determinations under the ESA.

1.1.19 Prioritization of Mineral Leasing

Summary: No summary—implementation-level decision

1.1.20 Range of Alternatives

Summary: The range of alternatives is unreasonably narrow.

Response: The range is adequate to address the agency's purpose and need for considering these amendments. And by incorporating the 2015 plans by reference, BLM avails itself of a larger range of

management options previously analyzed in a broadly distributed EIS. Further, BLM considered a number of alternatives and issues during scoping that the agency determined not to carry forward.

Summary: The no-action alternative does not reflect a proper baseline.

Response: The No-Action Alternative represents the current management plan as it is implemented on the ground across 11 states and over 90 RMPs, including US Forest Service lands, thereby reflecting a management baseline that is well understood by BLM.

1.1.21 Recreation

Summary: Recreation and its socioeconomic benefits are tied to sagebrush ecosystems

Response: The BLM agrees and ensures that recreation-related projects and actions in sage-grouse habitats conform with management goals and objectives from the 2015 management plans.

1.1.22 Required Design Features (RDFs)

Summary: NSO stipulations should be maintained in priority habitats.

Response: BLM is focused on aligning our management with the states. BLM's goal is to promote consistency and alignment with each State's management for greater sage-grouse. In most cases, the proposed plan maintains NSO restrictions and other management prescriptions. Where BLM has increased its management flexibility, it has done so to improve alignment with the state plans and based on local information. The impact to sage-grouse from disturbance and habitat fragmentation is well documented in the 2015 EIS.

1.1.23 Sagebrush Focal Areas (SFAs)

Summary: Sagebrush focal areas (SFAs) should not be removed. Inconsistency in retention and removal of SFA across states is arbitrary and capricious. BLM is not legally required to remove SFA. Justifications for eliminating SFAs are inadequate.

Response: BLM is focused on aligning our management with the states. BLM's goal is to promote consistency and alignment with each State's management for greater sage-grouse. Where BLM has increased its management flexibility, it has done so to improve alignment with the state plans and based on local information. BLM has determined that SFA designations provide a redundant layer of resource protection and land use prioritization within PHMA and is acting within its discretion to remove SFA designation. Further, the BLM canceled the proposed withdrawal of SFAs through a publication in the Federal Register on October 11, 2017 (82 Fed. Reg. 47,248) and findings in the Sagebrush Focal Area Draft EIS noted that there was broadly low potential for locatable minerals within the recommended withdrawal area, so the withdrawal would not have provided additional protection to Greater Sage-Grouse.

1.1.24 Sage-Grouse

Summary: Regulatory changes and regulatory uncertainty increase the likelihood of listing of the species under the ESA. The impacts analysis is deficient. Protections afforded by the plans aren't sufficient to prevent listing of the species.

Response: BLM's proposed plan balances the risk of uncertainty against the benefits of management flexibility and alignment when considering changes to the 2015 plans. Planning criteria identified for this amendment include consideration of how planning decisions may impact future listing determinations under the ESA.

I.1.25 Statutes and Regulations

Summary: The BLM must respect valid existing rights, including those reflected in oil and gas leases issued under the Mineral Leasing Act. The BLM also implements land use planning decisions differently with respect to uses related to the Mining Law of 1872.

Response: All proposed actions contained in the RMPA will be subject to valid existing rights, including those associated with leases issued under the Mineral Leasing Act of 1920. Accordingly, the BLM will ensure that its implementation of the management actions in the RMPA is consistent with the terms and conditions in existing leases or existing contracts. For example, if the BLM previously issued an oil and gas lease with standard lease terms and conditions, and the lessee submits an application for permit to drill, the BLM will ensure that any management actions from the RMPA will be applied in a manner that is consistent with the terms and conditions of the underlying oil and gas lease.

The BLM also recognizes that it has limited authority to impose conditions on certain uses related to the Mining Law of 1872 through land use planning decisions. Accordingly, the BLM will apply management actions in the RMPA only to the extent that they are consistent with the Mining Law of 1872 and the BLM's regulations.

Summary: The purpose and need is unreasonably narrow.

Response: The agency's purpose and need for considering these amendments was carefully drawn to promote alignment with the State's plans and policies while satisfying the BLM's responsibilities under FLPMA, other applicable laws, and BLM policy. This planning effort also builds off the comprehensive 2015 planning and NEPA process; incorporates the 2015 Final EIS analysis by reference in its entirety, including its alternatives; and has been informed by a scoping process that has identified specific opportunities to improve alignment with state plans.

Summary: The purpose and need is driven solely by applicant objectives.

Response: The planning and NEPA process does not respond to any applications submitted to the BLM. The BLM's intention is to build upon the 2015 plans by improving access and management flexibility by better aligning our management plans with the States' management plans. The purpose and need reflects this intent consistent with the agency's mission and Administration's priorities.

Summary: The BLM inappropriately tiered to a document of equal scope. The BLM failed to summarize and relate applicability of material incorporated by reference to the new plans.

Response: BLM is using incorporation by reference to streamline our analysis consistent with Administrative priorities. Incorporation of the 2015 EIS by reference is allowable under BLM regulations and is appropriate in this circumstance because the purpose of this action builds upon the goals and objectives of the 2015 EIS. Further, the CEQ 40 Questions, Question 24c, states that, "Tiering is a procedure which allows an agency to avoid duplication of paperwork through the incorporation by

reference of the general discussions and relevant specific discussions from an environmental impact statement of broader scope into one of lesser scope or vice versa.” The BLM has summarized and referenced applicable aspects of the 2015 EIS throughout the 2018 EIS, but especially in Chapters 2 and 4.

Summary: The BLM failed to consider and designate Areas of Critical Environmental Concern (ACECs).

Response: BLM properly considered and analyzed the designation of ACECs in 2015. No new information suggests it is necessary to reconsider those decisions and BLM has determined the issue of ACECs to fall outside the scope of this effort to better align federal management with state management plans.

Summary: BLM fails to incorporate an appropriate Analysis of Management Situation.

Response: The BLM analyzed the management situation in full compliance with its regulations and policies. The BLM evaluated inventory and other data and information, partnering with USGS and coordinating extensively with States, to help provide a basis for formulating reasonable alternatives. The BLM described this process in its Report to the Secretary in response to SO 3353 (Aug. 4, 2017). Among other things, the Report describes how the BLM coordinated “with each State to gather information related to the [Secretary’s] Order, including State-specific issues and potential options for actions with respect to the 2015 Greater Sage-Grouse Plans and IMs to identify opportunities to promote consistency with State plans.” (Report to the Secretary at 3.) This process overlapped to some degree with the BLM’s scoping process, which also assisted the BLM in identifying the scope of issues to be addressed and significant issues, and with coordination with the States occurring after the Report. In addition, as described in Draft EIS Chapter 3, the BLM determined that the current management situation is similar in condition to that assessed in 2015.

1.1.26 Travel and Transportation Management

Summary: Travel plans should be part of the plan amendments.

Response: Travel management planning is a crucial aspect in implementing land use plans. Ongoing travel management decisions in sage-grouse habitat are guided by the 2015 plans, with clarifications in the 2018 plan. Those BLM offices with travel plans in Greater Sage-Grouse habitat would also conform with the goals and objectives, and planning decisions in these amendments.

1.1.27 Waivers, Exceptions, and Modifications

Summary: The uncertainty with how waivers, exceptions, and modifications will be used introduces uncertainty to protections that aren’t fully analyzed. Criteria for the use of waivers, exceptions, and modifications should be more narrowly prescribed.

Response: Under the Proposed Plan, waivers, exemptions and modifications would be granted only when meeting specific criteria designed to advance the management goals and objectives in the RMPs. BLM’s proposed plan balances the risk of uncertainty against the benefits of management flexibility when considering whether to grant a waiver, exception, or modification. Planning criteria identified for this amendment include consideration of how planning decisions may impact future listing determinations under the ESA.

Summary: BLM should monitor the use of waivers, exceptions, and modifications.

Response: BLM currently monitors and tracks disturbance in Greater Sage-Grouse habitats. Some BLM states, through the fluid minerals program, track waivers, exceptions, and modifications. The BLM is currently reviewing how to apply these best management practices at the national level.

I.2 IDAHO-SPECIFIC COMMENT RESPONSES

I.2.1 Purpose and Need

Summary: Commenters recommended the purpose and need statement better reflect the commitment to conservation and restoration of Greater Sage-Grouse habitat and population levels and trends.

Response: The agency's purpose and need was carefully drawn to improve alignment with the State of Idaho's Greater Sage-Grouse Plan while complying with the BLM's responsibilities under FLPMA, other applicable laws, and BLM policy.

Summary: Commenters stated the purpose and need statement is too narrow to encompass new information and regulatory approaches for development of effective alternatives and violates NEPA.

Response: The agency's purpose and need was carefully drawn to improve alignment with the State of Idaho's Greater Sage-Grouse Plan while complying with the BLM's responsibilities under FLPMA, other applicable laws, and BLM policy. It is narrow, but it does not preclude regulatory approaches or effective alternative development. The BLM avails itself of a larger range of management options previously analyzed in a broadly distributed EIS. Further, the BLM considered a number of alternatives and issues during scoping that the agency determined not to carry forward.

Summary: Commenters stated a new range of alternatives needs to be developed for the 2018 Draft EIS due to the dramatically changed purpose and need statement, compared to the 2015 EIS.

Response: BLM analyzed new alternatives that were responsive to the 2018 Purpose and Need. This was a new planning effort that had a new and different scope than the 2015 planning effort. Therefore, the alternatives range was adequate.

Summary: Multiple commenters suggested plan changes deemed necessary be addressed with "maintenance actions" rather than a complete rewrite.

Response: In order to be transparent and expedient with the public, the BLM conducted a single effort to address both those changes that required an amendment in addition to those only requiring clarification in a single effort.

I.2.2 Modifying Waivers, Exceptions, and Modifications of Fluid Minerals Determinations

Summary: A commenter suggests the Technical and Policy Teams provide the public transparency and clarification of their operations and decisions before changes are made to the plan.

Response: Additional information and clarification was added to Appendix K of the Final EIS to illustrate how the technical and policy teams would work to implement more collaborative, responsible and consistent sage-grouse management.

Summary: A commenter recommends the Final EIS explain how the two-interagency team process replacing the unanimous finding requirement would improve decision making and collaboration relative to no action.

Response: Under the Proposed Plan, waivers, exemptions and modifications would be granted only when meeting specific criteria designed to advance the management goals and objectives in the RMPs. BLM's proposed plan balances the risk of uncertainty against the benefits of management flexibility when considering whether to grant a WEM. Planning criteria identified for this amendment include consideration of how planning decisions may impact future listing determinations under the ESA.

Summary: A commenter states the Final EIS/RMP should specifically address the need for waivers, exceptions and modifications to allow wind energy development and transmission siting in exclusion areas.

Response: Changes to the allocations of wind and solar projects in PHMA were not identified as an issue to better align with the State of Idaho when preparing this plan amendment; therefore, changes to wind and solar were not considered in this plan amendment process

Summary: Another commenter recommends that the BLM follow the Governor's approach and provide an opportunity for infrastructure in PHMA to demonstrate its societal benefits, as would be consistent with the type of flexibility that is granted in the Draft RMP/Draft EIS to fluid mineral production; the BLM reconsider its position within the Draft RMP/Draft EIS that wind energy development in PHMA does not require additional analysis; and BLM reevaluate its decision not to conduct additional analysis on the imposition of avoidance area zoning on rights-of-way in PHMA.

Response: The draft plan used the Governor's three-tiered habitat approach to move projects out of the best habitat. However, there are screening Criteria that, if met, would consider proposals in any HMA (see MD SSS 29 Draft EIS pg. 2-9, and MD SSS 30 Draft EIS pg. 2-14).

Summary: Development under existing leases should be managed under existing regulations.

Response: Development under existing leases is managed under existing regulations. An existing lease provides a valid existing right for reasonable development of a certain resource. When a lease is proposed for development a plan must be approved by BLM and is subject to the existing regulations and the stipulations identified in the lease that comply with BLM land use plans.

Summary: Fluid mineral determinations should maintain restrictions on surface occupancy in priority habitats.

Response: The BLM recognizes the importance of both PHMA and GHMA for managing Greater Sage-Grouse populations in Idaho. Given the BLM's intent to better align with the State plan for managing Greater Sage-Grouse, a no net loss standard was added to GHMA in the Proposed Plan Amendment and no change was proposed for PHMA.

I.2.3 Habitat Boundary/Habitat Management Area Designations

Summary: A commenter states the appropriate level of management for rights-of-way in Greater Sage-Grouse habitat is “exclusion area” rather than “avoidance area,” securing certainty of implementation and level of protection for Greater Sage-Grouse.

Response: PHMA and IHMA are Avoidance areas for ROWs and require projects to pass several layers of criteria to be allowed, including meeting a no net loss standard. In addition, the draft plan used the Governor’s three-tiered habitat approach to move projects out of the best habitat. However, there are screening Criteria that, if met, would consider proposals in any HMA (see MD SSS 29 Draft EIS pg. 2-9, and MD SSS 30 Draft EIS pg. 2-14).

Summary: A commenter states the Final EIS should uphold the GHMA restrictions and restore lek buffer requirements or risk undermining “regulatory certainty” achieved by the 2015 plans.

Response: Buffers were increased in IHMA and GHMA under the proposed Plan as a result of public and stakeholder input. Additionally, a no net loss requirement was added to GHMA.

Summary: One commenter requests the Draft EIS MAA include language that makes adjustment to HMAs through plan maintenance when appropriate, based on the most updated best available science.

Response: The flexibility to adjust habitat boundaries without requiring an amendment was included in the Draft EIS and is carried forward into the Proposed Plan Amendment.

Summary: A commenter requests BLM consider and analyze expanding the “Planning Area” to include the relevant portion of Nevada identified in the Draft EIS.

Response: A purpose of these plans is to better align with state management for Greater Sage-Grouse. Therefore, the appropriate planning area is Idaho. Cross border management of grazing permits is not a land use planning decision and would be better addressed through an implementation decision such as a permit renewal. In addition, BLM Nevada is conducting its own planning process to address alignment with the state’s plan.

Summary: A commenter recommends including the referenced Appendix K in the Final EIS that includes supporting language on the new interagency two-team approach for coordination and collaboration.

Response: Appendix K of the Final EIS was included in the MAA and is carried forward into the proposed plan amendment.

Summary: When permitting land use activities, a commenter suggests the BLM consider the ecological site potential within designated habitat management areas to validate the habitat conditions achievable for a specific site.

Response: BLM considers ecological site potential when authorizing actions or siting projects. The 2015 ARMPA and the proposed plan acknowledge that site specific data can identify requirements that would not be applicable.

Summary: For RDF supporting language, a commenter suggests replacing “incorporate RDFs as BMPs in the development of project or proposal implementation, reauthorizations or new authorizations, suppression activities, post-lease activities, and locatable minerals activities” with “RDFs are considered BMPs that should be considered and applied unless the proponent can show that applying the BMP is technically or economically impracticable.”

Response: The 2015 ARMPA acknowledges that the designated HMAs are broad designations and that there will be areas within that do not provide sage-grouse habitat. It also recommends that the site-specific data be used to identify applicable requirements. This language has not been proposed for change in this amendment process.

Summary: After a separate project identified discrepancies in forest vegetation within a GHMA, a commenter suggests BLM continuously update their sage-grouse habitat maps to properly characterize sage-grouse habitat. In addition, any significant changes to habitat boundaries must include public review and third-party participation.

Response: The thresholds for amending plans are defined in BLM’s planning handbook and often depend on specific context. The BLM is committed to streamlined and effective processes using plan maintenance and other measures when appropriate. Habitat boundaries are adjusted according to specific criteria and whether modified via plan maintenance or amendment will be determined at the appropriate time. Public participation will be commensurate with the level of planning and BLM policy.

1.2.4 Sagebrush Focal Area Designations

Summary: Several commenters support the removal of SFAs and add that SFAs should be removed from all grazing allotments. Other supporting arguments include the need for more adaptive management plans to account for probable changes to the landscape.

Response: Removal of the SFA designation was a primary issue for aligning with the State of Idaho Plan. Please see the analysis of effects for removing the SFA designations. (Draft EIS Ch4 pg. 4-10) The Removal of the SFA designations is carried forward into the proposed plan amendment.

Summary: The listed SFAs from the original 2015 plan should remain to protect against harmful land use and development such as new hardrock mining claims.

Response: BLM has determined that SFA designations provide a redundant layer of resource protection and land use prioritization within PHMA and is acting within its discretion to remove SFA designation. Further, the BLM cancelled the proposed withdrawal in SFAs on October 11, 2017, (82 *Federal Register* 47248) and findings in the SFA Draft EIS noted that there was broadly low potential for locatable minerals within the recommended withdrawal area, so the withdrawal would not have provided additional protection to Greater Sage-Grouse.

Summary: The justifications offered in the Idaho Draft EIS for eliminating SFAs lack a rational basis. If SFAs are removed, the protections must be maintained and incorporated into remaining PHMAs, specifically providing fluid minerals with a NSO stipulation with no VEMs the vegetation and conservation management stipulation, and other key management approaches.

Response: BLM has determined that SFA designations provide a redundant layer of resource protection and land use prioritization within PHMA and is acting within its discretion to remove SFAs designation. Further, the BLM cancelled the proposed withdrawal in SFA on October 11, 2017, (82 *Federal Register* 47248) and findings in the SFA Draft EIS noted that there was broadly low potential for locatable minerals within the recommended withdrawal area, so the withdrawal would not have provided additional protection to Greater Sage-Grouse.

1.2.5 Disturbance and Density Caps

Summary: A commenter criticized the method of measuring disturbance.

Response: Disturbance measurements are based on the best available information looking at the amount of on-the-ground disturbance that has occurred and whether leks within a given area have remained occupied.

Summary: Studies were submitted by the public for consideration by the BLM in support of maintaining more stringent disturbance protections.

Response: Disturbance protections identified in 2015 were based on the best available science. Changes in the disturbance caps are being analyzed to determine the impacts of management adjustments that will promote consistency and alignment with state management. The BLM analyzed the impacts of a disturbance cap in 2015 and in 2018, where appropriate, and disclosed the potential for impacts, both local and cumulative. Upon review of the studies submitted by the public, the BLM has determined that the analysis in the Draft EIS remains valid.

Summary: Several commenters noted that disturbance caps should not be reduced; one noted that state regulations provide adequate protection without disturbance caps.

Response: The removal of the project level disturbance cap is intended to help BLM better collocate or relocate projects in areas that already have infrastructure and are less used by sage-grouse thereby reducing risks of habitat fragmentation. This will allow BLM to preserve intact undeveloped sage-steppe. The BSU Scale disturbance cap would be retained.

Summary: Habitat management projects enhancing select plant groups should not be considered contributors to disturbance caps.

Response: Habitat management projects are not considered part of the disturbance cap.

1.2.6 Required Design Features

Summary: Incentives should accompany restrictions to encourage proper grazing.

Response: Properly managed grazing is compatible with sage-grouse management. An incentive for proper grazing includes the regular review and renewal of grazing privileges on public land. Additionally, BLM's current grazing regulations allow for flexibility in grazing management when allotment management is meeting land health standards and terms and conditions of the permit.

Summary: The amendments should further incorporate prioritization for grazing renewal and the effectiveness of livestock grazing.

Response: Prioritization of permit renewals and monitoring is identified in the Draft EIS and will be updated with elements of the Governor's plan.

Summary: The amendments should be explicit that RDFs can only be required to the extent practicable (43 CFR 3809).

Response: The Draft EIS clearly states that all requirements within the Land Use Plans (LUPs) are subject to valid existing rights.

Summary: Clarification is needed for what activities are included under the term "solid minerals".

Response: Solid Minerals is not a Management Direction Heading included in the 2015 Approved Resource Management Plan. Phosphate MDs are included in the 2015 Plan Amendment under the heading Nonenergy Leasable Minerals. Phosphate has its own set of MD that was not changed in the proposed plan. See MD MR 15, 16, and 17 in the 2015 Approved Plan.

Summary: Clarification is needed for the applicability of RFDs and lek buffers to activities in GHMA excluded by MD SSS 35.

Response: The Proposed Amendment adds buffers back into GHMA as a result of public and Governor comments. See **Appendix B**.

1.2.7 Habitat Objectives

Summary: In the absence of enclosure data, the influence of grazing on ecological conditions is not well understood; uncertainties should be disclosed.

Response: BLM did not change habitat objectives in the proposed plan. New science was included for nest cover. Habitat objectives are based on grouse life cycle habitat needs reported in the scientific literature. They are desired conditions that are well understood, and based on current peer reviewed scientific literature.

Summary: The public submitted studies for consideration by the BLM that demonstrate support for maintaining 2015 habitat objectives and stubble height standards.

Response: The 2015 plan and The Draft EIS does not have stubble height requirements. the Desired Conditions described in table 2-2 are remains in place under both alternatives. Adequate nesting cover is still required and would be based on current science. The Proposed Plan includes clarification about how the Habitat Objectives and Desired Conditions can be modified based on new information.

Summary: Language in IM 2018-25 should be carried into the text of the Amendments to avoid the same confusion they clarified from the earlier plans.

Response: IMs help guide implementation of the plan are subject to change based on agency discretion. Including IM language in a LUP is not necessary because BLM is required to follow Law, regulation, and policy. IMs constitute policy guidance

Summary: The analysis of restoration is inadequate—failing to address prioritization, likelihood of success, unintended impacts, and ecological thresholds.

Response: Restoration prioritization, likelihood of success, unintended impacts, and ecological thresholds would be analyzed during implementation NEPA in another decision-making process.

Summary: Clarification is needed to make more explicit the difference between objectives and standards.

Response: Objectives provide the clear direction and intent of planning decisions. They are required in land planning as per the BLM planning handbook. Rangeland Health Standards are not planning decisions yet help guide the implementation of planning decisions. They are used to measure land health prior to authorizing implementation actions.

Summary: The plans need to address the limited number of Land Health Assessments (LHAs) that are completed—and the corresponding limits on available information.

Response: LHAs are conducted as part of rangeland monitoring and considered for adaptive management for livestock grazing.

1.2.8 Adaptive Management

Summary: Static allowable-use levels hinder adaptive management.

Response: There are no Static Allowable use levels in the 2015 decision or this plan amendment.

Summary: The sage-grouse population goal for adaptive management is too low to eliminate the risk to the species.

Response: Adaptive management triggers were analyzed in the 2015 plan and are not being considered in this focused plan amendment process. The BLM is not aware of new information that would require a change in adaptive management to support management flexibility or improved alignment with state plans.

Summary: Hard triggers should not be removed.

Response: Hard triggers are not being removed. Additionally, the plan does not establish a population goal, rather it based adaptive management decisions on a 2011 baseline developed with IDFG the agency responsible for managing Greater Sage-Grouse populations.

Summary: Monitoring and use of management thresholds should continue.

Response: Monitoring and use of adaptive management triggers would continue under all alternatives considered in this amendment process.

I.2.9 Mitigation

Summary: Mitigation provisions in the 2015 plans were relied on in the USFWS 2015 finding. Mitigation should follow consistent principles. Mitigation could benefit from different strategies in different states. Mitigation provides stronger, faster decisions on project authorizations

Response: The BLM's Proposed Plan balances the risk of uncertainty against the benefits of management flexibility when considering mitigation strategies. The BLM is committed to applying and enforcing the mitigation hierarchy of actions to avoid, minimize, and otherwise mitigate impacts to the extent that federal law allows. A principal component of Greater Sage-Grouse management is the implementation of mitigation actions to ameliorate the threats and impacts on Greater Sage-Grouse and its habitats. The Proposed Plan clarifies how voluntary compensatory mitigation should be considered in the management of Greater Sage-Grouse habitat and how BLM will work with each state management agency to implement its compensatory mitigation strategy.

Summary: Mandatory net-gain and compensatory mitigation is supported by some commenters, and objected to by others.

Response: BLM's Proposed Plan balances the risk of uncertainty against the benefits of management flexibility when considering mitigation strategies. Following extensive review of FLPMA, including existing regulations, orders, policies, and guidance, the BLM has concluded that FLPMA does not explicitly mandate or authorize the BLM to require public land users to implement compensatory mitigation as a condition of obtaining authorization for the use of the public lands (IM No. 2018-093, *Compensatory Mitigation*, July 24, 2018). However, the BLM is committed to applying and enforcing the mitigation hierarchy of actions to avoid, minimize, and otherwise mitigate impacts to the extent that federal law allows. A principal component of Greater Sage-Grouse management is the implementation of mitigation actions to ameliorate the threats and impacts on Greater Sage-Grouse and its habitats. The Proposed Plan clarifies how voluntary compensatory mitigation should be considered in the management of Greater Sage-Grouse habitat and how BLM will work with each state management agency to implement its compensatory mitigation strategy.

Summary: Compensatory mitigation provides economic opportunities for landowners.

Response: BLM's Proposed Plan balances the risk of uncertainty against the benefits of management flexibility when considering mitigation strategies. Following extensive review of FLPMA, including existing regulations, orders, policies, and guidance, the BLM has concluded that FLPMA does not explicitly mandate or authorize the BLM to require public land users to implement compensatory mitigation as a condition of obtaining authorization for the use of the public lands (IM No. 2018-093, *Compensatory Mitigation*, July 24, 2018). However, the BLM is committed to applying and enforcing the mitigation hierarchy of actions to avoid, minimize, and otherwise mitigate impacts to the extent that federal law allows. A principal component of Greater Sage-Grouse management is the implementation of mitigation actions to ameliorate the threats and impacts on Greater Sage-Grouse and its habitats. The Proposed Plan clarifies how voluntary compensatory mitigation should be considered in the management of Greater Sage-Grouse habitat and how BLM will work with each state management agency to implement its compensatory mitigation strategy.

Summary: Recent changes in mitigation policy and their applicability to sage-grouse warrant a SEIS.

Response: Public input on implementing mitigation, “including alternative approaches to requiring compensatory mitigation in BLM land use plans,” was explicitly requested as part of the public comment period on the 2018 Draft EIS (see page ES-8, Section ES.4.2, last sentence of second paragraph). The Proposed Plan clarifies how voluntary compensatory mitigation should be considered in the management of Greater Sage-Grouse habitat and how BLM will work with each state management agency to implement its compensatory mitigation strategy. Because this clarification simply aligns the Proposed Plan Amendment with BLM policy and with the scope of compensatory mitigation authority expressly provided by FLPMA, and because any analysis of compensatory mitigation relating to future projects would necessarily be fact-specific and evaluated in project-specific NEPA documents, there is limited value in attempting to do so at the level of land use planning.

Summary: If a net-gain standard is not in place, a no-net-loss standard should stay in place.

Response: Following extensive review of FLPMA, including existing regulations, orders, policies, and guidance, the BLM has concluded that FLPMA does not explicitly mandate or authorize the BLM to require public land users to implement compensatory mitigation to offset environmental effects beyond the proponents level of impact. The Proposed Plan seeks to clarify that the mitigation standard applies not at the project level, but rather as a planning-level goal and objective. The BLM is pursuing agreements with the States of Colorado, Idaho, Nevada, Oregon, Utah and Wyoming to clarify how BLM, project proponents, and state management agencies will collaborate to implement a State’s compensatory mitigation plan.

Summary: Mitigation needs to occur at more than a 1:1 mitigation-ratio to account for uncertainties.

Response: The BLM is pursuing agreements with the States of Colorado, Idaho, Nevada, Oregon, Utah and Wyoming to clarify how BLM, project proponents, and state management agencies will collaborate to implement a State’s compensatory mitigation plan. The BLM will defer to a state methodology for habitat quantification if such a tool exists and incorporate the state’s assessment into the appropriate NEPA documentation. The Proposed Plan Amendment clarifies that BLM will consider compensatory mitigation only as a component of compliance with a state mitigation plan, program, or authority, or when offered voluntarily by a project proponent. The Proposed Plan further clarifies the application of the mitigation standard as a planning-level goal and objective for sage-grouse habitat conservation. BLM commits to cooperating with the State to analyze applicant-proffered or state-imposed compensatory mitigation to offset residual impacts. BLM may then authorize such actions consistent with NEPA analysis and the governing RMP.

Summary: Mitigation policy and plans for the state need to follow consistent principles if used in lieu of federal policy.

Response: The BLM is pursuing agreements with the States of Colorado, Idaho, Nevada, Oregon, Utah and Wyoming to clarify how BLM, project proponents, and state management agencies will collaborate to implement a State’s compensatory mitigation plan. The BLM will defer to a state methodology for habitat quantification if such a tool exists and incorporate the state’s assessment into the appropriate NEPA documentation. The Proposed Plan Amendment clarifies that BLM will consider compensatory mitigation only as a component of compliance with a state mitigation plan, program, or authority, or when offered voluntarily by a project proponent. The Proposed Plan further clarifies the application of the mitigation standard as a planning-level goal and objective for sage-grouse habitat conservation. BLM

commits to cooperating with the State to analyze applicant-proffered or state-imposed compensatory mitigation to offset residual impacts. BLM may then authorize such actions consistent with NEPA analysis and the governing RMP.

Summary: BLM needs to clarify how it adopts and enforces state mitigation plans.

Response: The BLM is pursuing agreements with the States of Colorado, Idaho, Nevada, Oregon, Utah and Wyoming to clarify how BLM, project proponents, and state management agencies will collaborate to implement a State's compensatory mitigation plan. The BLM will defer to a state methodology for habitat quantification if such a tool exists and incorporate the state's assessment into the appropriate NEPA documentation. The Proposed Plan Amendment clarifies that BLM will consider compensatory mitigation only as a component of compliance with a state mitigation plan, program, or authority, or when offered voluntarily by a project proponent. The Proposed Plan further clarifies the application of the mitigation standard as a planning-level goal and objective for sage-grouse habitat conservation. BLM commits to cooperating with the State to analyze applicant-proffered or state-imposed compensatory mitigation to offset residual impacts. BLM may then authorize such actions consistent with NEPA analysis and the governing RMP.

Summary: Different commenters provide evidence and arguments in support of or against the legal validity of requirements for compensatory mitigation.

Response: The BLM's Proposed Plan balances the risk of uncertainty against the benefits of management flexibility when considering mitigation strategies. Following extensive review of FLPMA, including existing regulations, orders, policies, and guidance, the BLM has concluded that FLPMA does not explicitly mandate or authorize the BLM to require public land users to implement compensatory mitigation as a condition of obtaining authorization for the use of the public lands (IM No. 2018-093, *Compensatory Mitigation*, July 24, 2018). However, the BLM is committed to applying and enforcing the mitigation hierarchy of actions to avoid, minimize, and otherwise mitigate impacts to the extent that federal law allows. A principal component of Greater Sage-Grouse management is the implementation of mitigation actions to ameliorate the threats and impacts on Greater Sage-Grouse and its habitats. The Proposed Plan clarifies how voluntary compensatory mitigation should be considered in the management of Greater Sage-Grouse habitat and how BLM will work with each state management agency to implement its compensatory mitigation strategy.

Summary: The state mitigation plans are sufficient to protect the bird.

Response: The state's mitigation plan is one part of a broader all lands approach to managing Greater Sage-Grouse and sagebrush habitats. The BLM is pursuing agreements with the States of Colorado, Idaho, Nevada, Oregon, Utah and Wyoming to clarify how BLM, project proponents, and state management agencies will collaborate to implement a State's compensatory mitigation plan. The BLM will defer to a state methodology for habitat quantification if such a tool exists and incorporate the state's assessment into the appropriate NEPA documentation. The Proposed Plan Amendment clarifies that BLM will consider compensatory mitigation only as a component of compliance with a state mitigation plan, program, or authority, or when offered voluntarily by a project proponent. The Proposed Plan further clarifies the application of the mitigation standard as a planning-level goal and objective for sage-grouse habitat conservation. BLM commits to cooperating with the State to analyze

applicant-proffered or state-imposed compensatory mitigation to offset residual impacts. BLM may then authorize such actions consistent with NEPA analysis and the governing RMP.

Summary: There is not clear justification or science for how the BLM arrived at weaker mitigation standards, particularly for GHMA.

Response: The no net loss mitigation standard was developed by the Idaho Governor's SGTF in 2014 and was a component of the co-preferred BLM and State of Idaho Alternative. The Idaho Governor's Plan did not require mitigation in GHMA and in an effort to better align with the Governor's plan, the BLM incorporated a no net loss mitigation Standard and removal of the mitigation requirement in GHMA under the MAA. As a result of Draft EIS comments, BLM has changed the Management Alternative in the Proposed Plan to require a no net loss mitigation standard in GHMA.

Summary: There should be an analysis of the environmental impact of no mitigation.

Response: Additional analysis of the environmental impacts of no mitigation is unnecessary because such impacts were considered in 2015. BLM is using incorporation by reference to streamline our analysis consistent with Administrative priorities. Incorporation of the 2015 EIS by reference is allowable under BLM regulations and is appropriate in this circumstance because the purpose of this action builds upon the goals and objectives of the 2015 EIS. Further, the CEQ 40 Questions, Question 24c, states that, "Tiering is a procedure which allows an agency to avoid duplication of paperwork through the incorporation by reference of the general discussions and relevant specific discussions from an environmental impact statement of broader scope into one of lesser scope or vice versa." The BLM has summarized and referenced applicable aspects of the 2015 EIS throughout the 2018 EIS, but especially in Chapters 2 and 4.

Summary: Fire mitigation treatments should avoid priority habitats.

Response: Fire mitigation treatment direction is from the 2015 Plan (MD Fire 17-31). This planning effort did not change any fire mitigation treatments direction. A responsible official's decision to site a fuels project in priority is based on very site-specific information that is better considered and analyzed in another decision process, specifically an activity level NEPA analysis. A responsible official may have a need to site a treatment outside or inside priority habitat based on the objectives of the proposal as per the 2015 plan decision MD Fire 17.

1.2.10 Lek Buffers

Summary: The public submitted studies for consideration by the BLM in support of larger lek buffers than provided in the ARMPAs.

Response: Buffers were increased in IHMA and GHMA under the proposed Plan to address stakeholder comments.

Summary: The 2015 USFWS listing decision was based, in part, on lek buffers; removing them could jeopardize listing.

Response: Buffers are not being proposed to be removed.

Summary: Buffers should be adaptable, based on the most current science.

Response: The science surrounding lek buffer distances comes from the USGS's Conservation Buffer Distance Estimates for Greater Sage-Grouse. Other detailed information comes from the SGTF. A suite of lek buffer distances have been analyzed using the most current science. Although, within the Great Basin Region; needs, threats, and utilization of public lands varies State to State.

Summary: Site-specific conditions should be part of the decision about the applicability and size of lek buffers.

Response: As in the 2015 decision, buffer distances are adaptable based on new science and the existing situation (see **Appendix B**). If a permittee can demonstrate that there are circumstances that make the buffer moot there are provisions written into the appendix that would allow for applying a different distance.

Summary: The science supporting more limited buffers should be explicitly summarized.

Response: The science surrounding lek buffer distances comes from the USGS's Conservation Buffer Distance Estimates for Greater Sage-Grouse. Other detailed information comes from the SGTF. A suite of lek buffer distances have been analyzed using the most current science. Although, within the Great Basin Region; needs, threats, and utilization of public lands varies State to State.

Summary: 1-km buffers can render certain activities infeasible (trailing sheep).

Response: As in the 2015 decision, buffer distances are adaptable based on new science and the existing situation (see RDFs Appendix C of the Draft EIS). RDFs are also adaptable based on new science and the existing situation. If a permittee can demonstrate that there are circumstances that make the 1 km buffer moot there are provisions written into the appendix that would allow for applying a different distance.

Summary: The description and use of lek buffers is inconsistent among states.

Response: BLM has reviewed new information and science to support its reconsideration of how lek buffers are applied across the range of Greater Sage-Grouse. In some cases, local information and public comment has helped inform the appropriate analysis resulting in different proposed actions across BLM states.

1.2.11 Criteria

Summary: The scope of projects and habitats that are subject to review by a technical or policy team needs clarifying.

Response: See Appendix K Draft EIS pg 2-26. Also, MD SSS 29 describes what constitutes large anthropogenic projects (Also In the Glossary of the Final EIS) and MD SSS 30 clarifies that the Technical and Policy team approach applies to PHMA and IHMA only.

1.2.12 Issues Dismissed from Detailed Analysis

Summary: Impacts to livestock grazing and its removal should be analyzed in detail

Response: BLM is focused on aligning our management with the states. BLM's stated purpose and need is to achieve consistency with each State's management for greater sage-grouse. As discussed in detail in **Chapter I**, issues were dismissed from detailed analysis because it did not align with the State's management plan and not identified as a significant issue by the Governor's office. See **Chapter I** for more detail. Livestock grazing removal is not considered in this planning effort

Summary: Best available science supports designating all Priority Areas for Conservation (PACs) as PHMAs, warranting detailed analysis.

Response: BLM is focused on aligning our management with the states. BLM's stated purpose and need is to achieve consistency with each State's management for greater sage-grouse. As discussed in detail in **Chapter I**, issues were dismissed from detailed analysis because it did not align with the State's management plan and were not identified as a significant issue by the Governor's office. See **Chapter I** for more detail. Designating all PACs as PHMA is outside the scope of this decision because it was not an issue carried forward for detailed analysis

Summary: Grazing decisions concerning post-fire rest should be revisited and analyzed in detail.

Response: BLM is focused on aligning our management with the states. BLM's stated purpose and need is to achieve consistency with each State's management for greater sage-grouse. As discussed in detail in **Chapter I**, issues were dismissed from detailed analysis because it did not align with the State's management plan and were not identified as a significant issue by the Governor's office. See **Chapter I** for more detail. Changing Post fire rest procedures for grazing decisions is outside the scope of this decision because it was not an issue carried forward for detailed analysis.

Summary: There should be detailed analysis of renewable energy and large infrastructure projects in all sage-grouse habitats to better align with the Governor's plan.

Response: BLM is focused on aligning our management with the states. BLM's stated purpose and need is to achieve consistency with each State's management for greater sage-grouse. As discussed in detail in **Chapter I**, issues were dismissed from detailed analysis because it did not align with the State's management plan and were not identified as a significant issues by the Governor's office. See **Chapter I** for more detail. Large scale anthropogenic disturbances as outlined in MD SSS 29 will be subjected to review by the Technical and Policy Teams as described in MD SSS 44, MD SSS 30, and Appendix K of the Final EIS. For the purposes of this Draft RMP / Draft EIS, conducting a detailed analysis of renewable energy and large infrastructure within the planning area is outside the scope of the range of alternatives and this decision making process.

Summary: Predator control should be analyzed in detail.

Response: BLM is focused on aligning our management with the states. BLM's stated purpose and need is to achieve consistency with each State's management for greater sage-grouse. As discussed in detail in **Chapter I**, issues were dismissed from detailed analysis because it did not align with the State's management plan and were not identified as a significant issues by the Governor's office. See **Chapter I** for more detail. While predation is included in several of the planning issues as a concern related to development, actual predator control activities are outside the authority of the BLM and Forest Service

and, therefore, will not be considered further in the planning process. (Greater Sage-Grouse Final EIS 2015 pg. I-37).

Summary: Impacts of management changes on wildfire are not adequately analyzed.

Response: BLM is focused on aligning our management with the states. BLM's stated purpose and need is to achieve consistency with each State's management for greater sage-grouse. As discussed in detail in **Chapter I**, issues were dismissed from detailed analysis because it did not align with the State's management plan and were not identified as a significant issues by the Governor's office. See **Chapter I** for more detail. BLM has determined the analysis is adequate to support decision making given the purpose, need and new information

Summary: Impacts of solid mineral restrictions on phosphate availability are not adequately analyzed.

Response: BLM is focused on aligning our management with the states. BLM's stated purpose and need is to achieve consistency with each State's management for greater sage-grouse. As discussed in detail in **Chapter I**, issues were dismissed from detailed analysis because it did not align with the State's management plan and were not identified as a significant issues by the Governor's office. See **Chapter I** for more detail. BLM has determined the analysis is adequate to support decision making given the purpose, need and new information.

Summary: Impacts of management decisions on invasive species are inadequately addressed.

Response: BLM is focused on aligning our management with the states. BLM's stated purpose and need is to achieve consistency with each State's management for greater sage-grouse. As discussed in detail in **Chapter I**, issues were dismissed from detailed analysis because it did not align with the State's management plan and were not identified as a significant issues by the Governor's office. See **Chapter I** for more detail. BLM has determined the analysis is adequate to support decision making given the purpose, need and new information.

1.2.13 New Alternative

Summary: An alternative should be added that integrates management across all fifteen plans.

Response: This plan amendment will integrate all management across all amended LUPs in Idaho.

Summary: An alternative should be added that incentivizes grouse-friendly grazing practices.

Response: Properly managed grazing is compatible with sage-grouse management. An incentive for proper grazing includes the regular review and renewal of grazing privileges on public land. Additionally, BLM's current grazing regulations allow for flexibility in grazing management when allotment management is meeting land health standards and terms and conditions of the permit.

Summary: An alternative should be added that provides for more intensive restoration.

Response: Restoration is an activity level decision. This existing plan sets the stage for field offices to complete restoration projects. It does not authorize restoration projects.

Summary: A new No Action Alternative should be added that analyzes the effect management prescriptions of applicable plans pre-2015 RMPA.

Response: The BLM planning handbook clearly defines the No Action Alternative as the existing plan. It would be improper and unnecessary to add another “No Action” alternative to address issues and management actions already analyzed in 2015 plans.

1.2.14 Preferred Alternative

Summary: One commenter expressed concern about the preferred alternative, another commenter expressed support for the MAA.

Response: BLM appreciates the engagement and concern from these stakeholders and has determined their comments do not result in any change to the analysis or proposed plan.

1.2.15 Range of Alternatives

Summary: There should be a third alternative that provides more stringent protections than the no-action alternative.

Response: There are two action alternatives proposed in the Draft EIS. Additionally several alternatives were considered but not analyzed in detail. See the Alternatives Considered but Not Analyzed in Detail section 2.2 of the Draft EIS for more information. In addition, this EIS incorporates by reference all of those alternatives considered in 2015, including more restrictive alternatives.

Summary: The range of alternatives is insufficient.

Response: There are two action alternatives proposed in the Draft EIS. Additionally several alternatives were considered but not analyzed in detail. See the Alternatives Considered but Not Analyzed in Detail section 2.2 of the Draft EIS for more information. In addition, this EIS incorporates by reference all of those alternatives considered in 2015, including more restrictive alternatives.

Summary: There should be another alternative that is more protective than the MAA.

Response: There are two action alternatives proposed in the Draft EIS. Additionally several alternatives were considered but not analyzed in detail. See the Alternatives Considered but Not Analyzed in Detail section 2.2 of the Draft EIS for more information. In addition, this EIS incorporates by reference all of those alternatives considered in 2015, including more restrictive alternatives.

Summary: An alternative should reflect NSO prescriptions for all sage-grouse habitat.

Response: There are two action alternatives proposed in the Draft EIS. Additionally several alternatives were considered but not analyzed in detail. See the Alternatives Considered but Not Analyzed in Detail section 2.2 of the Draft EIS for more information. In addition, this EIS incorporates by reference all of those alternatives considered in 2015, including more restrictive alternatives.

Summary: An alternative should reflect the standards of the conservation checklist.

Response: There are two action alternatives proposed in the Draft EIS. Additionally several alternatives were considered but not analyzed in detail. See the Alternatives Considered but Not Analyzed in Detail section 2.2 of the Draft EIS for more information. In addition, this EIS incorporates by reference all of those alternatives considered in 2015, including more restrictive alternatives.

Summary: The no-action alternative does not represent proper consideration of a baseline condition.

Response: The planning handbook defines the no action alternative as existing management which is currently characterized by the ongoing implementation of the 2015 plans.

Summary: An alternative should provide for a bigger role of restoration.

Response: Restoration is an activity-level decision. This existing plan sets the stage for field offices to complete restoration projects. It does not authorize restoration projects.

1.2.16 Alternatives - Other

Summary: A prohibition on retention and infiltration ponds should be considered to mitigate impacts of West Nile virus.

Response: The 2015 and 2018 plans already include RDFs specifically designed to reduce the risk of West Nile Virus (appendix C Draft EIS).

Summary: An alternative should reflect the recommendations of the NTT report.

Response: The BLM considered the entire range of alternatives from the 2015 Final EIS. The no action and the management alignment alternative reflect the NTT report recommendations

Summary: Winter habitat should have more protections to adequately protect the species.

Response: The Draft EIS provides protective measures for all life stage habitat requirements of Greater Sage-Grouse. BLM did not identify new information that suggests reconsidering winter habitat management measures to improve alignment or management goals and objectives.

Summary: All PACs should be designated PHMA.

Response: Designating all PACs as PHMA is outside the scope of this decision because it was not an issue carried forward for detailed analysis because it did not meet the Purpose and Need. When HMAs were designated in 2015, some PACS were designated IHMA because of the three-tiered system in the Governor's alternative. This allows potential development to be moved out of priority habitat into non-habitat. The majority of PACS are PHMA.

Summary: An alternative should reflect the provisions of land use plans before the 2015 Amendments for livestock.

Response: The BLM acknowledges that properly managed livestock grazing is compatible with Greater Sage-Grouse management and has not identified any significant new information that would warrant reconsideration of the 2015 planning direction on managing livestock in sage-grouse habitat. The existing

alternatives are consistent with the purpose and need and support improved alignment with state management plans.

1.2.17 Assumptions and Methodology

Summary: Metrics should be identified by which conservation success can be measured.

Response: Measuring the success of the conservation efforts for Greater Sage-Grouse is of the utmost import to the BLM. BLM will use the objectives located throughout the 2015 ARMPA to measure our success, which is why those objectives were mostly not proposed for change in this amendment process.

Summary: A framework should be identified that ensures that all areas are receiving adequate staff time.

Response: Committing adequate resources and staff to achieve the conservation goals and objectives remains a top priority for the BLM. Exemplified by the fact that to date the BLM has treated 1,505,326 acres; 1,159,247 acres since 2015. Further, the BLM treats more acres every fiscal year, highlighting the BLM's commitment to Greater Sage-Grouse conservation. BLM is committed to the continued implementation of sage-grouse and sagebrush steppe management. Each Field Office is in charge of prioritizing staff time to accomplish their identified workload.

Summary: Monitoring should be prioritized based on adaptive management triggers, not just priority habitats.

Response: The BLM agrees on the importance of including triggers in our analysis. Therefore, consideration of adaptive management triggers in prioritization of workload has been added to the Final EIS.

Summary: Allowable use levels are too static and are not appropriate prescriptions for livestock.

Response: The BLM understands this concern, and while they are outside the scope of this analysis, there are no Static Allowable use levels in the 2015 decision or this plan amendment.

1.2.18 Greater Sage-Grouse

Summary: Grazing is described as a secondary threat, but it can have high intensity impacts locally.

Response: The BLM recognizes that improper grazing can be a threat to Greater Sage-Grouse, and analyzed the threats appropriately. Further, the BLM provides management actions for grazing in Greater Sage-Grouse habitat.

Summary: Impacts of West Nile are not adequately analyzed.

Response: The BLM takes the potential impacts of West Nile seriously, and have RDFs specifically designed to reduce the risk of West Nile Virus (Appendix C Draft EIS). Analyzing impacts of West Nile are outside the scope and do not meet the purpose and need of the plan amendment.

Summary: Geophysical exploration activities are not adequately analyzed.

Response: Analyzing geophysical exploration activities would occur at the activity planning level and would be required to comply with the LUP decisions.

Summary: The impacts of roads and road use are not adequately analyzed.

Response: BLM has determined that the analysis provided in the 2015 Final EIS and 2018 Draft EIS are sufficient to support decision making.

Summary: The effectiveness of perch inhibitors is not adequately analyzed.

Response: The Concerns summarized here are largely outside the scope of this decision-making process. However, perch inhibitors, winter habitat prescriptions, livestock management, and vegetation standards are these types of impacts that were analyzed in the 2015 Final EIS. The Changes made to these topic areas by the 2018 Draft EIS are minimal or non-existent and the impacts would be as described in the 2015 Final EIS and 2018 Draft EIS.

Summary: Impacts of management prescriptions for winter habitat on sage-grouse are not adequately analyzed.

Response: BLM has determined that the analysis provided in the 2015 Final EIS and 2018 Draft EIS are sufficient to support decision making.

Summary: The impact of livestock grazing to sage-grouse does not merit special management prescriptions to protect the species.

Response: The BLM recognizes that improper grazing can be a threat to Greater Sage-Grouse, and analyzed the threats appropriately. Further, the BLM provides management actions for grazing in Greater Sage-Grouse habitat.

Summary: Livestock management decisions should be consistent across planning areas.

Response: The BLM has endeavored to maximize consistency in management across Greater Sage-Grouse habitat where local conditions allow.

Summary: The impact of vegetation standards on fire risk is not adequately analyzed.

Response: BLM has determined that the analysis provided in the 2015 Final EIS and 2018 Draft EIS are sufficient to support decision making.

1.2.19 Livestock Grazing

Summary: Livestock grazing is beneficial to Greater Sage-Grouse because they reduce fuel-loads.

Response: The BLM recognizes that properly managed livestock grazing is compatible with Greater Sage-Grouse management.

Summary: The scope of decisions addressed regarding livestock is too narrow; more should be revisited.

Response: The scope of the alternatives was focused using the purpose and need and the issues identified by the Governor.

1.2.20 Fluid Minerals

Summary: GHMA should be included as a trigger for mitigation consultation with BLM for developing fluid minerals on existing leases.

Response: The BLM recognizes the importance of GHMA for the populations in Idaho, and the purpose to align with the State plan for managing Greater Sage-Grouse; therefore, a no net loss standard was added to GHMA in the Proposed Plan Amendment.

1.2.21 Solid Minerals

Summary: Impacts to phosphate ore availability are inadequately analyzed.

Response: Decisions relating to the availability of Phosphate ore were not considered in the amendment process. Therefore, an analysis of the impacts of phosphate availability is outside the scope of this analysis.

Summary: The impacts of RDFs, buffers, and disturbance and density caps on solid minerals are inadequately analyzed.

Response: The impacts of changes to RDFs, Buffers, and density cap are analyzed as appropriate in Chapter 4 of the Draft EIS. Where impacts are not substantially different from those disclosed in the 2015 Final EIS, they impact analysis from 2015 has been incorporated by reference.

Summary: Foreseeable future phosphorus mining and prospecting should be considered an existing right, and provided an allowance.

Response: Managing for multiple uses is important to the BLM; existing leases provide a right to reasonable development of the lease. However, the possibility of future leasing does not convey a right.

Summary: A new lek adjacent to mining areas suggest that impacts are not as severe as presented.

Response: A newly discovered theoretical lek adjacent to a mine area does not indicate that populations are increasing. IDFG determines changes to grouse populations and informs BLM as per the 2015 Decision. However, management direction does not apply outside of HMAs.

1.2.22 Lands and Realty

Summary: The impacts of restrictions on land use on maintenance activities for energy infrastructure has impacts to human safety and energy supply that are not adequately analyzed.

Response: Changes to restrictions on maintenance actions were not considered in this amendment because it does not meet the purpose and need for the plan amendment and therefore are outside of the scope of this analysis. The BLM did not identify new information that suggests reconsidering the impact of such restrictions to support alignment or management flexibility.

Summary: BLM should use the NV ARMPA in lieu of a different ID ARMA to make management more consistent.

Response: BLM is focused on aligning our management with the states. BLM's goal is to achieve consistency with each State's management for Greater Sage-Grouse. This alternative does not align with the state plan and therefore does not meet the purpose and need.

Summary: Travel management restrictions should not apply to livestock management activities, consistent with the Governor's plan.

Response: The BLM did not identify new information that suggests reconsidering travel management decisions to support alignment or management flexibility.

Summary: Adaptive management triggers should drive priority for LHAs.

Response: Adaptive Management Triggers are a consideration when prioritizing LHAs.

1.2.23 Wild Horses and Burros

Summary: WHB should be controlled to manage rangeland health.

Response: The Management of WHBs is outside the scope of this amendment. This process only analyzes the impacts of the changes proposed for the 2015 ARMPA.

1.2.24 Cumulative Impacts

Summary: The CEA from 2015 is deficient because there is new information.

Response: The CEA has been updated in the Final EIS.

Summary: Several specific projects were submitted for consideration to be included in the CEA by the BLM.

Response: Projects have been reviewed and included where appropriate.

Summary: The CEA needs to include more extensive and clearer summary if it is going to incorporate by reference 2015 material into the document.

Response: The CEA has been updated in the Final EIS.

Summary: The cumulative impacts of the new department mitigation policy should be analyzed.

Response: The CEA has been updated in the Final EIS as appropriate.

1.3 RANGEWIDE COMMENTS

1.3.1 Adaptive Management

Adaptive management provisions such as "hard" and "soft" triggers must be maintained, along with provisions for public notice and comment when they are triggered, to show that monitoring of effectiveness is ongoing and management is adjusted as needed.

In sum, designated PHMAs should be expanded to all lands designated as PACs by the US Fish and Wildlife Service in 2013 (COT 2013), and include expansions of Core Areas adopted by the State of Wyoming in 2015. In turn, SFA status and management parameters should be expanded to all lands designated as PHMA if the BLM truly wants to protect and conserve sage-grouse throughout its range and the Plans are being used to defer ESA listing.

1.3.2 Alternatives - Other

In sum, designated PHMAs should be expanded to all lands designated as PACs by the US Fish and Wildlife Service in 2013 (COT 2013), and include expansions of Core Areas adopted by the State of Wyoming in 2015. In turn, SFA status and management parameters should be expanded to all lands designated as PHMA if the BLM truly wants to protect and conserve sage-grouse throughout its range and the Plans are being used to defer ESA listing.

1.3.3 Assumptions and Methodology

The analytical assumptions in the DEISs are neither reasonable nor supportable. At the beginning of Chapter 4, each DEIS lays out a series of analytical assumptions. The purpose of these assumptions is to set guidelines and provide reasonably foreseeable projected levels of development that would occur in the planning area during the planning period. As shown below, however, many of these assumptions are neither reasonable nor supportable when looked at objectively, and considering the most recent science.

- Assumption One: Sufficient funding and personnel would be available for implementing the final decision.
- Table ES-1 in each Executive Summary of the DEISs shows a significant decline in all planned habitat restoration and protection activities for FY 18, including conifer removal and invasive species removal. However, invasive species removal is already falling far behind the pace needed to adequately restore sagebrush habitat, as shown in a recent WAFWA report (WAFWA Gap Analysis) finding that most invasive weed management programs are addressing less than 10% of the average infested acres, while the annual rate of spread of invasive plants, can range from 15-35%. That document states, "[This] [I]ack of effort is due almost entirely to lack of capacity, not expertise."¹⁴
- In FY 19, The Administration budget request for funding sage-grouse would impose further cuts by consolidating the sage-grouse program with other programs and reducing the total amount sought.¹⁵
- Interior Secretary Zinke has told lawmakers that he wants to reduce the Department workforce by 4,000 full-time jobs.¹⁶ (Greenwire 8/15/17)
- Assumption Two: Implementation-level actions necessary to execute the LUP-level decisions in this RMPA/EIS would be subject to further environmental review, including that under NEPA.
- Instruction Memorandum (IM) 2018-034, recent guidance issued by BLM governing oil and gas leasing, emphasizes using Determinations of NEPA Adequacy instead of NEPA analysis.
- IM 2018-061 instructs BLM staff members to ensure they are using several tools to make the NEPA process more efficient, including categorical exclusions for certain types of oil and gas development.
- Pending legislation, H.R. 6106, introduced by Representative Pearce (R-NM), would require use of categorical exclusions from NEPA for many oil and gas drilling activities.
- Pending legislation, H.R. 6088, introduced by Representative Curtis (R-UT), would allow oil and gas companies to obtain authorization to drill in some circumstances without NEPA analysis.
- Pending legislation, S.1417, introduced by Sen. Hatch (R-UT) and Sen. Heinrich (D-NM), would create categorical exclusions for a wide variety of sage-grouse management activities, such as the use of herbicides and pesticides, mechanical piling and burning, chaining, and broadcast burning.
- There has been a large increase in the use of categorical exclusions from NEPA analysis for oil and gas development in Wyoming, particularly in the Continental Divide-Creston Project Area, where categorical exclusions allowed by section 390 of the Energy Policy Act of 2005 (42 U.S.C. § 15942) are being employed.
- Assumption Three: Direct and indirect impacts of

implementing the RMPA/EIS would primarily occur on public lands administered by the BLM in the planning area. ? The DEISs loosen restrictions on oil and gas development on BLM lands in a variety of ways, such as decreasing buffers, removing or modifying disturbance and density caps, opening new areas to development, and eliminating general habitat in Utah. While BLM assumes that impacts would primarily occur on public land, recent scientific research indicates the likelihood of impacts to adjoining private or public lands owned by agencies other than BLM. This study, by Spence et al., found that the probability of lek collapse was positively related to the density of oil and gas wells located outside of core areas at two distances - within 1.6 km and within 4.8 km of the core area boundary.¹⁷ ? These proposed changes would impact future collaborative processes, as expressed by Wyoming Governor Matt Mead: "If we go down a different road now with the sage grouse, what it says is, when you try to address other endangered species problems in this country, don't have a collaborative process, don't work together, because it's going to be changed," Mead said. "To me, that would be a very unfortunate circumstance."¹⁸ ? Assumption Four: The BLM would carry out appropriate maintenance for the functional capability of all developments. ? As noted in Assumption One, BLM is already not carrying out appropriate maintenance, and potential budget cuts foretell even greater deficiencies in the future. Moreover, the mere fact that treatment has occurred does not necessarily indicate that the habitat has successfully been restored, rendering Table ES-I essentially meaningless. As the 2018 USGS Synthesis of recent scientific research states, "Restoring sagebrush communities can be difficult, costly and slow."¹⁹ ? In *Desert Survivors v. U.S. Dept. of the Interior*, Case No. 16-cv-01165-JCS (N.D. CA May 15, 2018)²⁰, in ruling that the FWS erred in failing to list the bi-state GRSG population under ESA, the court held, "the service must offer some rational basis for its conclusions that future conservation efforts will be effective enough to improve the status of the bi-state (grouse) and therefore warrant withdrawal of the proposed listing." *Id.* at 64. Assumptions must have a basis in fact. ? Assumption Five: The discussion of impacts is based on best available data. ? In Chapter 4, the DEISs acknowledge that much important data is not available, including comprehensive planning area-wide inventory of wildlife and special status species occurrence and condition and GIS data used for disturbance calculation on private lands. Indeed, the DEISs acknowledge that some impacts of the proposed changes could not be quantified.²¹ ? CEQ regulations further require, where data is unavailable a summary of existing scientific evidence relevant to evaluating reasonably foreseeable significant adverse impacts and the agency's evaluation of such impacts.²² The DEISs fail to provide either of these types of information. ? In addition to failing to include the results of the WAFWA Gap Analysis, the DEISs also do not consider a study published in PLoS ONE by Kitzberger et al. (PLoS ONE study) finding that many parts of the West can expect to see more than five times the area burned during the next 20 years than fires covered in the past 20.²³ The DEISs state that their assumptions apply to the analysis of both alternatives presented by BLM. It is not appropriate, however, to rely on assumptions, as BLM has done here, that are not based either in fact or sound science.

III. THE ASSUMPTIONS, DATA, AND PLANNING CRITERIA BLM RELIES ON IN THE DRAFT EISs ARE FLAWED. There are significant problems in the DEISs relating to the assumptions, data, and planning criteria BLM uses in support of the proposed amendments to the 2015 land use plans. These flaws lead to a series of inadequacies in the DEISs themselves, including both faulty conclusions and a high degree of regulatory uncertainty as to the meaning of the proposed amendments, discussed in detail below. A. The analytical assumptions in the DEISs are neither reasonable nor supportable At the beginning of Chapter 4, each DEIS lays out a series of analytical assumptions. The purpose of these assumptions is to set guidelines and provide reasonably foreseeable projected levels of development that would occur in the planning area during the planning period. As shown below, however, many of these

assumptions are neither reasonable nor supportable when looked at objectively, and considering the most recent science.

I.3.4 Cumulative Impacts

F. BLM's cumulative impacts analysis is insufficient and invalid. The BLM is required to consider the cumulative environmental impacts to sage-grouse and sage-grouse habitat in the EISs it has prepared. Cumulative environmental impacts are defined as: The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions. 40 C.F.R. § 1508.7. "Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." Id. Cumulative impacts must be considered in the scope of an EIS. Id. § 1508.2(c). Despite the requirement to consider cumulative environmental impacts in the sage-grouse land use plan amendment EISs, the BLM has failed to do this adequately. For one, the BLM claims that the cumulative effects analysis from the 2015 sage-grouse land use plan amendments meets the cumulative effects analysis requirement that is needed now. The inappropriateness and legal invalidity of this claim is discussed elsewhere in these comments. As noted above, tiering is only appropriate when a subsequent narrower environmental analysis relies on an earlier broader environmental analysis. See 40 C.F.R. § 1508.28 (a) (stating that tiering is appropriate when a program, plan, or policy environmental impact statement is used to support a new analysis of "lessor scope" or which is site-specific). But we do not have that here; the scope of the current analysis is as broad as the 2015 analysis. There is no "step down" present here, therefore the cumulative impacts analysis from the 2015 plans cannot "incorporate[] by reference the analysis in the 2014 and 2015 Final EISs and the 2016 Draft Sagebrush Focal Area Withdrawal EIS." Wyoming DEIS at 4-20. In addition, BLM cannot simply incorporate the previous analysis by reference without justifying how it is appropriate and summarizing how it applies, neither of which has been done in the Draft EISs. See, 43 C.F.R. § 46.135(a). BLM also must ensure any incorporation by reference does not impede review by the public, which it surely does here. See 40 C.F.R. § 1502.21. Moreover, the purpose and need for the 2018 EISs differs from that of the 2015 EISs, which underscores why neither tiering nor incorporation by reference is appropriate.

Secondly, in each of the six 2018 EISs the BLM lists a number of projects that it claims reflect the cumulative effects impacts that are applicable here. See, e.g., Table 4-3 in the Wyoming Draft EIS (DEIS). But this list of projects fails to incorporate many relevant projects that should be considered in the cumulative effects analysis. In Wyoming, for example, neither the Normally Pressured Lance or Converse County oil and gas projects are listed. See Wyoming DEIS at Table 4-3, page 4-35. These are two mammoth projects, that will involve drilling thousands of oil and gas wells which will have significant impacts on sage-grouse and sage-grouse habitats.¹¹ Neither of these projects were considered in the 2015 EISs. In Utah the Greater Chapita Wells Natural Gas Infill Project is not considered in the Utah sage-grouse plan amendment EIS. Utah DEIS at Table 4-4, pages 4-41 to 42. This project could involve the drilling of 2808 natural gas wells in Uintah County, which is prime sage-grouse habitat. See <https://eplanning.blm.gov/epl-frontoffice/eplanning/planAndProjectSite.do?methodName=renderDefaultPlanOrProjectSite&projectId=3736> 2. There are other projects missing from the Range Wide Impacts from Past, Present, and Reasonably Foreseeable Future Actions table in the other states. In addition, while in Wyoming (and the other states), past and upcoming oil and gas lease sales are mentioned, see Wyoming DEIS at Table 4-3, page 4-35, the list is incomplete. The June lease sale (198,588 acres) is mentioned but neither the upcoming September (366,151 acres) or December (698,589 acres) lease sales are discussed.¹² The same is true in other states. For example, in Utah, the

Utah DEIS says 646 acres of oil and gas leases will be offered in Habitat Management Areas (HMA) in June, but it fails to mention the 158,944 acres (with 45,227 acres that had been previously offered) that will be offered for lease in September.¹³ The same is true in other states.

The BLM should review the list of projects shown in Tables 4-3 or 4-4 (depending on the state) causing cumulative impacts and ensure they are as comprehensive as is required to include "the incremental impact[s] . . . when added to other past, present, and reasonably foreseeable future actions." We note again the projects we have mentioned were not considered in the 2015 sage-grouse plan amendment EISs. These are "collectively significant actions taking place over a period of time" that must be considered in the cumulative impacts analysis, but which have not been. In addition, BLM should evaluate the cumulative effects of these projects across the planning areas of the 2015 Sage-grouse Plans. Under Council on Environmental Quality (CEQ) guidance, BLM must consider the current aggregate effects of past actions in a cumulative impacts analysis. CEQ, Guidance on the Consideration of Past Actions in Cumulative Effects Analysis (available at https://ceq.doe.gov/docs/ceq-regulations-andguidance/regs/Guidance_on_CE.pdf). This means the BLM must consider what the impacts of implementing the 2015 plans has been on cumulative impacts. BLM cannot just incorporate the 2015 plans by reference as its cumulative effects analysis, rather it must consider the "identifiable present effects of past actions," which the 2015 plans clearly are. Under the 2015 plans BLM has taken hundreds of actions, and in total those actions have had cumulative environmental impacts. An analysis of those cumulative impacts is missing from the current EISs, which is not permissible. "A cumulative impact analysis "must be more than perfunctory; it must provide 'a useful analysis of the cumulative impacts of past, present, and future projects.'" N. Plains Res. Council, Inc. v. Surface Transp. Bd., 668 F.3d 1067, 1076 (9th Cir. 2011) (quoting Kern v. U.S. Bureau of Land Mgmt., 284 F.3d 1062, 1075 (9th Cir. 2002) (additional citation omitted). "To be useful to decision makers and the public, the cumulative impact analysis must include "some quantified or detailed information; . . . general statements about possible effects and some risk do not constitute a hard look absent a justification regarding why more definitive information could not be provided.'" 668 F.3d at 1076 (quoting Ocean Advocates v. U.S. Army Corps of Eng'rs, 402 F.3d 846, 868 (9th Cir. 2004) (additional citation omitted). Here the BLM has offered nothing more than a perfunctory cumulative impacts analysis. There is no useful analysis of past projects; the dozens if not hundreds of approved projects implementing the 2015 sage-grouse plans. There is no quantifiable or detailed information about those projects, and there are not even any general statements about the cumulative impacts of those projects, many of which have undergone a NEPA analysis. Based on the above, it is evident the cumulative impacts analyses in the 2018 Draft EISs is invalid and must be expanded to fully address the cumulative impacts from the amendments.

1.3.5 Data and Science

A 2016 Wyoming study by Smith et al.³³ cited in both the USGS Annotated Bibliography and the ZUSGS Synthesis found that sage-grouse frequently used winter habitats outside of core areas. The Annotated Bibliography summarizes the implications of this study: Current seasonal use restrictions in winter concentration areas (December 1 to March 15) are shorter than the GRSG winter habitat use period identified in the study. A substantial proportion of winter use areas were located outside of identified core areas in one of the two study areas, suggesting reconsideration of the ability of Wyoming's Core Area policy to provide for long-term conservation of GRSG. While the Wyoming DEIS refers to potential changes to Habitat Management Area Designations (See, e.g., WY DEIS at 4-14-4-15), neither this study nor the need to expand winter habitat is mentioned. ? A second Wyoming study by Spence et al.³⁵ found the probability of lek collapse was positively related to the density of oil and gas wells located

outside core areas at two distances - within 1.6 km and within 4.8 km of the core area boundary. The USGS Annotated Bibliography states: The proportion of the male population within core areas and the observed decreased probability of lek collapse within core areas suggest that the core area policy is providing broad protection for GRSG in Wyoming. However, limitations on development near core areas may be needed to more effectively protect GRSG populations within core areas.³⁶ The Wyoming DEIS again makes no mention of this study, and in fact proposes reducing noise restrictions outside priority habitat (WY DEIS at 2-12-2-13), while other DEISs in other states, such as Utah and Idaho, eliminate a variety of restrictions outside but adjacent to priority habitat (see e.g., UT DEIS at 2-6; ID DEIS at 2-10).

A second Wyoming study by Spence et al.³⁵ found the probability of lek collapse was positively related to the density of oil and gas wells located outside core areas at two distances - within 1.6 km and within 4.8 km of the core area boundary. The USGS Annotated Bibliography states: The proportion of the male population within core areas and the observed decreased probability of lek collapse within core areas suggest that the core area policy is providing broad protection for GRSG in Wyoming. However, limitations on development near core areas may be needed to more effectively protect GRSG populations within core areas.³⁶ The Wyoming DEIS again makes no mention of this study, and in fact proposes reducing noise restrictions outside priority habitat (WY DEIS at 2-12-2-13), while other DEISs in other states, such as Utah and Idaho, eliminate a variety of restrictions outside but adjacent to priority habitat (see e.g., UT DEIS at 2-6; ID DEIS at 2-10). BLM must accurately characterize the findings in the Synthesis, elaborate upon the status of data considered and explain how it is addressing missing data. The agency cannot simply gloss over these requirements with rote or unsupported conclusions that it used in support of its Preferred Alternative.

We appreciate the idea that broad, science-based objectives have a place in determining whether greater sage-grouse habitat is contributing to stable populations. However, no single objective can cover the wide range of variability that occurs across a landscape as vast as the sagebrush sea. The Habitat Objectives Tables (Table 2-2) have been misinterpreted as standards that must be met, likely at the expense of the widest and most adaptable use in the West-livestock grazing. It does not make sense that these objectives be reflected in livestock grazing permittee/lessee terms and conditions if they do not fit the ecosystem in which they are being applied. Because of this, we appreciate those amendments that propose to make clear that habitat objectives must account for local conditions and site variability. This includes the removal of the seven-inch perennial grass and forb height habitat objective. We understand why grass and forb height objectives need to be considered for the health of the bird, but we believe these objectives should vary across the range. We request these changes be made to the habitat objectives tables for each greater sage-grouse RMP amendment.

By ignoring the WAFWA Gap Analysis and Plos ONE study, the DEISs fail to recognize the warning that occurs later in the USGS Synthesis, which states: [T]here continues to be emerging science quantifying effects and measuring the efficacy of conservation recommendations. Review of this new information as it becomes available, and incorporating changes, if appropriate, are essential to implementing valid conservation recommendations.³²

In addition to the problems with Table ES-I noted above in the first section, the figures used in the Table and on page 3-I are of limited utility at best because they are not broken down either state by state or by sage-grouse management zone. Range-wide data can mask significant decreases in habitat or

population in a more localized area. In addition, no citation is provided for either data set so that the numbers provided can be examined and verified. ? The PLoS ONE study found that median increases in AAB (Annual Area Burned) greater than 700% are predicted for ID, MT, and NV, and strong upper quartile increases are predicted for OR, ID, MT, and WY. In many areas the actual burning on the ground has exceeded the models. This is a huge increase from the conclusion in the 2015 FWS sage-grouse listing decision that that wildfire would continue to affect the Great Basin at the current rate of about 85% percent per year.²⁹

In discussing the findings of the Synthesis on impacts of activities such as oil and gas development to sage-grouse habitat, the DEIS states: The science developed since 2015 corroborates prior knowledge about the impact of discrete human activities on Greater Sage-Grouse. New science suggests that strategies to limit surface disturbance may be successful at limiting range-wide population declines; however, it is not expected to reverse the declines, particularly in areas of active oil and gas operations ([Synthesis], p.2). This information may have relevance when considering the impact of management actions designed to limit discrete disturbances.³¹ The studies referenced in this passage appears to be set out on page 14 and 15 of the USGS Synthesis. We were not able to locate a single instance in any of the DEISs, however, where any of these papers were cited in a discussion of the Impacts of the BLM Preferred Alternative in the DEISs.

The DEISs ignore studies referenced in the USGS Annotated Bibliography and USGS Synthesis that either support additional protections for sage-grouse habitat or provide evidence against the amendments BLM proposes.

The PLoS ONE study found that median increases in AAB (Annual Area Burned) greater than 700% are predicted for ID, MT, and NV, and strong upper quartile increases are predicted for OR, ID, MT, and WY. In many areas the actual burning on the ground has exceeded the models. This is a huge increase from the conclusion in the 2015 FWS sage-grouse listing decision that that wildfire would continue to affect the Great Basin at the current rate of about 85% percent per year.²⁹

The WAFWA Gap Analysis shows that invasive plant infestations in the West, particularly in the range of the sage-grouse, have reached enormous levels with estimates of invasive annual grass and perennial forb infestations at more than 100 million acres of public and private lands. Again, this is far more than contemplated in the FWS sage-grouse listing decision.³⁰

A limit of 3% human surface disturbance per square-mile section is the minimum necessary standard for preventing habitat abandonment by sage grouse. Knick et al. (2013) found that 99% of active leks across the western half of the sage grouse's range were surrounded by land with 3% or less human development. Decker et al. (2017) found a similar result in Colorado, with a linear decrease in sage grouse lek populations once surface disturbance increased above the 2.5% threshold. Preliminary results from Kirol et al. (in prep) indicate that the vast majority of sage-grouse were found in habitats with <1% surface disturbance. Disturbance density can also affect survival, Kirol et al. (2015a) found that brood survival for sage-grouse began to decline significantly once disturbance density hit the 4% threshold. The vast majority were surrounded by much less disturbance. Copeland et al. (2013) found that if all of the State of Wyoming sage grouse policy provisions (which include a 5% disturbance cap calculated using a Disturbance Density Calculation Tool) were implemented fully and to the letter, that a 9 to 15% decline in greater sage grouse populations would still occur statewide, including a 6 to 9% decline within designated Core Areas (where the 5% disturbance cap would be applied). There is no scientific evidence

at all indicating that sage grouse can tolerate a greater percentage of surface disturbance. In particular, the 5% cap on disturbance proposed for the Wyoming RMP amendment for Core Areas and Connectivity Areas been shown to be effective by no scientific study, ever.

The data BLM chose to rely upon is insufficient. The scientific grounding for the BLM plans, including the level of certainty in how they are applied, was a key part of the foundation for the FWS decision that listing the sage-grouse under ESA was not warranted.²⁴ Any changes proposed to the plans now by the BLM should meet a similarly high standard, complying with both the CEQ regulations and considering all the most recent peer-reviewed research. Unfortunately, here, much of the relevant data is not available, and the data BLM has ignored includes important studies that would argue against many of the changes BLM proposes in the DEISs. Table ES-1 of the DEISs purports to use the amount of on-the-ground treatment activity for the past three fiscal years, as well as planned activities for the current fiscal year, to show progress in sagebrush habitat restoration. In addition, every DEIS also includes the following language on page 3-1: While the BLM acknowledges that there have been changes to the landscape since 2015, due to the scale of this analysis... data collected consistently across the range indicate that the extent of these changes to the landscape are relatively minimal. For example, BLM monitoring data collected and analyzed annually at the biologically significant unit (BSU) scale... indicates that there has been a minimal overall increase in estimated disturbance (less than 1 percent range-wide from 2015 through 2017) within PHMA. Moreover, there has been an overall decrease in sagebrush availability (less than 1 percent range-wide from 2012 through 2015) in PHMAs within BSUs. Finally, Chapter 3 of every DEIS references both the USGS annotated bibliography of scientific research on greater sage-grouse published since January 2015²⁵ (USGS Annotated Bibliography) and the USGS report that synthesizes and outlines potential management implications of the new science.²⁶ (USGS Synthesis). These data are intended to show that changes to the landscape since the 2015 plans are "relatively minimal."²⁷ In addition, the DEISs state: Based on available information, including [the Annotated Bibliography and Synthesis], the BLM has concluded that the existing condition is not substantially different from that of 2015; therefore, the data and information presented in the 2014 and 2015 Final EISs are incorporated into this RMPA/EIS.²⁸ Both conclusions are faulty. Changes to the landscape since 2015 are not relatively minimal, and the sagebrush landscape of 2018 is not substantially similar to that of 2015, as shown below.

BLM must accurately characterize the findings in the Synthesis, elaborate upon the status of data considered and explain how it is addressing missing data. The agency cannot simply gloss over these requirements with rote or unsupported conclusions that it used in support of its Preferred Alternative.

Finally, Chapter 3 of every DEIS references both the USGS annotated bibliography of scientific research on greater sage-grouse published since January 2015²⁵ (USGS Annotated Bibliography) and the USGS report that synthesizes and outlines potential management implications of the new science.²⁶ (USGS Synthesis). These data are intended to show that changes to the landscape since the 2015 plans are "relatively minimal."²⁷ In addition, the DEISs state: Based on available information, including [the Annotated Bibliography and Synthesis], the BLM has concluded that the existing condition is not substantially different from that of 2015; therefore, the data and information presented in the 2014 and 2015 Final EISs are incorporated into this RMPA/EIS.²⁸ Both conclusions are faulty. Changes to the landscape since 2015 are not relatively minimal, and the sagebrush landscape of 2018 is not substantially similar to that of 2015, as shown below.

Holloran (2005) found that several types of oil and gas infrastructure sited within 1.9 miles of the lek site had a negative impact on populations of breeding males on the lek; these infrastructure features include both wellpads during the post-drilling, production phase and gravel trunk roads leading to five or more wellpads. It is important to note that a single wellpad or road can cause significant impacts, and these impacts occur even in cases where roads are not visible from the lek site due to intervening terrain (Holloran 2005). Drilling activities can have significant impacts when wells are sited within 3 miles of leks (id.). Manier et al. (2014) reviewed all available science and found that appropriate lek buffers (the "interpreted range") ranged from 3.1 to 5 miles. Aldridge and Boyce (2007) suggested that even larger buffers (10 km) are warranted. In addition to significant negative impacts on breeding populations at the lek site, industrial incursions can also have a significant negative impact on nesting females. The lek is the hub of nesting activity, with most females nesting within 4 to 6 miles of a lek site. Holloran et al. (2007) found that yearling sage grouse avoided otherwise suitable nesting habitat within 930m (almost 0.6 mile) of oil and gas-related infrastructure. This means that individual wellsites, and their access roads and other related facilities, will be surrounded by a 0.6-mile band of habitat that has substantially lost its habitat capability for use by nesting grouse. The National Technical Team (2011: 20) observed, "it should be noted that protecting even 75 to >80% of nesting hens would require a 4-mile radius buffer (Table 1). Even a 4-mile NSO buffer would not be large enough to offset all the impacts reviewed above." Importantly, a 0.6-mile lek buffer covers by area only 2% of the nesting habitat encompassed by a 4-mile lek buffer, which takes in approximately 80% of nesting grouse according to the best available science.

Priority Habitats were largely designated on the basis of buffers around active lek sites, which encompass the breeding and nesting habitats used by grouse during spring and summer. But protecting wintering habitats is equally important to assuring the continued existence and ultimate recovery of the species, and these wintering habitats are frequently located outside the protective boundaries of designated Priority Habitats (see, e.g., Smith et al. 2016, Dinkins et al. 2017). For Wyoming, Dinkins et al. (2017: 10) state, "Although breeding habitat—defined as the area within 8.5 km [5.3 miles] of a lek—was a good surrogate for delineating all seasonal habitats for sage-grouse, Core Areas provided habitat protections disproportionately for summer habitats compared to winter." These researchers went on to state, "our mapping results demonstrated that net reproduction from all birds associated with a winter habitat magnifies the importance of maintaining high-quality winter habitat. In other words, birds breeding outside of winter habitats were reliant on winter habitats for winter survival; thus, degraded winter habitat could equate to loss of reproduction from a much larger spatial footprint."

Recent empirical study confirms the established finding that sage-grouse lek attendance is negatively related to oil and gas density, regardless of sagebrush cover and participation.³ Green et al. (2017) examined greater sage-grouse lek attendance, oil and gas well, and habitat and precipitation data from Wyoming over the period 1984 to 2008, and, consistent with numerous prior studies, that lek attendance declines are closely associated with the density of oil and gas development: Oil and gas development correlates well with sage-grouse population declines from 1984 to 2008 in Wyoming, which is supported by other findings (Doherty et al. 2010b, Harju et al. 2010, Hess and Beck 2012, Taylor et al. 2013, Gregory and Beck 2014). As with other studies, we also found support for 4-year lag effects of oil and gas development on lek attendance (Walker et al. 2007, Doherty et al. 2010a, Harju et al. 2010, Gregory and Beck 2014). This result suggests that development likely affects recruitment into the breeding population rather than avoidance of wells by adult males or adult survival. Adult sage-grouse are highly philopatric to lek sites (Dalke et al. 1963, Wallestad and Schladow 1974, Emmons and Braun 1984, Dunn and Braun 1985, Connelly et al. 2011a), and males typically recruit to the

breeding population in 2-3 years. We would expect a delayed response in lek attendance if development affects recruitment, either by reducing fecundity or avoidance of disturbance by nesting females, as adult males die and are not replaced by young males.

Sagebrush Focal Areas ("SFAs") are by definition a subset of PHMA, where all PHMA direction applies with additional protections overlaid in some cases. Our organizations agree with the need for modification insofar as we believe SFA management actions should be expanded to more lands. In addition, we believe that all priority habitats, including SFAs must be designated as sage-grouse Areas of Critical Environmental Concern (ACECs) and managed to protect sage-grouse, as discussed in more detail above. The current Greater Sage-Grouse RMP Amendments and Revisions incorporate insufficient Priority Habitat Management Area designations in all states except Oregon, Colorado, and North Dakota. Crist et al. (2015) provided a critique that indicated that many PHMA units were too small and isolated to sustain sage-grouse populations over the long term, and also noted that a handful of large areas are strongholds of disproportionate importance to sage-grouse conservation efforts. All lands designated as Priority Areas for Conservation 65 ("PACs") by the U.S. Fish and Wildlife Service need to be designated as Priority Habitat Management Areas and given strong, science-based protections in accord with the recommendations of the National Technical Team. In addition, expansions of PHMA are warranted in Wyoming, where the BLM and U.S. Fish and Wildlife Service erroneously incorporated reductions in state Core Area designations that were made for political, rather than scientific, purposes, and which render this state's Priority Habitat Management Areas scientifically invalid.

Scientific research has determined that one energy site per square mile is the density threshold at which significant impacts to sage-grouse populations begin to be measured (Copeland et al. 2013). Tack (2009) found that this study in Montana's Milk River Basin, well densities of one per square mile also were correlated with a very low probability of a lek being large (see Figure 9, p. 43). The analysis of Copeland et al. (2013) found that a statewide analysis of well densities revealed population decline curves very close to the earlier studies by Holloran (2005), but also noted that a 1 wellpad per square mile density of development correlated to approximately 18% decline in sage grouse lek population (see Figure 4). So one wellpad per square mile definitely is not a zero-impact threshold. Indeed, Garman (2018) found that clustering 8 wells per pad using directional drilling in the Atlantic Rim coalbed methane project, which would meet the one-pad-per-square-mile threshold required for PHMA, still left comparatively little habitat within the Project Area outside the ecological zone of influence of roads and wellpads. This one-site-per-square-mile-section is a threshold that should not be subject to waiver, modification, or exception.

The BLM's own experts recommended for existing fluid mineral leases that a 4-mile No Surface Occupancy buffer should be applied to leks, with an exception allowed in cases where the entire lease is within 4 miles of a lek, in which case a single wellsite should be permitted in the part of the lease most distal to the lek (NTT 2011). This recommendation is reinforced by a similar recommendation from western state agency biologists, who also recommended a 4-mile No Surface Occupancy buffer (Apa et al. 2008). According to Taylor et al. (2012: 27), in a study commissioned by BLM, 68 Second, female sage-grouse that visit a lek use an approximately 9-mi (15-km) radius surrounding the lek for nesting; a 2-mi (3.2-km) radius encompasses only 35-50% of nests associated with the lek (Holloran and Anderson 2005, Tack 2009). While a lek provides an important center of breeding activity, and a conspicuous location at which to count birds, its size is merely an index to the population dynamics in the

surrounding habitat. Thus attempting to protect a lek, without protecting the surrounding habitat, provides little protection at all.

The studies referenced in this passage appears to be set out on page 14 and 15 of the USGS Synthesis. We were not able to locate a single instance in any of the DEISs, however, where any of these papers were cited in a discussion of the Impacts of the BLM Preferred Alternative in the DEISs. ? By ignoring the WAFWA Gap Analysis and Plos ONE study, the DEISs fail to recognize the warning that occurs later in the USGS Synthesis, which states: [T]here continues to be emerging science quantifying effects and measuring the efficacy of conservation recommendations. Review of this new information as it becomes available, and incorporating changes, if appropriate, are essential to implementing valid conservation recommendations.³² ? The DEISs ignore studies referenced in the USGS Annotated Bibliography and USGS Synthesis that either support additional protections for sage-grouse habitat or provide evidence against the amendments BLM proposes.

There is a substantial body of scientific literature concluding that discrete anthropogenic activities that are present in sagebrush have negative effects on sage-grouse. The extent of these effects varies based on the size, intensity and persistence of the human activity, and can range from displacement to local extirpation of sage-grouse.⁷³ Nonrenewable energy developments, such as fluid mineral leasing, and their supporting infrastructure are a pervasive, and in some cases an increasing presence within the range of sage-grouse.⁷⁴ There has, however, been a gradual decrease in recommended requirements for fluid mineral leasing within priority areas. * 2011 NTT Report⁷⁵: For unleased federal fluid mineral estate, close priority areas with very limited exceptions. For leased federal areas, do not allow new surface occupancy in priority habitat, with limited exception. Proposed surface disturbance cannot exceed 3% with limited exception. Disturbance measured within individual priority areas and local project area.⁷⁶ * 2013 COT Report⁷⁷: Avoid development in priority areas; identify areas where leasing is not acceptable. If avoidance not possible, development should occur only in non-habitat areas or 72 U. least suitable habitat. Reduce and maintain density of energy structures below which there are no impacts to sage-grouse habitats or do not result in declines to sage-grouse populations.⁷⁸ * 2015 BLM Plans⁷⁹: Implement disturbance cap of 3% within individual priority areas and local project area in priority habitat. Implement a density cap of an average of 1 energy and mining facility per 640 acres.⁸⁰ * 2018 BLM Proposed RMPA.EIS: Numerous additional waivers, exceptions and modifications for drilling in priority areas; restrictions on drilling limited; for Utah, if project design and site conditions indicate a project will improve habitat, exceedances of disturbance and density caps at either project level or individual priority area are allowed.; in Idaho disturbance cap only measured for individual population areas, not project area.⁸¹ The 2015 finding by the Fish and Wildlife Service that Greater Sage-Grouse did not need to be listed under the ESA relied heavily on the provisions in the 2015 BLM plans: As previously stated, sage-grouse are sensitive to disturbance, and small amounts of development within sage-grouse habitats can negatively affect sage-grouse population viability. Thus, limiting future disturbances in sage-grouse habitats is an essential component of reducing or eliminating effects related to disturbance, as recommended in the COT Report.⁸² In addition to the NTT and COT reports, numerous research papers confirm the importance of density and disturbance caps: * 2017 Edmunds study: Modeled density-independent and -dependent population growth across multiple spatial scales relevant to management and conservation. Relatively close fine-scale populations of sage-grouse can trend differently, indicating that large-scale trends may not accurately depict what is occurring across the landscape (e.g., local effects of gas and oil fields may be masked by increasing larger populations). ⁸³ * 2017 Green study (importance of caps): Best models indicated that GRSg responded to energy

development with a 1 to 4-year time lag, and well density within 6,400 m of leks best explained GRSG losses. Sagebrush cover and precipitation explained little variation in lek attendance over time. Across Wyoming, decreases in lek attendance were significant at a density of 4 wells per square kilometer, reaching 17 percent per year at 5.24 wells per square kilometer. Current regulations in Core Areas could limit GRSG losses from energy developments, but they may not promote GRSG recovery.⁸⁴ * 2015 Holloran Study (importance of caps): Use of suitable winter habitat by sage-grouse decreased with increasing density of gas wells within 2.8 km of data loggers. Habitat use also increased with distance to wells and plowed main haul roads, but well density was a better predictor. Effects of anthropogenic activity were evident at lower well densities. Effects of gas development on sage-grouse can be reduced by minimizing well densities and adopting methods that reduce anthropogenic activities.⁸⁵ * 2015 Fedy study (importance of caps): Birds avoided areas of high well density and nests were not found in areas with greater than 4 wells per km² and majority of nests (63%) were in areas with = 1 well per km².⁸⁶ * 2015 Kirol study (importance of caps): Energy infrastructure had negative effects on habitat use and brood survival, with brood survival decreasing once surface disturbance exceeded 4 percent. Results suggest that reduction of habitat quality was primarily driven by avoidance of energy infrastructure, resulting in primary and secondary source habitat becoming low-occurrence habitat.⁸⁷ * 2017 Spence Study (importance of caps): Probability of lek collapse inside core areas was positively related to the density of oil and gas wells located outside of core areas at two distances - within 1.6 km and within 4.8 km of the core area boundary.⁸⁸ * 2018 Holloran Letter (importance of 2015 protections): Recommending management approaches and objectives established in 2015 BLM sage-grouse land use plans be used as minimum standards in sagebrush habitat.⁸⁹

As explained in the NTT report: Sage grouse exhibit strong site fidelity (loyalty to a particular area even when the area is no longer of value) to seasonal habitats, which includes breeding, nesting, brood rearing, and wintering areas. (Connelly et al. 2004, Connelly et al. 2011b). Adult sage grouse rarely switch between these habitats once they have been selected, limiting their adaptability to changes. NTT at 51 (emphases added). Accordingly, loss of critical wintering habitat could lead to extirpation of sage-grouse populations that solely rely on these areas for the winter. See also FEIS at 3-5 ("Site fidelity in breeding birds could delay population response to habitat changes, and a clear response may require the death of most site-tenacious individuals.")

Attached is Attachment 3 to comments submitted by The Wilderness Society, Conservation Colorado, National Audubon Society, Colorado Wildlife Federation, Rocky Mountain Wild, Western Values Project, National Wildlife Federation and Natural Resources Defense Council.

For example, in Wyoming, Copeland et al. (2013) projected further sage-grouse population declines with full and rigorous implementation of the Wyoming Core Area plan (which subsequently was implemented in the federal Wyoming amendments and revisions as PHMA). Smith et al. (2017:9) found much lower probability of lek collapse inside PHMA, attributing this to a lower density of energy development in designated PHMA habitats: "This finding was predictable given how Core Areas were delineated to avoid existing energy disturbance and the low densities of disturbance where Core Areas were to be established prior to the [state Sage-Grouse Executive Order] in 2008." Also for Wyoming, Juliusson et al. (2017) modeled the likelihood of future oil and gas development under state and federal development restrictions (but not incorporating prioritization of leasing and development outside Core Areas, and found that with all other restrictions applied, 27.4% of the sage-grouse population would be exposed to baseline or highintensity energy development in Management Zone I (Northern Plains),

versus 13.9% of the sage-grouse population in Management Zone II. Spence et al. (2017) found that the likelihood of lek collapse inside PHMAs was roughly half that of leks outside PHMAs, related to comparatively higher levels of surface development outside PHMAs, but also found that leks 53 near the boundary are likely to be negatively affected by development along the PHMA boundary. Edmunds et al. (2016) documented continued declines in most Core Areas, while Gamo and Beck (2017) attributed value to the Core Area effort on the basis of lower levels of drilling and construction in sage-grouse habitats outside Core Areas versus inside them. Based on these studies, RMPAs as originally drafted and approved are expected to slow the decline, but not to halt or reverse it. During the pendency of the sage-grouse RMPA process and in the years that followed, approximately 5 million acres of oil and gas leases were deferred from federal lease auctions across 7 western states due to sage-grouse concerns, including 2.2 million acres in Nevada, 1.6 million acres in Wyoming, 600,000 acres in Montana, and more than 300,000 acres each in Colorado and Utah. This enormous amount of lease deferral represents the sole effective and scientifically sound conservation measure in the ARMPAs, inasmuch as sage-grouse habitats that remain unleased cannot be industrially developed, and their habitats are not subject to further degradation.

It is a well-established principle that for sage grouse, there is a time-lag for population responses to habitat impacts, taking two to ten years before population changes become measurable (Holloran 2005, Walker et al. 2007, Harju et al. 2010). As a result, the appropriate decision-point for changing management strategies would actually be 2-10 years before population declines are noted (in the best-case scenario that monitoring reliably recognizes a downturn as caused by a management problem versus population cyclicity, which is also problematic), which means that by the time that adaptive management changes are adopted it is already too late, the damage has been done, and because industrial infrastructure is rarely removed once in place the damage has become effectively irreversible.

We appreciate the idea that broad, science-based objectives have a place in determining whether greater sage-grouse habitat is contributing to stable populations. However, no single objective can cover the wide range of variability that occurs across a landscape as vast as the sagebrush sea. The Habitat Objectives Tables (Table 2-2) have been misinterpreted as standards that must be met, likely at the expense of the widest and most adaptable use in the West-livestock grazing. It does not make sense that these objectives be reflected in livestock grazing permittee/lessee terms and conditions if they do not fit the ecosystem in which they are being applied. Because of this, we appreciate those amendments that propose to make clear that habitat objectives must account for local conditions and site variability. This includes the removal of the seven-inch perennial grass and forb height habitat objective. We understand why grass and forb height objectives need to be considered for the health of the bird, but we believe these objectives should vary across the range. We request these changes be made to the habitat objectives tables for each greater sage-grouse RMP amendment.

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The BLM's own experts recommended for existing fluid mineral leases that a 4-mile No Surface Occupancy buffer should be applied to leks, with an exception allowed in cases where the entire lease is within 4 miles of a lek, in which case a single wellsite should be permitted in the part of the lease most distal to the lek (NTT 2011). This recommendation is reinforced by a similar recommendation from western state agency biologists, who also recommended a 4-mile No Surface Occupancy buffer (Apa et al. 2008). According to Taylor et al (2012: 27), in a study commissioned by BLM, Second, female sage-grouse that visit a lek use an approximately 9-mi (15-km) radius surrounding the lek for nesting; a 2-mi (3.2-km) radius encompasses only 35-50% of nests associated with the lek (Holloran and Anderson 2005, Tack 2009). While a lek provides an important center of breeding activity, and a conspicuous location at which to count birds, its size is merely an index to the population dynamics in the surrounding habitat. Thus attempting to protect a lek, without protecting the surrounding habitat, provides little protection at all.

To the extent that BLM's existing ARMPAs and revised RMPs ignore the recommendations of its own experts, they are arbitrary and capricious and an abuse of discretion. BLM should rectify this legal deficiency if the ARMPAs are further amended. In the context of the original Greater Sage-Grouse RMP amendment and revision effort, BLM's own Draft EIS analysis has supported 4-mile No Surface Occupancy buffers to be applied as Conditions of Approval to existing fluid mineral leases. The Wyoming Nine-Plan DEIS states, "Walker et al. (2007) recommends a buffer distance of at least 4.0 miles containing extensive stands of sagebrush habitat for breeding populations to persist." Wyoming Greater Sage-grouse RMP Amendment DEIS at 4-291. For the Buffalo RMP revision, BLM's analysis of the science states, 73 "Energy development within two miles of leks is projected to reduce the average probability of lek persistence from 87% to 5% (Walker et al. 2007a). Current research suggests that impacts to leks from energy development are discernible out to a minimum of 4 miles, and that some leks within this radius have been extirpated as a direct result of energy development (Apa et al. 2008). Even with a timing limitation on construction activities, Greater Sage-Grouse avoid nesting in oil and gas fields because of the activities associated with operations and production" Buffalo RMP Revision DEIS at 367. For Montana, BLM observes, "Impacts from energy development occur at distances between 3 and 4 miles. Impacts to leks caused by energy development would be most severe near the lek." HiLine RMP Revision DEIS at 4-135. Manier et al. (2014) undertook a comprehensive analysis of the available science on lek buffers, and concluded that the appropriate range for lek buffer protections was 3.1 to 5 miles, which encompasses and buttresses BLM's earlier NTT (2011) expert recommendations. State agencies and their wildlife experts have long pointed out the flaws in smaller lek buffers and the need for 4-mile No Surface Occupancy buffers around leks. According to the Nevada Division of Wildlife, "...the current NSO distance is 0.6 miles, which is not based on the best available science (see Coates et al. 2013 which suggests a buffer distance of 5.0 kilometers)." NDOW comments on Nevada - Northeastern California DEIS, January 14, 2014, analysis chart 1. Apa et al. (2008, emphasis added) reviews the best available science by a team of state sage grouse biologists, and states, "Yearling female greater sage-grouse avoid nesting in areas within 0.6 miles of wellpads, and brood-rearing females avoid areas within 0.6 miles of producing wells. This suggests a 0.6-mile buffer around all suitable nesting and brood-rearing habitat is required to minimize impacts to females during these seasonal periods." This report further clarifies, "These suggest that all areas within at least 4-miles of a lek should be considered nesting and brood-rearing habitats in the absence of mapping." Thus, by combining these two recommended buffers, state experts in this report in effect recommended a 4.6-mile NSO buffer around active leks. The U.S. Fish and Wildlife Service has also pointed out the inadequacy of smaller lek buffers. For the Utah RMP effort, the agency states, "There is substantial scientific information that shows that impacts of human disturbance (e.g. oil and gas drilling) to sage-grouse remain discernible out to distances > 4 miles of a lek." Attachment 2, USFWS comments on Utah Conservation Plan 7/12/12, at 3. The agency goes on to conclude, "In summary, we recommend avoiding permanent structures within a 4 mile lek buffer...at all times. Exceptions may be appropriate for the placement of permanent structures on non-habitat areas within the 4 mile lek buffer if it can be determined that the location of these structures will not impact nesting sagegrouse." USFWS comments Utah Conservation Plan, 5/8/13 at 8. In Nevada, the USFWS states, "We recommend a year-round lek buffer of 4.0 miles." 74 BLM's own NEPA analysis indicates that proposed lek buffers are inadequate. In the Nevada - Northeastern California DEIS, BLM states, Impacts on GRSG accrue over varying distances from origin depending on the type of development: ? Energy extraction such as oil and gas, geothermal, and plan of operation mining at 11.8 miles (19 kilometers) based on direct impacts of field development, including associated infrastructure, noise, lighting, and traffic (Johnson et al. 2011; Taylor et al. 2012) Nevada - Northeastern California Greater Sage-grouse RMP Amendment DEIS at 605. BLM Wyoming Draft EIS analysis arrives at the

same conclusion: "Buffer distances from 0.5 to two miles from oil and gas infrastructure have been shown to be inadequate to prevent declines of birds from leks (Walker et al. 2007). Studies have shown that greater distances, anywhere from two to four miles, are required for viable Greater Sage-Grouse populations to persist (Connelly et al. 2000, Holloran and Anderson 2005, Walker et al. 2007)." Wyoming Greater Sage-grouse RMP Amendment DEIS at 4-335. According to Apa et al. (2008), "Buffer sizes of 0.25 mi., 0.5 mi., 0.6 mi., and 1.0 mi. result in estimated lek persistence of 5%, 11%, 14%, and 30%." BLM concludes, "Studies have shown that greater distances, anywhere from two to four miles, are required for viable Greater Sage-Grouse populations to persist." Wyoming Greater Sage-grouse RMP Amendment DEIS at 4-335. For these reasons, the application of a 0.6-mile lek buffer is arbitrary and capricious, violates BLM Sensitive Species Policy, and will contribute to further population declines in Core Areas that will contribute to the need to protect the greater sage grouse under the Endangered Species Act. Holloran (2005) undertook an empirical test of the adequacy of 0.25-mile No Surface Occupancy buffers and 2-mile Timing Limitation Stipulations, and determined that sage grouse in the Pinedale Anticline and Jonah Fields would be completely extirpated within 19 years of the study as a result of full-field development with this package of protections applied. BLM's NEPA analysis for a recent Miles City Field Office oil and gas leasing EA provides a thorough synopsis: "Sage grouse are offered species specific protections through a stipulation. Under Alternative B, ¼ mile NSO buffers and 2 mile timing buffers would apply where relevant. Based on research, these stipulations for sage grouse are considered ineffective to ensure that sage grouse can persist within fully developed areas. With regard to existing restrictive stipulations applied by the BLM, (Walker et al. 2007a) research has demonstrated that the 0.4-km (0.25 miles) NSO lease stipulation is insufficient to conserve breeding sage-grouse populations in fully developed gas fields because this 75 buffer distance leaves 98 percent of the landscape within 3.2 km (2 miles) open to fullscale development. Full-field development of 98 percent of the landscape within 3.2 km (2 miles) of leks in a typical landscape in the Powder River Basin reduced the average probability of lek persistence from 87 percent to 5 percent (Walker et al. 2007a). Other studies also have assessed the efficacy of existing BLM stipulations for sage grouse. Impacts to leks from energy development are most severe near the lek, and remained discernable out to distances more than 6 km (3.6 miles) (Holloran 2005, Walker et al. 2007a), and have resulted in the extirpation of leks within gas fields (Holloran 2005, Walker et al. 2007a). Holloran (2005) shows that lek counts decreased with distance to the nearest active drilling rig, producing well, or main haul road, and that development influence counts of displaying males to a distance of between 4.7 and 6.2 km (2.9 and 3.9 miles). All well-supported models in Walker et al. (2007a) indicate a strong effect of energy development, estimated as proportion of development within either 0.8 km (0.5 miles) or 3.2 km (2 miles), on lek persistence. Buffer sizes of 0.25 mi., 0.5 mi., 0.6 mi. and 1.0 mi. result in an estimated lek persistence of 5 percent, 11 percent, 14 percent, and 30 percent. Lek persistence in the absence of CBNG development averages approximately 85 percent. Models with development at 6.4 km (4 miles) had considerably less support, but the regression coefficient indicated that impacts were still apparent out to 6.4 km (4 miles) (Walker et al. 2007a). Tack (2009) found impacts of energy development on lek abundances (numbers of males per lek) out to 7.6 miles." Miles City October 2014 Oil and Gas Leasing EA, Environmental Assessment DOI/BLM-MT-C020-2014-0091-EA, May 19, 2014 at 60. For most states, BLM purported to apply lek buffer distances in accordance with Manier et al. (2014) at the project stage of the NEPA approval process. These typically are set at 3.1 miles for roads and energy infrastructure, 2 miles for tall structures, and 1.2 miles for low structures, and represent the lowest (least protective) end of the protection spectrum described by Manier et al. (2014). Green et al. (2017) found that oil and gas development in proximity to leks contributed to a 2.5% per year decline in sage-grouse populations, and that the 3.1-mile buffer best explained these energy-driven declines, but it is important to note that

these researchers neglected to test development densities at buffer distances larger than 3.1 miles in radius. We are concerned that these buffer distances (and also the 1.2-mile standard for low structures) are inappropriately small (with the possible exception of the road buffer) because while they be adequate to protect breeding grouse while on the lek based on the best available science, they will allow these disruptive and damaging features to be located in the midst of prime nesting habitat, which extends 5.3 miles from the lek site (Holloran and Anderson 2005). Furthermore, "Justifiable departures to decrease or increase from these distances, based on local data, best available science, landscape features, and other existing protections (e.g., land use allocations, state regulations) may be appropriate for determining activity impacts." See, e.g., Idaho/Southwest Montana RMPA FEIS at DD-1. Statements like these completely undermine the certainty of implementation of lek buffers, rendering them completely discretionary. Because the nesting period is equally sensitive and equally important to survival of and recruitment to

A limit of 3% human surface disturbance per square-mile section is the minimum necessary standard for preventing habitat abandonment by sage grouse. Knick et al. (2013) found that 99% of active leks across the western half of the sage grouse's range were surrounded by lands with 3% or less human development. Decker et al. (2017) found a similar result in Colorado, with a linear decrease in sage grouse lek populations once surface disturbance increased above the 2.5% threshold. Preliminary results from Kirol et al. (in prep.) indicate that the vast majority of sage-grouse were found in habitats with <1% surface disturbance. Disturbance density can also affect survival; Kirol et al. (2015a) found that brood survival for sage-grouse began to decline significantly once disturbance density hit the 4% threshold. The vast majority was surrounded by much less disturbance. Copeland et al. (2013) found that if all of the State of Wyoming sage grouse policy provisions (which include a 5% disturbance cap calculated using a Disturbance Density Calculation Tool) were implemented fully and to the letter, that a 9 to 15% decline in greater sage grouse populations would still occur statewide, including a 6 to 9% decline within designated Core Areas (where the 5% disturbance cap would be applied). There is no scientific evidence at all indicating that sage grouse can tolerate a greater percentage of surface disturbance. In particular, the 5% cap on disturbance proposed for the Wyoming RMP amendment for Core Areas and Connectivity Areas been shown to be effective by no scientific study, ever.

Scientific research has determined that one energy site per square mile is the density threshold at which significant impacts to sage-grouse populations begin to be measured (Copeland et al. 2013). Tack (2009) found that this study in Montana's Milk River Basin, well densities of one per square mile also were correlated with a very low probability of a lek being large (see Figure 9, p. 43). The analysis of Copeland et al. (2013) found that a statewide analysis of well densities revealed population decline curves very close to the earlier studies by Holloran (2005), but also noted that a 1 wellpad per square mile density of development correlated to approximately 18% decline in sage grouse lek population (see Figure 4). So one wellpad per square mile definitely is not a zero-impact threshold. Indeed, Garman (2018) found that clustering 8 wells per pad using directional drilling in the Atlantic Rim coalbed methane project, which would meet the one-pad-per-square-mile threshold required for PHMA, still left comparatively little habitat within the Project Area outside the ecological zone of influence of roads and wellpads. The one-site-per-square-mile-section is a threshold that should not be subject to waiver, modification, or exception.

BLM should not reduce protections for greater sage-grouse on GHMA in Idaho because the agency does not have enough information about some Idaho sage-grouse populations to reasonably predict what

impacts of reducing protections will be. One area of concern is the East-Central Idaho population of sage-grouse, where BLM Idaho has proposed oil and gas leasing twice in 2018 and then temporarily deferred leasing after conservation groups filed administrative protests and litigated. In 2012, the U.S. Fish and Wildlife Service convened a "Conservation Objectives Team" of Service and state representatives with expertise in greater sage-grouse science and conservation. In 2013, that body issued a Conservation Objectives Team Report (COT Report) evaluating the threats to the species and recommending conservation measures. The COT Report described the East-Central Idaho sage-grouse population as "isolated/small size" and "high risk" with a "low probability of persistence" COT Report at 22, 76-77. Such a greater sage-grouse population is nevertheless 10 Green, Adam et al., Investigating Impacts of Oil and Gas Development on Greater Sage-Grouse, *Journal of Wildlife Management*, doi: 10.1002/jwmg.21179 (2016). 85 valuable because it helps ensure the species continues to exist by contributing to its redundancy, representation, and resilience. See COT Report at 12. Preserving peripheral populations is essential to arresting the decline of greater sage-grouse toward extinction and Endangered Species Act listing. See COT Report at 12-13. The COT Report further stated: [L]ittle information is available on [East Central Idaho] sage-grouse populations other than some limited location and attendance data on a few leks. No lek routes have been established within this area that would allow consistent monitoring of sage-grouse populations. This lack of data is largely due to very difficult access in most years during winter and spring. COT Report at 76. This paucity of information about the East-Central Idaho/East Idaho Uplands population of sage-grouse is well known to resource managers. Due to insufficient population information, the Idaho Department of Fish and Game closed the East Idaho Uplands area of the state to greater sage-grouse hunting in 2008. It has not been reopened since. See 2015 Idaho Sage-grouse Statewide Report at 16, 2016 Sage-grouse Rules at 2 and 2017 Sage-grouse Rules at 2.11 The Sage-grouse Conservation Plan prepared by the East Idaho Uplands Sage-grouse Working Group noted, "There is a need for better information related to population status and trends. Status, survival and trend data relative to sage-grouse populations in the East Idaho Uplands SGPA [Sage-grouse Planning Area] is lacking." EIU Sage-grouse Conservation Plan at 29. The Conservation Plan also stated that much of the area had not been surveyed for sage-grouse or had been only minimally surveyed by air without follow-up ground surveys; due to the lack of consistent lek counts and lek count routes, there was no index to sage-grouse breeding trend. EIU Sage-grouse Conservation Plan at 29. Furthermore, "It is unknown if sage-grouse in the East Idaho Uplands are migratory and if there is one population or multiple populations occurring in different parts of the area." EIU Sage-grouse Conservation Plan at 30. Moreover, the Plan stated there is no information available about seasonal habitat quality, the population is believed to be isolated from other sage-grouse populations, and there may be sage-grouse population isolations within the East Idaho Uplands Planning Area. EIU Sage-grouse Conservation Plan at 30, 31. The 2015 Idaho Sage-grouse Local Working Groups Statewide Annual Report, which was published in August 2016 by the Idaho Sage-grouse Advisory Committee Technical Assistance Team, demonstrates that five years later, these data deficiencies still existed. "Lack of information" was listed as a threat to the East Idaho Uplands greater sage-grouse population: "Most of EIU [East Idaho Uplands] does not have detailed information on populations, movements, etc." 2015 Idaho Sage-grouse Statewide Report at 20.12 11 The 2018-2019 Idaho sage-grouse season will not be set until August 2018. See Idaho Department of Game and Fish, Upland Game, Turkey & Furbearer, 2018 & 2019 Seasons & Rules at 9. Available at <https://idfg.idaho.gov/sites/default/files/seasons-rules-upland-birds-2018-2019.pdf>. 12 The 2015 statewide report (published in August 2016) is the most recent. No Idaho Sage-grouse Local Working Group Statewide Report has been published for 2016 or 2017. Email communications between Ann Moser (Idaho Department of Fish and Game) and Kelly Fuller (Western Watersheds Project), December 19, 2017. 86 Oil and gas leasing and exploratory

well drilling in this area, near Grays Lake National Wildlife Refuge, has occurred in the past, despite BLM's lack of site-specific greater sagegrouse population information for this area. Attachment 6. Although BLM has deferred oil and gas leasing in this area twice in 2018, the Expressions of Interest that led to this area being scheduled for leasing are still listed as "pending" in BLM's National Fluids Lease Sale System database as of July 17, 2018.

Its impact analysis must also account for the primacy of cheatgrass invasion in determining patterns of rangeland fire. According to BLM's past NEPA analysis, "The positive feedback loop between fire and invasive plant species may be the greatest impact on fire management and GRSG (Abatzoglou and Kolden 2011)." Nevada - Northeastern California Greater Sage Grouse RMP Amendment DEIS at 701. BLM further elucidates, 87 In Oregon 19th and early 20th century grazing practices, along with introduction and spread of invasive plant species and the practice of fire suppression in the 20th century, have all contributed to fire suppression and to increasingly destructive wildfires. Oregon Greater Sage Grouse RMP Amendment DEIS at 4-10. BLM's past NEPA analysis concedes, "In the absence of cheatgrass, Wyoming big sagebrush sites can take 150 years to recover." Nevada - Northeast California Greater Sage Grouse RMP Amendment DEIS at 608. When cheatgrass is present, it can take over following disturbance, forming a monoculture characterized by unnaturally frequent fire return intervals that can effectively prevent the recovery of sagebrush and perennial grasses on a long-term if not permanent basis. For Oregon, BLM states, "In Wyoming big sagebrush sites, full recovery to pre-burn sagebrush canopy cover conditions will take over 100 years (Cooper 2007);...." Oregon Greater Sage Grouse RMP Amendment DEIS at 3-70. More generally, BLM states, "Sagebrush recovers slowly from fire; most species do not resprout but must be replenished by wind-dispersed seed from adjacent unburned stands or seeds in the soil. Depending on the species and the size of a burn, sagebrush can reestablish itself within five years, but a return to a full pre-burn community cover can take 50 to over 100 years (Baker 2011)." Oregon Greater Sage Grouse RMP Amendment DEIS at 4-10. For these reasons, BLM must incorporate science-based measures to reduce the spread of cheatgrass, including rest from livestock grazing, into any future sage-grouse plan amendments, and must also rest burned areas for two years or more from livestock grazing, to allow native perennial grasses to recover and to reduce the distribution of weed seeds on newly burned areas.

Smith et al. (2017:9) found much lower probability of lek collapse inside PHMA, attributing this to a lower density of energy development in designated PHMA habitats: "This finding was predictable given how Core Areas were delineated to avoid existing energy disturbance and the low densities of disturbance where Core Areas were to be established prior to the [state Sage-Grouse Executive Order] in 2008." Also for Wyoming, Juliusson et al. (2017) modeled the likelihood of future oil and gas development under state and federal development restrictions (but not incorporating prioritization of leasing and development outside Core Areas, and found that with all other restrictions applied, 27.4% of the sage-grouse population would be exposed to baseline or high-intensity energy development in Management Zone I (Northern Plains), versus 13.9% of the sage-grouse population in Management Zone II. Spence et al. (2017) found that the likelihood of lek collapse inside PHMAs was roughly half that of leks outside PHMAs, related to comparatively higher levels of surface development outside PHMAs, but also found that leks near the boundary are likely to be negatively affected by development along the PHMA boundary. Edmunds et al. (2016) documented continued declines in most Core Areas, while Gamo and Beck (2017) attributed value to the Core Area effort on the basis of lower levels of drilling and construction in sage-grouse habitats outside Core Areas versus inside them. Based on these studies, RMPAs as originally drafted and approved are expected to slow the decline, but not to halt or reverse it.

During the pendency of the sage-grouse RMPA process and in the years that followed, approximately 5 million acres of oil and gas leases were deferred from federal lease auctions across 7 western states due to sage-grouse concerns, including 2.2 million acres in Nevada, 1.6 million acres in Wyoming, 600,000 acres in Montana, and more than 300,000 acres each in Colorado and Utah. This enormous amount of lease deferral represents the sole effective and scientifically-sound conservation measure in the ARMPAs, inasmuch as sage-grouse habitats that remain unleased cannot be industrially developed, and their habitats are not subject to further degradation.

Wyoming Greater Sage-grouse RMP Amendments Draft EIS at 4-276. Wisdom et al. (2011) found that lands within 3.1 miles of transmission lines and highways had an elevated rate of lek abandonment. Nonne et al. (2011) found that raven abundance increased along the Falcon-Gondor powerline corridor in Nevada both during the construction period, and long-term after powerline construction activities had ceased. Braun et al. (2002) reported that 40 leks with a power line within 0.25 mile of the lek site had significantly slower population growth rates than unaffected leks, which was attributed to increased raptor predation. Dinkins (2013) documented sage grouse avoidance of powerlines not just during the nesting period but also during early and late brood-rearing. LeBeau et al. (2014) found that sage grouse avoided habitats within 2.9 miles of transmission lines during the brood-rearing period. Hansen et al. (2016) documented negligible additional avoidance of a powerline co-located with an existing transmission line in low-quality wintering habitats in Utah, and stated (at p. 184, "existing transmission line corridors located in poor-quality winter habitat are likely already avoided by sage-grouse, and co-locating additional lines within these corridors may dampen the effects of new tall structures on the landscape in the years immediately following construction." Dinkins et al. (2014) documented no spatial avoidance, but lower hen survival in areas with higher powerline density. Shirk et al. (2015) found that colocating several transmission lines beside each other resulted in a complete barrier to sagegrouse migration and dispersal in central Washington. The National Technical Team (NTT 2011) recommended that Priority Habitats be exclusion areas for overhead powerlines, and that General Habitats should be avoidance areas for overheads lines. And according to BLM's own NEPA analysis, Impacts on GRSG accrue over varying distances from origin depending on the type of development: ? Tall structures such as power lines, wind turbines, communication towers, agricultural, and urban development based on an avian predator foraging distance of 4.3 miles (6.9 kilometers; Boarman and Heinrich 1999; Leu et al. 2008) Nevada - Northeastern California Greater Sage-grouse RMP Amendment DEIS at 605. The National Technical Team (NTT 2011) recommended that Priority Habitats be exclusion areas for overhead powerlines, and that General Habitats should be avoidance areas for overheads lines. And according to BLM's own NEPA analysis, 61 Impacts on GRSG accrue over varying distances from origin depending on the type of development: ? Tall structures such as power lines, wind turbines, communication towers, agricultural, and urban development based on an avian predator foraging distance of 4.3 miles (6.9 kilometers; Boarman and Heinrich 1999; Leu et al. 2008) Nevada - Northeastern California Greater Sage-grouse RMP Amendment DEIS at 605. The National Technical Team (2011) recommended that general habitats be managed as avoidance areas for new rights-of-way, and also recommended that overhead powerlines and other infrastructure that have fallen out of use should be removed, when they occur in Priority Habitats

The EPA supports coordination among federal, state, local, and tribal authorities for consistent and effective conservation of imperiled species. We are concerned that the Draft EIS does not provide sufficient information to fully assess the impacts of the proposed action. For this reason, the EPA has rated the Draft EIS/RMPA as Environmental Concerns - Insufficient Information - (EC-2). The

description of the EPA's rating system is available at: <https://www.epa.gov/nepa/environmental-impact-statement-rating-system-criteria>. The enclosed detailed comments include recommendations for improving the assessment and disclosure of the Proposed Action's expected impacts to greater sage-grouse and habitat; however, we defer to the expertise of the U.S. Fish and Wildlife Service and appropriate state wildlife management agencies regarding the extent to which those impacts would be beneficial or detrimental to the species. Specifically, we recommend improvements in the analysis of the potential impacts from increased oil and gas development for the Proposed Action, and updating the mitigation section to reflect any changes resulting from public comments.

Wyoming Greater Sage-grouse RMP Amendments Draft EIS at 4-276. Wisdom et al. (2011) found that lands within 3.1 miles of transmission lines and highways had an elevated rate of lek abandonment. Nonne et al. (2011) found that raven abundance increased along the Falcon-Gondor powerline corridor in Nevada both during the construction period, and long-term after powerline construction activities had ceased. Braun et al. (2002) reported that 40 leks with a power line within 0.25 mile of the lek site had significantly slower population growth rates than unaffected leks, which was attributed to increased raptor predation. Dinkins (2013) documented sage grouse avoidance of powerlines not just during the nesting period but also during early and late brood-rearing. LeBeau et al. (2014) found that sage grouse avoided habitats within 2.9 miles of transmission lines during the brood-rearing period. Hansen et al. (2016) documented negligible additional avoidance of a powerline co-located with an existing transmission line in low-quality wintering habitats in Utah, and stated (at p. 184, "existing transmission line corridors located in poor-quality winter habitat are likely already avoided by sage-grouse, and co-locating additional lines within these corridors may dampen the effects of new tall structures on the landscape in the years immediately following construction." Dinkins et al. (2014) documented no spatial avoidance, but lower hen survival in areas with higher powerline density. Shirk et al. (2015) found that co-locating several transmission lines beside each other resulted in a complete barrier to sage-grouse migration and dispersal in central Washington. The National Technical Team (NTT 2011) recommended that Priority Habitats be exclusion areas for overhead powerlines, and that General Habitats should be avoidance areas for overheads lines. And according to BLM's own NEPA analysis, Impacts on GRSG accrue over varying distances from origin depending on the type of development: ? Tall structures such as power lines, wind turbines, communication towers, agricultural, and urban development based on an avian predator foraging distance of 4.3 miles (6.9 kilometers; Boarman and Heinrich 1999; Leu et al. 2008) Nevada - Northeastern California Greater Sage-grouse RMP Amendment DEIS at 605. 58 The National Technical Team (NTT 2011) recommended that Priority Habitats be exclusion areas for overhead powerlines, and that General Habitats should be avoidance areas for overheads lines. And according to BLM's own NEPA analysis, Impacts on GRSG accrue over varying distances from origin depending on the type of development: ? Tall structures such as power lines, wind turbines, communication towers, agricultural, and urban development based on an avian predator foraging distance of 4.3 miles (6.9 kilometers; Boarman and Heinrich 1999; Leu et al. 2008) Nevada - Northeastern California Greater Sage-grouse RMP Amendment DEIS at 605. The National Technical Team (2011) recommended that general habitats be managed as avoidance areas for new rights-of-way, and also recommended that overhead powerlines and other infrastructure that have fallen out of use should be removed, when they occur in Priority Habitats.

A rather glaring oversight throughout this - and all state DEISs - is that BLM attempts to justify several aspects of the planning analyses through inclusion by reference from the 2015 analyses of sage-grouse plan amendments. However, the BLM used 2012-13 data in their analyses for the 2015 land use plan

amendments, and it cannot be denied that an extensive amount of new information, project development, and other factors have been developed or occurred since 2013. This seemingly violates BLM Planning Handbook and NEPA procedures.

Scientific Flaws with the Plan Amendment and Listing Decision: In addition to the missteps related to process, the Plan Amendments are substantively flawed. The key agency reports (the Reports) underpinning the Plan Amendments, as well as the earlier warranted but precluded GRS listing decision, were plagued with conflicts of interest, bias and selective citation. They ignored the most relevant factors to grouse populations (weather, predation and hunter harvest) in favor of draconian restrictions that will cost jobs and harm local communities without corresponding benefits to the species. The 2018 LUPAs fail to acknowledge the scientific shortcomings in the National Technical Team ("NTT") Report, the Conservation Objectives Team ("COT") Report, the U.S. Geological Society ("USGS") Monograph, and the Manier et al. Buffers Report (collectively, the "Reports"), much less redress the resulting inaccuracies in the agency decisions. DOI and the U.S. Department of Agriculture must recognize critical errors in the Reports and the prescriptions they support. Because future agency management decisions and potential litigation continue to turn to the Reports for support, addressing the scientific foundation is crucial. Accordingly, DOI should include this statement in the forthcoming amendments and records of decision ("RODs"): The NTT Report, the COT Report, the USGS Monograph and Manier, et al. 2014 (collectively "the Reports") were heavily relied upon in the 2010 listing decision on GRS as well as the LUPAs and corresponding RODs. Since then, the science and understanding on GRS has evolved and some significant shortcomings with the Reports have come to light. Management prescriptions from the Reports should be viewed with caution and tempered with the best available information, including specifically state and local science and knowledge. Detailed Data Quality Act challenges based on these issues were never adequately answered. In 2015, a coalition of 20 local governments (including the Counties) as well as diverse agricultural and energy interests (collectively, the Petitioners) undertook an independent scientific review of the Reports. The reviews uncovered significant errors, omissions and biases in the Reports that have contaminated subsequent policy and management actions based thereon. In several Data Quality Act challenges, (the Challenges), Petitioners documented hundreds of pages of flaws with: * 3 percent disturbance caps * Density caps of 1 disturbance per 640 acres * Lek buffers * Required Design Features * No Surface Occupancy areas (NSOs) in priority habitat * Implementation of an avoid-minimize-compensate policy * Net conservation gains * Sagebrush canopy cover * The warranted but precluded listing decision for GRS The Reports erroneously ignore accurate population data and adopt flawed modeling approaches that have consistently failed to accurately predict populations. This selective use of science is wholly misleading and assumes GRS populations are in decline despite evidence to the contrary. The Reports ignore natural population fluctuations; single out human-driven activities for alleged declines (but exclude the significance of hunter harvest); and overlook actual threats to GRS such as predation. The Reports fail to meet the standards of quality, integrity, objectivity and utility required by the Data Quality Act, as well DOI's standards of scientific integrity and transparency. DOI failed to address these shortcomings. The National Technical Team Challenge was 97 pages in length with four exhibits for a total of 197 pages of detailed issues. The COT Challenge was 88 pages with four exhibits for a total of 159 pages. The Monograph Challenge was 99 pages with three exhibits for a total of 332 pages. The Buffers Challenge was 41 pages. Nonetheless, the agencies virtually ignored these shortcomings and issued only a four-page response to the cumulative 729-page Challenges, and a two-page response to subsequent appeals. Moreover, in the NEPA documents, the agencies hardly recognized the existence of the Challenges, let alone addressed their merits. BLM and the USFS failed to address the substance and

detail in these challenges and provided little if any rationale for their misplaced use of the Reports and the Monograph. No corrective actions were taken nor were adequate disclosures of these flaws recognized or addressed as required by implementing regulations for NEPA. See 40 C.F.R. § 1502.9(b). In sum, these misplaced and unscientific management restrictions will negatively impact the economies and future viability of countless communities, small businesses, and family farms and ranches as well as efforts to conserve GRSG and we request BLM address the above bulleted points.

The purpose of this letter is to underscore recommendations made in a letter sent to you on October 13, 2017 by members of the sage-grouse science community in light of the recently completed U.S. Geological Survey (USGS) literature review and the Bureau of Land Management's (BLM) May 2018 draft Land Use Plan (LUP) amendments. Conclusions reached by the USGS in their synthesis of sage-grouse science (Synthesis) published since release of the BLM and U.S. Forest Service's LUPs in 2015 suggest that if these agencies proceed with amendments to those LUPs they must do so with a narrow, science-based focus. Unfortunately, we do not believe BLM's recently released draft Environmental Impact Statements (DEISs) reflect such a targeted focus.

The Department of Interior (DOI) and the U.S. Department of Agriculture (USDA) must recognize shortcomings in the key reports relied upon to craft the BLM's 2015 Record of Decision (ROD) which include the NIT and COT Reports and the USGS Monograph and the prescriptions they support. Agency management decisions and potential litigation will surely turn towards the Reports for support. Absent recognition of shortcomings, land management is sure to be entangled in controversy for years to come. Accordingly, we urge DOI to include this statement in the forthcoming amendments and records of decision (RODs): The NIT Report, the COT Report, the USGS Monograph and Manier, et al. 2014 (collectively "the Reports") were heavily relied upon in the 2010 listing decision on GRSG as well as the LUPs and corresponding RODs. Since then, the science and understanding on GRSG has evolved and some significant shortcomings with the Reports have come to light. Management prescriptions from the Reports should be viewed with caution and tempered with the best available information including specifically state and local science and knowledge. Most importantly, none of the information contained in the COT Report, NIT Report or the USGS Monograph specifically addressed the highly unique landforms, variable habitat or naturally fragmented habitat that exists in the Parachute-Piceance-Roan population found in Garfield County. The terrain in our County that hosts Greater Sage Grouse is a naturally fragmented habitat that varies radically over short distances to include severely undulating topography, steep slopes and deep canyons, dark timber, sage brush on the ridges and a complex range of vegetation types. These reports relied on above are void of scientific specificity regarding Garfield County's highly unique terrain.

The BLM is required to contemplate new science since the BLM's 2015 Record of Decision to better inform policy in the RMPA. Rather, the BLM has only relied on a limited scope of new scientific information contained in a report prepared by the US Geological Survey. This report ignores a vast body of additional science that provides beneficial analysis on grazing, predation, climate / weather impacts, high-resolution mapping and the value of including local working group activity. This is a tremendous shortcoming where the BLM ignored the opportunity to approach the management of the impacts to the species that could have been informed by a wide net of best available science; rather, it appears the best available science has been cherry picked thereby excluding highly important elements of could and should contribute to a more robust and effective adaptive management program for the benefit of the species.

We ask that the following information be considered in the EIS so that there is a more complete set of relevant new scientific information as best available science: A. THE IMPORTANCE OF HIGH RESOLUTION MAPPING TO PRIORITIZING SAGE-GROUSE CONSERVATION EFFORTS Coates, P.S., Casazza, M.L., Brussee, B.E., Ricca, M.A., Gustafson, K.B., Sanchez-Chopitea, E., Mauch, K., Niell, L., Gardner, S., Espinosa, S., and Delehanty, D.I., 2016, Spatially explicit modeling of annual and seasonal habitat for greater sage-grouse (*Centrocercus urophasianus*) in Nevada and northeastern California-An updated decision-support tool for management: U.S. Geological Survey Open-File Report 2016-1080, 160 p., <https://doi.org/10.3133/ofr20161080>. This revised USGS report utilized new data multiple sources, including updated GRSG telemetry locations, high-resolution vegetation maps, and seasonal habitat suitability indices. As a result of this higher resolution mapping, the authors note that, "GRSG habitat area increased by 6.5 percent compared to findings in the earlier report, with increases of a similar magnitude in core, priority, and general GRSG habitat management categories." The significance of this study is that it underscores the importance of producing modern, reproducible, high-resolution sage-grouse habitat maps to inform and prioritize conservation efforts far better than broad brush stroke approaches used in the development of the Northwestern Colorado RMP. A similar high-resolution habitat mapping effort is underway in Northwestern Colorado.

ACCOUNTING FOR CLIMATIC VARIATION IN POPULATION RESPONSES IN ADAPTIVE MANAGEMENT This paper is significant to northwestern Colorado but not for what the authors may have intended. Genetic and habitat connectivity analyses reveal the highest levels of genetic and spatial connectivity among sage-grouse subpopulations were found within Sage-grouse management zone 2, comprising the greater Wyoming basin population which includes Northwestern Colorado. These results are contrary to and refute the basic assumptions of Garton et al. (2009, 2011), that assumed far greater genetic isolation and were used to produce the population extinction predictions relied upon by the USFWS in their 2010 ESA listing decision, management subsequent reports and recommendations (including the COT and subsequent BIM RMPs). Homer, C.G., G. Xian, C.L. Aldridge, O.K. Meyer, T.R. Loveland, M.S. O'Donnell. 2015. Forecasting sagebrush ecosystem components and greater sage-grouse habitat for 2050: learning from past climate patterns and landsat imagery to predict the future. *Ecological Indicators* 55: 131-145. <https://doi.org/10.1016/j.ecolind.2015.03.002> The significance of this paper to Northwestern Colorado RMP is that it reiterates the need for locally informed and locally implemented adaptive tactics and strategies for vegetation and land management to offset predicted long-term climatic trends. Tronstad, L., G. Jones, M. Andersen and G. Beauvais. 2018. Modeling and mapping the distribution of invertebrate prey used by Greater Sage-grouse during the early brood rearing period: Report of a pilot project. Report prepared for the Wyoming Landscape Conservation Initiative by the Wyoming Natural Diversity Database, University of Wyoming, Laramie, Wyoming. Previous research on sage-grouse habitat evaluations has focused on vegetation and topographic components. However, invertebrate prey, which is strongly affected by climate and local weather, is vital to chick survival and sage-grouse hens typically prefer brooding habitat with higher densities of invertebrates. Therefore, this study investigated the relationship between vegetation and invertebrate species composition and density. This approach is significant because tracking annual variation and multi-year trends in invertebrate populations potentially provides a locally-based predictor of annual chick survival and therefore, population trends (i.e. spring conditions where a warm, moist spring may have far more invertebrates available compared to a cold, dry spring, and this will influence annual cohort size.). Ramey II, R.R. J.L. Thorley, and A.S. Ivey. local and population-level responses of greater sagegrouse to oil and gas and climatic variation in Wyoming. *BioArxiv* (<https://doi.org/10.1101/028274>) The significance of this research to adaptive management in the Northwestern Colorado RMP is that it was the first

order to mitigate the primary threat to sage-grouse eggs and chicks: determine raven dispersal distances and target winter roosts at landfills within range of sage-grouse nesting and brood rearing habitat. Because of the close proximity of landfills to BLM administered sagegrouse habitat in northwestern Colorado, this adaptive and highly effective approach should not be ignored or discounted in favor of one-size fits all management prescriptions that fails to address this threat.

Peebles, IoW. and M.R. Conover. 2017. Winter ecology and spring dispersal of common ravens in Wyoming. *Western North American Naturalist* 77(3): 293-308. Repeated research has shown that ravens have emerged as the primary predation threat to sage-grouse. However, land management agencies, including the BIM have continued to advocate for various restrictions on human activities (including NSO and setbacks) despite the fact that have not been proven to have a net positive effect on sage-grouse at local or population scales. The paper by Peebles and Conover (2017) is significant to the question of how to directly reduce local raven populations in order to mitigate the primary threat to sage-grouse eggs and chicks: determine raven dispersal distances and target winter roosts at landfills within range of sage-grouse nesting and brood rearing habitat. Because of the close proximity of landfills to BIM administered sage-grouse habitat in northwestern Colorado, this adaptive and highly effective approach should not be ignored or discounted in favor of one-size fits all management prescriptions that fails to address this threat. Additionally, as another example of the BIM's failure to meaningfully coordinate with local governments, the RMPA did not consider the predator control policies found in the Garfield County Greater Sage Grouse Conservation Plan of 2014, as amended and provided here: Section 5: Predation of sage-grouse eggs, juveniles, and adults occurs naturally, but can increase in association with human development, unless precautions are undertaken. Scientific research has shown that the predators on sage grouse are generalists, meaning that they prey on other species as well, and in some cases their populations are subsidized by human sources of food. Sage-grouse eggs are preyed upon by red foxes, coyotes, badgers, ravens, and (sometimes) black-billed magpies. Common predators of juvenile and adult sage-grouse include golden eagles, prairie falcons (as well as other raptors), coyotes, badgers, red fox and bobcats. Younger birds (especially brood\$), may be preyed upon by raven, red fox, northern harrier, ground squirrel, snakes, and weasels. However, of these predators, research has shown that ravens are the most abundant and have the greatest impact on the populations studied. While predation on sage grouse occurs at all stages of the life cycle, it is predation on nests and broods that is generally recognized as having the largest deleterious effect on annual survivorship and recruitment in populations. Adding to this problem is the fact that predators, such as ravens, are subsidized by humans to the point where they exceed historic levels in some areas by as much as 1,500%. In such cases, management actions, especially where predators like ravens are abundant and sage grouse mortality is high (such as in the Plan Area), may be needed to ensure that sage-grouse populations are not depressed by a known and potentially mitigated source of mortality. Ravens are clever and highly adaptable in their behavior. They use communication and group foraging which allows them to opportunistically exploit food resources associated with humans (e.g., landfills, trash, road kill, unattended food, and carrion from livestock operations). In contrast, sage-grouse are very stereotypic in their behavior and rely on cryptic coloration, which makes them vulnerable to predation by ravens. As a result of these and other unintended food subsidies, raven populations have greatly expanded in the West. This, in turn, has impacted many species, including desert tortoises, marbled murrelets, least terns, California condors, and sage-grouse. While reducing human-supplied food subsidies to predators is an essential part of any management strategy, it may not be effective unless coupled with active deterrents or management actions to reduce raven density (i.e., Coates and Delehanty 2010; Dinkins 2013). The last reported research on nest and brood survival in the PPR population (Apa 2010),

estimated annual nest success between zero and 40%, and substantially lower chick survival. By the end of that study, "Only 2 chicks remained radio-marked after 30 days of age. Apparent brood survival was 86% (n = 12/14) at 7 days, 62% (n = 9/14) at 14 days, and 14% (n = 2/14) at 30 days." Those data indicate predation could be holding back the PPR population.

Chapter 6 References - This section refers to older (now amended) versions of the Garfield County's Land Use Resolution and the Greater Sage Grouse Conservation Plan which is additional evidence that the BLM did not meaningfully coordinate with Garfield County. Further, as pointed out earlier in these comments, the BLM has neglected to consider significant studies and best available science published since the 2015 ROD. Garfield County requests the BLM not only cite the following studies but also amend the RMPA DEIS to incorporate the value these studies bring to the document including adaptive management.

Addressed Scientific Flaws with the Plan Amendments and the Listing Decision The Department of Interior (DOI) failed to recognize shortcomings in the key reports relied upon to craft the BLM's 2015 Record of Decision (ROD) which include the NTT and COT Reports and the USGS Monograph and the prescriptions they support. Multiple Data Quality Act challenges documented significant flaws with: * 3 percent disturbance caps * Density caps of 1 disturbance per 640 acres * Lek buffers * Required Design Features * No Surface Occupancy areas (NSOs) in priority habitat * Implementation of an avoid-minimize-compensate policy * Net conservation gains * Sagebrush canopy cover * The warranted but precluded listing decision for GRSB Absent recognition of these flaws, land management will be misled and entangled in litigation for many years to come. Therefore, the Districts respectfully request DOI to include the following statement in the forthcoming amendments and records of decision (RODs): provide adequate habitat quality for nesting sage o grouse." Effects of rotational grazing management on nesting greater sage o grouse (The Journal of Wildlife Management <https://onlinelibrary.wiley.com/doi/full/10.1002/jwmg.21344>)

"The newest study's authors re-evaluated more than 800 nests from several studies that originally showed a positive correlation between nest success and grass height. After correcting the data to account for grass growth, researchers found no relationship between grass height and nest fate, confirming a sampling bias in two of three re-analyzed datasets, (emphasis added) and a reduced but still significant association in the third." "These findings suggest that the height of grass may not be as crucial to sage grouse nesting success as previously thought. Researchers recommend that field sampling methods be adjusted to ensure unbiased measurement of grass height at predicted hatch date, and that sitescale habitat management guidelines that include grass height as an indicator of nesting habitat quality be revisited." Sage Grouse Initiative. 2017. Taking the Bias Out of Grass Height Measurements. Science to Solutions Series Number 15. Sage Grouse Initiative. 4pp.sagegrouseinitiative.com/taking-bias-out-sage-grouse-nesting-studies.

All Land Use Plan Amendments ("LUPAs") must recognize and allow for updates based on the most current and best science available. Identifying unique place-based, topographical differences and adjusting standards accordingly should be a decision made by local land managers utilizing the best available information and local, scientifically based data.

The RMPA should replace the current RMPA mapping with the revised mapping of priority habitat boundaries and active lek sites provided by Colorado Parks and Wildlife ("CPW").

Scientific Flaws with the Plan Amendment and Listing Decision: In addition to the missteps related to process, the Plan Amendments are substantively flawed. The key agency reports (the Reports) underpinning the Plan Amendments, as well as the earlier warranted but precluded GRSG listing decision, were plagued with conflicts of interest, bias and selective citation. They ignored the most relevant factors to grouse populations (weather, predation and hunter harvest) in favor of draconian restrictions that will cost jobs and harm local communities without corresponding benefits to the species. The 2018 LUPAs fail to acknowledge the scientific shortcomings in the National Technical Team ("NTT") Report, the Conservation Objectives Team ("COT") Report, the U.S. Geological Society ("USGS") Monograph, and the Manier et al. Buffers Report (collectively, the "Reports"), much less redress the resulting inaccuracies in the agency decisions. DOI and the U.S. Department of Agriculture must recognize critical errors in the Reports and the prescriptions they support. Because future agency management decisions and potential litigation continue to turn to the Reports for support, addressing the scientific foundation is crucial. Accordingly, DOI should include this statement in the forthcoming amendments and records of decision ("RODs"): The NTT Report, the COT Report, the USGS Monograph and Manier, et al. 2014 (collectively "the Reports") were heavily relied upon in the 2010 listing decision on GRSG as well as the LUPAs and corresponding RODs. Since then, the science and understanding on GRSG has evolved and some significant shortcomings with the Reports have come to light. Management prescriptions from the Reports should be viewed with caution and tempered with the best available information, including specifically state and local science and knowledge. Detailed Data Quality Act challenges based on these issues were never adequately answered. In 2015, a coalition of 20 local governments (including the Counties) as well as diverse agricultural and energy interests (collectively, the Petitioners) undertook an independent scientific review of the Reports. The reviews uncovered significant errors, omissions and biases in the Reports that have contaminated subsequent policy and management actions based thereon. In several Data Quality Act challenges, (the Challenges), Petitioners documented hundreds of pages of flaws with: * 3 percent disturbance caps * Density caps of 1 disturbance per 640 acres * Lek buffers * Required Design Features * No Surface Occupancy areas (NSOs) in priority habitat * Implementation of an avoid-minimize-compensate policy * Net conservation gains * Sagebrush canopy cover * The warranted but precluded listing decision for GRSG The Reports erroneously ignore accurate population data and adopt flawed modeling approaches that have consistently failed to accurately predict populations. This selective use of science is wholly misleading and assumes GRSG populations are in decline despite evidence to the contrary. The Reports ignore natural population fluctuations; single out human-driven activities for alleged declines (but exclude the significance of hunter harvest); and overlook actual threats to GRSG such as predation. The Reports fail to meet the standards of quality, integrity, objectivity and utility required by the Data Quality Act, as well DOI's standards of scientific integrity and transparency. DOI failed to address these shortcomings. The National Technical Team Challenge was 97 pages in length with four exhibits for a total of 197 pages of detailed issues. The COT Challenge was 88 pages with four exhibits for a total of 159 pages. The Monograph Challenge was 99 pages with three exhibits for a total of 332 pages. The Buffers Challenge was 41 pages. Nonetheless, the agencies virtually ignored these shortcomings and issued only a four-page response to the cumulative 729-page Challenges, and a two-page response to subsequent appeals. Moreover, in the NEPA documents, the agencies hardly recognized the existence of the Challenges, let alone addressed their merits. BLM and the USFS failed to address the substance and detail in these challenges and provided little if any rationale for their misplaced use of the Reports and the Monograph. No corrective actions were taken nor were adequate disclosures of these flaws recognized or addressed as required by implementing regulations for NEPA. See 40 C.F.R. § 1502.9(b). In sum, these misplaced and unscientific management restrictions will negatively impact the economies

and future viability of countless communities, small businesses, and family farms and ranches as well as efforts to conserve GRSG and we request BLM address the above bulleted points.

The Department of Interior (DOI) and the U.S. Department of Agriculture (USDA) must recognize shortcomings in the key reports relied upon to craft the BLM's 2015 Record of Decision (ROD) which include the NIT and COT Reports and the USGS Monograph and the prescriptions they support. Agency management decisions and potential litigation will surely turn towards the Reports for support. Absent recognition of shortcomings, land management is sure to be entangled in controversy for years to come. Accordingly, we urge DOI to include this statement in the forthcoming amendments and records of decision (RODs): The NIT Report, the COT Report, the USGS Monograph and Manier, et al. 2014 (collectively "the Reports") were heavily relied upon in the 2010 listing decision on GRSG as well as the LUPAs and corresponding RODs. Since then, the science and understanding on GRSG has evolved and some significant shortcomings with the Reports have come to light. Management prescriptions from the Reports should be viewed with caution and tempered with the best available information including specifically state and local science and knowledge. Most importantly, none of the information contained in the COT Report, NIT Report or the USGS Monograph specifically addressed the highly unique landforms, variable habitat or naturally fragmented habitat that exists in the Parachute-Piceance-Roan population found in Garfield County. The terrain in our County that hosts Greater Sage Grouse is a naturally fragmented habitat that varies radically over short distances to include severely undulating topography, steep slopes and deep canyons, dark timber, sage brush on the ridges and a complex range of vegetation types. These reports relied on above are void of scientific specificity regarding Garfield County's highly unique terrain.

The BLM is required to contemplate new science since the BLM's 2015 Record of Decision to better inform policy in the RMPA. Rather, the BLM has only relied on a limited scope of new scientific information contained in a report prepared by the US Geologic Survey. This report ignores a vast body of additional science that provides beneficial analysis on grazing, predation, climate / weather impacts, high-resolution mapping and the value of including local working group activity. This is a tremendous shortcoming where the BLM ignored the opportunity to approach the management of the impacts to the species that could have been informed by a wide net of best available science; rather, it appears the best available science has been cherry picked thereby excluding highly important elements of could and should contribute to a more robust and effective adaptive management program for the benefit of the species.

We ask that the following information be considered in the EIS so that there is a more complete set of relevant new scientific information as best available science: **A. THE IMPORTANCE OF HIGH RESOLUTION MAPPING TO PRIORITIZING SAGE-GROUSE CONSERVATION EFFORTS** Coates, P.S., Casazza, M.L., Brussee, B.E., Ricca, M.A., Gustafson, K.B., Sanchez-Chopitea, E., Mauch, K., Niell, L., Gardner, S., Espinosa, S., and Delehanty, D.L., 2016, Spatially explicit modeling of annual and seasonal habitat for greater sage-grouse (*Centrocercus urophasianus*) in Nevada and northeastern California-An updated decision-support tool for management: U.S. Geological Survey Open-File Report 2016-1080, 160 p., <https://doi.org/10.3133/ofr20161080>. This revised USGS report utilized new data multiple sources, including updated GRSG telemetry locations, high-resolution vegetation maps, and seasonal habitat suitability indices. As a result of this higher resolution mapping, the authors note that, "GRSG habitat area increased by 6.5 percent compared to findings in the earlier report, with increases of a similar magnitude in core, priority, and general GRSG habitat management categories." The significance

of this study is that it underscores the importance of producing modern, reproducible, high-resolution sage-grouse habitat maps to inform and prioritize conservation efforts far better than broad brush stroke approaches used in the development of the Northwestern Colorado RMP. A similar high-resolution habitat mapping effort is underway in Northwestern Colorado.

Chapter 6 References - This section refers to older (now amended) versions of the Garfield County's Land Use Resolution and the Greater Sage Grouse Conservation Plan which is additional evidence that the BLM did not meaningfully coordinate with Garfield County. Further, as pointed out earlier in these comments, the BLM has neglected to consider significant studies and best available science published since the 2015 ROD. Garfield County requests the BLM not only cite the following studies but also amend the RMPA DEIS to incorporate the value these studies bring to the document including adaptive management.

the ARMPA, and by extension the Draft RMPA, rely on technical reports riddled with significant inaccuracies, omissions, and shortcomings which do not constitute the best scientific data.

The NTT Report contains numerous errors and shortcomings, as documented in the Alliance's first DQA challenge, including: * Failure to include citations in the "Literature Cited" section, and listed articles in the "Literature Cited" section that are not referenced or used in the Report; * Citing authorities in a misleading fashion; * Failure to provide justification for the 3% disturbance cap used; * Including noise restriction recommendations based on flawed studies that relied on unpublished data and speculation, and using suspect testing equipment in unrealistic conditions; * Failure to cite or include scientific reports and papers on oil and natural gas operations and mitigation measures available at the time the NTT Report was created; and, * Failure to undergo an adequate peer review.

The ARMPA further relies on Greater Sage-Grouse: Ecology and Conservation of a Landscape Species and Its Habitats (Studies in Avian Biology), published in 2011 (USGS Monograph). This book also suffers from scientific and technical flaws. The Center for Environmental Science, Accuracy and Reliability analyzed four of the most frequently cited sources and found, as documented in our third DQA challenge: Northwest Colorado Greater Sage-Grouse Draft RMPA August 2, 2018 Page 12 of 17 * Significant mischaracterization of previous research; * Substantial errors and omissions; * Lack of independent authorship and peer review; * Methodological bias; * Lack of reproducibility; and, * Inadequate data.

BLM finally relies on the flawed USGS "Conservation Buffer Distance Estimates for Greater Sage-Grouse - A Review" (Buffer Report), to support the 3.1-mile lek buffer for infrastructure related to energy development imposed in the Draft RMPA. Draft RMPA at H-3. As discussed in our fourth DQA challenge, the studies referenced in the Buffer Report did not test the buffers discussed therein and failed to recognize other factors driving GrSG population changes such as variations in regional climate and weather. Furthermore, the Buffer Report: * Was developed with unsound methods; * Ignores scientific studies that do not support its conclusions; * Reaches conclusions that are pure conjecture; and * Disseminates information that is neither objective nor reliable and that lacks scientific integrity. Accordingly, the Buffer Report, and by extension the buffers and noise restrictions in the Draft RMPA, are not based on the best available science.

On March 22, 2013, the FWS-organized Conservation Objectives Team (COT) issued the Greater Sage-grouse (*Centrocercus urophasianus*) Conservation Objectives: Final Report (COT Report). BLM applies

measures from the COT Report to all of the action alternatives identified in the ARMPA, and by extension to the Draft RMPA. As detailed in our second DQA challenge, the COT Report suffers from various errors. Specifically, the report: * Provides no original data or quantitative analysis; * Does not provide comprehensive, unbiased review of all available scientific literature; * Relies on unverified data; * Relies on flawed and biased reports; * Contains flawed methodology; * Suffers from conflicts of interest; * Relies on ambiguous definitions; * Includes unsupported, speculative statements lacking empirical basis; * Ignores evidence related to GrSG adaptation to disturbed environments; * Discounts conservation strategies utilized by states; and, * Fails to recognize latest habitat mapping efforts.

The operational restrictions in the ARMPA and Draft RMPA are not based on the best available science. The Buffer Report, the NTT Report, the COT Report, and the GrSG Monograph are fundamentally flawed and do not support the operational restrictions in the ARMPA and the Draft RMPA. BLM should address additional scientific analysis related to GrSG conservation that were not cited in the NTT Report, COT Report, GrSG Monograph, and the Buffer Report. Additionally, BLM should utilize state and local conservation measures that have been imposed and successful for over a decade, rather than unsubstantiated landscape-scale measures that do not take into account site-specific considerations.

The proposed disturbance cap and density limit, to be applied across an entire section of habitat that contains existing development and fragmentation, are overbroad and unduly restrictive. This type of habitat management mechanism should only be applied sparingly on an as-needed basis, after site-specific survey and biological analysis. Specifically, any disturbance threshold should be based on a discrete area of biological influence, rather than across an entire section of habitat that contains existing surface development and habitat fragmentation. The Draft RMPA fails to recognize that increased surface disturbance will not automatically result in environmental impacts where there are protections in place for specific resources, such as offset mitigation requirements. In addition, BLM fails to explain why it rejected less restrictive disturbance caps and density limits. Specifically, BLM proposes to require a 3% disturbance cap in Colorado and a 5% disturbance cap in Wyoming. 2015 ROD at I-18. The use of a 5% disturbance cap in Wyoming demonstrates that a higher threshold is reasonable. Further, BLM does not explain why it rejected Colorado's less restrictive density BMP which calls for the avoidance of 10 well pads per 10-square mile area in GrSG breeding and summer habitat (within 4 miles of active leks) and allows for increased density with a Comprehensive Development Plan, which has proven effective. BLM should remove the proposed 3% disturbance cap and density limit. Instead, BLM should rely on site-specific analysis to determine potential impacts to GrSG and appropriate mitigation measures consistent with CPW's AMAIWR.

Scientific Flaws with the Plan Amendment and Listing Decision: In addition to the missteps related to process, the Plan Amendments are substantively flawed. The key agency reports (the Reports) underpinning the Plan Amendments, as well as the earlier warranted but precluded GRSG listing decision, were plagued with conflicts of interest, bias and selective citation. They ignored the most relevant factors to grouse populations (weather, predation and hunter harvest) in favor of draconian restrictions that will cost jobs and harm local communities without corresponding benefits to the species. The 2018 LUPAs fail to acknowledge the scientific shortcomings in the National Technical Team ("NTT") Report, the Conservation Objectives Team ("COT") Report, the U.S. Geological Society ("USGS") Monograph, and the Manier et al. Buffers Report (collectively, the "Reports"), much less redress the resulting inaccuracies in the agency decisions. DOI and the U.S. Department of Agriculture must recognize critical errors in the Reports and the prescriptions they support. Because future agency

management decisions and potential litigation continue to turn to the Reports for support, addressing the scientific foundation is crucial. Accordingly, DOI should include this statement in the forthcoming amendments and records of decision ("RODs"): The NTT Report, the COT Report, the USGS Monograph and Manier, et al. 2014 (collectively "the Reports") were heavily relied upon in the 2010 listing decision on GRS as well as the LUPAs and corresponding RODs. Since then, the science and understanding on GRS has evolved and some significant shortcomings with the Reports have come to light. Management prescriptions from the Reports should be viewed with caution and tempered with the best available information, including specifically state and local science and knowledge.

Detailed Data Quality Act challenges based on these issues were never adequately answered. In 2015, a coalition of 20 local governments (including the Counties) as well as diverse agricultural and energy interests (collectively, the Petitioners) undertook an independent scientific review of the Reports. The reviews uncovered significant errors, omissions and biases in the Reports that have contaminated subsequent policy and management actions based thereon. In several Data Quality Act challenges, (the Challenges), Petitioners documented hundreds of pages of flaws with: * 3 percent disturbance caps * Density caps of 1 disturbance per 640 acres * Lek buffers * Required Design Features * No Surface Occupancy areas (NSOs) in priority habitat * Implementation of an avoid-minimize-compensate policy * Net conservation gains * Sagebrush canopy cover * The warranted but precluded listing decision for GRS The Reports erroneously ignore accurate population data and adopt flawed modeling approaches that have consistently failed to accurately predict populations. This selective use of science is wholly misleading and assumes GRS populations are in decline despite evidence to the contrary. The Reports ignore natural population fluctuations; single out human-driven activities for alleged declines (but exclude the significance of hunter harvest); and overlook actual threats to GRS such as predation. The Reports fail to meet the standards of quality, integrity, objectivity and utility required by the Data Quality Act, as well DOI's standards of scientific integrity and transparency. DOI failed to address these shortcomings. The National Technical Team Challenge was 97 pages in length with four exhibits for a total of 197 pages of detailed issues. The COT Challenge was 88 pages with four exhibits for a total of 159 pages. The Monograph Challenge was 99 pages with three exhibits for a total of 332 pages. The Buffers Challenge was 41 pages. Nonetheless, the agencies virtually ignored these shortcomings and issued only a four-page response to the cumulative 729-page Challenges, and a two-page response to subsequent appeals. Moreover, in the NEPA documents, the agencies hardly recognized the existence of the Challenges, let alone addressed their merits. BLM and the USFS failed to address the substance and detail in these challenges and provided little if any rationale for their misplaced use of the Reports and the Monograph. No corrective actions were taken nor were adequate disclosures of these flaws recognized or addressed as required by implementing regulations for NEPA. See 40 C.F.R. § 1502.9(b). In sum, these misplaced and unscientific management restrictions will negatively impact the economies and future viability of countless communities, small businesses, and family farms and ranches as well as efforts to conserve GRS and we request BLM address the above bulleted points.

Research has shown that in arid and semiarid areas, grazing at use levels below 40 percent can have positive impacts to forage plants compared to exclusion of grazing.¹ Research conducted in western Colorado in mountain big sagebrush communities found no significant effects from 40-50 years of grazing exclusion on cover or frequency of grasses, biotic crusts, or bare soil and that grazing exclusion decreased above ground net primary production and biodiversity.² In a synthesis of scientific literature on long-term rest in the sagebrush steppe, Davies et al.³ found that long-term rest and properly

managed grazing produced few significant differences, and in some situations, negative ecological effects from long-term rest.

The Department of Interior (DOI) and the U.S. Department of Agriculture (USDA) must recognize shortcomings in the key reports relied upon to craft the BIM's 2015 Record of Decision (ROD) which include the NIT and COT Reports and the USGS Monograph and the prescriptions they support. Agency management decisions and potential litigation will surely turn towards the Reports for support. Absent recognition of shortcomings, land management is sure to be entangled in controversy for years to come. Accordingly, we urge DOI to include this statement in the forthcoming amendments and records of decision (RODs): The NIT Report, the COT Report, the USGS Monograph and Manier, et al. 2014 (collectively "the Reports") were heavily relied upon in the 2010 listing decision on GRS as well as the LUPAs and corresponding RODs. Since then, the science and understanding on GRS has evolved and some significant shortcomings with the Reports have come to light. Management prescriptions from the Reports should be viewed with caution and tempered with the best available information including specifically state and local science and knowledge. Most importantly, none of the information contained in the COT Report, NIT Report or the USGS Monograph specifically addressed the highly unique landforms, variable habitat or naturally fragmented habitat that exists in the Parachute-Piceance-Roan population found in Garfield County. The terrain in our County that hosts Greater Sage Grouse is a naturally fragmented habitat that varies radically over short distances to include severely undulating topography, steep slopes and deep canyons, dark timber, sage brush on the ridges and a complex range of vegetation types. These reports relied on above are void of scientific specificity regarding Garfield County's highly unique terrain.

While many opine about Sage-grouse as if they are the only species in the sage, I'm well aware of the decline of sagebrush songbirds and mule deer across much of the range, and have documented Brewer's and sagebrush sparrow, sage thrasher, and mule deer on the Pinedale Anticline's critical winter range, where the species has declined by 60% since drilling began in winter a little over a decade ago. Sage-grouse are now the face of a systemic problem of not giving wildlife freedom to roam across the west. Short-sighted land management plans that change with shifting political winds aren't good for wildlife or stakeholders. We need to know that our leaders in land management will stand with the best science and researchers in seeking optimal solutions.

With that backdrop, the sudden change to Secretarial order 3353 just two years away from the next milestone of the current plan is baffling. I stand with Governors Mead and Hickenlooper in calling for giving the current plan a chance to work. Order 3353 isn't adaptive management, but a major shift from solid science into the unknown. State population targets and reduced buffers for these iconic birds, still declining and vulnerable to prolonged drought and a host of other threats invites a population crash that would likely be irreversible.

The EPA supports coordination among federal, state, local, and tribal authorities for consistent and effective conservation of imperiled species. We are concerned that the Draft EIS does not provide sufficient information to fully assess the impacts of the proposed action. For this reason, the EPA has rated the Draft EIS/RMPA as Environmental Concerns - Insufficient Information - (EC-2). The description of the EPA's rating system is available at: <https://www.epa.gov/nepa/environmental-impact-statement-rating-system-criteria>. The enclosed detailed comments include recommendations for improving the assessment and disclosure of the Proposed Action's expected impacts to greater sage-

grouse and habitat; however, we defer to the expertise of the U.S. Fish and Wildlife Service and appropriate state wildlife management agencies regarding the extent to which those impacts would be beneficial or detrimental to the species. Specifically, we recommend improvements in the analysis of the potential impacts from increased oil and gas development for the Proposed Action, and updating the mitigation section to reflect any changes resulting from public comments.

We note that most of the 2015 greater sage-grouse analysis was focused largely on lek habitat. However, BLM has also identified winter concentration, nesting, brood rearing and linkage habitats as having the highest conservation value to maintain sustainable greater sage-grouse populations. We recommend the Final EIS include any new information on winter, nesting and brood rearing habitat in Colorado and consider whether additional mitigation measures are warranted to protect these seasonal habitats from impacts from O&G development. We also recommend the Final EIS include information on whether increased drilling and O&G production in greater sage-grouse habitat compared to the 2015 plan would specifically impact any general- or linkage habitat areas.

The RMPA should replace the current RMPA mapping with the revised mapping of priority habitat boundaries and active lek sites provided by Colorado Parks and Wildlife ("CPW")

A study was conducted by Adrian Monroe, a CSU research scientist, and found the effects of grazing on sage-grouse populations may depend on plant productivity. The study evaluates multiple, real-world livestock grazing operations across the entire state. There is a direct correlation between plant growth, when and how much livestock graze, and the effects on wildlife, and a way to sustain ranching while simultaneously sustaining wildlife populations.

1.3.6 Disturbance and Density Caps

No surface occupancy stipulations must be maintained for oil and gas development in priority habitats. Preventing destruction of greater sage-grouse habitat is critical to avoiding harm while permitting development.

Existing disturbance caps must be maintained to limit harm to habitat. Disturbance caps serve as a backstop that limits harm to habitat and provides needed certainty.

BLM acknowledges the changes in Utah "could result in a site-specific loss of Greater Sage-Grouse habitat and displacement from the area of development by local populations."⁹⁰ BLM also admits that, "Projects that would likely be precluded under the No Action Alternative could proceed under the 2018 proposed amendments."⁹¹ BLM reasons, however, that requiring that impacts improve habitat will offset those concerns. There are significant problems with the agency's reasoning because the Draft Utah mitigation rule does not provide a preference for offset benefits to accrue within the landscape affected by the project; prioritize projects that provide the greatest benefits, and reduce the greatest threats, to sage-grouse habitat; does not require mitigation for all impacts; does not guarantee against temporal losses; does not use a habitat quantification tool to measure comparability between impacts and offsets. BLM also notes the requirement to avoid development within priority habitat, but this development would expressly occur within priority areas. The DEIS also provides new opportunities for waivers, exceptions, modifications for siting projects in priority habitat.⁹³

In Idaho, the DEIS states: Removal of the 3 percent project level disturbance cap would allow BLM to intentionally cluster developments within areas already degraded by discrete anthropogenic activities in

Greater Sage-Grouse habitat as long as the overall disturbance within the BSU remains below 3 percent. The 3 percent project scale disturbance cap has the potential to spread development into undeveloped areas of Greater Sage-Grouse habitat just to avoid reaching the 3 percent project scale disturbance cap in already fragmented areas. All 8 BSUs in Idaho are well under the 3 percent BSU scale Disturbance Cap (most are less than 1 percent) and are expected to remain low because of the nonet-loss mitigation standard and the other restrictions to development in PHMA and IHMA. Some areas, especially those with existing development, may be further developed even though compensatory mitigation would offset those impacts for the statewide Greater Sage-Grouse habitat.⁹⁴ Essentially, Idaho has come up with a standard that for the foreseeable future will never disallow a project because the priority area densities are so low, even though the density of an individual project area may be high. This flies in face of studies showing impacts to sage-grouse because of individual project density, and Edmunds study that there can be differences between densities at large and small-scale levels that are significant. Also, Idaho's mitigation program is not finalized, and there is no time line by which it is guaranteed to be finalized; thus, we do not know what provisions it will or will not include. As a result, we oppose these amendments to the land use plan, both because they will reduce important protections for sage-grouse, and because they make it more likely that the bird will need to be listed under ESA.⁹⁵

IX. DENSITY AND DISTURBANCE CAPS SHOULD BE MAINTAINED. The DEISs propose changes in Utah and Idaho to the density and disturbance caps set out in the 2015 BLM sage-grouse land use plans limiting the amount of development that can take in priority habitat management areas. We oppose these changes, for the reasons set out below. ⁶⁶ The decision by the FWS not to list sage-grouse under the ESA noted the importance of the caps to sagegrouse protection: Each Federal Plan includes a disturbance cap that will serve as an upper limit (the maximum disturbance permitted). Anthropogenic disturbance has been identified as a key impact to sagegrouse. To limit new anthropogenic disturbance within sage-grouse habitats, the Federal Plans establish disturbance caps, above which no new development is permitted (subject to applicable laws and regulations; e.g., General Mining Law of 1872, and valid existing rights). This cap acts as a backstop to ensure that any implementation decisions made under the Federal Plans will not permit substantial amounts of new disturbance within the distribution of sage-grouse on BLM and USFS

I.3.7 Fire and Invasive Species

A more specific approach to managing noxious weeds and invasive species should be developed and included to address this significant threat. The 2018 report issued by Western Association of Fish and Wildlife Agencies (updating a 2013 report) summarizing policy, fiscal and science challenges land managers have encountered in control and reduction of invasive grasses and fire cycle, with a focus on the greater sage-grouse found ongoing gaps and also recommended that the agencies continue working on a "landscape-scale approach to fire and land management and further enhance collaborative, science-based approaches to management activities within the Sagebrush Biome." 2018 Gap Report, p. 46. Following these recommendations and committing to developing a more detailed strategy is needed.

I.3.8 General Habitat Management Areas

A just-released U.S. Forest Service study (Cross 2018) attempted to quantify the importance of connectivity across the sagebrush range. ⁶¹ Scientists set out to map the mating areas called "leks" and identify the birds that use each of these areas. They grouped 1,200 leks into "nodes," or a collection of leks, within the network of greater sage-grouse. The nodes were then categorized as "hubs" or "spokes" based on their importance to facilitating gene flow within and across the range of sage-grouse. Hubs

foster gene flow out to the spokes. If a hub were to be lost, the birds in the connected spokes would be at risk of genetic isolation. The two maps below depict (1) the location of general habitat in Utah under the 2015 BLM sage-grouse land use plans, with the pink areas representing general habitat,⁶² and (2) a figure depicting the overall ranking of node importance to genetic connectivity across the contiguous range of greater sage-grouse, as measured by "betweenness" calculated in Cross et al. 2018.⁶³ As the maps reveal, the Forest Service found hubs across the bird's range, with a concentration in northwestern Utah, where protection of general habitat is particularly important. Areas in northeastern Utah also show up as corridors of genetic connectivity to Colorado. Even where general habitat is not important for connectivity between populations, as is in central Utah, general habitat is important for providing links between different priority habitat areas within Utah. Similarly, hubs were also concentrated in central Idaho, where large swaths of general habitat are located.⁶⁴ *See attachment, Map* Given the role general habitat plays in preserving connectivity between populations, as well as the other purposes it serves, it would be a grave mistake to eliminate, or even reduce, protections for these areas. In addition, the importance placed on general habitat by the Fish and Wildlife Service raises the concern that the proposed changes will lead to a greater chance of listing sage-grouse under the ESA. The proposed amendments to eliminate or reduce protections for general habitat should therefore be rejected.

CPC strongly supports the intent of the DRMPA to improve the alignment between individual state plans and/or conservation measures, and DOI and BLM policy. States have authority for managing wildlife populations and work with local governments and stakeholders to balance conservation and business development practices in consideration of their socioeconomic impacts.

Of the more than 48 million acres in the Utah Subregional Planning Area, only about 580,000 are in general habitat, as are another 225,000 acres of mineral estate.⁵⁵ Eliminating general habitat in Utah would mean, for example, that mitigation, including avoidance, minimization and compensatory mitigation, as well as minimal Required Design Features (RDFs), are not required in those areas, regardless of the impact to sage-grouse populations or sagebrush habitat. It would also preclude application of precautionary measures such as avoiding removal of sagebrush and minimizing development that creates a physical barrier to sage-grouse movement.⁵⁶ For areas constituting such a small percentage of Utah's land base, it makes no sense to skimp on protections that could both prevent further reductions in Utah's sage-grouse populations and avoid imposing additional burdens on neighboring states still required to manage general habitat for sage-grouse. This is particularly true given the importance of general habitat in Utah and other sagebrush steppe states for sage-grouse connectivity. Sage-grouse select large intact sagebrush landscapes.⁵⁷ The USGS Synthesis has confirmed the importance of maintaining connectivity between different sage-grouse populations to conserve genetic diversity.⁵⁸ A 2015 study found that long-distance movements of GRSG have been documented, but the risk associated with the landscapes that the birds traverse is not well understood. The current designated priority area strategy does not protect movement corridors among priority areas, and some areas may be at risk of isolation even when they are not separated by large distances.⁵⁹ A 2016 study covering Idaho, Utah and Wyoming showed that several sage-grouse moved 100 km north and west, traversing from the Wyoming Basin to a range typically associated with the Snake River Plain, and theorized that these migrating birds may serve as an important genetic link between two sage-grouse management zones.⁶⁰ A just-released U.S. Forest Service study (Cross 2018) attempted to quantify the importance of connectivity across the sagebrush range.⁶¹ Scientists set out to map the mating areas called "leks" and identify the birds that use each of these areas. They grouped 1,200 leks into "nodes," or

a collection of leks, within the network of greater sage-grouse. The nodes were then categorized as "hubs" or "spokes" based on their importance to facilitating gene flow within and across the range of sage-grouse. Hubs foster gene flow out to the spokes. If a hub were to be lost, the birds in the connected spokes would be at risk of genetic isolation.

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VII. GENERAL HABITAT MANAGEMENT AREAS SHOULD BE MAINTAINED. The Utah DEIS would eliminate all protections for general habitat.⁴⁷ Other states would weaken protections for sage-grouse in general habitat;⁴⁸ Idaho, for example would eliminate lek buffers, reduce the application of required design features, and eliminate compensatory mitigation in general habitat.⁴⁹ For the reasons set out below, we oppose any reduction of protection for general habitat. While General Habitat Management Areas (GHMA) represent areas with fewer leks and lower densities of breeding birds where disturbance is limited, and provide greater flexibility for land use activities,⁵⁰ their designation is still important to sage-grouse conservation. The FWS 2015 Sage-grouse Listing Decision states: The designation as GHMA provides sage-grouse conservation by protecting habitat and connectivity between populations and potential refugia in the event of catastrophic events such as wildfire. While the amelioration of threats in GHMA will likely be less than in PHMA due to less stringent required conservation measures, GHMA do have restrictions that benefit sage-grouse conservation.⁵¹ It is important to ensure that seasonal habitats not included in priority areas receive some protection,⁵² and to allow for expansion of recovering populations into newly restored areas. In addition, general habitat can serve as a location for compensatory mitigation offsets and restoring degraded habitat.⁵³ The recent USGS synthesis of recent science on sage-grouse recently stated: Maintaining connectivity among (priority areas) through restoration activities or conservation of existing sagebrush communities at important "pinch points," where movements are constrained, is an important component of an overall sage-grouse management strategy. Maintenance or restoration of habitat quality within corridors is important to limit exposure to risk (for example, from predators), and because sage-grouse use these sites as resting and refueling areas.⁵⁴

In addition, general habitat can serve as a location for compensatory mitigation offsets and restoring degraded habitat.⁵³ The recent USGS synthesis of recent science on sage-grouse recently stated: Maintaining connectivity among (priority areas) through restoration activities or conservation of existing

sagebrush communities at important "pinch points," where movements are constrained, is an important component of an overall sage-grouse management strategy. Maintenance or restoration of habitat quality within corridors is important to limit exposure to risk (for example, from predators), and because sage-grouse use these sites as resting and refueling areas.⁵⁴ Of the more than 48 million acres in the Utah Subregional Planning Area, only about 580,000 are in general habitat, as are another 225,000 acres of mineral estate.⁵⁵ Eliminating general habitat in Utah would mean, for example, that mitigation, including avoidance, minimization and compensatory mitigation, as well as minimal Required Design Features (RDFs), are not required in those areas, regardless of the impact to sage-grouse populations or sagebrush habitat. It would also preclude application of precautionary measures such as avoiding removal of sagebrush and minimizing development that creates a physical barrier to sage-grouse movement.⁵⁶ For areas constituting such a small percentage of Utah's land base, it makes no sense to skimp on protections that could both prevent further reductions in Utah's sage-grouse populations and avoid imposing additional burdens on neighboring states still required to manage general habitat for sage-grouse. This is particularly true given the importance of general habitat in Utah and other sagebrush steppe states for sage-grouse connectivity. Sage-grouse select large intact sagebrush landscapes.⁵⁷ The USGS Synthesis has confirmed the importance of maintaining connectivity between different sage-grouse populations to conserve genetic diversity.⁵⁸ A 2015 study found that long-distance movements of GRSG have been documented, but the risk associated with the landscapes that the birds traverse is not well understood. The current designated priority area strategy does not protect movement corridors among priority areas, and some areas may be at risk of isolation even when they are not separated by large distances.⁵⁹ A 2016 study covering Idaho, Utah and Wyoming showed that several sage-grouse moved 100 km north and west, traversing from the Wyoming Basin to a range typically associated with the Snake River Plain, and theorized that these migrating birds may serve as an important genetic link between two sage-grouse management zones.⁶⁰

1.3.9 Habitat Boundary/Habitat Management Area Designations

For larger adjustments, NEPA and BLM planning rules and procedures should apply, requiring a plan amendment and public engagement, as well as the following provisions, before any adjustment of habitat management boundaries: * Federal, state, and local agencies, and other interested stakeholders, should have the opportunity to participate. * There should be public notice of proposed changes, and an opportunity for the public to comment. * Adjustments should be based on the best available, science-based information, including all applicable peer-reviewed research papers. * Review of boundaries would occur every five years, unless more frequent adjustments are necessary, as determined by BLM and the relevant state agency * Boundaries would generally not be adjusted to exclude non-habitat areas if those areas are wholly contained within existing management boundaries. * Areas within habitat management boundaries not currently used by sage-grouse but ecologically capable of supporting sage-grouse would not be removed from existing management boundaries.¹⁵³ As part of this process, states may convene working groups to recommend boundary adjustments, as long as the recommendations of those groups are made available to the public for comment. Because of the concern of a future listing under ESA, any changes should not represent a meaningful decrease in the current level of conservation under the 2015 Sage-grouse Plans. In the event that BLM wants to address the potential for broader habitat adjustments, then the agency can conduct additional analysis to evaluate the impacts of increasing and reducing habitat within a larger area (i.e., greater than 3% of the identified habitat management area polygon), which could then be tiered to for later adjustments.

The Plans manage PHMAs as right-of-way "avoidance areas" instead of exclusion areas (See, e.g., Wyoming RMPA FEIS at 2-25), as recommended by their own experts. This prevents certainty of implementation by allowing new rights-of-way to be granted on a case-by-case basis. "Exclusion" is the appropriate level of management for these habitats based on the best available science, and this level of protection should also apply to Focal Areas and Winter Concentration Areas as well. Only portions of General Habitats would be managed as avoidance areas for rights-of-way based on other resource values (See, e.g., Wyoming RMPA FEIS at 2-26); the importance of protecting sage grouse habitat merits avoidance management for all General Habitats.

XII. HABITAT BOUNDARY ADJUSTMENTS SHOULD BE BASED ON BEST AVAILABLE SCIENCE AND DATA, AND MADE WITH FULL TRANSPARENCY. All the 2018 DEISs except for the Oregon DEIS include provisions for adjustment of sage-grouse habitat management boundaries.¹⁵⁰ We support transparent and consistent science-based efforts to ensure that any habitat management boundaries changes (1) represent the most available up-to-date and accurate information; and (2) do the most effective job possible of conserving sage-grouse habitat, and do not result in a meaningful decrease in the current level of conservation provided by the 2015 sage-grouse land use plans. Moreover, boundary adjustments and complementary adjustments of related management prescriptions should only be made to reflect a changed understanding of the preferences of the species and/or data showing changed use and conditions of habitat; adjustments may not be made to accommodate a proposed use that might otherwise be prohibited or conditioned based on a different habitat classification. We recognize that some changes to boundaries will be so small that they do not require a plan amendment. Plain maintenance procedures are available to refine or clarify a previously approved decision. BLM's regulations and Land Use Planning Handbook provide that "land use plan decisions and supporting components can be maintained to reflect minor changes in data" but [m]aintenance is limited to further refining, documenting, or clarifying a previously approved decision incorporated in the plan."¹⁵¹ Examples of appropriate plan maintenance provided in the BLM Land Use Planning Handbook include "correcting minor data, topographical, mapping, or tabular data errors in the planning records after a plan or plan amendment has been completed" and "refining the known habitat of a special status species addressed in the plan based on new information."¹⁵² Such actions, which do not involve formal public involvement or NEPA analysis, should only be used for small boundary adjustments of an existing individual habitat management area. We propose that an adjustment (adding or subtracting acreage) comprising not more than 3% of an existing polygon would qualify as appropriate for a maintenance action.

1.3.10 Habitat Management Areas

All sage-grouse habitat must be subject to specific management approaches. While the strongest protections should continue to apply to the most important habitat, managing general habitat is also important for maintaining, improving, restoring and expanding habitat overall. Protections that were included in Sagebrush Focal Area designations should be incorporated into Priority Habitat Management Areas, where appropriate. The General Habitat Management Areas in Utah must be maintained; eliminating GHMA in Utah would hamper sage-grouse recovery in the state and have grave implications for habitat designations in other states. Similarly, proposals to remove management protections associated with GHMA in Idaho must not be adopted, since they effectively undercut the meaning of the habitat classification.

In addition, to meet the overall goals of the plans and habitat objectives to conserve, enhance and restore sage-grouse habitat, the plans should develop and incorporate specific restoration targets for PHMA to incentivize activities to reduce disturbance and the threat from noxious weeds.

1.3.11 Habitat Objectives

Specific habitat objectives for all aspects of the sage-grouse lifecycle should be defined, as discussed in the 2018 USGS report, which highlight the need to address the full range of sage-grouse habitat.

1.3.12 Lands and Realty

Sage-grouse habitat must be retained in federal ownership and not transferred to state control in order to maintain certainty of management across these lands, as well as habitat connectivity.

Sage-grouse habitat should be retained in federal ownership. The BLM's Scoping Report mentions the concerns of states such as Utah that maintaining sage-grouse habitat in federal ownership could affect the states' ability to develop land.⁶⁷In fact, the Utah DEIS states: Increased potential for disposal and/or exchange of BLM-managed federal lands in [priority] and Greater Sage-Grouse habitat outside of [priority areas] could possibly result in expanded economic opportunities in the affected location... Possible land uses include use for county and municipal physical facilities, commercial or residential development, and/or recreation use.⁶⁸ These uses are all identified as threats to sage-grouse habitat in the 2013 Conservation Objectives Team (COT) Report, which developed range-wide conservation objectives for sage-grouse that define the degree to which threats needed to be reduced or ameliorated to ensure that the species was no longer in danger of an ESA listing. ⁶⁹ It can be difficult under the standards proposed by BLM to determine if land disposal "will compromise" sage-grouse persistence, or have "no direct or indirect impact" on populations.⁷⁰Retaining habitat in federal ownership helps ensure the land will be managed as prescribed in the BLM land use plans, providing certainty. It also will promote connectivity of sage-grouse populations.⁷¹States have not committed to all the same management and approaches as BLM. Moreover, in some cases, such as for state trust lands, they are required to manage the lands to maximize revenues, which is likely inconsistent with conserving sage-grouse habitat. If there is a need to correct lands designated as sage-grouse habitat, we prefer it be accomplished through authorized habitat management boundary adjustments as provided for in the 2018 DEISs, consistent with our recommendations for how that process should be conducted. We also support the continued inclusion of provisions in the BLM plans that encourage acquisition of habitat where it will benefit sage-grouse populations.

VIII. KEEPING GROUSE HABITAT IN FEDERAL OWNERSHIP IS IMPORTANT FOR CONSISTENT MANAGEMENT AND CONNECTIVITY. The 2015 Utah sage-grouse land use plan provides that BLM cannot dispose of priority or general habitat, unless there are no impacts to sage-grouse or its habitat or there would be a net conservation gain to sagegrouse. The 2018 DEIS would change this provision to allow disposal if it improves the condition of sage-grouse habitat, or BLM can demonstrate disposal "will not compromise the persistence of Greater Sage-Grouse populations" within priority habitat. The 2015 Utah plans also support identifying areas where acquisitions or easements will benefit sage-grouse habitat, while the 2018 DEIS eliminates this provision.⁶⁵ Similarly, the Nevada DEIS also allows disposal of sage-grouse habitat if it would have "no direct or indirect adverse impact on conservation of the Greater Sage-Grouse or can achieve a net conservation gain though the use of compensatory mitigation."⁶⁶ We oppose these changes in the 2018 DEISs. Sage-grouse habitat should be retained in federal ownership. The BLM's Scoping Report mentions the concerns of states such as Utah that

maintaining sage-grouse habitat in federal ownership could affect the states' ability to develop land.⁶⁷ In fact, the Utah DEIS states: Increased potential for disposal and/or exchange of BLM-managed federal lands in [priority] and Greater Sage-Grouse habitat outside of [priority areas] could possibly result in expanded economic opportunities in the affected location... Possible land uses include use for county and municipal physical facilities, commercial or residential development, and/or recreation use.⁶⁸ These uses are all identified as threats to sage-grouse habitat in the 2013 Conservation Objectives Team (COT) Report, which developed range-wide conservation objectives for sage-grouse that define the degree to which threats needed to be reduced or ameliorated to ensure that the species was no longer in danger of an ESA listing. ⁶⁹ It can be difficult under the standards proposed by BLM to determine if land disposal "will compromise" sage-grouse persistence, or have "no direct or indirect impact" on populations.⁷⁰ Retaining habitat in federal ownership helps ensure the land will be managed as prescribed in the BLM land use plans, providing certainty. It also will promote connectivity of sage-grouse populations.⁷¹ States have not committed to all the same management and approaches as BLM. Moreover, in some cases, such as for state trust lands, they are required to manage the lands to maximize revenues, which is likely inconsistent with conserving sage-grouse habitat. If there is a need to correct lands designated as sage-grouse habitat, we prefer it be accomplished through authorized habitat management boundary adjustments as provided for in the 2018 DEISs, consistent with our recommendations for how that process should be conducted. We also support the continued inclusion of provisions in the BLM plans that encourage acquisition of habitat where it will benefit sage-grouse populations.

1.3.13 Lek Buffers

Prescribed buffer distances (both those limiting activities and those setting out areas for analyzing and addressing impacts) must be maintained to guide analysis of impacts and limit harm to habitat.

BLM and USFS may approve actions in PHMAs that are within the applicable lek buffer distance identified above only if the BLM or USFS determine that a buffer distance other than the distance identified above offers the same or greater level of protection to sage-grouse and its habitat. The BLM or USFS will make this determination based on best available science... For actions in GHMAs, the BLM and USFS will apply the lek buffer distances in Table 3 as required conservation measures to fully address any impacts to sage-grouse identified during the project-specific NEPA analysis. However, if it is not possible to locate or relocate the project outside of the applicable lek buffer distance(s) identified above, the BLM or USFS may approve the project only if: (1) Based on best available science, landscape features, and other existing protections, (e.g., land use allocations, State regulations), the BLM or USFS determine that a lek buffer distance other than the applicable distance identified above offers the same or a greater level of protection to sage-grouse and its habitat, including conservation of seasonal habitat outside of the analyzed buffer area; or (2) the BLM or USFS determines that impacts to sage-grouse and its habitat are minimized such that the project will cause minor or no new disturbance (e.g., co-location with existing authorizations); and (3) any residual impacts within the lek buffer distances are addressed through compensatory mitigation measures sufficient to ensure a net conservation gain, as outlined in the Mitigation Strategy (see below). By applying lek buffers in addition to other measures, the Federal Plans provide an additional layer of protection to the habitat in closest proximity to leks and the areas documented in the literature to be the most important for breeding and nest success.¹⁰⁰

If BLM is to move forward with eliminating the 1-mile leasing closure around sage grouse lek sites in favor of a No Surface Occupancy (NSO) stipulation, then it must be done in a manner that provides

certainty for conservation outcomes. The draft plan provides opportunities for oil and gas operators to seek waivers, modifications, or exceptions (WME) for both the new NSO stipulation within 1-mile of a lek and new criteria for WMEs in priority habitat beyond that distance. Given the fact that the criteria for both stipulations is heavily predicated upon consultation with Colorado Parks and Wildlife and compensatory mitigation, then BLM must commit to requiring compensatory mitigation while also still adhering to the mitigation hierarchy, which prioritizes avoiding and minimizing impacts prior to mitigating.

On average, lek attendance was stable when no oil and gas development was present within 6,400m. However, attendance declined as development increased.⁴ For nesting habitat Zabihi et al. (2017) likewise found that avoidance of wellpads and access roads were the two most important factors predicting nest site selection. Importantly, Green et al. confirmed that declines in sage-grouse populations may continue even within Wyoming's "core areas," where density of wells is limited to approximately one pad per square mile. In addition, Kirol et al. (2015b) found that increases on coalbed methane wastewater ponds were correlated with decreased nest success in the Powder River Basin of Wyoming. To rectify these problems, BLM should impose, as terms of the Resource Management Plan, Conditions of Approval on all existing fluid mineral leases consistent with the recommendations of the Sage-Grouse National Technical Team, including no new surface occupancy on existing federal leases (with exceptions for occupancy of no more than 3% outside a 4-mile lek buffer, if the entire leasehold is within such habitat).

To develop relevant and practical lek buffer distances for the BLM plans, DOI commissioned the U.S. Geological Survey to review the scientific information on conservation buffer distances for sage-grouse. The resulting study¹⁰¹ recommended there be 5 km (3.1 miles) between leks and infrastructure related to energy development.¹⁰² It is important to stress that this distance does not result in 100% protection for sage-grouse: [T]he minimum distance inferred here (5 km [3.1 miles]) from leks may be insufficient to protect nesting and other seasonal habitats. Based on the collective information reviewed for this study, conservation practices that address habitats falling within the interpreted distances may be expected to protect as much as 75 percent to 95 percent of local population's habitat utilization.¹⁰³ A recent Wyoming study suggests that current regulations may only be sufficient for limiting population declines but not for reversing these trends. That study also noted that areas not protected under the 100 Wyoming plans are not subject to core area regulations and may experience larger increases in oil and gas development and, therefore, larger declines in sage-grouse populations.¹⁰⁴ Other scientific input continues to stress the importance of buffers: ? 2016 Dahlgren study (UT): This study assesses distances between seasonal habitats to recommend buffer zones for conservation. Females and their broods from larger populations in contiguous sagebrush moved more than those in smaller, isolated populations, but small populations moved farther from leks to winter grounds. Distances from nests to leks were consistent with other research, but nest success slightly increased with distance from leks. Seasonal movements of Utah GRSG were generally lower than reported rangewide, likely because of fragmented sagebrush habitats. Management actions that increase the area of usable sagebrush may benefit Utah GRSG. Management plans can incorporate buffers based on, for example, observed distances between nests and leks to increase the conservation value of management actions. The authors recommended buffers of 5 and 8 kilometers between disturbed areas and GRSG breeding and summer habitats, respectively.¹⁰⁵ ? 2018 Holloran Letter (importance of 2015 protections): Recommending management approaches and objectives established in 2015 BLM sage-grouse land use plans be used as minimum standards in sagebrush habitat.¹⁰⁶ BLM's argument in support of the changes

in Idaho, despite its acknowledgment that infrastructure and development would be allowed much closer to leks, is that there is very new development of infrastructure in Idaho in either priority or important habitat.¹⁰⁷ If that is the case, then there is no real need for the proposed change. BLM also asserts that disturbance from development is not the major threat to sage-grouse in Idaho. While that is true, it is still a threat, one that buffers are designed to avoid. The Utah and Nevada DEISs argue that the 2014 USGS Report acknowledges that because of differences in populations, habitats and other factors, there is no single buffer distance that is appropriate for all sagegrouse populations and habitats across the range, and that buffers are just one of a number of protections for sage-grouse.¹⁰⁸ The USGS Report acknowledges these points, and states that it attempted to take this variability into account in determining proper buffer distances, and notes that some studies have supported an 8 km buffer.¹⁰⁹ As a result, USGS thus ended up with a compromise standard that protects most, but not all, habitat. Given that FWS explicitly relied on buffers as one of the protections that allowed it to avoid listing sage-grouse, it would be a mistake to reduce these standards or vest greater discretion with the states to allow reductions.

X. BUFFERS AROUND LEKS SHOULD BE MAINTAINED. The Idaho DEIS proposes to weaken buffers around leks in important habitat management areas, and to eliminate them in general habitat. They also grant additional discretion to decrease or increase buffers generally.⁹⁶ Other DEISs also increase the degree of discretion afforded to decrease or increase⁹⁷ buffers.⁹⁸ Still other DEIS propose to provide "clarification" for lek buffers without stating what form that clarification would take.⁹⁹ We oppose any changes that would weaken the standard for buffers in the 2015 Sage-grouse Plans. The decision by the FWS not to list sage-grouse under the ESA noted the importance of buffers to sagegrouse protection, and their role in the decision not to list: Sage-grouse leks are communal breeding centers that are representative of the breeding and nesting habitats. Conservation of these areas is crucial to maintaining sage-grouse populations.

1.3.14 Mitigation

Overall, the plans must explicitly commit to maintaining the FWS "not warranted" decision. The purpose and need of the 2018 amendments to seek better cooperation with states by modifying the management approach in the plans must be reconciled and made consistent with the purpose and need of the 2015 Sage-grouse Plans to conserve, enhance, and restore sage-grouse habitat by eliminating or minimizing threats to their habitat identified in the FWS 2010 finding that listing under the ESA was warranted. Without ongoing conservation, enhancement and restoration of habitat, the already impacted habitat and risks of further harm that led to the FWS 2010 finding will not be sufficiently addressed in these plans to maintain the FWS 2015 finding that listing is no longer warranted.

Mitigation must be applied through the mitigation hierarchy (avoid, minimize, then compensate) and, at a minimum, apply a "no net loss" standard so that while a range of multiple uses continue, their impacts are addressed. Avoidance should include avoiding locating rights-of-ways in habitat. Mitigation programs must incorporate a set of recognized principles related to mitigation, and continue to provide for application of compensatory mitigation at greater than 1:1 ratios, where necessary to address factors such as the full suite of harms and the uncertainty of success for specific mitigation measures, including where state programs provide for such approaches. The 2015 Sagegrouse Plans were premised on the understanding that ongoing activities in habitat would result in ongoing damage to habitat, so that opportunities to enhance and expand habitat must be provided in order for the species to ultimately survive.

Mitigation is a well-established tool that was relied upon in the 2015 Fish and Wildlife Service decision to support the decision to not list the Greater Sage-Grouse as threatened or endangered under the Endangered Species Act. The practice of "mitigation" is based on two common-sense principles: (1) certain activities are more appropriate in some locations than others; and (2) we should clean up after ourselves as we conduct activities that damage the landscape. The simplest definition of mitigation is "the action of reducing the severity, seriousness, or painfulness of something." Mitigation "done right" involves smart planning, efficient and effective decision-making, and predictability for project proponents, as well as a multitude of other stakeholder interests, and can result in positive outcomes for all - the public, communities, businesses, and the environment. The widely accepted mitigation hierarchy is a step-wise framework for evaluating proposed impacts that first acknowledges that the best way to address impacts from development on the most important habitat is to avoid those impacts in the first place. Some places are just too important to develop, or measures to minimize and/or compensate impacts may not be available or effective. Consider the wintering areas for sage-grouse. Several recent studies have confirmed the importance of ensuring conservation of sufficient amounts of these habitats.¹¹² The next step in the hierarchy is to minimize impacts. A project developer should employ a wide range of actions to avoid as much disturbance as possible to wildlife in the area. For example, markers work to prevent fence-related mortality or injury that can occur when sage-grouse fly low to the ground over sagebrush range.¹¹³ If unavoidable impacts occur, the third and final step in the mitigation hierarchy is to compensate for the loss by creating, restoring, enhancing, or preserving habitat elsewhere. This might involve securing a conservation easement on private land or restoring nearby habitat with treatments designed to improve conditions for the affected species overall. Compensatory mitigation for a new road system or transmission line in sagebrush habitat could involve, for example, payments by the developer to reconvert farmland in central Montana that have pushed out sage species' preferred cover back to native sagebrush habitat. Thus, in its most basic sense, mitigation policy is truly about good governance. Sound mitigation policy provides agencies such as BLM with a structured, rational, and transparent framework for reviewing use requests and meeting their multiple use and sustained yield mandates. When agencies frontload their planning and provide the public and applicants with information in advance about where development should and should not go, they are empowered to make faster, better decisions. Potential conflicts between conservation and development are reduced when developers know in advance what areas should be avoided. Good mitigation policy and practice is also one of the best opportunities to achieve sustainable development and conservation goals. Projects, even those with relatively small footprints, can pose significant impacts to migratory wildlife. Avoidance of the most important places offers the best way to support a Western landscape where species can thrive. Where impacts cannot be avoided or minimized, well-designed compensatory mitigation programs can achieve the multiple-use, sustained yield objectives of BLM and other federal agencies.

Additional authority also exists for the use of the mitigation hierarchy in issuing project-specific authorizations. For example, project-specific authorizations must be "in accordance with the land use plans,"¹³⁵ so if the land use plans adopt the mitigation hierarchy or other mitigation principles for the sage grouse under the various authorities described above, the project authorization must follow those principles. Moreover, in issuing project-specific authorizations, BLM may attach "such terms and conditions" as are consistent with FLPMA and other applicable law.¹³⁶ This general authority also confers broad discretion on BLM to impose mitigation requirements on project applicants, including compensatory mitigation in appropriate circumstances.¹³⁷ Finally, as a distinct authority, BLM also has the obligation to ensure that project-specific authorizations do not result in "undue or unnecessary degradation. FLPMA states that BLM "shall, by regulation or otherwise, take any action necessary to

prevent unnecessary or undue degradation of the lands." 138A number of cases have found that BLM met its obligation to prevent unnecessary or undue degradation based, in part, on its imposition of compensatory mitigation. See e.g., *Theodore Roosevelt Conservation Partnership v. Salazar*, 616 F.3d 497, 518 (D.C. Cir. 2010) (BLM decision to authorize up to 4,399 natural gas wells from 600 drilling pads did not result in "unnecessary or undue degradation" in light of substantial mitigation required from permittees, including prohibition of new development outside core area until comparable acreage in the core was restored to functional habitat, and a monitoring and mitigation fund of up to \$36 million); see also *Gardner v. United States Bureau of Land Management*, 638 F.3d 1217, 1222 (9th Cir. 2011) (FLPMA provides BLM "with a great deal of discretion in deciding how to achieve the objectives" of preventing "unnecessary or undue degradation of public lands.")

As noted above, there has been a great deal of concern surrounding the BLM's authority to apply a net conservation benefit standard for sage grouse. Regardless of the standard employed, it is most important that there be a high level of certainty that direct, indirect, and cumulative impacts of infrastructure development will be offset with high quality, durable, timely, and additional compensatory mitigation projects. High quality compensatory mitigation projects are guided by mitigation programs that appropriately account for the magnitude, extent and duration of impacts, characterize the benefits of compensatory mitigation projects, and ensure that compensatory mitigation projects are durable. We support compensatory mitigation programs that seek to achieve a "reasonable relationship" between impacts and compensatory mitigation and adequately account for habitat quality, temporal losses, and risk of project failure. The 2016 Work Group Mitigation Report states that for compensatory mitigation programs to adequately address residual impacts, they should "provide habitat values, services and functions that bear a reasonable relationship to the lost values, service and functions for which mitigation is required". 148 There are large variations in the quality of habitat for sage-grouse, and a significant likelihood of failure of restoration of habitat due to catastrophic fire events and the current low success rates of restoration. 149 Recognizing these issues, most state sage-grouse mitigation programs, such as Nevada, address the variation in habitat quality by including measures of habitat functionality and using adjustment factors to account for the risk of failure and temporal loss. If habitat functionality is considered, state agencies can use a ratio-based estimate, adjusted to include consideration of factors such as likelihood of success and temporal loss of functions. Compensatory mitigation programs need not rely upon overly complicated measures - they must be defensible but need not be overly precise.

BLM has ample authority to apply the full mitigation hierarchy in the sage-grouse plans. FLPMA directs that public lands to be managed in a manner to ensure the protection of ecological and environmental values, preservation and protection of certain public lands in their natural condition, and provision of food and habitat for wildlife. 120 This direction guides every significant aspect of the management of public lands under FLPMA, including the development of land management plans, 121 project-specific authorizations for the use, occupancy, development of public lands, 122 the granting of rights of way on public lands, 123 and the promulgation of regulations to implement each of these authorities. 124 While FLPMA does not elevate certain uses over others, it does delegate discretion to the BLM to determine whether and how to develop or conserve resources, including whether to require enhancement of resources and values through means such as compensatory mitigation. 125 In sum, these statutory policies encompass the protection of environmental and ecological values on the public lands and the provision of food and habitat for fish and wildlife and are furthered by the implementation of the

mitigation hierarchy, including compensatory mitigation, to protect and preserve habitat for the sage grouse.

Beside the principles of FLPMA and its multiple use/sustained yield standards, individual provisions of that Act confer additional authority on BLM to apply the mitigation hierarchy. In the section on land use plans, for example, FLPMA obliges BLM to consider environmental values, such as fish and wildlife like the sage grouse, in the development of such plans.¹³³ More particularly, BLM must also "consider the relative scarcity of the values involved and the availability of alternative means...and sites for realization of those values".¹³⁴ Sage-grouse habitat is a wildlife value with relative scarcity, as evidenced by the Fish and Wildlife Service's consideration of the species for listing under the ESA, its designation as a special status species by BLM, and its active management by numerous Western states. In the process of developing land use plans which account for this important and relatively scarce species, BLM can provide for the use of "alternative sites" in appropriate instances, thereby resulting in avoidance. Similarly, BLM can specify "alternative means," which can include minimization as well as compensatory mitigation under appropriate circumstances. In short, resources designated as "special" by BLM should be managed through a resource goal that may necessitate compensatory mitigation actions, as appropriate.

BLM has the authority to incorporate, implement, and enforce state sage-grouse mitigation programs that meet a recognized set of principles. The 2015 Records of Decision for Greater sage-grouse included a commitment to develop compensatory mitigation strategies in each sage-grouse management zone.¹⁴² As the 2015 land use plans were completed and implementation efforts began, however, several states had already completed or had begun efforts to develop compensatory mitigation strategies to implement GRSG conservation measures on state and private lands. It thus became apparent that developing federal mitigation strategies for each management zone would be redundant and could, in fact, create conflicts between state and federal mitigation strategies. This recognition led to the establishment of the Greater Sage-Grouse Mitigation Work Group (2016 Work Group Mitigation Report), and its charge to identify key principles for compensatory mitigation strategies as well as mechanisms to support and institutionalize collaborative state and federal GRSG mitigation efforts.¹⁴³ The 2018 DEISs state that the purpose of the Work Group was "to enhance cooperation with the states by modifying the approach to Greater Sage-Grouse management in existing land use plans to better align with individual state plans and/or conservation measures and DOI and BLM policy."¹⁴⁴ The DEISs also state that, "The BLM will work to be consistent with or complementary to the management actions in [state] plans whenever possible."¹⁴⁵ Given BLM's broad authority to adopt and impose mitigation to protect sage-grouse, at a minimum, BLM certainly can act to adopt, implement and enforce the state mitigation programs for use on federal land. In doing so, it is critical to ensure that the state mitigation programs employed by BLM follow commonly recognized principles, such as those laid out by The Nature Conservancy in its 2015 report, *Achieving Conservation and Development: Applying the Mitigation Hierarchy* (2015 TNC Report).¹⁴⁶ These principles include: application of the mitigation hierarchy in a landscape context; policy goals that support conservation and drive accountability; inclusion of stakeholder engagement practices; long-term, durable options; additionality, equivalence, and protection against temporal losses.¹⁴⁷ We support efforts of the states to experiment with different mitigation approaches, if their programs and those of the Department, meet the defined principles. The fact that the state programs differ from each other is not necessarily a concern; in fact, variation can often result in good management outcomes, enabling programs to be tailored to the needs of each state, as well as allowing states to experiment and determine which approaches are most effective. We thus

support the Department providing minimum principles, consistent with the 2015 TNC Report, that all state programs must meet, and allowing states to exceed those principles if they choose to do so.

FLPMA also directs the Secretary to "manage the public lands under principles of multiple use and sustained yield".¹²⁶ The principles of multiple use and sustained yield pervade and underpin each of BLM's authorities under FLPMA, including the policies governing the Act,¹²⁷ the development of land use plans,¹²⁸ the authorization of specific projects,¹²⁹ and the granting of rights of way.¹³⁰ Multiple use means, among other things: the management of public lands...so that they are utilized in the combinations that will best meet the present and future needs of the American people; ... a combination of balanced and diverse resource uses that takes into account the long term needs of future generations for renewable and nonrenewable resources, including...range, ... watershed, wildlife and fish...; and harmonious and coordinated management of the various resources without permanent impairment of...the quality of the environment...¹³¹ Sustained yield means "the achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the public lands".¹³² Sage-grouse is certainly one of the wildlife resources to be protected under the multiple use standard, and it is a resource whose annual and periodic output is to be achieved and maintained in perpetuity under the sustained yield standard. To protect the present and long-term use of the public land for "fish and wildlife" "without impairment of the quality of the environment," BLM has the authority to apply the mitigation hierarchy for sage grouse, including compensatory mitigation in appropriate circumstances. Thus, BLM has additional, clear authority to use the mitigation hierarchy in its land use plans for the protection of the sage-grouse and its habitat. Case law confirms that multiple use/sustained yield principles do "not mandate that every use be accommodated on every piece of land; rather, delicate balancing is required." *New Mexico ex rel. Richardson v. BLM*, 565 F.3d 683, 710 (10th Cir. 2009). The mitigation hierarchy, including compensatory mitigation, provides an important tool for achieving a balance among the multiple uses allowed on public lands. BLM can authorize a consumptive use, like oil and gas development, but balance that use by providing compensatory mitigation for the unavoidable losses suffered by the fish and wildlife. In other words, the mitigation hierarchy can have the effect of expediting and defending authorized consumptive uses of the public lands while simultaneously protecting fish and wildlife resource values in perpetuity.

Good mitigation policy and practice is also one of the best opportunities to achieve sustainable development and conservation goals. Projects, even those with relatively small footprints, can pose significant impacts to migratory wildlife. Avoidance of the most important places offers the best way to support a Western landscape where species can thrive. Where impacts cannot be avoided or minimized, well-designed compensatory mitigation programs can achieve the multiple-use, sustained yield objectives of BLM and other federal agencies. Governments, businesses, and local communities are increasingly acting to improve mitigation policy and practice. This is shown by the following: ? 56 countries have or are developing national mitigation policies that require offsets or enable the use of offsets, with most of these policies developed over the past decade. ? Multi-lateral and private sector financial institutions are requiring projects they finance to avoid, minimize, and compensate for biodiversity impacts in accordance with new performance standards. This includes requirements for project developers to avoid impacts to "critical habitat." ? A 2015 analysis of the economic contribution of mitigation determined that the domestic ecological restoration sector directly employs approximately 126,000 workers nationwide and generates \$9.5 billion in economic output (sales) annually, with an additional 95,000 jobs and \$15 billion in economic output through indirect (business-to business) linkages and increased household spending.

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In 2015, in its ESA listing decision, the Fish and Wildlife Service (FWS) found that "the greater sage-grouse is not in danger of extinction now or in the foreseeable future throughout all or a significant portion of its range and that listing the species is no longer warranted." The Service's finding was based not on the stability of the species' population, but rather on the "adequacy of regulatory mechanisms and conservation efforts".¹⁴ Mitigation - avoidance, minimization and, where appropriate, compensatory mitigation - was an essential regulatory and conservation tool that supported this decision. Specifically, the FWS stated: All of the Federal Plans require that impacts to sage-grouse habitats are mitigated and that compensatory mitigation provides a net conservation gain to the species. All mitigation will be achieved by avoiding, minimizing, and compensating for impacts following the regulations from the White House Council on Environmental Quality (e.g., avoid, minimize, and compensate), hereafter referred to as the mitigation hierarchy. If impacts from BLM/USFS management actions and authorized third party actions that result in habitat loss and degradation remain after applying avoidance and minimization measures (i.e., residual impacts), then compensatory mitigation projects will be used to provide a net conservation gain to the species. Any compensatory mitigation will be durable, timely, and in addition to that which would have resulted without the compensatory mitigation.¹⁵ The decision outlines the efforts states have made to utilize regulatory mechanisms to address threats to the species, noting that the Wyoming state program "features development stipulations to guide and regulate development within the Core Population Areas to avoid as much as possible, but, if avoidance is not possible, to minimize and mitigate, impacts to sage-grouse and its habitat."¹⁶ The Service then concluded, "Requiring mitigation for residual impacts provides additional certainty that, while impacts will continue at reduced levels on Federal lands, those impacts will be offset".¹⁷ Each of the seven states with significant sage-grouse populations has by now either completed or is working on establishing a mitigation program for sage-grouse. Barrick Gold and the Department of the Interior have also signed a separate agreement to create the Barrick Nevada Sage-Grouse Bank in northern Nevada, creating incentives for Barrick to voluntarily protect, restore and enhance sagebrush ecosystems for the benefit of sage-grouse, while allowing the company to conduct mining activities on other BLM land.¹⁸ Last August, the Department of the Interior (DOI) Sage-Grouse Review Team Report, commissioned by Secretary Zinke, concluded that state and federal mitigation programs were an important and critical tool to preclude an ESA listing, noting that both DOI and the states agree on this point. ¹⁹ The 2015 BLM sage-grouse plans not only employ the mitigation hierarchy as a regulatory and conservation tool to preclude listing, but the listing decision is, in part, also based on the promise of the protections and conservation measures that implementation would deliver.

In addition, BLM should have the policy prescriptions and tools available to allow for compensatory mitigation on public lands to offset private or public activities. Impacts to key sage-grouse habitat located

on private land, particularly in states such as Nevada, often necessitate the need for compensatory mitigation on public lands, given the limited availability of private land for use as offsets. Maintaining this capability will be critical to conservation success. Last, but far from least, providing agency field staff with training is an important mechanism to accelerate permitting and project review. By committing resources to training field staff, BLM could increase the technical capacity of local staff to implement mitigation policies effectively and do so consistently across field offices. Providing clear direction to project proponents on how the agencies will make avoidance, minimization and compensatory mitigation decisions can help streamline project review and accelerate project approval.

In doing so, it is critical to ensure that the state mitigation programs employed by BLM follow commonly recognized principles, such as those laid out by The Nature Conservancy in its 2015 report, *Achieving Conservation and Development: Applying the Mitigation Hierarchy* (2015 TNC Report).¹⁴⁶ These principles include: application of the mitigation hierarchy in a landscape context; policy goals that support conservation and drive accountability; inclusion of stakeholder engagement practices; long-term, durable options; additionality, equivalence, and protection against temporal losses.¹⁴⁷ We support efforts of the states to experiment with different mitigation approaches, if their programs and those of the Department, meet the defined principles. The fact that the state programs differ from each other is not necessarily a concern; in fact, variation can often result in good management outcomes, enabling programs to be tailored to the needs of each state, as well as allowing states to experiment and determine which approaches are most effective. We thus support the Department providing minimum principles, consistent with the 2015 TNC Report, that all state programs must meet, and allowing states to exceed those principles if they choose to do so.

It has recently been argued by several states that BLM may only use compensatory mitigation to prevent "unnecessary or undue degradation". Under this view, where the impacts of a proposed activity have not been demonstrated to rise to the level of "unnecessary or undue degradation," any authorization of that activity which requires either net benefit or no net loss for the actual impacts would violate FLPMA. The unnecessary or undue degradation standard, however, is just a minimum standard for BLM's land management policy; it does not restrain BLM's discretion to adopt or require mitigation in circumstances that do not rise to the level of "undue or unnecessary degradation" or to implement a higher mitigation standard. As explained above, BLM has numerous authorities supporting its use of mitigation more generally, including the policies and principles underlying FLPMA, the foundational multiple use, sustained yield standard, the authority to promulgate regulations, and the specific authorities applicable to land use plans and project-specific authorizations. This point was confirmed in *Western Exploration, LLC v. U.S. Department of the Interior*.¹³⁹ In considering the argument that a net conservation gain standard for compensatory mitigation violated FLPMA, the court stated: The FEIS states that if actions by third parties result in habitat loss and degradation, even after applying avoidance and minimization measures, then compensatory mitigation projects will be used to provide a net conservation gain to the sage-grouse. The Agencies' goals to enhance, conserve, and restore sage-grouse habitat and to increase the abundance and distribution of the species, they argue, is best met by the net conservation gain strategy because it permits disturbances so long as habitat loss is both mitigated and counteracted through restorative projects. If anything, this strategy demonstrates that the Agencies allow some degradation to public land to occur for multiple use purposes, but that degradation caused to sage-grouse habitat on that land be counteracted. The Court fails to see how BLM's decision to implement this standard is arbitrary and capricious. Moreover, the Court cannot find that BLM did not consider all relevant factors in choosing this strategy... In sum, Plaintiffs fail to establish that BLM's

challenged decisions under FLPMA are arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.¹⁴⁰ Both FLPMA and the case law thus establish that BLM has ample discretion to go beyond the prevention of unnecessary or undue degradation to seek compensatory mitigation that will meet "the long-term needs of future generations for renewable and non-renewable resources, including, but not limited to, . . . wildlife and . . . natural scenic, scientific and historical values."¹⁴¹ None of these authorities distinguish between avoidance, minimization, and compensatory mitigation or prohibit or circumscribe compensatory mitigation; rather, the authorities are broad and support the use of each aspect of mitigation in appropriate circumstances. BLM's obligations, discretion and authority are particularly important in coordinating with states, especially where states lack ownership or authority to carry out needed mitigation.

XI. MITIGATION IS AN IMPORTANT PART OF FEDERAL AND STATE EFFORTS, AND MUST BE MAINTAINED. Each of the DEISs contains similar language requesting comments on how the Bureau of Land Management (BLM) should consider and implement sage-grouse mitigation: The DOI and the BLM have also modified their mitigation policies since the 2015 plans were finalized. The public did not have the opportunity to comment specifically on a net conservation gain approach to compensatory mitigation during the 2015 land use planning process. In addition, the DOI and the BLM are evaluating whether the implementation of a compensatory mitigation standard on public lands is appropriate and consistent with applicable legal authorities. We request public comment about how the BLM should consider and implement mitigation with respect to the Greater Sage-Grouse, including alternative approaches to requiring compensatory mitigation in BLM land use plans.¹⁴² For some states, such as Idaho, Utah, and Wyoming, the DEIS also removed the requirement of a net conservation gain standard for their mitigation programs.¹⁴³ Overall: 1. Mitigation (avoidance, minimization, and compensation) as adopted in the 2015 BLM land use plans is an effective and well-established tool that the Fish and Wildlife Service relied upon to support its decision not to list the Greater Sage-Grouse as threatened or endangered under the ESA. Sound mitigation policy provides agencies such as BLM with a structured, rational, and transparent framework for reviewing use requests and meeting their multiple use and sustained yield mandates. The 2015 BLM sage-grouse plans employed the mitigation hierarchy to help reach their goal of protecting sage-grouse while also allowing multiple uses to proceed by ensuring that associated impacts to habitat are fully offset. 2. BLM has ample authority to apply the full mitigation hierarchy in the sage-grouse plans. Both FLPMA and case law provide BLM the discretion to seek compensatory mitigation to protect sage-grouse. 3. BLM has the authority to incorporate, implement, and enforce state sage-grouse mitigation programs that meet a recognized set of principles. We recommend that these principles should be consistent with those laid out by The Nature Conservancy in its 2015 report, *Achieving Conservation and Development: Applying the Mitigation Hierarchy*. In addition, we support compensatory mitigation programs that seek to achieve a "reasonable relationship" between impacts and compensatory mitigation and adequately account for habitat quality, temporal losses, and risk of project failure. The amount and type of compensatory mitigation should be proportional to, and have a reasonable relationship to, direct and indirect impacts.

1.3.15 Modifying Waivers, Exceptions, and Modifications of Fluid Minerals

As an example, the general approach conditions included in the Draft Colorado RMP Amendment related to no surface occupancy stipulations are more specific and include public engagement. * Waivers are permitted if the area lacks "protected attributes" - as determined through coordination with Colorado Parks and Wildlife and following a 30-day public notice/comment period * Modifications and exceptions are permitted if: (1) impacts are fully offset by compensatory mitigation; or (2) no impacts to

greater sage-grouse would occur because of terrain or habitat type - but can only be applied after consultation with Colorado Parks and Wildlife. CO Draft RMP Amendment/EIS, pp. 2-4 - 2-5. Overall, one-time exceptions should be the preferred approach where relief is sought from protective stipulations, such that the safeguards prescribed in these stipulations will remain in place for the majority of oil and gas leases. Waivers, exceptions and modifications should only be granted from no surface occupancy (NSO) stipulations or any stipulations in PHMA after a 30-day public notice and comment period. Further, the U.S. Fish and Wildlife Service should have the opportunity to submit information for consideration prior to granting waivers, exceptions and modifications. Finally, it is critical that BLM track waivers, exceptions and modifications requested and those granted, and make that information available to the public. These records will provide important insight into how the stipulations are being applied and the potential impact of waivers, exceptions and modifications on the overall function of the plans. This information will also allow BLM to determine if the availability of or criteria for granting waivers, exceptions and modifications needs to be further narrowed in order to ensure sufficient protection for sage-grouse habitat. Accordingly, we recommend that each plan include language that provides: Exceptions will be considered prior to considering waivers or modifications. If the BLM determines that a waiver or modification is more appropriate, the reasons for such decisions will be documented. Waivers are permitted if the area lacks "protected attributes" - as determined through coordination with the appropriate state wildlife agency. Modifications and exceptions are permitted if: (1) impacts are fully and verifiably offset by compensatory mitigation; or (2) there are no impacts to greater sage-grouse because of terrain or habitat type, based on consultation with the applicable state wildlife agency. Prior to granting any waivers, exceptions and modifications, BLM will insure that the U.S. Fish and Wildlife Service has the opportunity to submit information for consideration. For no surface occupancy stipulations or stipulations in Priority Habitat Management Areas, waivers exceptions and modifications will only be granted following a 30-day public notice and comment period. BLM will maintain an ongoing record of requests for waivers, exceptions and modifications and whether those requests are granted, and will publish those cumulative results on a quarterly basis.

V. RECOMMENDED APPROACH TO WAIVERS, EXCEPTIONS AND MODIFICATION TO OIL AND GAS LEASE STIPULATIONS. The 2015 Sage-grouse Plans include numerous oil and gas lease stipulations that apply to development in order to protect sage-grouse and sage-grouse habitat, including no surface occupancy stipulations, timing limitations and surface use limitations. The draft amendments and EISs also rely on lease stipulations. However, the protections actually provided by the stipulations are only reliable and effective to the extent that the safeguards are applied. Waivers (permanent exemption that applies to the entire leasehold), exceptions (one-time exemption for a particular site within the leasehold) and modifications (change to the lease stipulation, either temporarily or for the term of the lease, can apply to the entire leasehold or certain areas) all permit an operator to avoid compliance with the requirements of a stipulation. Where these loopholes are permitted and used, the protections that the stipulations are supposed to provide can be undermined. Recent studies confirm that oil and gas development can harm both sage-grouse habitat and lifecycle activities, such as breeding.⁴⁶ Consequently, it is vital that protections associated with oil and gas development are reliably applied and, as a result, that waivers, exceptions and modifications are not broadly used to weaken those protections. While we can accept narrowly prescribed waivers, exceptions and modifications to lease stipulations that are based on very specific criteria, broad standards, such as those currently included in the Nevada Draft RMP Amendment/EIS are not acceptable.

1.3.16 Noise Management Outside of PHMA

Comment: 2 Document: CH 3 - Affected Environment 3.11 Noise 3.11.5 Page Number: 3-95 Line Number: 14 Local studies conducted for the PAPA found existing ambient sound levels (L50) at four locations throughout the Upper Green River area for hours important to greater sage-grouse lek behavior (1800-0800) were 19.9 dBA, 14.8 dBA, 14.3 dBA, and 14.5 dBA. The median L50 for all 1800-0800 hours at all sites was 15.4 dBA.

Comment: 5 Document: CH 3 - Affected Environment 3.11 Noise 3.11.5.3 Page Number: 3-97 Line Number: 1-16 The discussion including the BLM Wyoming sage-Grouse RMP Amendments should include Appendix C, Required Design Features identifying ambient measures as 20-24 dBA at sunrise at the perimeter of a lek during active lek season.

Comment: 7 Document: CH 2 -Alternatives 2.4.3 Greater Sagegrouse habitat management Page Number: 2-8 Line Number: 25-27 Noise protocols for Wyoming have been developed and should be required (Ambrose and MacDonald 2015. Review of sound level measurements in Wyoming relative to greater sage grouse and recommended protocol for future measurements) Management of noise should include but not be limited to, timing restrictions during lekking, nesting and brood rearing season, and design features that include; siting facilities outside of grouse priority habitat or placed to take advantage of topography, application of sound blankets and or sound walls, use of mufflers, and reducing traffic noise through controlled traffic patterns and restricting travel hours to between 8 am and 6 pm within 2 miles of the perimeter of a lek.

Comment:3 Document: CH 3 - Affected Environment 3.11 Noise 3.11.5.2 Page Number: 3-95 Line Number: 27 We are concerned for the validity of the noise data provided for this project as the microphone height was reported as being 2.43 meters (8 feet) above the ground. Protocols for noise monitoring were established for the Pinedale Field Office, Pinedale Anticline Project Area which requires a microphone height of 0.3 m (1 foot) to address the influence of wind on sound measurement.

Comment:4 Document: CH 3 - Affected Environment 3.11 Noise 3.11.5.2 Page Number: 3-96 Line Number:2-7 An evaluation of sound level studies was conducted for WGFD which looked at noise data collected throughout Wyoming (Ambrose, S. and J. MacDonald, 2015. Review of Sound Level Measurements in Wyoming Relative to Greater Sage-grouse and Recommended Protocol for Future Measurements.) The authors recommended microphones be placed 1 foot from the ground (0.30 m) to more accurately reflect sounds experienced by the bird. They also found wind to have a clear influence on dBA data and metrics; the higher the wind speed, the higher the dBA levels "As wind speed increased, dBA levels increased, regardless of microphone height; however, dBA levels at 1.5 m were significantly higher than dBA levels at 0.3 m (up to 8.7 dBA higher). What these data indicate is that at a microphone height of 0.3 m, the increase in dBA level was due to sounds of wind through vegetation. The report goes on to say, "Sounds due to wind are of two types: natural sounds, such as leaves rustling and the sound of wind through vegetation, and wind-induced equipment sounds, such as turbulence over the diaphragm of the microphone, wind hitting the foam wind screen, wind causing the microphone tripod to move, or wind sounds through cables securing the tripod. Wind-induced equipment sounds are not part of the acoustic environment, but rather an artifact of data collection. Such data should not be included in analysis. "We are concerned for the validity of the noise data provided for this project as the microphone height was reported as being 2.43 meters (8 feet) above the ground. Also, no monitoring data was excluded from the analysis even though three of the microphones were found

tipped over due to wind. This would suggest the data is flawed as the influence of noise and equipment falling over are not legitimate sounds of the environment, but artifacts of wind-equipment interaction.

Comment:6 Document: CH 3 - Affected Environment 3.11 Noise 3.11.5.3 Page Number: 3-99 Line Number:1-8 Minimum L50 values reported for the monitoring sites were elevated due to the microphone height being at 8 feet from the ground and tipping over resulting in additive influence from wind. The single average L50 value of 25 dBA recommended to characterize the ambient noise level at the perimeter of lek location in the NPL Project EIS is flawed. By comparison, within the PAPA (an active gas field) the median L50 dBA for all hours at all leks for the years 2013-2015 was 26.0 dBA (range 17.5-36.9). Additionally, monitoring noise impacts in the PAPA has revealed lek declines for all leks exposed noise > 26 dBA from the perimeter of a lek.

Comment: 1 Document: CH 3 - Affected Environment 3.11 Noise Page Number: 3-89 through 3-99 This section proposes to evaluate existing sound levels within the proposed project area to adequately assess noise-related impacts from the proposed action. The data was collected in 2012 and likely does not represent sound levels found in the project area today. Six of the 10 leks within the proposed project area are showing declining trends without the addition of this project activity. This suggests there are already impacts to sage grouse from existing anthropogenic activities. Four of the leks showing declining trends are within a Core area for sage grouse This project evaluation drew comparisons f a study conducted in Lander WY. To adequately assess the noise-related impacts of the NPL Project, it would be appropriate to incorporate local baseline data. Such data was collected for the adjacent Pinedale Anticline Project Area (PAPA) and should be included in this project evaluation. Noise level data has been collected throughout the Upper Green River Valley since 2009. This information is available from published reports on the BLM PAPO web page (<http://www.wy.blm.gov/jio-papo/>). Instead the analysis drew comparisons only to a study conducted in Lander WY.

1.3.17 Preferred Alternative

Proposed Alternative to Maintain the "Not Warranted" Finding The 2015 Sage-grouse Plans were the basis for the U.S. Fish and Wildlife Service (FWS) finding that listing the greater sage-grouse under the Endangered Species Act (ESA) is no longer warranted. This decision was based on a determination that the plans provide sufficient certainty regarding their implementation and effectiveness and must not be threatened by this amendment process. The surest way to maintain the not warranted decision would be to maintain the current 2015 Sage-grouse Plans by adopting the "no action" alternative in this amendment process, which would still provide sufficient flexibility to adapt through implementation. However, recent instruction memoranda and policy changes (such as rescinding guidance on mitigation) that alter implementation of the 2015 plans are already undermining their effectiveness. The changes to the 2015 plans that are currently under review further jeopardize the structure and function of the plans and, as a result, risk the important protections that safeguard habitat and support FWS's not warranted finding. The collaborative work that went into creating the original plans should be honored. To the extent that DOI and BLM are committed to making some changes to the plans while also maintaining necessary protections to justify the Fish and Wildlife Service's finding, this proposed alternative highlights key elements to be incorporated in the plans, including maintaining current provisions and clarifying or improving others. This alternative is further supported by the 2018 U.S. Geological Survey report (<https://doi.org/10.3133/ofr20181017>), which found that research since 2015 reinforces the science underlying the structure and function of the 2015 Sage-grouse Plans. The following describes the

key elements of our recommended alternative. Additional detail regarding implementation of the elements is available in technical comments.

The surest way to maintain the not warranted decision would be to maintain the current 2015 Sage-grouse Plans by adopting the "no action" alternative in this amendment process, which would still provide sufficient flexibility to adapt through implementation. However, recent instruction memoranda and policy changes (such as rescinding guidance on mitigation) that alter implementation of the 2015 plans are already undermining their effectiveness. The changes to the 2015 plans that are currently under review further jeopardize the structure and function of the plans and, as a result, risk the important protections that safeguard habitat and support FWS's not warranted finding. The collaborative work that went into creating the original plans should be honored. To the extent that DOI and BLM are committed to making some changes to the plans while also maintaining necessary protections to justify the Fish and Wildlife Service's finding, this proposed alternative highlights key elements to be incorporated in the plans, including maintaining current provisions and clarifying or improving others. This alternative is further supported by the 2018 U.S. Geological Survey report (<https://doi.org/10.3133/ofr20181017>), which found that research since 2015 reinforces the science underlying the structure and function of the 2015 Sage-grouse Plans.

1.3.18 Prioritization of Mineral Leasing

The requirement to prioritize oil and gas leasing and development outside of sage-grouse habitats must be maintained and clarified so that it is a meaningful tool to reduce habitat destruction and fragmentation. Prioritization should be based on analyzing factors such as the condition of habitat and oil and gas potential to make informed decisions about when the best approach would be to prioritize other proposed lease or permits, or even defer leasing or phase development in order to ensure habitat is protected.

In order to ensure adequate conservation of sage-grouse and sage-grouse habitat, prioritization of oil and gas leasing and development cannot be based solely on whether BLM has sufficient resources to process leasing nominations or applications for permits to drill in sage-grouse habitat. Rather, there must be a thorough consideration of opportunities to protect habitat. These opportunities include deferring proposed leasing that would unnecessarily harm habitat or where leasing is not the best use of agency resources (both internal resources and in terms of allocating our public lands), such as where there is low or no potential for leasing, high quality habitat and no surrounding infrastructure or development. BLM is not obligated to lease every parcel that is proposed nor is there a requirement that any deferral be replaced with another parcel to somehow maintain the same number of parcels or acres up for lease. See, e.g., *New Mexico ex. rel. Richardson v. BLM*, 565 F.3d 683, 710 (10th Cir. 2009) ("It is past doubt that the principle of multiple use does not require BLM to prioritize development over other uses."). Rather, the agency can take into account relevant factors and the importance of conserving grouse habitat to meaningfully prioritize leasing where it is most appropriate and least harmful to sage-grouse habitat. The impact such factors could have on leasing decisions is demonstrated by the map below, which shows the distribution of proposed lease sale parcels for the December 2018 sale in sage-grouse habitat in the Kremmling (Colorado) Field Office: [SEE ATTACHMENT PG 28] Explicitly considering the value of habitat and the potential for actual energy production would unquestionably help the agency prioritize the right parcels for leasing.

RECOMMENDED APPROACH TO PRIORITIZING OIL AND GAS LEASING AND DEVELOPMENT OUTSIDE SAGE-GROUSE HABITAT. The 2015 Sage-grouse Plans are clear as to the need for prioritizing oil and gas leasing and drilling outside sage-grouse habitat and the desired effect of related actions. From the Rocky Mountain Record of Decision (p. I-25): . . . the ARMPs and ARMPAs prioritize oil and gas leasing and development outside of identified PHMAs and GHMAs. This is to further limit future surface disturbance and encourage new development in areas that would not conflict with GRSG. This objective is intended to guide development to lower conflict areas and as such protect important habitat and reduce the time and cost associated with oil and gas leasing development by avoiding sensitive areas, reducing the complexity of environmental review and analysis of potential impacts on sensitive species, and decreasing the need for compensatory mitigation. The Rocky Mountain ROD also identifies prioritizing oil and gas leasing and development outside habitat as a "key component" and a "key management response" (pp. I-18 - I-19). The Buffalo Field Office ARMP/ROD (p. 50) and Wyoming 9-Plan ARMPA (p. 24) echo this directive, including the following objective: Priority will be given to leasing and development of fluid mineral resources, including geothermal, outside of Greater Sage-Grouse habitat. When analyzing leasing and authorizing development of fluid mineral resources, including geothermal, in priority habitat (core population areas and core population connectivity corridors) and general habitat, and subject to applicable stipulations for the conservation of Greater Sage-Grouse, priority will be given to development in non-habitat areas first and then in the least suitable habitat for Greater Sage-Grouse. (emphasis added). The inter-agency, expert Conservation Objectives Team (COT) Report confirms the need to prioritize development outside habitat, finding that: Sage-grouse populations can be significantly reduced, and in some cases locally extirpated, by non-renewable energy development activities, even when mitigative measures are implemented (Walker et al. 2007). The persistent and increasing demand for energy resources is resulting in their continued development within sage-grouse range, and may cause further habitat fragmentation. . . . Both non-renewable and renewable energy developments are increasing within the range of sage-grouse, and this growth is likely to continue given current and projected demands for energy.⁴⁴ As a result, the COT Report recommended the following objective for energy development: "Energy development should be designed to ensure that it will not impinge upon stable or increasing sage-grouse population trends."⁴⁵

Prioritization for Leasing BLM has used specific factors to guide prioritization of leasing outside sage-grouse habitat. For instance, in assessing the December 2017 lease sale for the Vernal Field Office (https://eplanning.blm.gov/epl-frontoffice/projects/nepa/80165/130450/158729/Final_Vernal_EA.pdf), BLM created a chart evaluating how certain prioritization considerations applied to parcels (existing lease, existing unit, field-EIS, high gas potential, high oil potential), completed site visits to confirm conditions on the ground, and then only included parcels in the lease sale that met the majority of the factors. We propose that the BLM use the following factors: * Intactness/quality of habitat - classification of habitat (i.e., priority, important, general); quality of habitat; importance for connectivity or seasonal habitat * Population trends in applicable zone or biologically significant unit * Distance from existing disturbance * Distance from existing infrastructure - roads, well pads, pipelines * Need for additional infrastructure - estimated surface disturbance * Adjacent to existing lease - yes/no/proximity * Within existing oil and gas unit * Within existing master leasing plan * Oil potential - none, low, moderate, high * Natural gas potential - none, low, moderate, high BLM will conduct site visits to confirm conclusions, as needed. Decisions to include nominated lease parcels in sage-grouse habitat in lease sales will be based on the following evaluation of factors: - Parcels that do not have moderate or high potential should not be offered. - Parcels that have high quality habitat, are not in proximity to existing disturbance and/or require additional infrastructure to be developed should not be offered. - Parcels

that are in close proximity to existing disturbance and infrastructure, and are already within an existing oil and gas unit or master leasing plan that has been analyzed in an environmental impact statement may be considered for leasing. - Parcels outside priority habitat should be considered for leasing prior to parcels in PHMA. Prioritization in Development BLM will prioritize development outside sage-grouse habitat by considering the following factors: * Intactness/quality of habitat - classification of habitat (i.e., priority, important, general); quality of habitat; quality of habitat; importance for connectivity or season habitat * Population trends in applicable zone or biologically significant unit * Distance from a lek * Need for new infrastructure - estimated surface disturbance * Ability to use existing well pad and infrastructure * Oil potential - none, low, moderate, high * Natural gas potential - none, low, moderate, high These factors will apply to both exploratory and other types of development activities. BLM will conduct site visits to confirm conclusions, as needed. Decisions to approve applications for permits to drill in sage-grouse habitat will be based on the following evaluation of factors: - Where applications for permits to drill are in high quality/intact habitat, are not in proximity to existing disturbance and/or require additional infrastructure to be developed, they will not be prioritized and opportunities will be evaluated to relocate permits. - Where applications for permits to drill are not in areas with high or moderate potential, they will not be prioritized. - Where applications for permits to drill are able to use existing well pads and infrastructure and otherwise avoid surface disturbance and noise impacts to leks, they are more suitable for processing and approval. - Applications for permits to drill outside priority habitat should be considered for approval prior to parcels in PHMA.

Prioritization is also essential when it comes to the location of oil and gas leasing and development. BLM makes no mention of lease prioritization in the DEIS despite previous guidance regarding lease prioritization. Quite simply, it makes perfect sense to prioritize the leasing and development of oil and gas resources outside of priority and general habitat. Nearly 90% of Colorado's Greater sage grouse population is concentrated in Moffat and Jackson Counties. Without the highest quality habitat being conserved, the risk of adversely impacting those populations is far too high and in turn, the likelihood of a future ESA listing grows, which no one wants to see happen.

1.3.19 Range of Alternatives

Alternatives are measured against purpose and need; BLM has not considered a reasonable range of alternatives in the Draft EIS based on the restated purpose and need. When developing an EIS, the "range of reasonable alternatives is measured against the 'Purpose and Need' section...." Cal. ex rel. Lockyer v. U.S. Dep't. of Agriculture, 459 F. Supp. 2d 874, 905 (N.D. Calif., 2006), aff'd, 2009 U.S. App. LEXIS 19219 (9th Cir. 2009). The statement of "purpose and need" is the basis upon "which the agency is responding in proposing the alternatives including the proposed action." 40 C.F.R. §1502.13 and City of Carmel-by-the-Sea v. U.S. Dep't. of Transportation, 123 F.3d 1142, 1155 (9th Cir. 1997). Therefore, if the purpose and need of the 2018 Draft EIS for the Greater Sage-Grouse changes from the purpose and need for the 2015 EIS, then the range of alternatives must necessarily change as well. Even the 2018 Draft EIS recognizes that "BLM's purpose and need for this planning action helps define the scope of proposed alternative actions..." Nevada DEIS, p. ES-2. In Lockyer, the Forest Service argued that it could base its EIS for the new 2005 version of the "Roadless Rule" upon the EIS (and its alternatives) for 2001 Roadless Rule that it replaced. The court found: This argument fundamentally misconstrues the role of the consideration of reasonable alternatives, which lies at the heart of any NEPA analysis. Failure to consider reasonable alternatives thwarts the goals of informed decision making and meaningful public comment before the environmental die is cast. Lockyer at 905 (citations omitted). The Forest Service proposed the 2005 Roadless Rule as a means to give states more authority over designating roadless

areas on federal land. In fact, the Forest Service called the 2005 rule the "State Petitions" rule. While the Forest Service argued the 2005 rule and the 2001 rule "share the same purpose and need," the Court concluded that their purposes were "plainly quite different" because the 2005 rule granted state-specific exemptions. Lockyer at 906. The 2018 Draft EISs are clear that their purpose and need is different from the 2015 EISs. Under the heading "Purpose of and Need for Action," the Draft EISs state that "The purpose of this RMPA/EIS is to enhance cooperation with the states by modifying the approach to Greater Sage-Grouse management in existing land use plans to better align with individual state plans and conservation measures and with DOI and BLM policy." See, e.g. Nevada DEIS, p. 1-3. Because the 2018 Draft EIS states a different purpose and need compared to the 2015 EIS, BLM, pursuant to Lockyer, must necessarily consider a new range of alternatives to meet that new purpose and need. Under Lockyer, BLM in 2018 cannot tier to alternatives considered for the different purpose and need of the 2015 EIS.

The No-Action Alternative in the Draft EIS is the baseline, not a real alternative. The 2018 Draft EISs for the Greater Sage-Grouse purport to compare two alternatives - the "No Action Alternative" versus the "Management Alignment Alternative." See, e.g. Nevada DEIS, p. 2-3. But the "no action alternative generally does not satisfy the proposed action's purpose and need; its inclusion in the Environmental Impact Statement is required by NEPA as a basis for comparison." Lockyer at 905, quoting Ronald E. Bass, Albert I. Herson & Kenneth M. Bogdan, *The NEPA Book: A Step-by-Step Guide on How to Comply with the National Environmental Policy Act*, 95 (2d. ed. 2001). Because the No Action Alternative fails to satisfy the purpose and need of the 2018 Draft EISs, the Draft EISs propose only one alternative: the Management Alignment Alternative. When there is only one alternative, it is not, by definition, an alternative at all. "[T]he agency must consider a range of alternatives that covers the full spectrum of possibilities." *Sierra Club v. Watkins*, 808 F. Supp. 852, 872 D.D.C. 1991). By proposing the "Management Alignment Alternative" as the only option to the status quo, BLM has failed to "consider a range of alternatives that covers the full spectrum of possibilities." *Id.* at 872.

BLM must evaluate additional management alternatives. By failing to thoroughly evaluate more than one alternative, BLM is not complying with NEPA.. See *TWS v. Wisely*, 524 F. Supp. 2d 1285, 1312 (D. Colo. 2007) (BLM violated NEPA by failing to consider "middle-ground compromise between the absolutism of the outright leasing and no action alternatives"); *Muckleshoot Indian Tribe v. US Forest Serv.*, 177 F.3d 800, 813 (9th Cir. 1999) (NEPA analysis failed to consider reasonable range of alternatives where it "considered only a no action alternative along with two virtually identical alternatives"). BLM must consider additional alternatives, including alternatives that are more environmentally protective than the Management Alignment Alternative. The purpose and need of the 2015 Sage-grouse Plans is to "conserve, enhance, and restore GRS habitat by eliminating or minimizing threats to their habitat" (Rocky Mountain Record of Decision, p. 1-21), while the 2018 amendments are based on a purpose to "enhance cooperation with the states." BLM should consider an alternative that is explicitly focused on enhancing cooperation with the states while conserving, enhancing and restoring sage-grouse habitat. For instance, the projection of on-the-ground activities set out in Table ES-1 of the 2018 EISs shows a reduction in restoration efforts, but a more conservation-oriented alternative would consider increasing these projects. Similarly, this alternative would evaluate how to enhance cooperation with the states while retaining more of the core protections and management approaches that made the previous plans the basis for the FWS determination that listing was no longer warranted under the ESA. This alternative would be more environmentally protective and provide more certainty. We have developed a proposed alternative that would accomplish these goals, set out in detail in Attachment I,

incorporated herein by reference. BLM should also have considered alternatives to complete additional analysis of key protective provisions that it is proposing to eliminate through the DEISs: net conservation gain and Sagebrush Focal Areas (SFA). The DEISs state: The public did not have the opportunity to comment specifically on a net conservation gain approach to compensatory mitigation during the 2015 land use planning process. In addition, the DOI and the BLM are evaluating whether the implementation of compensatory mitigation standard on public lands is appropriate and consistent with applicable legal authorities. We request public comment about how the BLM should consider and implement mitigation with respect to the Greater Sage-Grouse, including alternative approaches to requiring compensatory mitigation in BLM land use plans. See, e.g. Utah DEIS, p. ES-8. The Management Alignment Alternative in the DEISs for Utah and Wyoming proposes to remove this standard. Utah DEIS, p. ES-8; Wyoming DEIS, p. ES-6. Rather than seeking comments only on eliminating this approach, BLM should evaluate an alternative that would retain the approach, while leaving the agency flexibility to determine applicable standards by working with the states. The DEISs also propose eliminating SFAs in Utah, Wyoming, Nevada and Idaho. Utah DEIS, p. 2-6; Wyoming DEIS, p. ES-6; Nevada DEIS, p. 1-8; Idaho DEIS, p. 2-7. BLM's scoping notice stated that the agency "seeks comments on the SFA designation" in response to the decision in *Western Exploration, LLC v. U.S. Dep't of the Interior*, 250 F. Supp. 3d 718 (D. Nev. 2017), which found BLM must conduct supplemental NEPA analysis in order to support the designation. 82 Fed. Reg. 47248, 47249 (Oct. 11, 2017). As another alternative, BLM should evaluate the impacts of the SFAs without the previously-proposed mineral withdrawal, which has now been withdrawn, in light of how those designations and the important protective measures they provide (in addition to the withdrawal protections) benefit sage-grouse habitat and how application can be better coordinated with the states.

The range of alternatives is insufficient. The Draft EISs only consider one alternative, the "Management Alignment Alternative" and refer to the 2015 Sage-grouse Plans as the "No Action Alternative." This does not meet BLM's obligations under NEPA. The range of alternatives is "the heart of the environmental impact statement." 40 C.F.R. § 1502.14. NEPA requires BLM to "rigorously explore and objectively evaluate" a range of alternatives to proposed federal actions. See 40 C.F.R. §§ 1502.14(a) and 1508.25(c). NEPA's requirement that alternatives be studied, developed, and described both guides the substance of environmental decision-making and provides evidence that the mandated decision-making process has actually taken place. Informed and meaningful consideration of alternatives -- including the no action alternative -- is thus an integral part of the statutory scheme. *Bob Marshall Alliance v. Hodel*, 852 F.2d 1223, 1228 (9th Cir. 1988), cert. denied, 489 U.S. 1066 (1989) (citations and emphasis omitted). "An agency must look at every reasonable alternative, with the range dictated by the nature and scope of the proposed action." *Northwest Envtl Defense Center v. Bonneville Power Admin.*, 117 F.3d 1520, 1538 (9th Cir. 1997). An agency violates NEPA by failing to "rigorously explore and objectively evaluate all reasonable alternatives" to the proposed action. *City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1310 (9th Cir. 1990) (quoting 40 C.F.R. § 1502.14). This evaluation extends to considering more environmentally protective alternatives and mitigation measures. See, e.g., *Kootenai Tribe of Idaho v. Veneman*, 313 F.3d 1094, 1122-1123 (9th Cir. 2002) (and cases cited therein). By only meaningfully considering one alternative and not considering alternatives that would be more environmentally protective, BLM has failed to consider a reasonable range of alternatives.

The 2018 Draft EISs also state that their purpose and need is to "better align with ... DOI and BLM policy." See, e.g. Nevada DEIS, p. 1-3. That policy was issued on June 7, 2017, through Secretarial Order 3353, "Greater Sage-Grouse Conservation and Cooperation with Western States." The Secretarial

Order stated that one of the policy goals for managing the Greater Sage-Grouse is to "give appropriate weight to the value of energy and other development on public lands" in compliance with President Trump's Executive Order of March 28, 2017, "Promoting Energy Independence and Economic Growth" (EO 13783). The new "DOI and BLM policy" is completely opposite of the purpose and need expressed in the 2015 EIS, which identified the "major threats" to sage grouse habitat as "exploration and development" of hard rock mining and fluid mineral development. Nevada DEIS, p. 1-8. The purpose and need for the 2018 Draft EISs - and thus the basis for the 2018 alternatives - has shifted from conservation in 2015 to energy development in 2018: "As analyzed in the [2015 EIS], all of the previously analyzed alternatives, including one proposing constraints stricter than the current management plan, were predicted to result in a loss of development opportunities on public lands (emphasis added)." Nevada DEIS, p. 2-3. The purpose and need of the 2018 Draft EIS, pursuant to Secretarial Order 3353, is to "contribut[e] to economic growth and energy independence" (Nevada DEIS, p. 2-3), or, in other words, increase development opportunities on public lands. Therefore, BLM cannot base the pro-development alternatives in its 2018 Draft EISs upon the 2015 alternatives that had a purpose and need focused on conservation and avoidance of an ESA listing, not energy independence and economic growth. Because the "range of reasonable alternatives is measured against the 'Purpose and Need' section," Lockyer at 905, the range of alternatives in the 2018 Draft EIS fail to account for the dramatic change in purpose and need compared to the 2015 EIS, which is a violation of NEPA. 40 C.F.R. §1502.13. In another section of these comments we discuss the purpose and need issue in the 2018 EISs in more detail.

1.3.20 Recreation

These management strategies are more than smart conservation – they also support our local economies. A healthy sagebrush ecosystem is an important economic driver for Western economies and hundreds of other species that live in sagebrush habitat including the golden eagle, elk, pronghorn and mule deer. Research has shown that across the American West, the sagebrush ecosystem powers the outdoor recreation industry to the tune of more than \$1 billion—\$76 million in Colorado alone.

1.3.21 Sagebrush Focal Areas

Concerns with removal of SFAs in Idaho, Nevada, Utah, and Wyoming. Unfortunately, under the draft land use plans and the accompanying EISs that BLM has prepared for proposed changes to the 2015 Sage-grouse Plans, the BLM would eliminate SFAs in the states of Idaho, Nevada, Utah, and Wyoming. This would include about 8.7 million acres of public land. It represents a tremendous downgrade in land use plan protections that are oriented towards sage-grouse conservation. While BLM previously decided to not pursue the withdrawal from mineral location and entry that was recommended under the 2015 land use plans for the approximately 10 million acres of SFAs that are located in the states of Wyoming, Montana, Idaho, Oregon, Nevada, and Utah, this new, additional proposal represents a further step backward. It is a retreat from environmental protections that have been recognized as needed for sage-grouse conservation by the U.S. Fish and Wildlife Service (and BLM). But given the previous retreat relative to mineral entry, the effect of the current proposed elimination of the SFAs in four of the states in the range of the sage-grouse is somewhat less significant. Still, there will be a number of lost or modified protections that applied to SFAs in one or more of the four states. These include provisions under the 2015 plans that require oil and gas leasing to only be allowed pursuant to a no surface occupancy (NSO) stipulation that was not subject to waiver, exception, or modification (Idaho, Nevada, and Utah); prioritizing SFAs for vegetation and conservation actions (Idaho, Nevada, Utah, and Wyoming); and prohibitions of geothermal development in SFAs (Nevada). These are important

protections that must be maintained in priority habitat management areas (PHMA) if SFAs no longer exist in the four states. The value of these protections was recognized by the Fish and Wildlife Service in its 2015 not warranted decision, and thus are a key component of the land use plans that must be maintained if the not warranted decision is to be sustained, which it must be. "Based on our recommendation to further protect sage-grouse population centers that have been identified in the scientific literature as critically important for the species and areas identified through our analysis as important for conservation, BLM and USFS designated areas as Sagebrush Focal Areas (SFA) and added protections that would further limit new, human-caused surface disturbance in SFAs." 80 Fed. Reg. 59858, 59875 (Oct. 2, 2015). SFAs "are the areas that the Federal Plans manage as the highest priority lands in PHMAs for sage-grouse conservation (Figure 5)." Id. at 59878. They are "strongholds" for sagegrouse conservation and as mentioned above contain important connectivity habitat and high densities of breeding birds. Id. The Fish and Wildlife Service recognized that in addition to PHMA protections, the protections mentioned above would also apply in SFAs, including mineral entry withdrawal, NSO stipulations for fluid minerals with no waivers, exceptions, or modifications, and prioritizing management and conservation actions. Id. This was because SFAs need "the most conservative strategies to protect sage-grouse and habitat." Id. Grazing permit review is also prioritized in SFAs. Id. at 59877, 59910. Clearly the protections in SFAs that would be lost by eliminating SFAs must be maintained in the remaining PHMAs, and the land use plan amendments BLM is contemplating must so provide. The BLM should modify the EISs and proposed land use plan amendments in Idaho, Nevada, Utah, and Wyoming to specifically provide that the fluid minerals NSO stipulation with no waivers, exceptions, or modifications, the vegetation and conservation management stipulation, and where appropriate the prohibition on geothermal development will be specifically incorporated into and made a part of the PHMAs in those states.

Inconsistent treatment across the plans appears arbitrary and capricious. While the BLM is planning to eliminate SFAs in Idaho, Nevada, Utah, and Wyoming, they would be maintained in Oregon and Montana. The BLM provides no explanation for this differential treatment of central aspects of the 2015 Sage-grouse Plans, yet the agency must do so to comply with fundamental legal requirements that apply to Administrative Procedure Act rulemaking efforts, the hard look and public involvement provisions of NEPA, and the land use planning provisions of the FLPMA. In Oregon, the BLM states that SFAs presented "issues [that] require clarification of language in the 2015 ROD/ARMPA but do not require new analysis" and in any event the only issue that requires clarification relative to SFAs is withdrawal from mineral entry. Oregon Draft Resource Management Plan (RMP) and EIS at I-8. The BLM does not mention Montana in this NEPA analysis because that state desires to leave its 2015 sage-grouse plans intact. Therefore, SFAs would remain intact in Montana. But in Wyoming, Utah, Idaho, and Nevada elimination of SFAs would be pursued with little explanation. In Wyoming "[u]nder the Management Alignment Alternative, there would be no designation of SFAs." Wyoming Draft RMP and EIS at 4-15. According to the BLM, the environmental impact of not having SFAs was considered in the no action alternative in the 2015 Approved Resource Management Plan Amendment (ARMPA), and in the other Wyoming RMPs that did not consider SFAs, the impacts of designating PHMAs encompassed the impacts of SFAs. Id. The BLM seems to believe that its 2016 Draft EIS for Sagebrush Focal Area Withdrawal concluded that SFAs had little conservation benefit and it is only interested in issues related to the nonexistent mineral withdrawal in any event. Id. at ES-3, I-8, 4-16. In Idaho, BLM without explanation, states SFAs duplicate protections, focus on mere de minimis activities, do not provide appreciable benefits for sage-grouse, and they complicate the state's adaptive management provisions. Idaho Draft RMP and EIS at ES-3, I-6. BLM concludes "[t]he removal of SFA designations would have no measurable

effect on the conservation of Greater Sage-Grouse in Idaho because the Management Direction proposed for PHMA would remain in place and continue to protect Greater Sage-Grouse habitat. SFA removal would add flexibility for responsible development with stringent requirements including mitigation to achieve a no net loss to Greater Sage-Grouse habitat in PHMA." *Id.* at 4-10. In Nevada, BLM is again concerned about the nonexistent mineral withdrawal serving as a basis for SFAs and whether SFAs "adequately maintain conservation of Greater Sage-Grouse habitat . . ." Nevada Draft RMP and EIS at ES-3, 1-8, 2-8. In Utah BLM also raises the nonexistent mineral withdrawal as a basis for eliminating SFAs as well as questioning whether they achieve conservation outcomes and concerns about alignment with the state strategy. Utah Draft RMP and EIS at ES-3, 1-7. The explanations for elimination of SFAs in these four states does not establish a clear basis for doing so especially when they would be maintained in Montana and Oregon. This differential treatment and the basis for it must be explained. Fundamentally BLM is creating regulatory uncertainty by creating this patchwork pattern. The need for regulatory certainty, and the fact it was established by the 2015 plans, was a key basis for the Fish and Wildlife Service reaching its not warranted decision. 80 Fed. Reg. 59858. Yet now BLM is creating regulatory uncertainty. This raises questions about whether the sage-grouse will have to be given ESA protections, which in our view should be avoided. At a minimum, to avoid this uncertainty, the SFA protections we have mentioned, like the fluid mineral NSO stipulation with no waiver, exception, or modification, need to be made part of the PHMAs in states that no longer have SFAs. Moreover, BLM needs to address whether eliminating SFAs in some states will threaten SFA protections in Oregon and Montana where the SFA designation would remain in place. It would be inappropriate for SFAs to be threatened in Oregon and Montana just because they have been eliminated elsewhere. If BLM is going to treat SFA designation as subject to state-by-state revocation and not as a range-wide need-a proposition that is totally at odds with the Fish and Wildlife Service not warranted finding not to mention language in the 2015 land use plans-it needs to put in place provisions to ensure the SFA designations are protected where they remain and reconsider the proposals to eliminate SFAs.

Recent legal decisions support maintaining SFAs. There are two recent decisions that BLM should consider as it makes decisions about SFA designations. These are *W. Exploration, LLC v. U.S. Dept. of the Interior*, 250 F. Supp. 3d 718 (D. Nev. 2017) and *Desert Survivors v. U.S. Dept. of the Interior*, 2018 U.S. Dist. LEXIS 81922 (N.D. Cal., May 15, 2018). BLM frames *Western Exploration* as creating a need for these RMP amendments stating changes might be needed "in order to comply with the court's order" and "seeking comment on the SFA designation." 82 Fed. Reg. 47248-49 (Oct. 11, 2017). BLM states that the court "held that the BLM violated NEPA by failing to prepare a supplemental EIS for the designation of SFAs in the 2015 Greater Sage-Grouse Plan in Nevada." *Id.* at 47248. In fact, *Western Exploration* does not direct BLM to eliminate SFAs from the land use plans. First, the court found that the BLM had adequately considered any inconsistencies between the Federal sage-grouse plans and local county plans. 250 F. Supp. 3d at 744. The court also found that the BLM met its multiple use responsibilities under FLPMA when it adopted the Nevada sage-grouse plan. *Id.* at 746. The proposed withdrawal of 2.8 million acres from mineral entry (i.e., the SFAs) did not violate FLPMA. *Id.* "A review of the administrative record shows that BLM considered the relative value of Nevada's resources." *Id.* While the court agreed that under NEPA "the designation of 2.8 million acres as Focal Areas in Nevada amounts to a substantial change relevant to environmental concerns, requiring the Agencies to prepare [a supplemental EIS]" the court nevertheless refused to enjoin the ROD implementing the Nevada plan, holding "protection of the greater-sage grouse weighs against vacatur of the RODs. Enjoining implementation of the Plan Amendments pending the Agencies' preparation of an SEIS presents 'the possibility of undesirable consequences' to the greater sage-grouse species and their habitat." *Id.* at 748,

751. Based on this decision, the BLM is not required to eliminate SFAs, as it proposes, but rather, at most, it should only reconsider whether the SFA designations were made with a sufficient opportunity for public comment, and allow for additional public comment if warranted, making, possibly, only mid-course corrections, not summary eliminations. Further, as discussed above, in *Desert Survivors* the court determined that in withdrawing the proposed ESA listing of the Nevada/California bi-state sage-grouse population the FWS ignored the best available science, improperly concluding voluntary conservation measures could stem the decline of the population. The court held the Service "erred in concluding there was sufficient certainty of effectiveness of planned conservation measures to support the conclusion that listing" the bird as threatened "was no longer warranted." *Desert Survivors* at 71. "There are no rational grounds for the service's conclusion." *Id.* at 83. The court held that, "the service must offer some rational basis for its conclusions that future conservation efforts will be effective enough to improve the status of the bi-state (grouse) and therefore warrant withdrawal of the proposed listing." *Id.* at 64. In reaching its 2015 not warranted finding, FWS concluded that SFAs had a strong scientific basis and were a critical element in showing that BLM had put in place adequate regulatory mechanisms to make listing the sage-grouse unnecessary. Now the BLM is abandoning the commitment to implement SFA protections in much of the range of the sage-grouse. That decision is not based on best available science and must be reassessed.

Clearly the protections in SFAs that would be lost by eliminating SFAs must be maintained in the remaining PHMAs, and the land use plan amendments BLM is contemplating must so provide. The BLM should modify the EISs and proposed land use plan amendments in Idaho, Nevada, Utah, and Wyoming to specifically provide that the fluid minerals NSO stipulation with no waivers, exceptions, or modifications, the vegetation and conservation management stipulation, and where appropriate the prohibition on geothermal development will be specifically incorporated into and made a part of the PHMAs in those states.

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PHMA." Id. at 4-10. In Nevada, BLM is again concerned about the nonexistent mineral withdrawal serving as a basis for SFAs and whether SFAs "adequately maintain conservation of Greater Sage-Grouse habitat . . . " Nevada Draft RMP and EIS at ES-3, 1-8, 2-8. In Utah BLM also raises the nonexistent mineral withdrawal as a basis for eliminating SFAs as well as questioning whether they achieve conservation outcomes and concerns about alignment with the state strategy. Utah Draft RMP and EIS at ES-3, 1-7.

The explanations for elimination of SFAs in these four states does not establish a clear basis for doing so especially when they would be maintained in Montana and Oregon. This differential treatment and the basis for it must be explained. Fundamentally BLM is creating regulatory uncertainty by creating this patchwork pattern. The need for regulatory certainty, and the fact it was established by the 2015 plans, was a key basis for the Fish and Wildlife Service reaching its not warranted decision. 80 Fed. Reg. 59858. Yet now BLM is creating regulatory uncertainty. This raises questions about whether the sage-grouse will have to be given ESA protections, which in our view should be avoided. At a minimum, to avoid this uncertainty, the SFA protections we have mentioned, like the fluid mineral NSO stipulation with no waiver, exception, or modification, need to be made part of the PHMAs in states that no longer have SFAs. Moreover, BLM needs to address whether eliminating SFAs in some states will threaten SFA protections in Oregon and Montana where the SFA designation would remain in place. It would be inappropriate for SFAs to be threatened in Oregon and Montana just because they have been eliminated elsewhere. If BLM is going to treat SFA designation as subject to state-by-state revocation and not as a range-wide need-a proposition that is totally at odds with the Fish and Wildlife Service not warranted finding not to mention language in the 2015 land use plans-it needs to put in place provisions to ensure the SFA designations are protected where they remain and reconsider the proposals to eliminate SFAs.

These are important protections that must be maintained in priority habitat management areas (PHMA) if SFAs no longer exist in the four states. The value of these protections was recognized by the Fish and Wildlife Service in its 2015 not warranted decision, and thus are a key component of the land use plans that must be maintained if the not warranted decision is to be sustained, which it must be. "Based on our recommendation to further protect sage-grouse population centers that have been identified in the scientific literature as critically important for the species and areas identified through our analysis as important for conservation, BLM and USFS designated areas as Sagebrush Focal Areas (SFA) and added protections that would further limit new, human-caused surface disturbance in SFAs." 80 Fed. Reg. 59858, 59875 (Oct. 2, 2015). SFAs "are the areas that the Federal Plans manage as the highest priority lands in PHMAs for sage-grouse conservation (Figure 5)." Id. at 59878. They are "strongholds" for sage-grouse conservation and as mentioned above contain important connectivity habitat and high densities of breeding birds. Id. The Fish and Wildlife Service recognized that in addition to PHMA protections, the protections mentioned above would also apply in SFAs, including mineral entry withdrawal, NSO stipulations for fluid minerals with no waivers, exceptions, or modifications, and prioritizing management and conservation actions. Id. This was because SFAs need "the most conservative strategies to protect sage-grouse and habitat." Id. Grazing permit review is also prioritized in SFAs. Id. at 59877, 59910.

IMPORTANCE OF SAGEBRUSH FOCAL AREAS An important component of the existing BLM and Forest Service sage-grouse land use plans is the designation of sagebrush focal areas (SFA). These are the most important sage-grouse habitats, which contain large, contiguous blocks of Federal lands in important sage-grouse habitats that have high levels of population connectivity and densities of breeding birds.

I.3.22 Sage-Grouse

Current finding that listing is no longer warranted. In 2010, FWS determined that the greater sage-grouse warranted listing under the ESA "due to the loss and fragmentation of habitat and a lack of adequate regulatory mechanisms to stem habitat loss." In 2015, FWS concluded that the species no longer warranted listing, explaining the change in position in a Frequently Asked Questions accompanying its finding as follows: How did the Service arrive at this not warranted finding? In September 2015, the Bureau of Land Management and U.S. Forest Service completed amendments and revisions to 98 separate federal land use plans that address sage-grouse habitat loss, fragmentation, and other threats to the species. This represents the largest landscape-scale conservation planning effort in U.S. history. In addition, states in the greater sage-grouse range developed or updated greater sage-grouse conservation plans. New federal and state regulatory mechanisms developed since 2010 in the Rocky Mountain region have addressed the most serious threats to the species, primarily fossil fuel and renewable energy development, infrastructure such as roads and power lines, mining, improper grazing, the direct conversion of sagebrush to croplands, and urban and ex-urban development. In the Great Basin region, regulatory mechanisms and other conservation efforts developed since 2010 will substantially reduce and mitigate the primary potential threats of wildfire, invasive plants, conifer encroachment and mining.² Although actual, on-the-ground, measurable improvements to sage-grouse habitat were not accomplished simply by completing the federal plans in 2015, the measures agreed to in those plans, along with those by the states of Wyoming, Montana, and Oregon formed the basis for the FWS finding by meeting the elements of the agency's Policy for Evaluating Conservation Efforts (PECE), which provides that, in order to rely on a conservation effort, FWS "must find that the conservation effort is sufficiently certain to be implemented and effective so as to have contributed to the elimination or adequate reduction of one or more threats to the species . . .³ See, 68 Fed.Reg. 15100 (March 28, 2003) (emphasis added). FWS relied on this policy in its 2015 finding, stating: The [PECE] policy provides guidance on how to evaluate conservation efforts that have not yet been implemented or have not yet demonstrated effectiveness. The evaluation focuses on the certainty that the conservation efforts will be implemented and the effectiveness of the conservation efforts to contribute to make listing a species unnecessary. In this finding, we evaluated the certainty that the Federal Plans, and the Montana and Oregon Plans will be implemented into the future and the certainty that they will be effective in addressing threats, based on the best available science and professional recommendations provided in the COT and other scientific literature and reports. 80 Fed.Reg. 59874 (October 2, 2015) (emphasis added).

BLM cannot rely on perch inhibitors to reduce impacts to sage grouse, as these do not address the behavioral avoidance of sage grouse of tall structures, and don't even completely prevent raptor perching. Prather (2010) provided an empirical test of the effectiveness of perch inhibitors on smaller distribution lines in Utah, and found that they had no significant effect in terms of reducing raptor perching activity. Lammers and Collopy (2007) found similar results for larger transmission lines in Nevada.

Geophysical exploration can result in numerous impacts to sage grouse, including crushing sagebrush, creating linear disturbances through sagebrush habitat that facilitate the movements of sage grouse predators, causing direct disturbance to birds, leading to stress and/or displacement from important habitats, and direct collision mortality. For these reasons, the National Technical Team (2011) recommended, "Allow geophysical operations only by helicopter-portable drilling methods and in accordance with seasonal timing restrictions and/or other restrictions that may apply." The existing

RMPAs neglect to provide definable seasonal restrictions on geophysical exploration in important sage grouse habitats, and also does not prescribe that low-impact techniques (i.e., heliportable methods) be applied, and the amendments to the RMPAs need to redress this deficiency.

THE DIRECTION OF THE OVERALL CHANGES TO THE 2015 SAGE-GROUSE PLANS RISKS THE FINDING THAT THE GREATER SAGE-GROUSE NO LONGER WARRANTS LISTING UNDER THE ENDANGERED SPECIES ACT. Although the FWS found that the greater sage-grouse no longer warranted listing under the ESA in 2015, the actions that this administration has taken and proposed are undermining the reasons for that finding, imperiling the species. Walking away from the vital commitments in the BLM's 2015 Sage-grouse Plans will have unavoidable consequences for the grouse, the more than 350 species that rely on the same habitat and the many stakeholders who have benefitted from the current, flexible management of millions of acres of public lands. If the administration continues on the present track, then: * Actual protections in BLM's 2015 Sage-grouse Plans - the "foundation" of FWS's 2015 not warranted decision - would be weakened or removed altogether, despite a wealth of science showing they are needed; * Commitments to implement and fund other meaningful protections will continue to be formally abandoned or made doubtful; and, * Without reliable, effective actions to address ongoing threats to greater sage-grouse, there will no longer be a basis for finding that a listing is not warranted, leading to action by the FWS and/or the courts to protect the species and its habitat.

The FWS's 2015 finding explicitly relied on specific conservation measures in BLM's 2015 Sage-grouse Plans to address major threats, such as oil and gas development. For example, with respect to oil and gas in the Frequently Asked Questions: How do the conservation actions address the threat of oil and gas development in greater sage-grouse habitat? Oil and gas development is likely to continue throughout the greater sage-grouse range into the future, although its form and extent across the landscape may change. For this status review, the Service mapped locations of the highest potential for oil and gas development in Montana, the Dakotas, Wyoming, Colorado and northeastern Utah to quantify potential exposure of greater sage-grouse to risk of future development. The Service's analyses indicate that the federal land use plans and the Wyoming Core Area Strategy are reducing exposure of the species to fossil fuel development, as measured by the portions of the breeding population and breeding habitat. The Service estimates that the vast majority of lands with a high- to moderate potential for oil and gas development are outside Priority Habitat. Regulatory mechanisms further reduce the risk of nonrenewable energy exposure to the breeding population and breeding habitat by more than 35 percent in Montana, Wyoming's Powder River Basin and the Dakotas, and more than 60 percent in the rest of Wyoming and adjacent portions of Colorado and Utah

The NSO buffers in the plan are likely insufficient to protect wintering sage grouse. While surface disturbance could be prohibited up to 3.1 miles around leks, sage-grouse will still avoid development within 1.75 miles of wellpads and other development during winter (Holloran et al. 2015), or within 1.9 miles of wellpads during the breeding season (Holloran 2005), as discussed above. Thus, development near these buffer zones could still cause sage grouse to avoid otherwise suitable winter areas falling within lek buffer zones. No analysis shows that enough winter habitat will be left undisturbed under existing ARMPAs to support local populations. Absent a clear definition of "winter habitat" and "winter concentration area" and the distinction between the two, BLM should adopt a plan that provides adequate disturbance and vegetation protection for all identified winter habitats. In the current Plans, it is unclear whether these terms are interchangeable or distinct concepts. The NTT defines "winter concentration areas" as: Sage-grouse winter habitats which are occupied annually by sage-grouse and

provide sufficient sagebrush cover and food to support birds throughout the winter (especially periods with above average snow cover). Many of these areas support several different breeding populations of sage-grouse. Sage-grouse typically show high fidelity for these areas, and loss or fragmentation can result in significant population impacts. NTT 2011, p. 37. Winter habitat, on the other hand, may be areas that have favorable sagebrush conditions for sage grouse throughout the winter, regardless of whether sage grouse annually occupy these areas. Wintering areas not utilized in typical years may become critical in severe winters. Caudill 2013. Thus, all winter habitat should be protected. Finally, as detailed in previous comments, BLM's winter habitat health objectives must have scientific support. These objectives should require 20-30% crown cover with shrub heights 25-35 cm above the median snow level, or greater than 40 cm in height, whichever is taller. See Center for Biological Diversity Nevada RMPA DEIS Comment, p. 22. PHMA designations may not be adequate to protect sage-grouse wintering habitats. For example, in Wyoming, Dinkins et al. (2016) found that PHMAs protected 62.5% of breeding locations in Wyoming, but only 50% of wintering habitats. These researchers recommended designating winter concentration areas outside PHMAs for elevated habitat protections. BLM should suspend mineral leasing and all other development activities until all winter habitat is identified. Identified winter habitats, whether inside or outside of Priority Habitats, should be closed to future mineral leasing and materials sales and withdrawn from locatable minerals entry. For valid existing rights both agencies should impose a 3% surface disturbance limit and one pad limit, both calculated per square mile section of winter habitat; No Surface Occupancy within 1.75 miles of the edge of wintering habitats; and no high-volume roads within 1.9 miles of wintering habitats. Wintering habitats should be seasonally closed to all vehicular access between November 30 and March 15. If BLM will not protect all winter habitat as requested, BLM should suspend mineral leasing and all other development activities in winter 63 habitat until winter concentration areas are identified. These winter concentration areas should receive the same protections as the NTT recommends for priority habitats. BLM should also tailor winter habitat objectives to 20-30% crown cover with shrub heights 25-35 cm above the median snow level, or greater than 40 cm in height, whichever is taller.

Wastewater ponds associated with coalbed methane development form breeding habitat for the *Culex tarsalis* mosquitoes that transmit West Nile virus, and have been directly linked to increases in these mosquito populations (Zou et al. 2006, Doherty 2007). The National Technical Team (2011: 19) observed that "ponds created by coal bed natural gas development may increase the risk of West Nile virus mortality in late summer (Walker et al. 2004, Zou et al. 2006, Walker 3 Id. 4 Green et al. at 9. 52 et al. 2007b)." In addition, Kirol et al. (2015b) found that coalbed methane wastewater ponds subsidize sage-grouse nest predators, and that pond shoreline length was the single greatest correlate with sage-grouse nest failure. Greater sage grouse have essentially no ability to develop immunity to West Nile virus (Naugle et al. 2004), and outbreaks of West Nile have led to catastrophic population losses of sage grouse in habitats developed for coalbed methane in the past (Walker et al. 2004). Sinai et al. (2017) found that sage-grouse did not produce antibodies against West Nile, and in addition were susceptible to avian leukosis virus. Taylor et al. (2012) found that the synergy of oil, gas and coalbed methane impacts and West Nile would result in the functional extinction of the Powder River Basin sage grouse population in Wyoming as a result of the next major West Nile virus outbreak.

Sage grouse avoid habitats 54 surrounding roads (Braun 1986, Holloran 2005, Wisdom et al. 2011). According to BLM's own NEPA analysis: Impacts on GRSG accrue over varying distances from origin depending on the type of development: ... ? Interstate highways at 4.7 miles (7.5 kilometers) and paved roads and primary and secondary routes at 1.9 miles (3 kilometers) based on indirect effects measured

through road density studies (Connelly et al. 2004; Holloran 2005; Lyon 2000) Nevada - Northeastern California Greater Sage-grouse RMP Amendment DEIS at 605. BLM has admitted that roads fragment habitats and interfere with natural movements of sensitive species, and with regard to road upgrades, "Any exceptions resulting in road upgrades could further fragment habitat, cause vegetation loss, erosion, and the spread of invasive, nonnative plant species." Wyoming Greater Sage-grouse RMP Amendment DEIS at 4-313 and 4- 294, respectively. BLM's own National Technical Team (2011: 11) recommended that at minimum, vehicle traffic in Priority Habitats be limited to designated roads and trails, use existing roads for access, limit construction to realignments of existing routes that minimize impacts to sage grouse, prohibit road upgrades that change route category, consider seasonal road closures, and conduct travel planning within 5 years, reclaiming roads and trails not designated for vehicular use. Road densities are also an issue, because sage grouse avoid habitats adjacent to roads. Holloran (2005) found that road densities greater than 0.7 linear miles per square mile within 2 miles of leks resulted in significant negative impacts to sage grouse populations. This road density should be applied as a maximum density in Priority and General Habitats, and in areas that already exceed this threshold, existing roads should be decommissioned and revegetated to meet this standard on a per-square-mile-section basis. BLM's proposed plan amendment fails to provide adequate limits on road density. Limiting road and trail networks and off-road vehicle travel also is critical in limiting the spread of invasive weeds. According to BLM's own NEPA analysis, "Roads and trails are one of the main vectors of invasive weed spread, which leads to increase in FRCC and ecosystems moving away from natural fire regimes (CEC 2012)." Nevada - Northeastern California Greater Sage-grouse RMP Amendment DEIS at 701. Off-road vehicle travel must be adequately regulated to protect sage grouse under new plans. According to BLM's own analysis, off-road vehicles are noisy, and typically exceed the background noise levels by more than 10 dBA. Northwest Colorado Greater Sage-grouse RMP Amendment DEIS at 399. This level of noise exceedance has significant negative consequences for sage grouse, as outlined in the section of this protest addressing noise. Off-road vehicle use also results in habitat degradation and destruction, disturbance of sage grouse, and proliferation of invasive weeds (NTT 2011; see also Manier et al. 2011).

winter concentration areas should receive at least the level of protection from permitted industrial activities as recommended by NTT (2011) for priority habitats. As it stands now, unlimited surface disturbance is allowed in all winter concentration areas and winter habitat outside of priority habitats, risking significant winter habitat loss. This EIS must discuss these impacts resulting from development and sagebrush removal in winter habitat or respond to comments noting these impacts. Nor does it provide any sense of the long-term impact of winter habitat loss on the persistence of local sage grouse in the planning area. Moreover, BLM must identify baseline winter habitat and winter concentration areas to create a science-based understanding of any plan amendment's impacts on wintering sage grouse. Even if it were proper for BLM to postpone the identification of winter habitat, the EIS must analyze any specific plans as to how and when this will occur or the criteria these areas must meet for winter habitat protections to apply. And the planning amendment must provide for interim protections for these areas until mapping is complete. In the absence of interim protections, it is thus entirely possible that sage-grouse wintering areas will be irreparably damaged and sage-grouse populations lost before they can receive minimal protections that apply today under the ARMPAs, let alone the full set of protections needed for winter habitat based on the science. At minimum, any leasing or development of parcels that potentially contain winter habitat should be suspended until winter habitat and winter concentration areas are fully mapped and designated appropriate protections. This is extremely critical: Without any restrictions on sagebrush removal in wintering habitats, the habitat loss will be permanent.

See Minnick 2015 (well sites lacked favorable soil conditions decades after reclamation, preventing sagebrush regrowth); cf. FEIS 4-315 (winter concentration areas "could be difficult to restore to original conditions...due to the composition and size of sagebrush in these areas"). Indeed, to the extent the EIS relies on winter habitat restoration as "mitigation" for any habitat loss, this is wishful thinking. Even a short-term loss of winter habitat would likely be detrimental to sage grouse dependent on these areas

I.3.23 Travel and Transportation Management

Travel planning should be carried out to address the risks of habitat destruction and fragmentation acknowledged in the plans.

I.3.24 Waivers, Exceptions, and Modifications

Waivers, exceptions and modifications to oil and gas lease stipulations must be subject to narrow and specific criteria so they are consistently and reliably applied, and can be effective as intended. In addition, applications for and responses to waivers, exceptions and modifications should be tracked and made available to the public.

Finally, it is critical that BLM track waivers, exceptions and modifications requested and those granted, and make that information available to the public. These records will provide important insight into how the stipulations are being applied and the potential impact of waivers, exceptions and modifications on the overall function of the plans. This information will also allow BLM to determine if the availability of or criteria for granting waivers, exceptions and modifications needs to be further narrowed in order to ensure sufficient protection for sage-grouse habitat. Accordingly, we recommend that each plan include language that provides: Exceptions will be considered prior to considering waivers or modifications. If the BLM determines that a waiver or modification is more appropriate, the reasons for such decisions will be documented. Waivers are permitted if the area lacks "protected attributes" - as determined through coordination with the appropriate state wildlife agency. Modifications and exceptions are permitted if: (1) impacts are fully and verifiably offset by compensatory mitigation; or (2) there are no impacts to greater sage-grouse because of terrain or habitat type, based on consultation with the applicable state wildlife agency. Prior to granting any waivers, exceptions and modifications, BLM will insure that the U.S. Fish and Wildlife Service has the opportunity to submit information for consideration. For no surface occupancy stipulations or stipulations in Priority Habitat Management Areas, waivers exceptions and modifications will only be granted following a 30-day public notice and comment period. BLM will maintain an ongoing record of requests for waivers, exceptions and modifications and whether those requests are granted, and will publish those cumulative results on a quarterly basis.

V. RECOMMENDED APPROACH TO WAIVERS, EXCEPTIONS AND MODIFICATION TO OIL AND GAS LEASE STIPULATIONS. The 2015 Sage-grouse Plans include numerous oil and gas lease stipulations that apply to development in order to protect sage-grouse and sage-grouse habitat, including no surface occupancy stipulations, timing limitations and surface use limitations. The draft amendments and EISs also rely on lease stipulations. However, the protections actually provided by the stipulations are only reliable and effective to the extent that the safeguards are applied. Waivers (permanent exemption that applies to the entire leasehold), exceptions (one-time exemption for a particular site within the leasehold) and modifications (change to the lease stipulation, either temporarily or for the term of the lease, can apply to the entire leasehold or certain areas) all permit an operator to avoid compliance with the requirements of a stipulation. Where these loopholes are permitted and used, the

protections that the stipulations are supposed to provide can be undermined. Recent studies confirm that oil and gas development can harm both sage-grouse habitat and lifecycle activities, such as breeding.⁴⁶ Consequently, it is vital that protections associated with oil and gas development are reliably applied and, as a result, that waivers, exceptions and modifications are not broadly used to weaken those protections. While we can accept narrowly prescribed waivers, exceptions and modifications to lease stipulations that are based on very specific criteria, broad standards, such as those currently included in the Nevada Draft RMP Amendment/EIS are not acceptable. As an example, the general approach conditions included in the Draft Colorado RMP Amendment related to no surface occupancy stipulations are more specific and include public engagement. * Waivers are permitted if the area lacks "protected attributes" - as determined through coordination with Colorado Parks and Wildlife and following a 30-day public notice/comment period * Modifications and exceptions are permitted if: (1) impacts are fully offset by compensatory mitigation; or (2) no impacts to greater sage-grouse would occur because of terrain or habitat type - but can only be applied after consultation with Colorado Parks and Wildlife. CO Draft RMP Amendment/EIS, pp. 2-4 - 2-5. Overall, one-time exceptions should be the preferred approach where relief is sought from protective stipulations, such that the safeguards prescribed in these stipulations will remain in place for the majority of oil and gas leases. Waivers, exceptions and modifications should only be granted from no surface occupancy (NSO) stipulations or any stipulations in PHMA after a 30-day public notice and comment period. Further, the U.S. Fish and Wildlife Service should have the opportunity to submit information for consideration prior to granting waivers, exceptions and modifications.

I.4 IDAHO-SPECIFIC COMMENTS

I.4.1 Purpose and Need

The purpose and need for the RMP amendments should be expanded to better align with the overall goal-conserving the species and maintaining the U.S. Fish and Wildlife Service's 2015 "not warranted" decision. We recommend the commitment to conserve, enhance and restore sagegrouse habitat be reflected in the purpose and need statement and in the forthcoming record of decision.

B. BLM's purpose and need violates NEPA. BLM is employing an unlawful "purpose and need" for the Draft EISs. While BLM has some discretion over a project's "purpose and need," that discretion is not unlimited. BLM may not, for example, define the "purpose and need" so narrowly that it forecloses consideration of a reasonable range of alternatives. *Westlands Water Dist. v. U.S. DOI*, 376 F.3d 853, 867 (9th Cir. 2004); see also *City of Carmel-By-The-Sea v. U.S. Dep't of Transp.*, 123 F.3d 1142, 1155 (9th Cir. 1997) ("... an agency cannot define its objectives in unreasonably narrow terms."). Nor may BLM simply adopt the "purpose and need" advanced by a project proponent. *National Parks Conservation Ass'n v. BLM [NPCA]*, 606 F.3d 1058, 1070-72 (9th Cir. 2010). Yet, that is exactly what BLM has done here. It has developed an unreasonably narrow "purpose and need" for the Draft EISs that forecloses consideration of any alternative that does not "align with individual state plans" See, e.g., Idaho DEIS at ES-2. Further, it is self-evident that this "purpose and need" was defined not by BLM, as required by NEPA, but by the states/project proponents. Thus, BLM's "purpose and need" is fundamentally flawed and corrupts the range of alternatives, along with other aspects of the Draft EISs.

I. BLM's "Purpose and Need" for the Draft EISs is unreasonably narrow. In violation of NEPA, BLM is using an unreasonably narrow "purpose and need" for the Draft EISs. According to the Draft EISs, "[t]he purpose of this resource management plan amendment/environmental impact statement (RMPA/EIS) is to enhance cooperation with the states by modifying the approach to Greater Sage-Grouse management in existing land use plans to better align with individual state plans and conservation measures and with

DOI and BLM policy." Idaho DEIS at ES-2. This represents a dramatic departure from the original purpose behind BLM's sage-grouse conservation plans, which was based entirely on the need to develop "adequate regulatory mechanisms" that would avoid the need to list the species under the ESA. See, e.g., Idaho ARMPA at 1-8 - 9. 3 Yet, BLM has totally and impermissibly eliminated this fundamental objective from the Draft EISs. When evaluating the reasonableness of an agency's "purpose and need" statement, courts consider the views of Congress . . . in the agency's statutory authorization to act, as well as in other congressional directives." *Citizens Against Burlington v. BUSEY IV*, 938 F.2d 190, 196 (D.C. Cir. 1991). Here, "Congress intended endangered species to be afforded the highest of priorities." *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 174 (1978). Accordingly, the ESA requires BLM to administer programs that "provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved" 16 U.S.C. § 1531(b); see also *id.* § 1536(a)(1) ("The Secretary shall . . . utilize such programs in furtherance of the purposes of [the ESA]."). Previously, BLM fulfilled the wishes of Congress by identifying the need to develop and adopt "adequate regulatory mechanisms" that would address the long-term "conservation needs of the species" as the guiding and principal purpose for the sage-grouse planning process. See, e.g., Idaho ARMPA at 1-8 - 9. This purpose drove the development of alternatives for the plans, and more than any other factor, shaped the final decision on the plans: "The ARMPAs are designed to directly address the specific threats to the species identified by the FWS in its 2010 listing determination" ROD and ARMPAs for the Great Basin Greater Sage-Grouse Sub-Regions at 1-35.4 The Fish and Wildlife Service (FWS) subsequently recognized 3 https://eplanning.blm.gov/epl-front-office/projects/lup/103344/143603/176718/2015_IDMT_ARMPA.pdf 4 https://eplanning.blm.gov/epl-front-office/projects/lup/21152/63385/68727/Great_Basin_ROD_9.21.15_508.pdf. 4 BLM's conservation plans as the "foundation" of its "not-warranted" decision for Greater sage-grouse. 80 Fed. Reg. 59,858, 59,887 (Oct. 2, 2015). Notably, this decision found that only conservation plans adopted by BLM (and the U.S. Forest Service) and the states of Montana, Oregon, and Wyoming contained "adequate regulatory mechanisms." *Id.* at 59,936. However, in spite of Congress's clear direction to make the conservation of endangered and threatened species the "highest priority," and even though BLM did so during the original planning process, BLM has now abandoned this purpose. Instead, in the Draft EISs, BLM is focused on "aligning" its conservation plans with those of the states. This purpose has nothing to do with ensuring the long-term conservation of sage-grouse or avoiding a future ESA listing. If anything, this new direction will likely move the species closer to a listing, because BLM and FWS both previously rejected an approach that relied heavily on state plans: * BLM: "Alternative E is the alternative based on information provided by the State or Governor's offices for inclusion and analysis in the EISs The BLM believes Alternative E did not incorporate adequate regulatory mechanisms into the existing plan to meet its purpose and need to conserve, enhance, and restore Greater Sage-Grouse and its habitat; therefore, the BLM did not select Alternative E as the ARMPA." ROD and ARMPAs for the Great Basin Greater Sage-Grouse Sub-Regions at 3- 3 to -4;5 and * FWS: "While 10 of the 11 States in the range of the sage-grouse updated their State plans to conserve the species by incorporating new information, which is a testimony to their concern and commitment to protect the grouse and its habitats, not all of these plans have been implemented or are regulatory in scope. We will specifically highlight the regulatory conservation actions mandated by the State plans in Wyoming, Montana, and Oregon because they provide the greatest degree of regulatory certainty in addressing potential threats on State and private lands not under the jurisdiction of Federal plans. We appreciate the work that each State has completed, but not all planning efforts met a level of certainty for implementation and effectiveness." 80 Fed. Reg. at 59,873. Moreover, by focusing so narrowly on what the states want, BLM is foreclosing consideration of alternatives that respond to new information concerning the species and what changes

or new approaches might be necessary to strengthen the regulatory mechanisms adopted in 2015. In sum, BLM has adopted an unreasonably narrow "purpose and need" that violates NEPA.

The purpose and need of the 2018 Draft EIS, pursuant to Secretarial Order 3353, is to contribute to economic growth and energy independence, or, in other words, increase development opportunities on public lands. Therefore, BLM cannot base the pro-development alternatives in its 2018 Draft EISs upon the 2015 alternatives that had a purpose and need focused on conservation and avoidance of an ESA listing, not energy independence and economic growth. Because the "range of reasonable alternatives is measured against the 'Purpose and Need' section," Lockyer at 905, the range of alternatives in the 2018 Draft EIS fail to account for the dramatic change in purpose and need compared to the 2015 EIS, which is a violation of NEPA. 40 CFR §1502.13. In the above section of these comments we discussed the purpose and need issue in the 2018 EIS in more detail.

Because the 2018 Draft EIS states a different purpose and need compared to the 2015 EIS, BLM, pursuant to Lockyer, must necessarily consider a new range of alternatives to meet that new purpose and need. Under Lockyer, BLM in 2018 cannot tier to alternatives considered for the different purpose and need of the 2015 EIS.

The purpose for the EISs foundational to the LUPAs identified in a December 9, 2011 Notice of Intent ("2011 NOI")² was "to avoid a potential listing under the Endangered Species Act." The EISs and LUPAs completely failed to actually address the stated purpose by failing to analyze if the greater sage-grouse met the qualifications for listing as either endangered or threatened under the Endangered Species Act (ESA)³. Instead, the EISs and LUPAs were constructed upon the false assumption that listing was warranted unless extra conservation measures were implemented. Impartial analysis demonstrates that the greater sage-grouse does not meet the criteria to be listed as endangered or threatened, so there was no need to change the land use plan direction that existed before the LUPAs were approved because the identified purpose was already met. Thus, the scope of the 2017 NOI regarding greater sage-grouse conservation should begin with an analysis to see if the original purpose, to avoid an ESA listing, could be achieved by simply vacating each of the LUPAs and reverting back to the previous land use plan direction. WESTERN RANGE SERVICE COMMENTS AND RECOMMENDATIONS NOVEMBER 29, 2017 2017 NOI REGARDING GREATER SAGE-GROUSE CONSERVATION PAGE 2 OF 10 GREATER SAGE-GROUSE STATUS (THE HEART OF THE ISSUE) The 2017 NOI states that the BLM "seeks input on planning criteria, which include compliance with laws and regulations and adequacy of Greater Sage-Grouse conservation measures in the land use plans." See 2017 NOI , page 3. The 2014/2015 LUPAs fail to conform to the requirements of the 1973 ESA, but rather impose conservation measures for greater sage-grouse under the umbrella of the ESA when the species actually fails to meet the qualifications to be listed as either an "endangered species" or a "threatened species" under the Act. The 2011 NOI stated that the overall purpose behind the whole (BLM and USFS) greater sage-grouse conservation effort was "to incorporate consistent objectives and conservation measures for the protection of greater sage-grouse (into land use plans)... in order to avoid a potential listing under the Endangered Species Act." See 2011 NOI² , page 77009, underlined emphasis added. Likewise, the Nevada and Northeastern California Draft LUPA/EIS confirmed that the purpose of the regional greater sage-grouse conservation effort was specifically tied to the desire to avoid listing the species under the ESA, and the Idaho and Southwestern Montana Draft LUPA/EIS tacitly acknowledged the overall purpose by recognizing that the "effort responds to the USFWS's 2010 Finding". In order to fulfill such an overall purpose, the BLM had a fundamental obligation to evaluate whether the greater sage-grouse

meets the criteria of the ESA as an "endangered species" or as a "threatened species" under the land use plan direction that was in place before the LUPAs were approved. During the NEPA process that resulted in the 2014/2015 LUPAs, the BLM failed to undertake any such evaluation. Instead, the LUPAs and their underlying EISs were constructed upon the false assumption that listing was warranted (and even likely) unless extra conservation measures were implemented through land use plan amendments. To the extent that the false assumption is derived from regulations, rules, or policies that drive a finding that the greater sage-grouse is warranted for listing under the ESA when available evidence demonstrates that the species does not meet the definition of an "endangered species" or a "threatened species" under the Act (as discussed in detail below), such regulations, rules, or policies themselves fail to conform to the ESA and must not be allowed to stand. Under the ESA, the term "endangered species" means "any species which is in danger of extinction throughout all or a significant portion of its range", and the term "threatened species" means "any species which is likely to become an endangered species within the foreseeable future...". See ESA3 , definitions (6) and (20). Thus, the criteria to qualify as an "endangered species" under the ESA requires the risk of imminent extinction in the immediate future, while the criteria to qualify as a "threatened species" requires the risk of becoming "endangered" in the foreseeable future. The LUPAs and their associated EISs failed to analyze if the greater sage-grouse meets the ESA definitions for listing as either endangered or threatened and thus failed to meet the overriding purpose stated for the whole greater sage-grouse conservation effort. To evaluate whether the greater sage-grouse presently meets the criteria to be listed as endangered or threatened under the ESA, at least three questions must be answered: 1] How many greater sage-grouse are needed to safeguard the species against imminent extinction or eventual extinction in the foreseeable future? WESTERN RANGE SERVICE COMMENTS AND RECOMMENDATIONS NOVEMBER 29, 2017 2017 NOI REGARDING GREATER SAGE-GROUSE CONSERVATION PAGE 3 OF 10 2] Do recent greater sage-grouse population numbers and trends put the species at risk for imminent extinction? 3] Do recent greater sage-grouse population numbers and trends put the species at risk for eventual extinction in the foreseeable future? The U.S. Fish and Wildlife Service (FWS) provided the information required to answer Question 1] above in its 2010 FWS Findings which identified greater sage-grouse populations below 50 breeding adults "as being at short-term risk of extinction" and populations below 500 breeding adults "as being at long-term risk for extinction." See FWS Findings4 , page 13959. The FWS further qualified that the minimum effective population needed to protect the species long-term may be as high as 5,000 individuals in order to "maintain an effective population size of 500 birds" (see, FWS Findings4 , page 13985). The FWS also deduced that a minimum effective population size may need to be as high as 5,000 individuals in order to maintain minimal "viable population(s)" (see, FWS Findings4 , pages 13959 and 13985). Thus, a population that exceeds 50 breeding adult birds is needed to safeguard greater sage-grouse against the short-term risk of imminent extinction, and as many as 5,000 individual birds may be needed as a minimum effective population to safeguard the species against the risk of eventual extinction in the foreseeable future. The FWS also provided information required to answer Question 2] above. The FWS Findings estimated that the recent range-wide greater sage-grouse population totals well over 500,000 birds, more than 10,000 times larger than the 50 breeding adults needed to safeguard the species against the risk of imminent extinction (and more than 100 times larger than the minimum effective population of 5,000 birds). See FWS Findings4 , Table 4, page 13921. All eleven of the locations reported in Table 4 greatly exceed a population of 50 breeding adults. Likewise, given the estimated number of males by Management Zone reported in Table 6 of the FWS Findings (see FWS Findings4 , page 13923) and the female skewed sex ratio for greater sage-grouse (reported to average about two females per male, FWS Findings4 , pages 13916 and 13992), it is evident that all seven Management Zones greatly exceed a population of 50 breeding adults. Thus, all eleven state/regional

locations and all seven Management Zones exceed the population size below which greater sage-grouse are considered to be at risk for imminent extinction, so there are at least seven to eleven areas that support sufficient populations to prevent greater sage-grouse from presently being listed as an "endangered species" under the ESA. Finally, the FWS provided information required to answer Question 3] above. Seven of the locations reported in Table 4 and five of the Management Zones reported in Table 6 of the FWS Findings greatly exceed a minimum effective population of 5,000 birds below which greater sage-grouse are considered to be at risk for eventual extinction in the foreseeable future. Additionally, estimates for the contemporary rate of decline in greater sage-grouse populations from 1985 through 2007 have averaged about 1.4% per year. See FWS Findings⁴, page 13922. Assuming that management practices in place prior to approval of the LUPAs endured and the reported rate of decline continued unchanged, it would take more than 330 years for the reported greater sage-grouse population to dwindle below the minimum effective population of 5,000 birds. Speculating what might occur over three centuries from now reaches well beyond the foreseeable future. In fact, the FWS itself limited its sage-grouse population trend projections to a time-frame of "30 years to minimize the risk of error associated with the 100 year projections simply due to using lek data." See FWS Findings⁴, page 13959. WESTERN RANGE SERVICE.

The Draft LUPA EISs devote voluminous space to the current status of the affected environment and to the expected environmental consequences of the various alternatives under consideration for almost everything under the sun, except for the status and environmental consequences with respect to greater sage-grouse population levels and trends, thereby failing to meet the overriding purpose for the project. The EISs analyze the status and environmental consequences with respect to other special status species, vegetation, fish and wildlife, wild horses and burros, wildfire, livestock grazing, recreation, travel management, lands and realty, mineral resources, special designations, soil resources, water resources, cultural resources, tribal interests, visual resources, roadless areas, air quality, climate change, social and economic conditions, and forest and woodland products, among other things. But the Draft LUPA EISs give only cursory attention to the current status of greater sage-grouse populations and essentially no attention to the environmental consequences of the various alternatives under consideration on greater sage-grouse population levels and trends.

The 2017 NOI states that the BLM "seeks comment on the SFA designation, mitigation standards, lek buffers in all habitat management area types, disturbance and density caps, habitat boundaries to reflect new information, and reversing adaptive management responses when the BLM determines that resource conditions no longer warrant those responses..." as well as comments regarding "State-specific issues...". See 2017 NOI¹, page 3. These statements indicate that the BLM may continue to overlook the overall purpose of their greater sage-grouse conservation effort, to avoid a potential ESA listing. To the extent that the BLM's continuing greater sage-grouse conservation effort fails to remedy the fatal flaw of its previous LUPAs which failed to evaluate the status of greater sage-grouse in relation to the stated purpose for the whole effort, and instead seeks to further build upon the unstable foundation propped up by the false assumption that an ESA listing for the species is warranted unless extra conservation measures are implemented (beyond measures that were in place when the 2010 FWS Findings were published), the resulting decisions are doomed to suffer from the same fatal flaw and result in additional amendments to land use plan direction that also fail to conform to the requirements of the ESA and will thus be vulnerable to successful legal challenges.

As discussed in our detailed comments above, the assumption that the greater sage-grouse somehow qualifies for listing as either an "endangered species" or a "threatened species" unless extra conservation measures are implemented does not stand up under a reasoned evaluation of the available evidence regarding recent sage-grouse population status and trends. Thus, the assumption is a false and unsound foundation, and everything else that is built thereon is destined to fall like a house-of-cards. Because the greater sage-grouse does not qualify for listing as "endangered" or "threatened" under the ESA by virtue of the available evidence regarding recent population status and trends, any changes to planning direction regarding SFA designation, mitigation standards, lek buffers, disturbance and density caps, habitat boundaries, and adaptive management responses cannot be justified under the umbrella of the ESA. Since the purpose of this entire planning effort was couched in terms of meeting the requirements of the ESA, such changes to planning direction simply were not and are not justified under this effort. If such changes to planning direction are to be made, they must be justified and stand on their own merit rather than be propped up on the false assumption that they are required to comply with the ESA.

B. Chapter I - Purpose and Need for Action Here, the DRMP/DEIS recognizes Secretary's Order No. 3349 and its requirement that BLM should better balance conservation strategies and policies with the equally legitimate needs for creating jobs. This chapter also recognizes the Secretary's issuance of Secretary's Order No. 3353 among the identified planning criteria with which the DRMP/DEIS must comply. Id. at I-4. The chapter stating the purpose and need for the action omits, however, any reference to President Trump's energy independence Executive Order directing greater development of domestic energy from all sectors, including renewable resources.

If there are any changes that experts deem necessary, these should instead be done via minor plan amendments, also known as "maintenance actions." A complete rewrite is an unnecessary waste of federal resources, and risks upending the FWS's 2015 finding.

Instead of amending the plans by weakening protections, BLM should focus on engaging communities in the decisions necessary to implement the plans as they are. Give the plans a chance to work. If there are any changes that experts deem necessary, these should instead be done via minor plan amendments, also known as "maintenance actions." A complete rewrite is an unnecessary waste of federal resources, and risks upending the official finding made by the FWS that a listing under the ESA is not needed.

I.4.2 Issues

The DEIS points out that under the 2015 RMPA (DEIS, No Action Alternative), over the 3 year period from 2015 through 2017, 534,744 acres of sage-grouse habitats have been lost to wildfire, and 431,295 acres have been treated to restore or improve sage-grouse habitat. Furthermore, the effectiveness of these restoration treatments is uncertain at this time, and even if they prove to be effective, it will take many years to come online. It is clear by BLM's analysis in the DEIS that we are still very much in a downward trajectory with respect to sage-grouse conservation despite the significant conservation commitments in the No Action ' Alternative. This points out the need to be cautious of any downgrading of conservation commitments from the No Action Alternative, and forms the basis of our comments on the Management Alignment Alternative and the un-analyzed effects of BLM implementing IM 2018-093. While the BLM, had no way of predicting the impact of 2018 fires on sage-grouse habitat since the DEIS' was completed in May, 2018, the Final EIS should analyze the effects of further loss of sage-grouse habitat from the 2018 fires to date. Information is currently available on the acres of sage-grouse habitat burned in 2018 and it will likely reflect that the downward trajectory in habitat continues

at an even greater rate. The BLM should specifically provide a detailed analysis in the Final EIS of habitat loss to fire from 2015-2018 in its rangewide analysis, especially the Idaho/Oregon/Nevada tri-state area, given this area's importance as one of the last remaining large blocks of sage-grouse habitat and its importance to long-term survival of the species. The DEIS currently does a poor job of analysis of this tri-State area.

I.4.3 Modifying Waivers, Exceptions, and Modifications of Fluid Minerals Determinations

On 2-10, Table 2-2 under waivers, exemptions and modifications, and other locations in the DEIS, the BLM outlines the use of Technical and Policy Teams that will be involved in many aspects of implementing commitments in the Idaho Plan. The DEIS notes that "The BLM will, in collaboration with the Idaho Governor's Office of Species Conservation (OSC), Idaho Department of Fish and Game (IDFG), US Fish and Wildlife Service (USFWS), and potentially other state and federal agencies, form two teams (Technical Team and Policy Team), through an MOU, that will be responsible for review of proposed infrastructure developments, exceptions, variances, adaptive management triggers and responses, habitat management area adjustments, mitigation, etc. as described in detail in Appendix K." We appreciate such a process for engagement of these teams, but are deeply concerned about the final approval process, as it is clear these professionals are merely advisors with no requirement for their input to be used on technical matters like assessing direct, indirect or cumulative impacts on the sage-grouse. Indeed it would seem that the Authorized Official simply needs to check the box on seeking collaboration and advice without any binding requirement to use professional advice on complex ecological issues related to waiver or other decisions associated with plan implementation. Also, on 2-27, there is no commitment in the DEIS to make the operation of these teams public or provide an opportunity for public input, even though their operation could lead to fundamental variations from the terms of the plan. Transparency in operation of these teams and clarification that the core management commitments are binding decisions and how they will be reliably applied would provide more and necessary certainty in the DEIS. BLM should provide clarification regarding the operation of the Technical and Policy Teams, including adding requirements to use state wildlife agency recommendations on projects that affect sagegrouse, as well as transparency regarding their efforts and needed analysis and public input before changes are made to the plan.

The plans contain many new provisions that serve as loopholes and exceptions to habitat protections. We need certainty that crucial habitat will be protected to ensure the species thrives into the future. If the revisions are adopted, thousands of wells could move into the species core habitats, potentially leading to a listing of the species as endangered

DEIS Section 4.5, 5. Including Waivers, Exceptions and Modification on No-Surface Occupancy Stipulations MD Mineral Resources (MR) 3 Under the Management Alignment Alternative, the 2015 Approved Resource Management Plan Amendment MD MR 3 would be amended to remove the requirement for an unanimous finding between BLM, FWS, and the State of Idaho to grant an exception for No Surface Occupancy in fluid minerals development. The unanimous finding requirement would be replaced with coordination with the two interagency teams. According to the DEIS, "This change is expected to facilitate improved decision making and a more collaborative process for Greater sage-grouse management in Idaho while retaining BLM's decision-making authority." We recommend the Final EIS explain how the two-interagency team process would improve decision making and collaboration relative to no action.

The plans contain many new provisions that serve as loopholes and exceptions to habitat protections. We need certainty that crucial habitat will be protected to ensure the species thrives into the future.

A. Executive Summary Table ES-2 identifies issues and corresponding resource topics addressed in the DRMP/DEIS. Significantly, issue number 5 addresses waivers, exceptions, and modifications to no-surface-occupancy ("NSO") stipulations that apply to fluid minerals. However, as noted above, the 2015 plan essentially creates no-surface occupancy for wind energy by designating all PHMA as exclusion areas. The DRMP/DEIS fails to explain why it is addressing waivers, exceptions, and modifications to NSO stipulations for fluid minerals but does not address waivers, exceptions, and modifications for the equivalent NSOs in the context of wind energy. The final EIS/RMP should specifically address the need for waivers, exceptions and modifications to allow wind energy development and transmission siting in exclusion areas.

This change would be consistent with Governor Otter's sage-grouse plan which is the stated basis for the flexibility in the NSO stipulations in the context of fluid minerals. Specifically, Governor Otter's plan, at DRMP/DEIS Appendix I, allows for the development of infrastructure in priority habitat where that infrastructure project could "demonstrate, among other things, a significant high value benefit to the State of Idaho as well as provide compensatory mitigation consistent with the guiding principles above." Appendix I at 25. The Governor recommended a key criterion for obtaining an exemption to an exclusion requirement - where the project proponent can demonstrate that the project will provide a high value benefit to meet critical existing needs and/or important societal objectives to the State of Idaho. *Id.* at 27. Further, the Governor's alternative recognizes that "federal officials are not well-positioned to determine whether a project under this exemption provides a 'high value' benefit to the State." *Id.* The Governor calls for the creation of an Implementation Commission to determine what is of high value to the State and its economic vitality. *Id.* Consequently, the Governor's plan provides an opportunity for LS Power to demonstrate the high value benefits to the State and its economy from the development of wind energy and transmission in Idaho. Given the President's and the Secretary's emphasis on domestic energy production, including renewable energy, it is recommended that the BLM follow the Governor's approach and provide an opportunity for infrastructure in PHMA to demonstrate its societal benefits, as would be consistent with the type of flexibility that is granted in the DRMP/DEIS to fluid mineral production. Not to do so would infer that the BLM has concluded wind energy development to be more impactful than fluid mineral production. LS Power is not aware of any body of evidence supporting this conclusion. The Governor's plan further outlined how infrastructure could be developed in priority habitat in situations where the development could (1) not be reasonably accomplished outside of core habitat, (2) demonstrate that the sage-grouse population was stable or increasing over a three-year period, (3) ensure that project impacts would not accelerate or cause a population decline within the relevant area, (4) co-locate with existing infrastructure to the maximum extent practicable, and (5) mitigate unavoidable impacts through compensatory mitigation. *Id.* at 33-34. Again, this logical, step-by-step approach provides an opportunity for a project proponent to show that its project can avoid, minimize or compensate for impacts to sage-grouse and, if so, locate within PHMA habitat without the threat of outright prohibition based upon gross scale habitat maps creating exclusion zones. For these reasons, the BLM should reconsider its position within the DRMP/DEIS that wind energy development in PHMA does not require additional analysis. (DRMP/DEIS at ES-4.) Similarly, BLM should reevaluate its decision not to conduct additional analysis on the imposition of avoidance area zoning on rights-of-way in PHMA. *Id.* Failure to do so leaves in place those Obama Administration policies. *Id.* at ES-5.

For any management action that potentially would interfere with the exercise of valid existing rights, the Proposed RMPA/Final EIS should provide flexibility for case-by-case exceptions to protect such rights without the need to amend the RMP. For example, the Final RMP/EIS should recognize that, if a BLM right-of-way through sage-grouse habitat is required to access an existing phosphate lease, any right-of-way exclusion area provisions or other restrictions on rights-of-way will not be applied in a manner so as to make accessing the lease area unreasonable or unduly uneconomical- e.g., by requiring a 25-mile road detour around Greater Sage-Grouse habitat where two miles of road would provide proper access- and without considering possible mitigation. With respect to future phosphate mining opportunities, the Proposed RMPA/Final EIS should similarly allow sufficient flexibility for mineral development to coexist with sage-grouse conservation.

I.4.4 Habitat Boundary/Habitat Management Area Designations

The Plans manage PHMAs as right-of-way "avoidance areas" instead of exclusion areas (See, e.g., Wyoming RMPA Final EIS at 2-25), as recommended by their own experts. This prevents certainty of implementation by allowing new rights-of-way to be granted on a case-by-case basis. "Exclusion" is the appropriate level of management for these habitats based on the best available science, and this level of protection should also apply to Focal Areas and Winter Concentration Areas as well. Only portions of General Habitats would be managed as avoidance areas for rights-of-way based on other resource values (See, e.g., Wyoming RMPA Final EIS at 2-26); the importance of protecting sage grouse habitat merits avoidance management for all General Habitats.

* MD SSS 6 - I support the integration of flexibility into RMPs to be able to adjust habitat management area boundaries without the need for a plan amendment. The DRMP /DEIS should be revised to make clear that this concept of mapping flexibility will be extended to assessments of site-scale suitability of sage-grouse habitat as required by IM 2018-025 and that when a project proponent suggests a site in a habitat management area, BLM may adjust the habitat management area boundaries to match the on-the-ground suitability of the habitat for sage-grouse. This could, for example, result in amending PHMA maps to include areas of IHMA or GHMA, thus allowing application of IHMA or GHMA management directions for a project located there. This approach is also consistent with Governor Otter's plan, Appendix I at p. 11. Governor Otter's plan recognizes that broad, programmatic habitat maps must be verified on the ground to determine if a particular site is inside or outside a particular management zone and that the BLM and the State must determine actual habitat quality at a specific location where a project is proposed.

Protect sagebrush reserves. It is important, particularly in light of climate change, that land managers set aside areas both where sage-grouse are now and where they will need to go in the future; the current conservation plans fail to provide that direction.

BLM must retain key protections for GHMAs. The 2015 ARMPA designated approximately 2.1 million acres of GHMAs in Idaho. Idaho DEIS at 3-5. These areas are subject to measures that are designed to harmonize development activities with habitat conservation, including applying the net conservation gain standard and lek buffers. Idaho ARMPA at 1- 11 to 1-14. Maintaining these protections is necessary for the proper functioning of GHMAs, which are, in turn, a central component of the broader sage-grouse conservation strategy: The GHMAs represent habitats that contain fewer leks and sage-grouse than PHMAs. The designation as GHMAs provide sage-grouse conservation by protecting habitat and 9 The BLM recognizes the Federal Land Policy and Management Act (FLPMA) "neither enlarges nor diminishes

the authority of the states in managing fish and wildlife." Utah DEIS at I-2 (emphasis added). In fact, FLPMA only requires coordination of planning efforts with a state "to the extent consistent" with public land laws, and BLM land use plans only need to be consistent with state plans "to the maximum extent . . . consistent with Federal law and the purposes of [FLPMA]." 43 U.S.C. § 1712(c)(9). 15 connectivity between populations and potential refugia in the event of catastrophic events such as wildfire. While the amelioration of threats in GHMAs will likely be less than in PHMAs due to less stringent required conservation measures, GHMAs do have restrictions that benefit sage-grouse conservation. 80 Fed. Reg. at 59,879. Yet, the Idaho DEIS guts these protections, rendering GHMAs superfluous and ineffectual. First, the Idaho DEIS requires project proponents to "avoid and minimize impacts to the extent practicable." Idaho DEIS at 2-14. This change strikes at the heart of the sage-grouse conservation strategy, where avoiding and minimizing impacts - and providing for compensatory mitigation - are guiding principles. See, e.g., Idaho ARMPA at I-9 ("The purpose of The purpose of the ARMPA is to identify and incorporate appropriate measures in existing land use plans to conserve, enhance, and restore Greater Sage-Grouse habitat by avoiding, minimizing, or compensating for unavoidable impacts on Greater Sage-Grouse habitat. . . ."); 80 Fed. Reg. at 59,875 ("The Federal Plans represent a paradigm shift in western Federal lands management in their focus on maintaining large expanses of the sagebrush ecosystem for the benefit of sage-grouse and many other species. Federal Plans are structured around a layered management approach that aims to preclude or minimize additional surface disturbance in priority conservation habitats. . . ."). Making the requirement to avoid and minimize the impacts of development activities optional negates any of the conservation benefits of GHMAs. Second, the Idaho DEIS eliminates lek buffers within GHMAs. This arbitrary and unexplained decision does not at all comport with the best available science concerning development activities in designated habitats. See, e.g., USGS, Greater Sage-Grouse (2015-17)-Synthesis and Potential Management Implications 14 (2018) ("No substantial new information was identified in the review of the literature since 2015 regarding effects of discrete anthropogenic activity (energy development, power lines, roads, agricultural conversion) on sage-grouse, although some information was developed that continues to add to the understanding of these activities."). BLM must restore these important requirements in the Final EIS, or risk undermining the "regulatory certainty" achieved by the 2015 plans.

a. **Modifying Habitat Boundary Designations** The Idaho DEIS is requesting comment on the "[in]tegration of flexibility into the plans to be able to adjust habitat management area boundaries without the need for plan amendment." Idaho DEIS at ES-3. Under FLPMA, requirements for land use planning on public land include that the BLM, under the Secretary of the Department of the Interior, "develop, maintain, and when appropriate, revise land use plans" to ensure that land management be conducted "on the basis of multiple use and sustained yield." 43 U.S.C. §§ 1701(a)(7), 1712(a). See also *Klamath Siskiyou Wildlands Center v. Boody*, 468 F.3d 549, 555 (9th Cir. 2006). As between plan maintenance and plan revisions, the Ninth Circuit held that "these provisions were created as complements, and taken together they ensure that whatever resource management plans are changed in any meaningful way, the changes must be made by amendment (i.e., supported by scientific environmental analysis and public disclosure)." This is consistent with FLPMA's requirement that the BLM ensure the "views of the general public" and "third-party participation" are adequately incorporated into the land planning process. [Citation omitted.] This interpretation is also supported by provisions of FLPMA that require the BLM to manage public lands in accordance with resource management plans once they have been established." *Klamath Siskiyou Wildlands Center*, 468 F.3d at 557. In the Ninth Circuit, the test is that the dividing line between plan maintenance and plan revisions is crossed where a "dramatic change in policy" effectuates a change in a "term or condition" in the existing RMP. *Id.* at 559-60. Under 43 CFR § 1610.5-4, plan

maintenance actions are "limited to further refining or documenting a previously approved decision incorporated in the plan." Further, "maintenance shall not result in expansion in the scope of resource uses or restrictions, or change the terms, conditions and decisions of the approved plan." *Id.* By contrast, 43 CFR § 1610.5-5 requires more extensive plan amendments triggered by "the need to consider monitoring and evaluation findings, new data, new or revised policy, a change in circumstances or a proposed action that may result in a change in the scope of resource uses or a change in the terms, conditions and decisions of the approved plan." The BLM Land Use Planning Handbook, H-1601-1, Part VI, Chapter (H) further directs that land use plan maintenance is limited to "clarifying a previously approved decision incorporated into the plan," including such examples as refining the boundary of an archeological district based on new inventory data; refining the known habitat of a special status species addressed in the plan based on new information; and, upon new discovery of a sage-grouse lek, applying an existing oil and gas lease stipulation to a new area. *Id.* at 44, available at https://www.ntc.blm.gov/krc/uploads/360/4_BLM%20Planning%20Handbook%20H-1601-1.pdf The Commenters support the laudable purposes of flexibility for adjustment of HMAs without the need for a plan amendment. The issue is how to define the outer reaches of "plan maintenance" from material changes that would warrant the formality of land use plan amendments under FLPMA. The DEIS Management Alignment Alternative should include language that makes adjustment to Habitat Management Areas ("HMAs") through plan maintenance when appropriate, based on the most updated best available science. Such efforts to reflect the accurate habitat on the ground would serve the laudable purpose of allowing infrastructure and economic development to occur in areas that would not impact the species.

Issue 3: DEIS Comment 4: The Issue, the Comment, and the Recommendation seem to be addressed as "Issue Number" 1 in the DEIS at pages ES-3 and I-6, which speaks of an issue "Modifying Habitat Boundary Designations". However, a closer read of the DEIS reveals that the DEIS truly omitted any consideration of the Issue, the Comment, and the Recommendation, wherein the DEIS at page 2-29 (Figure I-1) identifies the "Planning Area" and which ignores expanding the "Planning Area" to include the relevant portion of Nevada, as illustrated in the map above. It is critical that BLM consider and analyze this Issue in the Final EIS, and implement a proposed action in the ROD that adopts the Recommendation. See also DEIS at page 2-7 (Table 2-2, "Management Alignment Alternative", "Habitat management area flexibility") (wherein DOI hints to the need to "correct administrative errors in the 2015 mapping", but Simplot L&L does not read page 2-7 to speak to this specific Issue, Comment, and Recommendation). In addition, this comment and recommendation is consistent with the Governor's Plan wherein in the Map included with the Governor's Plan at page 6 (DEIS at PDF page 125 of 172) clearly shows the portion of Nevada to be included within the Southern Conservation area.

DEIS Section 4.5, I. Modifying Habitat Designations Habitat management area flexibility and Two-team interagency approach (Management Decision (MD) Special Status Species (SSS) 6 and MD SSS 44) The DEIS states Appendix K describes the new interagency teams' responsibilities and sideboards for the Management Alignment Alternative's actions. The DEIS also states the two-team approach should improve the consistency of greater sage-grouse management across property ownership and improve interagency coordination and collaboration in Idaho.² We note there is no Appendix K in the DEIS or on the project website. Therefore, we recommend the Final EIS include the referenced Appendix K and explain how the two-team approach improves - relative to no action - consistency across ownership and interagency coordination and collaboration.

Conserve all of the most important sage-grouse habitat. For example, winter habitat is particularly important to sage-grouse, mule deer and other wildlife, but the current federal plans fail to protect those areas from harmful land use and development.

Protect sagebrush reserves. It is important, particularly in light of climate change, that land managers set aside areas both where sage-grouse are now and where they will need to go in the future; the current conservation plans fail to provide that direction.

MD WHB 4: In PHMA, assess and adjust *appropriate management levels (AMLs)* through the NEPA process within HMAs when wild horses or burros are identified as a significant causal factor in not meeting land health standards, even if current AML is not being exceeded.

MD SSS 35 : In undertaking BLM management actions in PHMA, IHMA *and GHMA,* and consistent with valid and existing rights and applicable law in authorizing third-party actions, the BLM will apply the lek buffer distances in accordance with Appendix B *(Buffers)*. The buffers do not apply to vegetation treatments specifically designed to improve or protect Greater Sage-Grouse habitat. *However impacts to leks should be analyzed and those impacts should be minimized to the extent practicable.*

MD SSS 32 : In PHMA and IHMA, incorporate RDFs as described in Appendix C in the development of project or proposal implementation, reauthorizations or new authorizations and suppression activities, as conditions of approval (COAs) into any post-lease activities and as best management practices for locatable minerals activities, to the extent allowable by law, unless at least one of the following conditions can be demonstrated and documented in the NEPA analysis associated with the specific project: a. A specific RDF is not applicable to the site-specific conditions of the project or activity; b. A proposed design feature or BMP is determined to provide equal or better protection for Greater Sage-Grouse or its habitat; or c. Analysis concludes that following a specific RDF will provide no more protection to Greater Sage-Grouse or its habitat than not following it, for the project being proposed. In GHMA, *the RDFs are considered best management practices (BMPs) that should be considered and applied unless the proponent can show that applying the BMP is technically or economically impracticable.* Delete: "incorporate RDFs as best management practices in the development of project or proposal implementation, reauthorizations or new authorizations, suppression activities, post-lease activities, and locatable minerals activities."

SSS OBJ 2 : Within PHMA and IHMA, maintain large intact sagebrush steppe communities with vegetative characteristics consistent with their ecological potential such that Greater Sage-Grouse can select suitable seasonal habitats for breeding, nesting, rearing young, and wintering. Greater Sage-Grouse actively select suitable use areas within large intact sagebrush ecosystems. Not every site will provide for every Greater Sage-Grouse need, which is why they require large intact sagebrush ecosystems. The *desired conditions* for Greater Sage-Grouse (the *Desired Conditions* table (Table 2-2) in the 2015 Final EIS) are a list of indicators, characteristics, and values that describe Greater Sage-Grouse seasonal habitat use areas. The BLM used indicator values derived from a synthesis of local and regional Greater Sage-Grouse habitat research and data to describe the typical vegetation communities that Greater Sage-Grouse select. While the *desired conditions* are not attainable on every site or every acre within designated Greater Sage-Grouse habitat management areas, the values reflect a range of habitat conditions that generally lead to greater survival of individuals within a population. When permitting land use activities, the BLM shall consider the ecological site potential within designated habitat management areas to validate the habitat conditions achievable for a specific site. The seasonal

habitat descriptions in Table 2-2 [the *Desired Conditions* table in the 2015 Final EIS] vary across the range of Greater Sage-Grouse, within a subregion, and between sites. They are not land health standards but are quantitative measures that help inform the Special Status Species Habitat Land Health Standard for Greater Sage-Grouse. These measurable values reflect ecological potential, and may be adjusted based on local factors influencing Greater Sage-Grouse habitat selection. Local data or recent science may indicate that Greater Sage-Grouse select for vegetation structure and composition in seasonal habitats not characterized by the values in the *desired conditions* table. In these cases, it may be appropriate to adjust the values. *Desired Conditions* should be evaluated in the context of annual variability in ecological conditions and should not be used singly to determine habitat suitability for Greater Sage-Grouse. *As appropriate,* they may be used to demonstrate trends over time, during plan evaluations for effectiveness of Greater Sage-Grouse conservation, or when identifying limiting habitat characteristics for a given area. The indicators, characteristics, values, and desired seasonal habitat conditions in the Greater Sage-Grouse Plan *Desired Conditions* Table are meant to inform the wildlife habitat component of the Land Health Standards evaluation process (LHS, 43 CFR 4180.2), but do not replace rangeland health assessments. Results from the LHS evaluation should be used to support the BLM in land use authorization processes and during development of appropriate objectives for management actions such as vegetation treatments. The *Desired Conditions* Tables are to be used: *

- * To assess habitat suitability for Greater Sage-Grouse following the BLM policy on Greater Sage-Grouse habitat assessments *at the appropriate scale.*
- * To describe desired conditions that provide habitat at multiple spatial scales as defined by the best available science.*
- * To evaluate land use plan effectiveness for Greater Sage-Grouse conservation *
- * As a basis to develop measurable project objectives for actions in BLM-designated Greater Sage-Grouse habitat management areas *as needed* when considered alongside land health standards, ecological potential, and local information.

MD MT 3 : In PHMA, IHMA, *and GHMA* in undertaking BLM management actions, and, consistent with valid existing right and applicable law, in authorizing third-party actions that result in habitat loss and degradation (Appendix E, Table E-1), the BLM will require and ensure mitigation that provides no net loss to the species including accounting for any uncertainty associated with the effectiveness of such mitigation. This will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions.

Appendix B: Distance Estimates for Greater Sage-Grouse - A Review (Open File Report 2014-1239). In PHMA: The BLM will apply the lek buffer-distances specified as the lower end of the interpreted range in the report unless justifiable departures are determined to be appropriate (see below). The lower end of the interpreted range of the lek buffer-distances is as follows:

- o linear features (roads) within 3.1 miles of leks
- o infrastructure related to energy development within 3.1 miles of leks
- o tall structures (e.g., communication or transmission towers, transmission lines) within 2 miles of leks
- * *Distribution lines/poles: within 0.6 miles of leks *
- * o low structures (e.g., fences and rangeland structures) within 1.2 miles of leks
- o surface disturbance (continuing human activities that alter or remove the natural vegetation) within 3.1 miles of leks
- o noise and related disruptive activities
- * *repeated/sustained disturbance including those that do not result in habitat loss at least 2 miles from leks
- * * *Temporary* noise including those that do not result in habitat loss (e.g., motorized recreational events) at least 0.25 miles from leks)

In IHMA: The BLM will apply the lek buffer-distances as follows unless justifiable departures are determined to be appropriate (see below).

- o linear features (e.g. roads) within 0.8 miles of leks
- o infrastructure related to energy development *(e.g. oil, gas, wind, solar)* within 2 miles of leks
- o tall structures (e.g., Electrical, communication, meteorological)
- * *Transmission Lines/Towers: within

1.2 miles of leks, with a 1.2 - 2 mile buffer subject to the exemption criteria: applicable to this variable and select variables in GHMA below

- * Distribution Lines/Poles: within 0.6 miles of leks
- * Communication & Meteorological Towers - within 2 miles of leks
- * low structures (e.g., fences and rangeland structures) within 0.6 miles of leks
- * surface disturbance (continuing human activities that alter or remove the natural vegetation) within 2 miles of leks
- * noise and related disruptive activities
- * repeated/sustained noise disturbance including those that do not result in habitat loss at least 2 miles of leks
- * temporary noise disturbance including those that do not result in habitat loss (e.g., motorized recreational events) at least 0.25 miles from leks
- * at least 0.12 miles from leks

Buffers are not required in GHMA. In GHMA: The BLM will apply the lek buffer-distances as follows, subject to exception criteria:

- * linear features (e.g. roads) within 0.25 miles of leks
- * infrastructure related to energy development (e.g. oil, gas, wind, solar) within 0.6 miles of leks.
- 2 mile feasibility/practicality conditions
- * tall structures: (e.g. Electrical, communication, meteorological) within 0.6 miles of leks
- * low structures (e.g., fences and rangeland structures) within 0.12 miles of leks
- * surface disturbance (continuing human activities that alter or remove the natural vegetation) within 2 miles of leks
- * noise and related disruptive activities
- * repeated/sustained disturbance including those that do not result in habitat loss at least 2 miles from leks
- * temporary disturbance including those that do not result in habitat loss (e.g., motorized recreational events) at least 0.25 miles from leks

Buffer Exception Criteria for IHMA and GHMA: It is impracticable, technically or economically, to locate the project outside of the buffer area; and Impacts are avoided through project siting and design to the extent reasonable -or- Impacts are minor or non-existent; -and- Impacts are avoided through project siting and design to the extent reasonable.

- * The buffers do not apply to vegetation treatments specifically designed to improve or protect Greater Sage-Grouse habitat. Justifiable departures to decrease or increase from these distances, based on local data, best available science, landscape features, and other existing protections (e.g., land use allocations and state regulations) may be appropriate for determining activity impacts. The USGS report recognized "that because of variation in populations, habitats, development patterns, social context, and other factors, for a particular disturbance type, there is no single distance that is an appropriate buffer for all populations and habitats across the sage-grouse range." The USGS report also states that "various protection measures have been developed and implemented... [which have] the ability (alone or in concert with others) to protect important habitats, sustain populations, and support multiple-use demands for public lands." All variations in lek buffer-distances will require appropriate analysis and disclosure as part of activity authorization. In determining lek locations, the BLM will use the most recent active or occupied lek data available from the state wildlife agency.
- * For Actions in PHMA and IHMA
- * The BLM will apply the lek buffer-distances identified above as required conservation measures to fully address the impacts on leks as identified in the NEPA analysis. Impacts should be avoided by locating the action outside of the applicable lek buffer-distance(s) identified above.

Do a better job of protecting Priority Habitat Management Areas by reducing oil/gas development impacts. New development should be prioritized outside these important population areas and strong buffers maintained around sage-grouse leks.

Definitions and management actions associated with BLM habitat designations need to be removed from private land as they apply specifically to BLM administered lands; therefore there is no basis for including private land in disturbance calculations.

MD WHB 4: In PHMA, assess and adjust *appropriate management levels (AMLs)* through the NEPA process within HMAs when wild horses or burros are identified as a significant causal factor in not meeting land health standards, even if current AML is not being exceeded.

MD SSS 35 : In undertaking BLM management actions in PHMA, IHMA *and GHMA,* and consistent with valid and existing rights and applicable law in authorizing third-party actions, the BLM will apply the lek buffer distances in accordance with Appendix B *(Buffers).* The buffers do not apply to vegetation treatments specifically designed to improve or protect Greater Sage-Grouse habitat. *However impacts to leks should be analyzed and those impacts should be minimized to the extent practicable.*

MD SSS 32 : In PHMA and IHMA, incorporate RDFs as described in Appendix C in the development of project or proposal implementation, reauthorizations or new authorizations and suppression activities, as conditions of approval (COAs) into any post-lease activities and as best management practices for locatable minerals activities, to the extent allowable by law, unless at least one of the following conditions can be demonstrated and documented in the NEPA analysis associated with the specific project: a. A specific RDF is not applicable to the site-specific conditions of the project or activity; b. A proposed design feature or BMP is determined to provide equal or better protection for Greater Sage-Grouse or its habitat; or c. Analysis concludes that following a specific RDF will provide no more protection to Greater Sage-Grouse or its habitat than not following it, for the project being proposed. In GHMA, *the RDFs are considered best management practices (BMPs) that should be considered and applied unless the proponent can show that applying the BMP is technically or economically impracticable.* Delete: "incorporate RDFs as best management practices in the development of project or proposal implementation, reauthorizations or new authorizations, suppression activities, post-lease activities, and locatable minerals activities."

SSS OBJ 2 : Within PHMA and IHMA, maintain large intact sagebrush steppe communities with vegetative characteristics consistent with their ecological potential such that Greater Sage-Grouse can select suitable seasonal habitats for breeding, nesting, rearing young, and wintering. Greater Sage-Grouse actively select suitable use areas within large intact sagebrush ecosystems. Not every site will provide for every Greater Sage-Grouse need, which is why they require large intact sagebrush ecosystems. The *desired conditions* for Greater Sage-Grouse (the *Desired Conditions* table (Table 2-2) in the 2015 Final EIS) are a list of indicators, characteristics, and values that describe Greater Sage-Grouse seasonal habitat use areas. The BLM used indicator values derived from a synthesis of local and regional Greater Sage-Grouse habitat research and data to describe the typical vegetation communities that Greater Sage-Grouse select. While the *desired conditions* are not attainable on every site or every acre within designated Greater Sage-Grouse habitat management areas, the values reflect a range of habitat conditions that generally lead to greater survival of individuals within a population. When permitting land use activities, the BLM shall consider the ecological site potential within designated habitat management areas to validate the habitat conditions achievable for a specific site. The seasonal habitat descriptions in Table 2-2 [the *Desired Conditions* table in the 2015 Final EIS] vary across the range of Greater Sage-Grouse, within a subregion, and between sites. They are not land health standards but are quantitative measures that help inform the Special Status Species Habitat Land Health Standard for Greater Sage-Grouse. These measurable values reflect ecological potential, and may be adjusted based on local factors influencing Greater Sage-Grouse habitat selection. Local data or recent science may indicate that Greater Sage-Grouse select for vegetation structure and composition in seasonal habitats not characterized by the values in the *desired conditions* table. In these cases, it may

be appropriate to adjust the values. *Desired Conditions* should be evaluated in the context of annual variability in ecological conditions and should not be used singly to determine habitat suitability for Greater Sage-Grouse. *As appropriate,* they may be used to demonstrate trends over time, during plan evaluations for effectiveness of Greater Sage-Grouse conservation, or when identifying limiting habitat characteristics for a given area. The indicators, characteristics, values, and desired seasonal habitat conditions in the Greater Sage-Grouse Plan *Desired Conditions* Table are meant to inform the wildlife habitat component of the Land Health Standards evaluation process (LHS, 43 CFR 4180.2), but do not replace rangeland health assessments. Results from the LHS evaluation should be used to support the BLM in land use authorization processes and during development of appropriate objectives for management actions such as vegetation treatments. The *Desired Conditions* Tables are to be used: * To assess habitat suitability for Greater Sage-Grouse following the BLM policy on Greater Sage-Grouse habitat assessments *at the appropriate scale.* * To describe desired conditions that provide habitat at multiple spatial scales as defined by the best available science.* * To evaluate land use plan effectiveness for Greater Sage-Grouse conservation * As a basis to develop measurable project objectives for actions in BLM-designated Greater Sage-Grouse habitat management areas *as needed* when considered alongside land health standards, ecological potential, and local information.

MD MT 3 : In PHMA, IHMA, *and GHMA* in undertaking BLM management actions, and, consistent with valid existing right and applicable law, in authorizing third-party actions that result in habitat loss and degradation (Appendix E, Table E-1), the BLM will require and ensure mitigation that provides no net loss to the species including accounting for any uncertainty associated with the effectiveness of such mitigation. This will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions.

Appendix B: Distance Estimates for Greater Sage-Grouse - A Review (Open File Report 2014-1239). In PHMA: The BLM will apply the lek buffer-distances specified as the lower end of the interpreted range in the report unless justifiable departures are determined to be appropriate (see below). The lower end of the interpreted range of the lek buffer-distances is as follows: o linear features (roads) within 3.1 miles of leks o infrastructure related to energy development within 3.1 miles of leks o tall structures (e.g., communication or transmission towers, transmission lines) within 2 miles of leks * *Distribution lines/poles: within 0.6 miles of leks * o low structures (e.g., fences and rangeland structures) within 1.2 miles of leks o surface disturbance (continuing human activities that alter or remove the natural vegetation) within 3.1 miles of leks o noise and related disruptive activities * *repeated/sustained disturbance including those that do not result in habitat loss at least 2 miles from leks * *Temporary* noise including those that do not result in habitat loss (e.g., motorized recreational events) at least 0.25 miles from leks) In IHMA: The BLM will apply the lek buffer-distances as follows unless justifiable departures are determined to be appropriate (see below). o linear features (e.g. roads) within 0.8 miles of leks o infrastructure related to energy development *(e.g. oil, gas, wind, solar)* within 2 miles of leks o tall structures (e.g., Electrical, communication, meteorological) * *Transmission Lines/Towers: within 1.2 miles of leks, with a 1.2 - 2 mile buffer subject to the exemption criteria: applicable to this variable and select variables in GHMA below* * *Distribution Lines/Poles: within 0.6 miles of leks * * *Communication & Meteorological Towers - within 2 miles of leks* o low structures (e.g., fences and rangeland structures) within *0.6* miles of leks o surface disturbance (continuing human activities that alter or remove the natural vegetation) within 2 miles of leks o noise and related disruptive activities * *repeated/sustained noise disturbance including those that do not result in habitat loss at least 2 miles of leks * *temporary noise disturbance including those that do not result in habitat loss (e.g., motorized

recreational events) at least 0.25 miles from leks * at least 0.12 miles from leks * Buffers are not required in GHMA. *In GHMA: The BLM will apply the lek buffer-distances as follows, subject to exception criteria: * linear features (e.g. roads) within 0.25 miles of leks * infrastructure related to energy development (e.g. oil, gas, wind, solar) within 0.6 miles of leks. 2 mile feasibility/practicality conditions * tall structures: (e.g. Electrical, communication, meteorological) within 0.6 miles of leks * low structures (e.g., fences and rangeland structures) within 0.12 miles of leks * surface disturbance (continuing human activities that alter or remove the natural vegetation) within 2 miles of leks noise and related disruptive activities * repeated/sustained disturbance including those that do not result in habitat loss at least 2 miles from leks * temporary disturbance including those that do not result in habitat loss (e.g., motorized recreational events) at least 0.25 miles from leks Buffer Exception Criteria for IHMA and GHMA: It is impracticable, technically or economically, to locate the project outside of the buffer area; and Impacts are avoided through project siting and design to the extent reasonable -or- Impacts are minor or non-existent; -and- Impacts are avoided through project siting and design to the extent reasonable. * The buffers do not apply to vegetation treatments specifically designed to improve or protect Greater Sage-Grouse habitat. Justifiable departures to decrease or increase from these distances, based on local data, best available science, landscape features, and other existing protections (e.g., land use allocations and state regulations) may be appropriate for determining activity impacts. The USGS report recognized "that because of variation in populations, habitats, development patterns, social context, and other factors, for a particular disturbance type, there is no single distance that is an appropriate buffer for all populations and habitats across the sage-grouse range." The USGS report also states that "various protection measures have been developed and implemented... [which have] the ability (alone or in concert with others) to protect important habitats, sustain populations, and support multiple-use demands for public lands." All variations in lek buffer-distances will require appropriate analysis and disclosure as part of activity authorization. In determining lek locations, the BLM will use the most recent active or occupied lek data available from the state wildlife agency. * For Actions in PHMA and IHMA * The BLM will apply the lek buffer-distances identified above as required conservation measures to fully address the impacts on leks as identified in the NEPA analysis. Impacts should be avoided by locating the action outside of the applicable lek buffer-distance(s) identified above.

Changes to habitat designations within Caldwell Canyon and Trail Creek Exploration Project planning area When P4 Production prepared its Caldwell Canyon and Trail Creek exploration project Environmental Assessment, our ground-truthing efforts identified that approximately 19% of the presumed GHMA was actually found to consist of forest community vegetation species that do not represent viable sage-grouse habitat. That equates to approximately 279 acres that had been mischaracterized as sage-grouse habitat when in reality it is made up of Douglas fir and Aspen stand communities. BLM should continuously update their sage-grouse habitat maps to properly characterize sage-grouse habitat.

1.4.5 Sagebrush Focal Areas (SFA) Designations

Removal of the designation of Sagebrush Focal Areas is essential not only to implement decisions of the federal court in Nevada but also to address the problems with this concept on mineral resources of the State and elsewhere. Sagebrush Focal Areas should be deleted not only with regard to withdrawals from the General Mining Act of 1872, but also with regard to all grazing allotments. The BLM's Instruction Memorandum addressing prioritization and processing of grazing permits adequately addresses issues in priority habitat. The retention of Sagebrush Focal Areas for any purposes should be eliminated.

Conserve all of the most important sage-grouse habitat, including Sagebrush Focal Areas within Priority Habitat Management Areas. As an example, winter habitat is particularly important to sage-grouse, mule deer and other wildlife, but the current federal plans fail to protect those areas from harmful land use and development. In the Sagebrush Focal Areas as listed in the original 2015 plan, federal land use plans will avoid new surface disturbance and recommend that the areas be withdrawn from new hardrock mining claims.

Eliminating the punitive nature of the focal areas will allow the continued management practices that created the habitat in the first place. The management plan should recognize the past successes and build upon them instead of creating prescriptive standards that will ultimately change management on these sensitive areas. Additionally, these dynamic ranges cannot be managed with an inflexible map of focal areas. With an ecosystem dominated by wildfire followed by the restoration of sage brush steppe, the focal areas of today may be vastly different twenty years from now. Federal land managers need a management plan that accounts for the probable changes to the landscape.

BLM must retain SFAs and/or commensurate protections. The Idaho DEIS would eliminate the roughly 3.6 million acres of SFAs designated in the 2015 ARMPA. SFAs "represent recognized strongholds for 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." Idaho ARMPA at 5-10. Yet, in the Idaho DEIS, BLM mischaracterizes the purpose and effect of SFAs, and it is based on these false pretenses that BLM proposes to eliminate the designation entirely. The Idaho DEIS makes several demonstrably false and/or unsupported claims to justify the elimination of SFAs, each of which we will address in turn 1. "[SFAs] duplicate many protections that are already in place through the designation of [PHMAs]." In the 2015 ARMPA, BLM developed and adopted several measures specific to SFAs that do not apply to PHMAs - again because SFAs "represent recognized strongholds" and contain "the highest densities of Greater Sage-Grouse. . . ." These include: * Applying NSO stipulations to fluid mineral leasing without waiver, exception, or modification; * Prioritizing for grazing permit reviews; and * Prioritizing for fire prevention, suppression, and restoration. Idaho ARMPA at 1-11 to 1-13. 16 2. "The SFA designation . . . does nothing to address the primary threats of wildlife and invasive species. . . ." False, as noted above. As noted in FWS's "not warranted" determination, this measure is part of a broader fire and invasive species strategy included in the plans that "directly address the recommendations found in the COT Report, are based on the best available information, and address the major issues related to wildfire prevention and suppression, as well as restoration of areas impacted by wildfire and invasive plants." 80 Fed. Reg. at 59,907. 3. "SFAs also complicate the state's adaptive management process and negatively affect the economic viability of the state through land use prohibitions (i.e., locatable mineral withdrawal recommendation)." First, BLM has already decided not to finalize the mineral withdrawal recommendations. Thus, BLM may not point to any economic impacts associated with the withdrawal to support the elimination of SFAs. Second, the Idaho DEIS contains no evidence to support the claim that SFAs are "affecting the economic viability of" the State of Idaho. In fact, news reports suggest that the State of Idaho is currently thriving, experiencing the fastest population growth of any state in the nation. "Idaho Leads U.S. As Fastest Growing State, Census Bureau Reports," NPR (Dec. 21, 2017).¹⁰ Moreover, most of the most productive lands managed by BLM, at least for energy development, lie outside of SFAs. See, e.g., Western EcoSystems Technology, Inc., Analysis of the Overlap between Priority Habitat Management Areas and Existing and Potential Energy Development across the Western United States (June 9, 2017).¹¹ In sum, the justifications offered in the Idaho DEIS for eliminating SFAs lack a rational basis. Consequently, the protections in

SFAs that would be lost by eliminating SFAs must be maintained in the remaining PHMAs, including in the Idaho plan. The final plan amendments should specifically provide that the fluid minerals NSO stipulation with no waivers, exceptions, or modifications, the vegetation and conservation management stipulation, and other key management approaches will be specifically incorporated into and made a part of the PHMAs as appropriate to protect this most important habitat.

i. SFA Designations The Idaho DEIS at ES-3 declares that SFAs as designated in Idaho duplicate may protections already in place in priority habitat management areas ("PHMA") and do not provide appreciable benefit to the Greater Sage-Grouse, including addressing the primary threats of wildfire and invasive species. Accordingly, the continued relevance of SFAs are at issue in the Idaho DEIS. As a part of the range-wide approach to the BLM and USFS land use plans in the previous Administration, approximately 10 million acres of available public lands were withdrawn and made inaccessible under the 1872 Mining Law, including 3,961,824 acres in Idaho. The preview to the formality of the actual withdrawals became evident in the ROD and the ARMPAs. See Notice of Proposed Withdrawal; Sagebrush Focal Areas; Idaho, Montana, Nevada, Oregon, Utah, and Wyoming and Notice of Intent to Prepare an Environmental Impact Statement, 80 Fed. Reg. 57635-01 (Sept. 24, 2015) (notifying the public of the proposed withdrawal of BLM and USFS lands identified as SFAs in Idaho, Montana, Nevada, Oregon, Utah and Wyoming). The notice also began a two-year segregation period which prohibited location and entry from those lands identified as SFAs. However, when the NEPA process began to facilitate the withdrawals, the purported threat to the Greater Sage-Grouse as dictated by the FWS was infinitesimal compared to the overall acreage proposed to be withdrawn. The BLM DEIS noted: "The total amount of mining related disturbance in Sagebrush habitat under the No Action Alternative [no withdrawal] would be 9,554 acres . . . , or approximately one-tenth of 1 percent of the total withdrawn area." (Emphasis added). Sagebrush Focal Areas Withdrawal Environmental Draft Impact Statement Idaho, Montana, Nevada, Oregon, Utah, and Wyoming (Dec. 2016) at 4-71. Indeed, the difference in acres that could be disturbed over 20 years between no withdrawal and a withdrawal of approximately 10 million acres was a mere 6,934 acres. Based on the erroneously calibrated threat to Greater Sage-Grouse from mining and other resource development, on October 11, 2017, BLM allowed the two-year segregation period to expire by operation of law and cancelled the proposed SFA withdrawal. See Notice of Cancellation of Withdrawal Application and Withdrawal Proposal and Notice of Termination of Environmental Impact Statement for the Sagebrush Focal Area Withdrawal in Idaho, Montana, Nevada, Oregon, Utah and Wyoming, 82 Fed. Reg. 47248-01 (Oct. 11, 2017). The obsolescence and imprecision by which the SFA allocations remain in the current ARMPAs, including Idaho, remains apparent. Other restrictions tied to the designation of the SFAs, if legitimate to advance Greater Sage-Grouse conservation, can be developed with a scalpel, as opposed to the overbroad and miscalculated scope of proposed withdrawals advocated by the previous Administration. Accordingly, the LUP should be amended to eliminate the SFA allocations.

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Sagebrush Focal Areas; Idaho, Montana, Nevada, Oregon, Utah, and Wyoming and Notice of Intent to Prepare an Environmental Impact Statement, 80 Fed. Reg. 57635-01 (Sept. 24, 2015) (notifying the public of the proposed withdrawal of BLM and USFS lands identified as SFAs in Idaho, Montana, Nevada, Oregon, Utah and Wyoming). The notice also began a two-year segregation period which prohibited location and entry from those lands identified as SFAs. However, when the NEPA process began to facilitate the withdrawals, the purported threat to the Greater Sage-Grouse as dictated by the FWS was infinitesimal compared to the overall acreage proposed to be withdrawn. The BLM DEIS noted: "The total amount of mining related disturbance in Sagebrush habitat under the No Action Alternative [no withdrawal] would be 9,554 acres . . . , or approximately one-tenth of 1 percent of the total withdrawn area." (Emphasis added). Sagebrush Focal Areas Withdrawal Environmental Draft Impact Statement Idaho, Montana, Nevada, Oregon, Utah, and Wyoming (Dec. 2016) at 4-71. Indeed, the difference in acres that could be disturbed over 20 years between no withdrawal and a withdrawal of approximately 10 million acres was a mere 6,934 acres. Based on the erroneously calibrated threat to Greater Sage-Grouse from mining and other resource development, on October 11, 2017, BLM allowed the two-year segregation period to expire by operation of law and cancelled the proposed SFA withdrawal. See Notice of Cancellation of Withdrawal Application and Withdrawal Proposal and Notice of Termination of Environmental Impact Statement for the Sagebrush Focal Area Withdrawal in Idaho, Montana, Nevada, Oregon, Utah and Wyoming, 82 Fed. Reg. 47248-01 (Oct. 11, 2017). The obsolescence and imprecision by which the SFA allocations remain in the current ARMPAs, including Idaho, remains apparent. Other restrictions tied to the designation of the SFAs, if legitimate to advance Greater Sage-Grouse conservation, can be developed with a scalpel, as opposed to the overbroad and miscalculated scope of proposed withdrawals advocated by the previous Administration. Accordingly, the LUP should be amended to eliminate the SFA allocations.

iii. The Fatal Imbalance of the Current Idaho Land Use Plan Afford Ample Justification to Formally and Finally Terminate the SFA Withdrawals The previous land use plans were not crafted under a premise that balanced the Congressional directives under the 1872 Mining Law and FLPMA. The Idaho 2015 ARMPA was driven by an effort by the previous Administration to achieve an outcome under the ESA, and, out of necessity, the balance required between 1872 Mining Law and FLPMA was minimized. As observed by a senior Administration official at the time, the 2015 Greater Sage-Grouse LUPAs were "not a planning exercise, but an effort to develop a landscape level plan to conserve the Greater Sage-Grouse."⁷ In other words, the BLM and USFS endorsed a policy decision by the previous Administration that an ESA outcome, a Washington, D.C.-directed outcome under the ESA, was to prevail over local values and considerations that the 1872 Mining Law and FLPMA accommodate.⁸ The litigation administrative record reveals that FWS Director Dan Ashe assumed command of determining when the cosmetic "good-faith" negotiations with the States advancing their land use management plans needed to be directed differently, or in some cases, terminated in favor of national ESA uniformity.⁹ Stated differently, the interested constituencies found themselves negotiating with the FWS over Federal activity wholly within the province of the BLM. On October 11, 2017, the BLM published a Notice of Cancellation of Withdrawal Application and Withdrawal Proposal and Notice of Termination of [EIS] for [SFAs] Withdrawal in Idaho, Montana, Nevada, Oregon, Utah and Wyoming ("Cancellation Notice"), 82 Fed. Reg. 47248-01 (Oct. 11, 2017). The BLM determined that "the lands are no longer needed in connection with the withdrawal. The BLM has also terminated the preparation of an [EIS] evaluating this application. Id. at 47248. It also provided notice that the two-year segregation expired by operation of law on September 24, 2017. Id. Accordingly, for the reasons stated above, the unlawful SFA withdrawals should not be revived.

Issue 8: Recommendation 27: SFAs and BSUs should be removed through any plan amendment processed. In the alternative, we contend that, at a minimum, a supplemental EIS process is initiated to assess the areas / units as to each LUPA. Issue 8: DEIS Comment 28: SFAs have appropriately been removed from the proposed alternative. BSUs remain, however the ability to alter those boundaries utilizing plan maintenance is added in the proposed alternative is beneficial.

The LUPA requires the prioritization of grazing permit renewals within SFAs, assuming SFAs are sustained during this amendment process. In some cases, BLM requires prioritization of both Land Health Assessments as well as permit renewals. BLM grazing regulations via 43 C.F.R. 4180.2(c) already requires BLM to make management changes in order for allotments determined to not be meeting rangeland health standards to move towards meeting, additional language covering this is not legally required or rational (see Issue #2). Specifically, the Greater Sage-Grouse LUPA in (at least) Idaho include the following Management Directions and Management Actions which demonstrate these flaws / consequences: MD LG 2: Prioritize BLM land health assessments and processing of BLM grazing permits consistent with management are prioritization (MD SSS 4), unless other higher priority considerations exist (MD LG 15) or other factors such as threatened, endangered and proposed species habitat that livestock grazing could affect. Where possible, conduct land health assessments at a watershed, or other meaningful landscape-scale.

Agency staffing will not allow for prioritizing all allotments within SFAs; the inability to do so will result in litigation, causing unnecessary commitment of federal resources to litigated areas. BLM grazing regulations via 43 C.F.R. 4180.2(c) already requires BLM to make management changes in order for allotments determined to not be meeting rangeland health standards to move towards meeting standards or making significant progress in meeting standards. As such, additional language covering this is not legally required or rational (see Issue #2). Putting focus on grazing within focal areas is irrational unless a trigger has been tripped and a correlation has been made to existing livestock grazing (as opposed to historical livestock or other grazing practices).

Sage Brush Focal Areas were created without local input building another unnecessary regulation for permitted uses of the federal rangelands. Through existing frame work and rangeland health standards, the BLM already has adequate mechanisms in place to manage grazing in sage grouse habitat. The addition of Sage Brush Focal Areas in the 2015 Plan Amendments were unnecessary and created uncertainty in the future of my grazing permit.

Sagebrush Focal Area Designations. The Bureau proposes to eliminate the Sagebrush Focal Areas (SFAs) and have them managed as priority habitat management areas (PHMA). This elimination of SFAs would allow leasing of mineral withdrawal in Greater Sage-Grouse habitats and increase the risk of population declines of the species. Despite the presence of this risk, the Bureau incorrectly claims SFAs do not solve any of the issues facing the environment of the State. The Bureau also makes the egregious claim that removal of the SFAs designation would have no measurable effects on the conservation of Greater Sage-Grouse in Idaho. We find these claims about SFAs in the RMPA/EIS problematic because the elimination of these designated areas will eventually cause the Greater Sage-Grouse and sagebrush in Idaho to be increasingly vulnerable.

1.4.6 Disturbance and Density Caps

On 2-8, Table 2-2 under disturbance and density caps, the DEIS states that "This disturbance is measured by direct footprint or by ROW width for linear features (power lines, pipelines, and roads)." This approach (measuring only the project[s] footprint) is not science-based and fatally flawed if it does not incorporate known or estimated indirect effects that would render habitat unsuitable. BLM should incorporate indirect effects into this measurement and any subsequent mitigation calculations that would actually achieve a functional no-net-loss outcome.

BLM must not weaken density and disturbance caps. The Idaho DEIS proposes changes to the density and disturbance caps set out in the 2015 ARMPA limiting the amount of development that can take in priority habitat management areas. We oppose these changes, for the reasons set out below. The decision by the FWS not to list sage-grouse under the ESA noted the importance of the caps to sagegrouse protection: Each Federal Plan includes a disturbance cap that will serve as an upper limit (the maximum disturbance permitted). Anthropogenic disturbance has been identified as a key impact to sagegrouse. To limit new anthropogenic disturbance within sage-grouse habitats, the Federal Plans establish disturbance caps, above which no new development is permitted (subject to applicable laws and regulations; e.g., General Mining Law of 1872, and valid existing rights). This cap acts as a backstop to ensure that any implementation decisions made under the Federal Plans will not permit substantial amounts of new disturbance within the distribution of sage-grouse on BLM and USFS lands. 10 Available at <https://www.npr.org/sections/thetwo-way/2017/12/21/572591681/idaho-leads-u-s-as-fastest-growingstate-census-bureau-reports> 11 Available at https://d3n8a8pro7vnm.cloudfront.net/backcountryhunters/pages/3172/attachments/original/1497040181/SageGrouse_Energy_Overlap_Report_060917_%281%29.pdf?1497040181 17 In addition to the percent disturbance cap at the BSU and project scales, the BLM and USFS will use a density cap related to the density of energy and mining facilities during project-scale authorizations. If the disturbance density is greater than an average of 1/259 ha (1/640 ac) in PHMA, the project will either be deferred or co-located in an existing disturbed area (subject to applicable laws and regulations, such as the General Mining Law of 1872, valid existing rights, etc.). 12 There is a substantial body of scientific literature concluding that discrete anthropogenic activities that are present in sagebrush have negative effects on sage-grouse. The extent of these effects varies based on the size, intensity and persistence of the human activity, and can range from displacement to local extirpation of sage-grouse. 13 Nonrenewable energy developments, such as fluid mineral leasing, and their supporting infrastructure are a pervasive, and in some cases an increasing presence within the range of sage-grouse. 14 There has, however, been a gradual decrease in recommended requirements for fluid mineral leasing within priority areas. * 2011 NTT Report 15: For unleased federal fluid mineral estate, close priority areas with very limited exceptions. For leased federal areas, do not allow new surface occupancy in priority habitat, with limited exception. Proposed surface disturbance cannot exceed 3% with limited exception. Disturbance measured within individual priority areas and local project area. 16 * 2013 COT Report 17: Avoid development in priority areas; identify areas where leasing is not acceptable. If avoidance not possible, development should occur only in non-habitat areas or least suitable habitat. Reduce and maintain density of energy structures below which there are no impacts to sage-grouse habitats or do not result in declines to sage-grouse populations. 18 * 2015 BLM Plans 19: Implement disturbance cap of 3% within individual priority areas and local project area in priority habitat. Implement a density cap of an average of 1 energy and mining facility per 640 acres. 20 * 2018 BLM Proposed RMPA.EIS: Numerous additional waivers, exceptions and modifications for drilling in priority areas; restrictions on drilling limited; for Utah, if project design and site conditions indicate a project will improve habitat, exceedances of

disturbance and density caps at 12 U.S. Fish and Wildlife Service. Endangered and Threatened Wildlife and Plants: 12-Month Finding on a Petition to List Greater Sage-Grouse as an Endangered or Threatened Species. 80 Federal Register 59858 (October 2, 2015) (FWS 2015 Greater Sage-grouse Listing Decision) at p. 59879-80. 13 Hanser, S.E., et al., 2018, Greater sage-grouse science (2015-17)-Synthesis and potential management implications: U.S. Geological Survey Open-File Report 2018-1017, p.12 (2018 USGS Synthesis) 14 Id. 15 Sage-grouse National Technical Team. A Report on National Greater Sage-Grouse Measures (December 21, 2011) (NTT Report) (Comprised of scientists and specialists from BLM, State Fish and Wildlife Agencies, USFWS, NRCS and USGS). 16 Id., pp. 7-9, 22-23. 17 COT Report (Comprised of state officials in ten states with sage-grouse habitat and FWS staff). 18 Id., pp. 43-44. 19 See, e.g., 2015 Utah BLM plan. 20 Id., p. 1-10, Appendix E. Wyoming has a disturbance cap of 5%. Colorado has a no surface occupancy requirement in priority habitat for fluid mineral development, which BLM also proposes to change in this rulemaking. 18 either project level or individual priority area are allowed.; in Idaho disturbance cap only measured for individual population areas, not project area.21 The 2015 finding by the Fish and Wildlife Service that Greater Sage-Grouse did not need to be listed under the Endangered Species Act relied heavily on the provisions in the 2015 BLM plans: As previously stated, sage-grouse are sensitive to disturbance, and small amounts of development within sage-grouse habitats can negatively affect sage-grouse population viability. Thus, limiting future disturbances in sage-grouse habitats is an essential component of reducing or eliminating effects related to disturbance, as recommended in the COT Report.22 In addition to the NTT and COT reports, numerous research papers confirm the importance of density and disturbance caps: * 2017 Edmunds study: Modeled density-independent and -dependent population growth across multiple spatial scales relevant to management and conservation. Relatively close fine-scale populations of sage-grouse can trend differently, indicating that large-scale trends may not accurately depict what is occurring across the landscape (e.g., local effects of gas and oil fields may be masked by increasing larger populations). 23 * 2017 Green study (importance of caps): Best models indicated that Greater Sage-Grouse responded to energy development with a 1 to 4-year time lag, and well density within 6,400 m of leks best explained Greater Sage-Grouse losses. Sagebrush cover and precipitation explained little variation in lek attendance over time. Across Wyoming, decreases in lek attendance were significant at a density of 4 wells per square kilometer, reaching 17 percent per year at 5.24 wells per square kilometer. Current regulations in Core Areas could limit Greater Sage-Grouse losses from energy developments, but they may not promote Greater Sage-Grouse recovery.24 * 2015 Holloran Study (importance of caps): Use of suitable winter habitat by sage-grouse decreased with increasing density of gas wells within 2.8 km of data loggers. Habitat use also increased with distance to wells and plowed main haul roads, but well density was a better predictor. Effects of anthropogenic activity were evident at lower well densities. Effects of gas development on sage-grouse can be reduced by minimizing well densities and adopting methods that reduce anthropogenic activities.25 * 2015 Fedy study (importance of caps): Birds avoided areas of high well density and nests were not found in areas with greater than 4 wells per km² and majority of nests (63%) were in areas with = 1 well per km². 26 * 2015 Kirol study (importance of caps): Energy infrastructure had negative effects on habitat use and brood survival, with brood survival decreasing once surface disturbance exceeded 4 percent. Results suggest that reduction of habitat quality was primarily driven by avoidance of energy 21 Utah DEIS, pp. 2-6, 2-10-11; Idaho DEIS, p. 2-8, Appendix E. 22 FWS 2015 Greater Sage-grouse Listing Decision at 59879-80. 23 Edmunds, D.R., Aldridge, C.L., O'Donnell, M.S., and Monroe, A.P., 2017, Greater sage-grouse population trends across Wyoming: Journal of Wildlife Management. 24 Green, A.W., Aldridge, C.L., and O'Donnell, M.S., 2017, Investigating impacts of oil and gas development on greater sage-grouse: Journal of Wildlife Management, v. 81, no. 1, p. 46-57. 25 Holloran, M.J., Fedy, B.C., and Dahlke, J., 2015, Winter habitat use of greater

sage-grouse relative to activity levels at natural gas well pads: Journal of Wildlife Management, v. 79, no. 4, p. 630-640. 26 Fedy, B.C., Kirol, C.P., Sutphin, A.L., and Maechtle, T.L., 2015, The influence of mitigation on sage-grouse habitat selection within an energy development field: PLoS ONE, v. 10, no. 4, article e0121603, 19 p. 19 infrastructure, resulting in primary and secondary source habitat becoming low-occurrence habitat.27 * 2017 Spence Study (importance of caps): Probability of lek collapse inside core areas was positively related to the density of oil and gas wells located outside of core areas at two distances - within 1.6 km and within 4.8 km of the core area boundary.28 * 2018 Holloran Letter (importance of 2015 protections): Recommending management approaches and objectives established in 2015 BLM sage-grouse land use plans be used as minimum standards in sagebrush habitat.29 (attached to these comments as Attachment 2). In the Idaho DEIS, BLM states: Removal of the 3 percent project level disturbance cap would allow BLM to intentionally cluster developments within areas already degraded by discrete anthropogenic activities in Greater Sage-Grouse habitat as long as the overall disturbance within the BSU remains below 3 percent. The 3 percent project scale disturbance cap has the potential to spread development into undeveloped areas of Greater Sage-Grouse habitat just to avoid reaching the 3 percent project scale disturbance cap in already fragmented areas. All 8 BSUs in Idaho are well under the 3 percent BSU scale Disturbance Cap (most are less than 1 percent) and are expected to remain low because of the nonet-loss mitigation standard and the other restrictions to development in PHMA and IHMA. Some areas, especially those with existing development, may be further developed even though compensatory mitigation would offset those impacts for the statewide Greater Sage-Grouse habitat.30 Essentially, Idaho has come up with a standard that for the foreseeable future will never disallow a project because the priority area densities are so low, even though the density of an individual project area may be high. This flies in face of studies showing impacts to sage-grouse because of individual project density, and Edmunds study that there can be differences between densities at large and small-scale levels that are significant. Also, Idaho's mitigation program is not finalized, and there is no time line by which it is guaranteed to be finalized; thus, we do not know what provisions it will or will not include. As a result, we oppose this change to the 2015 ARMPA, both because it will reduce important protections for sage-grouse, and because it will make it more likely that the bird will need to be listed under ESA.31

Development on existing leases should be managed per regulations that are currently in place, which limit surface occupancy and disturbance. Years of research leave no doubt that sage-grouse do not do well in close proximity to energy development. More development in the most important habitat will not help conserve the species.

In MD 5527 the 3% disturbance cap in a BSU should not be restricted by acreage limitations within a grazing unit for sagebrush habitat management projects which enhances the viability of perennial grasses and forbs within site specific sagebrush vegetative communities (Le. Mountain Big Sagebrush communities in mesic areas with good soils). Appropriate and economic scale is important in big landscapes.

Development on existing leases should be managed under current regulations, which limit surface occupancy and disturbance. Years of research leaves no doubt that sage-grouse do not do well in close proximity to energy development. More development in the most important habitat will not help conserve the species.

MD SSS 27 : If the 3 percent anthropogenic disturbance cap is exceeded on lands (regardless of landownership) within Greater Sage-Grouse PHMA (or IHMA in Idaho) habitat management areas in any given BSU, then no further discrete anthropogenic disturbances (subject to applicable laws and regulations, such as the General Mining Law of 1872, as amended, valid existing rights, etc.) will be permitted by BLM within Greater Sage-Grouse PHMA and IHMA in any given BSU until the disturbance has been reduced to less than the cap, as measured according to the Disturbance and Adaptive Management Appendix (Appendix E) for the intermediate scale.

MD SSS 29 : Subject to valid existing rights, new anthropogenic disturbances within PHMA (Idaho only): Anthropogenic Disturbance Screening Criteria. In order to avoid surface-disturbing activities in PHMA, priority will be given to development (including ROWs, fluid minerals, and other mineral resources subject to applicable stipulations) outside of PHMA. When authorizing development in PHMA, priority will be given to development in non-habitat areas first and then in the least suitable habitat for Greater Sage-Grouse. In addition to the PHMA and IHMA Anthropogenic Disturbance Development Criteria (MD SSS 30), the following criteria must all be met in the project screening and assessment process: a. The population trend for the Greater Sage-Grouse within the associated Conservation Area is stable or increasing over a three-year period and the population levels are not currently engaging the adaptive management triggers (this applies strictly to new authorizations; renewals and amendments of existing authorizations will not be subject to this criteria when it can be shown that long-term impacts from those renewals or amendments will be substantially the same as the existing development); b. The development with associated mitigation will not result in a net loss of Greater Sage-Grouse key habitat or of the respective PHMA; c. The project and associated impacts will not result in a net loss of Greater Sage-Grouse key habitat or habitat fragmentation or other impacts causing a decline in the population of the species within the relevant Conservation Area. d. The development cannot be reasonably accomplished outside of the PHMA; or can be either: 1) developed pursuant to a valid existing authorization; or 2) is collocated within the footprint of existing infrastructure (proposed actions will not increase the 2011 authorized footprint and associated impacts more than 50 percent, depending on industry practice). e. Development will be implemented adhering to the required design features (RDF) described in Appendix C; f. The project will not exceed the disturbance cap (MD SSS 27) g. Large scale anthropogenic disturbances *in PHMA and IHMA* will be reviewed by the Technical and Policy Teams as described in MD SSS 44. *(Definition of Large Scale Anthropogenic disturbances will be in the glossary).* Idaho recommends BLM delete: "Large Scale Anthropogenic disturbance includes highways, high voltage transmission lines, commercial wind projects, energy development (e.g., oil and gas development, geothermal wells), airports, mines, cell phone towers, landfills, residential, and commercial subdivisions, etc. "

Appendix E: *E.6 Part VI - No Net Loss Criterion for Anthropogenic Disturbance This part of the appendix provides guidelines for the implementation of the "no net loss" criterion for proposed anthropogenic disturbance (e.g., MD SSS 30.c.). * *The following steps identify the screening process by which BLM will review proposed activities in PHMA, IHMA, and GHMA. These steps commence after the BLM has determined that the proposal for authorization of use is adequate and consistent with other provisions of the LUPA, including the BSU-level disturbance cap (MD SSS 27). Step 1 - Determine if Impacts to Greater Sage-Grouse Habitat Can Be Avoided in Accordance with LUPA Standards and Guidelines. Step 2 - Quantify Residual Impacts of the Project Project impacts occur at multiple scales. Impact analysis will account for both the direct impacts (e.g., habitat loss) and indirect impacts (e.g., sage-grouse avoidance of the project area) to the ecological values, functions and/or services of sage-

grouse habitat. Indirect impacts extend beyond the footprint of disturbance and may extend beyond ownership boundaries. The quantification of these impacts must be based on the best available science (e.g., Manier 2017), provide an objective and transparent assessment of these impacts, measure impacts over multiple scales and address the cumulative impacts and interactions among stressors. Methods should take into account differences in habitat quality. Thus, they should assign lower impact scores in lower quality habitat and higher impact scores in higher quality habitat. Step 3 - Determine Minimization Measures If sage-grouse impacts cannot be avoided by relocating or modifying the project in accordance with LUPA standards and guidelines, then minimize impacts, including use of applicable required design features and/or best management practices. Step 4 - Apply Compensatory Mitigation If it is determined after screening the proposal (Steps 1 through 3) that there are residual impacts, the BLM can approve the project if compensatory mitigation achieves the following: * Is consistent with the provisions of Parts 1 and 2 of Appendix F, Mitigation. For Part 1 of Appendix F, if a Regional Mitigation Strategy is not prepared, the principles and content of pages F-2 through F-5 will apply to individual project proposals. * Provides a high level of confidence that compensatory mitigation actions will provide habitat/conservation values, services, and functions that are at least equal to the lost or degraded values, services and functions caused by the residual impacts. * Offers transparency and certainty to developers and regulators. *

We were disappointed to see that the project level disturbance cap was not included in the Management Alignment Alternative. However, several factors may preclude the need for such a cap, including the State of Idaho's high levels of protections for Priority and Important Habitat Zones, the State's commitment to the No Net Loss standard, the buffers related to infrastructure development, and the current expectation that such developments will not be common.

MD SSS 27 : If the 3 percent anthropogenic disturbance cap is exceeded on lands (regardless of landownership) within Greater Sage-Grouse PHMA (or IHMA in Idaho) habitat management areas in any given BSU, then no further discrete anthropogenic disturbances (subject to applicable laws and regulations, such as the General Mining Law of 1872, as amended, valid existing rights, etc.) will be permitted by BLM within Greater Sage-Grouse PHMA and IHMA in any given BSU until the disturbance has been reduced to less than the cap, as measured according to the Disturbance and Adaptive Management Appendix (Appendix E) for the intermediate scale.

I.4.7 Required Design Features

I also support BLM's decision to review the Required Design Features Appendix to clarify it and remove redundancies. Especially important is the decision to modify the 2015 ARMPA and its imposition of uniform and unnecessary grazing standards that do not incentivize proper grazing affecting the grazing renewal permit thresholds in Sagebrush Focal Areas. The DRMP /DEIS should further incorporate the direction for setting priorities for renewal of grazing authorizations found in Instruction Memorandum 2018-24 and its prioritization of monitoring for determining the effectiveness of livestock grazing management practices.

d. Changing Requirements for Design Features The Idaho DEIS affirmatively posits that the imposition of required design features ("RDFs") was an illogical and misguided attempt at uniformity across most, if not all, of the 2015 Greater Sage-Grouse land use plans in the Western States. Idaho DEIS at ES-3.11 As noted above in the discussion on the need to revisit uniform lek buffers, the preexisting regulations at 43 Code of Federal Regulations Subpart 3809 cannot be ignored as a regulatory framework to guide

project management on Federal lands that play a role in Greater Sage-Grouse conservation. In the Idaho LUPA, BLM must acknowledge that in proscribing RDFs, such design features are applicable to BLM decisions under 43 C.F.R. Subpart 3809 only to the extent practicable and may not be imposed to deny approval of a notice or plan of operations under those regulations.

On page 2-11 under the Changing Requirements for Design features where it starts with "In GHMA, incorporate RDFs" the paragraph needs to be changed to In GHMA, the RDFs are considered best management practices (BMPs) that should be considered and applied unless the proponent can show that applying the BMP is technically or economically impracticable. Since this is not a high priority area it will put less pressure on the opponents if it is not feasible while still providing protection for the sage grouse.

MD MR 1 : Areas within PHMA and IHMA will be open to mineral leasing and development and geophysical exploration subject to NSO with a limited exception (MD MR 3). GHMA will be open to mineral leasing and development and geophysical exploration subject to CSU which includes standard stipulations and best management practices as identified in Appendix C *(Required Design Features).*

Appendix C. Required Design Features Required design features (RDFs) are a list of best management practices that are intended to avoid and minimize impacts on Greater Sage-Grouse or Greater Sage-Grouse habitat. When the RDFs are applicable to a given project in PHMA and IHMA, they are required *unless an alternate action is implemented that will provide equal or greater protection. The RDFs are considered best management practices that *should* be considered and applied in GHMA unless the proponent can show that applying the BMP is technically or economically impracticable. Because of site-specific circumstances, some RDFs may not apply to some projects (e.g., a resource is not present on a given site) and/or may require slight variations (e.g., a larger or smaller protective area). RDFs are continuously improving as new science and technology become available and therefore are subject to change. All variations in RDFs would require that at least one of the following be demonstrated in the NEPA analysis associated with the project/activity: * A specific RDF is documented to not be applicable to the site-specific conditions of the project/activity (e.g. due to site limitations or engineering considerations). Economic considerations, such as increased costs, do not necessarily require that an RDF be varied or rendered inapplicable. * An alternative RDF, a state-implemented conservation measure, or plan-level protection is determined to provide equal or better protection for Greater Sage-Grouse or its habitat. * A specific RDF will provide no additional protection to Greater Sage-Grouse or its habitat. The following RDFs are included for consideration and use based upon review of current science and effects analysis (circa 2014; Table B-1). These may be reviewed during project evaluation and updated through plan maintenance as new information and updated scientific findings become available. The table is organized by program area grouping the RDFs most relevant to that program. All relevant RDFs, regardless of which program they are grouped under, should be considered during project evaluation, and applicable RDFs should be applied during implementation. The following measures would be applied as RDFs for all solid minerals. They would also apply to locatable minerals consistent with applicable law. In some cases, the RDFs may not all be appropriate based on local conditions and would be assessed in the appropriate site-specific NEPA analysis; these all should be considered and where determined to be beneficial to achieving Greater Sage-Grouse habitat objectives included as part of the site-specific project. In other cases, additional project design criteria or best management practices could be incorporated into project implementation to address site-specific concerns not fully addressed by the RDFs described here. Required Design Features General (applicable

to all projects) Seasonal Restrictions 1. Solicit and consider expertise and ideas from local landowners, working groups, and other federal, state, county, and private organizations during development of projects. 2. DELETE: "No repeated or sustained behavioral disturbance (e.g., visual, noise over 10 dbA at lek, etc.) to lekking birds from 6:00 pm to 9:00 am within 2 miles (3.2 km) of leks during the lekking season." *(This RDF is covered through HMA buffers.)* 3. Avoid mechanized anthropogenic disturbance, in nesting habitat during the nesting season, and in wintering habitat during the winter season when implementing: DELETE: "1) fuels/vegetation/habitat restoration management projects," 2) infrastructure construction or maintenance, 3) geophysical exploration activities; 4) organized motorized recreational events. * Routine road blading, where no water turnouts or culverts are cleaned, repaired, or replaced and no road upgrades occur, is not included in this restriction. * Emergency actions to protect life or property are excluded from these restrictions. * Fuels and vegetation treatments specifically designed to improve or protect Greater Sage-Grouse habitat are *not* subject to this restriction. *Restoring and improving Greater Sage-Grouse habitat is a high priority of this plan *and the activity's effects will be analyzed for that sage-grouse population.* General infrastructure development activities 4. Minimize cross-country vehicle travel during all types of activities in Greater Sage-Grouse habitat. 5. Power-wash all vehicles and equipment involved in off-road activities (including firefighting vehicles, construction equipment, seeding equipment, etc.) prior to entering the area, to minimize the introduction of undesirable and/or invasive plant species. 6. Above-ground disturbance areas would be seeded with perennial vegetation as per vegetation management. 7. Where practicable, place infrastructure in already disturbed locations where the habitat has not been fully restored. 8. Cluster disturbances, operations (fracturing stimulation, liquids gathering, etc.) and facilities as close as possible. 9. Collocate linear facilities within *1 km* of existing linear facilities. 10. Micro-site linear facilities to reduce impacts on Greater Sage-Grouse habitats. 11. Locate staging areas outside PHMA to the extent possible. 12. Consider collocating powerlines, flowlines, and pipelines under or immediately adjacent to a road or adjacent to other pipelines first, before considering collocating with other ROWs. 13. Restrict the construction of tall facilities and fences to the minimum number and amount needed. 14. Construction and development activities should conform to seasonal restrictions...

MD MR 1 : Areas within PHMA and IHMA will be open to mineral leasing and development and geophysical exploration subject to NSO with a limited exception (MD MR 3). GHMA will be open to mineral leasing and development and geophysical exploration subject to CSU which includes standard stipulations and best management practices as identified in Appendix C *(Required Design Features).*

[Our company] supports maintaining the 2015 ARMPA management direction that KPLAs in GHMA will be open to leasing subject to standard stipulations. [Our company] also supports the application of best management practices to GHMA outside KPLAs for prospecting, subsequently leasing, and initial mine development subject to standard stipulations. It is unclear, however, why Required Design Features and lek buffers apply to prospecting permits in GHMA when GHMA is excluded from the lek buffer requirements of MD SSS 35. This issue should be clarified in the Final RMP/EIS.

Appendix C-Required Design Features: [our company] supports the change in Appendix C that states that Required Design Features are considered best management practices that may be considered and applied in GHMA as practicable. Some confusion is caused by the retention of language from the 2015 ARMPA that states that Required Design Features would be applied "for all solid minerals." It is not clear whether non-energy leasable minerals are included in the definition of "all solid minerals" and this statement seems to contradict the previous statements that Required Design Features in GHMA, even

for solid minerals, are best management practices to be applied where practicable. This should be clarified so as not to contradict the new management direction that eliminates the required nature of RDFs and instead views them as BMPs in GHMA where practicable.

I.4.8 Habitat Objectives

BLM's own data, along with WWP's observations of grazing allotments across Idaho, show that current conditions reflect severe habitat degradation from grazing. In the Owyhee region of southwest Idaho, for example, roughly three-quarters of BLM grazing allotments are not meeting rangeland health standards because of grazing. In many cases, BLM has failed to follow its own management plans, which require grazing to "yield" to sage-grouse habitat conservation. Salazar, 842 F.Supp.2d at 1131. Given BLM's proven record of noncompliance in Idaho, habitat objectives should not be changed unless the changes are supported by objective, reliable, quantitative data. Indeed, unless the BLM has enclosure data that show the habitat objectives cannot be met even in the absence of livestock disturbance, the agency must not use grazed lands as a basis for setting weaker parameters for managing grazing impacts. As noted above and in the attached document, WWP completed its own review of grazing enclosures in Idaho and found that nearly all can meet the habitat objectives in the absence of grazing. See WWP 2018.

Holloran in 2018 letter to the BLM referenced above says don't remove the 7 inches standard unless you've got better data-and the 2018 USGS synthesis of recent papers discuss the importance of grass height to nest success and identified greater heights correlated with habitat guidelines, supporting earlier rangewide findings of approximately 7 inches.² Thus, the best science shows support for the existing Habitat Objective as a guideline

The proposed plan revision also says, "The USFWS's 2010 Warranted but Precluded determination recognized rangeland health standards are adequate regulatory mechanisms." ES4. The BLM is using this to disregard the habitat objectives and permit renewal thresholds of the ARMPAs. This misstates the finding. The Service found that rangeland health standards could be adequate regulatory mechanisms, but "We do not have the results of rangeland health assessments or other information... and therefore cannot assess the efficacy in conserving this species." Elsewhere the Service admits, "we lack the information necessary to assess how this regulatory mechanism effects [sic] sage-grouse conservation." And, the 2010 finding assumed that the rangeland health assessment would actually be done at regular intervals and that changes would be applied in a timely fashion through grazing permit renewal decision.

* The 2015 ARMPA included Table 2-2 setting habitat objectives for sagegrouse. Unfortunately, these objectives have often been implemented by BLM field staff as mandatory Management Decisions. BLM, to its credit, issued Instruction Memorandum 2018-25 clarifying that the objectives were not to be used as proscriptive management decisions but rather, as intended, a statement of objectives. The 2018 DRMP DEIS modifies Objective SSS 2 with some introductory text about the importance of maintaining large, intact sagebrush communities in PHMA and IHMA and noted that not every site will provide for every sage-grouse need. These introductory sentences are then followed by retention of the 2015 ARMPA language. This could possibly lead to confusion about whether the Instruction Memorandum clarifying the proper use of Table 2-2 is still in effect or has been nullified in the May 2018 DEIS/DRMP by the few sentences modifying Objective SSS 2. BLM should clarify this point by incorporating the terms of the Instruction Memorandum into the 2018 plan amendments regarding the proper interpretation of the habitat objectives in the 2015 ARMPA. The elimination of the seven-inch stubble height requirement

is particularly important and appropriate based on the additional scientific citations supporting the more flexible residual nesting cover standard.

Issue #4: Restoration and Rehabilitation not adequately assessed and May Not Reflect Achievable Conditions - not covered in DEIS. The LUPA has significant flaws in assessing restoration and rehabilitation potential and impacts outside of fire rehabilitation, and the DEIS does nothing to address those flaws. The document does not address the need to prioritize areas for restoration where natural disturbance such as fire has occurred. It also does not address the need to evaluate unintended negative consequences, as well as the cost and the likelihood of success in restoration projects. The document also does not discuss areas that have crossed an ecological threshold. Specifically, the Greater Sage-Grouse LUPA in (at least) Idaho includes the following Management Directions that demonstrate these flaws / 9 consequences, that were not addressed during the DEIS process: MD VEG 2: Implement vegetation rehabilitation or manipulation projects to enhance sagebrush cover or to promote diverse and healthy grass and forb understory to achieve the greatest improvement in Greater Sage-Grouse habitat based on FIAT assessments, HAF assessments, other vegetative assessment data and local, site specific factors that indicate sagebrush canopy cover or herbaceous conditions to not meet habitat management objectives (i.e. is minimal or exceeds optimal characteristics). This may necessitate the use of prescribed fire as a site preparation technique to remove annual grass residual growth prior to the use of herbicides in the restoration of certain lower elevation sites (e.g., Wyoming big sagebrush) but such efforts will be carefully planned and coordinated to minimize impacts to Greater Sage-Grouse seasonal habitats. MD VEG-7: During land health assessments, evaluate the relative value of existing nonnative seeding within Greater Sage-Grouse habitat as: 1) a component of a grazing system allowing improvement of adjacent native vegetation, 2) development of a forage reserve, 3) incorporation into a fuel break system (Davies et al.2011) or 4) restoration/diversification for Greater Sage-Grouse habitat improvement. Where appropriate and feasible, diversify seedings, or restore to native vegetation when potential benefits to Greater Sage-Grouse habitat outweigh the other potential uses of the non-native seeding, with emphasis on PHMA and IHMA. Allow recolonization of seedings by sagebrush and other native vegetation.

Desired Conditions should be evaluated in the context of annual variability in ecological conditions and should not be used singly to determine habitat suitability for greater Sage-Grouse. They may be used to demonstrate trends over time, during plan evaluations for effectiveness of Greater Sage-Grouse conservation, or when identifying limiting habitat characteristics for a given area. The indicators, characteristics, values, and desired seasonal habitat conditions in the Greater Sage-Grouse Plan Habitat Objectives Desired Conditions Table are meant to inform the wildlife habitat component of the Land Health Standards evaluation process (LHS, 43 CFR 4190.2), but do not replace rangeland health assessments. Results from the LHS evaluation should be used to support the BLM in land use authorization processes and during development of appropriate objectives for management actions such as vegetation treatments. BLM land use authorizations will contain terms and conditions regarding the actions needed to achieve or make progress toward achieving habitat objectives to meet or move toward the desired conditions and land health standards.

See Issue #2. This language was pushed from the top down and needs removed. Table 2-2 was intended to provide objectives for habitat conditions. These documents continually elevate livestock grazing to a primary threat, and utilize Table 2-2 as Standards not objectives. This management direction furthers that misguidance. BLM is actively and irrationally utilizing this management direction in (at least) Idaho in

grazing permit renewals. For example, the Big Springs EA (dated 8.30.2017) from the Bruneau Field Office, Boise District, Idaho, BLM, provides on page 26 a series of thresholds with only one provided response. Thresholds are direct numbers from the Table 2-2 "objectives" - response is an automatic decrease of 25% AUMs to the allotment if threshold is not met.

Page 2-13; Decision Number MD IG 15: Although livestock grazing is not as significant a threat as invasive annual plants and wildfire, it is one of the most wide-spread uses of Idaho rangelands and improper grazing is a threat that can have negative effects on sage-grouse habitats on a large scale. This measure in the Management Alignment Alternative should contain a commitment to a specific reasonable timeline when BLM will complete the review of all grazing permits/leases in PHMA and IHMA to determine if they are meeting Land Health Standards. The commitments to manage livestock grazing to meet DRMPA habitat objectives are meaningless if BLM does not complete land Health Standard evaluations in a timely manner so that permits not meeting standards can be modified as necessary.

VEG OBJ 3 : Delete VEG OBJ 3 - Add: *Redundant to OBJ SSS I which states: (Maintain or make progress toward all lands within PHMA and IHMA (at least 70%) capable of producing sagebrush so there is a minimum of 15 percent sagebrush cover and conifers absent to uncommon within 1.86 miles of occupied leks.)*

Do not strip the fundamental "net conservation gain" standard. No net loss of habitat merely prevents additional habitat loss and is not adequate for long-term recovery.

Do not strip the fundamental mitigation goal of "net conservation gain" from the plans. A no net loss of habitat merely prevents additional habitat loss and is not adequate to achieve long-term conservation of sage-grouse.

VEG OBJ 3 : Delete VEG OBJ 3 - Add: *Redundant to OBJ SSS I which states: (Maintain or make progress toward all lands within PHMA and IHMA (at least 70%) capable of producing sagebrush so there is a minimum of 15 percent sagebrush cover and conifers absent to uncommon within 1.86 miles of occupied leks.)*

Habitat Objectives and Standards * RM-17 shifts from setting sage-grouse habitat objectives found in Tables 2-14 - 16, and instead adopts the "specific management thresholds" found in Table 2-3. * The creation of standards or thresholds is contrary to the COT Report's finding that desired outcomes may not always be feasible.

1.4.9 Adaptive Management

In addition, the imposition of allowable use levels impairs the ability for a permittee and BLM to implement adaptive management strategies.

Even though the presence of an adaptive management strategy is commendable, we take issue with a couple of aspects of the strategy. First, using the 2011 maximum baseline male population is too low for the population to no longer be in danger. The population should flourish, not stay stagnant and at its lowest point. Having this low population baseline does not eliminate the risk for the Greater Sage-Grouse and its habitat.

Moreover, the removal of hard triggers in the adaptive management response comes when the habitat or maximum male population count returns to or exceeds the 2011 baseline levels within the associated conservation area in accordance with the adaptive management strategy. Like mentioned above, this would only leave the soft trigger in place. Removing the hard triggers means the Greater Sage-Grouse and its habitat would lose their second line of defense against the harmful anticipated cumulative impacts.

* Such wilderness/refuge complexes already operate under regulatory mechanisms which minimize human disturbance and limit or prohibit anthropogenic development. † The population size at which the current rate of decline would result in numbers falling below the minimum effective population of 5,000 individuals within ten years.

agencies should continue to monitor greater sage-grouse population numbers and trends within priority portions of its range, including BLM administered lands, particularly within the southwest Wyoming Basin (a conservation priority, see FWS Findings⁴, page 1393) and within the Owyhee Wilderness complex in Idaho and the Black Rock Wilderness/Sheldon National Wildlife Refuge complex in Nevada*, with the aim of implementing additional sage-grouse conservation and protection measures within any of these three broad areas if the estimated greater sage-grouse population therein declines below 5,750 individual birds† ;

efforts to conserve and enhance the Gunnison Sage-Grouse (presently about 5,000 birds) should continue in order to preserve their unique genetic characteristics (although such efforts should not be conducted under the umbrella or color of the ESA); and, 5] efforts to conserve and enhance the Bi-State population (presently about 3,000 birds) should continue in order to preserve their unique genetic characteristics (although such efforts should not be conducted under the umbrella or color of the ESA).

MD LG 17: Allotments within PHMA, focusing on those *with declining sage grouse populations, defined by a soft or hard adaptive management trigger being engaged and/or* with land health concerns, especially those containing riparian areas, including wet meadows, will be prioritized for field...

1.4.10 Mitigation

When compensatory mitigation is appropriately analyzed and applied as an option to offset residual impacts, there are increased opportunities for landowners to participate in programs intended to improve habitats. The full suite of mitigation options, including compensatory mitigation, must be available to conserve the habitat and populations necessary to avoid a future listing under the ESA. Whether compensatory mitigation strategies are addressed in BLM land-use plans, or through other mechanisms such as guidance or memorandums of understanding, the approach should not diminish opportunities for landowners to work with permitting entities and project proponents to improve greater sage-grouse conservation efforts.

The threat of habitat loss and the proverbial "death by a thousand cuts" is further exacerbated by DOI's recent decision to not require compensatory mitigation (BLM Instruction Memorandum 2018-093, July 24, 2018). The Management Alternative also calls for removing the net conservation gain standard and also suggests deference to the states' mitigation plan. Under the existing 2015 plan (the DEIS no-action alternative) the BLM would require compensatory mitigation to offset the impacts to a net conservation gain standard, yet there is no analysis or disclosure of the environmental consequences of that decision.

Given this fact, and that BLM IM 2018-093 states the BLM will no longer require compensatory mitigation - a significant policy change to say the least - a supplemental analysis disclosing how this change would impact habitat loss and effectiveness of the BLM's conservation plans for sage-grouse is warranted. Furthermore, we request that a supplemental NEPA analysis be performed in regard to mitigation.

d. at ES-6. Recently, the BLM has issued IM 2018-093 addressing compensatory mitigation including its previous use by BLM to achieve the net conservation gain standard. I support the new policy's emphasis on voluntary compensatory mitigation. The policy also appropriately recognizes that some states may require compensatory mitigation as part of state approval of a project also sited on BLM lands. Governor Otter's plan at Appendix I incorporates the Idaho Sage-Grouse Mitigation Framework but only where compensatory mitigation is required. (Appx. I at I 112). Since BLM will no longer require compensatory mitigation, the state framework may not apply depending on how it is further developed by the State. Nevertheless, as noted at page 4-15 of the DRMP /DEIS, ranchers or project proponents could voluntarily exceed the no-net-loss standard for mitigation and could do so by voluntarily offering to engage in compensatory mitigation.

I also support the modification of the mitigation standard away from the unfounded and unsupported "net conservation benefit" standard to the statutorily compliant "no net loss" standard. In this regard, the DRMP/DEIS specifically requests comment about BLM's mitigation policy regarding sage-grouse.

Reduce manageable impacts in sage-grouse habitat. Some threats to sage-grouse are difficult to manage, such as wildfire and invasive species. The federal conservation strategy should compensate for those impacts by emphasizing management of land uses that we can control, such as improperly managed livestock grazing, which contributes to unnatural fire and the spread of invasive species.

Even if net conservation gain is not continued as the standard, at a minimum the BLM should maintain a "no net loss" mitigation standard. This can be achieved if BLM applies the avoid, minimize, then compensate mitigation hierarchy. BLM's mitigation policies must allow for more than a 1:1 ratio of compensation due to the uncertainty of some mitigation measures. It is crucial that this be a matter of federal policy not just state policy. State plans need to meet this minimum standard and they cannot transfer full authority from the BLM to the state.

To the extent BLM relies on the State of Idaho's sage-grouse mitigation policy, it must ensure that the resulting standards ensure it has the authority to incorporate, implement, and enforce state sage-grouse mitigation programs that meet a recognized set of principles. We recommend that these principles should be consistent with those laid out by The Nature Conservancy in its 2015 report, *Achieving Conservation and Development: Applying the Mitigation Hierarchy*. In addition, we support compensatory mitigation programs that seek to achieve a "reasonable relationship" between impacts and compensatory mitigation and adequately account for habitat quality, temporal losses, and risk of project failure. The amount and type of compensatory mitigation should be proportional to, and have a reasonable relationship to, direct and indirect impacts.

it is not clear how BLM would be able to adopt and enforce state mitigation plans, such as the Idaho plan, as part of this sage-grouse management plan, even if they meet requirements for an acceptable compensatory mitigation program. Therefore, in addition to completing the necessary supplemental NEPA to evaluate the impacts of the new guidance on the Idaho Plan, as discussed below, BLM must also

clarify how the IM permits it to continue to uphold its commitment to the states in terms of applying state mitigation plans.

BLM has numerous authorities supporting its use of mitigation more generally, including the policies and principles underlying FLPMA, the foundational multiple use, sustained yield standard, the authority to promulgate regulations, and the specific authorities applicable to land use plans and project-specific authorizations.

Both FLPMA and the case law thus establish that BLM has ample discretion to go beyond the prevention of unnecessary or undue degradation to seek compensatory mitigation that will meet "the long-term needs of future generations for renewable and non-renewable resources, including, but not limited to, . . . wildlife and . . . natural scenic, scientific and historical values." 43 U.S.C. § 1702(c). None of these authorities distinguish between avoidance, minimization, and compensatory mitigation or prohibit or circumscribe compensatory mitigation; rather, the authorities are broad and support the use of each aspect of mitigation in appropriate circumstances.

Given BLM's broad authority to adopt and impose mitigation to protect sage-grouse, at a minimum, BLM certainly can act to adopt, implement and enforce the state mitigation programs for use on federal land. In doing so, it is critical to ensure that the state mitigation programs employed by BLM follow commonly recognized principles, such as those laid out by The Nature Conservancy in its 2015 report, *Achieving Conservation and Development: Applying the Mitigation Hierarchy* (2015 TNC Report).⁴⁴ These principles include: application of the mitigation hierarchy in a landscape context; policy goals that support conservation and drive accountability; inclusion of stakeholder engagement practices; long-term, durable options; additionality, equivalence, and protection against temporal losses.⁴⁵

e. *Modifying the Mitigation Strategy to Align with the State Mitigation Strategy, including Standard for No Net Loss* i. *The BLM Has Conceded that Net Conservation Gain Was Unlawfully Inserted into the Idaho ARMPA Under NEPA* As correctly stated in the Idaho DEIS, the public was not afforded the opportunity to comment on the "net conservation gain" mitigation standard to be applied for Greater Sage-Grouse conservation because it came well after the DEIS was published and comment period closed. Idaho DEIS at ES-6. Accordingly, the United States concedes this key feature of the 2015 RMP as fatally defective as a matter of NEPA process review.

ii. *Net Conservation Gain, as a Mitigation Requirement, is not Authorized under FLPMA* There is no lawful authority by the BLM to impose "net conservation gain" in an RMP, even if it is a desired environmental mitigation baseline by some constituencies to this BLM land use planning review. FLPMA represents a "balance of two vital - but often competing - interests": the "need for domestic sources of minerals, food, timber, and fiber from the public lands," and the protection of "the quality of scientific, scenic, historical, ecological, environmental, air, and atmospheric, water resource, and archeological values." *Mineral Policy Center v. Norton*, 292 F. Supp. 2d 30, 33 (D.D.C. 2003) (quoting 43 U.S.C. §§ 1701(a)(12) and (a)(8)). FLPMA contemplates and accepts that authorized land uses can have impacts on Federal lands. The statute requires the Secretary to "take any action necessary to prevent unnecessary or undue degradation of the [public] lands," 43 U.S.C. § 1732(b), a provision referred to as the UUD standard. BLM's regulations define UUD, for mining purposes, as prohibiting "conditions, activities, or practices" that are "not reasonably incident to prospecting, mining, or processing operations." 43 C.F.R. § 3809.5 (quotation marks omitted). Even if desired, the UUD standard does authorize the BLM to limit the degradation of public land resources resulting from authorized uses. The agency may prohibit not

only unnecessary impacts but also those impacts that, despite being necessary to an authorized land use, are undue or excessive. As directed by Congress, FLPMA accommodates reasonable public land development in order to fulfill the vision of the multiple use mission of Western public lands. Accordingly, flexibility within designated habitat management areas is accommodated through the unnecessary and undue degradation standard as a direct expression of Congress. Greater Sage-Grouse conservation-range wide-can comfortably be implemented to compensate for reasonable land use within important Greater Sage-Grouse habitat without confronting FLPMA's delicate balancing of land use and land stewardship.

iii. Truly Voluntary Conservation Should be Accounted for in the Idaho Plan Amendment In IM 2018-093, the BLM recently had cause to define the parameters of voluntary compensatory mitigation. According to IM 2018-093, compensatory mitigation as a condition of permitting is not authorized under any organic direction under FLPMA as a required condition to use public lands. However, compensatory mitigation that a project proponent proposes continues to be a tool, but, importantly, must be voluntary. According to the BLM, compensatory mitigation is "voluntary" when a project proponent's activities, payments, or in-kind contributions to conduct offsite actions to minimize the impacts of a proposed action are free of coercion or duress, including the agency's withholding of authorization for otherwise lawful activity, or the suggestion that a favorable outcome is contingent upon adopting the compensatory mitigation program. Indicia of voluntary compensatory mitigation are that the BLM not explicitly or implicitly suggest that project approval is contingent upon proposing compensatory mitigation or that doing so would reverse or avoid an adverse finding. If voluntary, a project proponent may proffer such mitigation and the BLM may consider such voluntary compensation as a means to reach a finding of no significant impact ("FONSI") or as a part of a proposed designed feature of a project. See IM 2018-093. Commenters' members have engaged in voluntary ESA conservation activity, including candidate conservation agreement with assurances (CCAAs) on private surface and candidate conservation agreement (CCA, without assurances) on Federal surface. The construct, operation, and funding of these agreements have been, and will continue to be, a fundamental part of the business model of companies whose activities may affect species with special status designations or their habitat. Accordingly, to the extent such voluntary conservation is reaffirmed and voluntarily implemented, they must be accounted for appropriately in these land use plan amendments as an asset to Greater Sage-Grouse conservation.

Do not strip the fundamental mitigation goal of "net conservation gain" from the plans. A no net loss of habitat merely prevents additional habitat loss and is not adequate to achieve long-term conservation of sage-grouse.

When compensatory mitigation is appropriately analyzed and applied as an option to offset residual impacts, there are increased opportunities for landowners to participate in programs intended to improve habitats. The full suite of mitigation options, including compensatory mitigation, must be available to conserve the habitat and populations necessary to avoid a future listing under the ESA. Whether compensatory mitigation strategies are addressed in BLM land-use plans, or through other mechanisms such as guidance or memorandums of understanding, the approach should not diminish opportunities for landowners to work with permitting entities and project proponents to improve greater sage-grouse conservation efforts.

The LUPA has significant flaws in assessing restoration and rehabilitation potential and impacts outside of fire rehabilitation, and the DEIS does nothing to address those flaws. The document does not address the need to prioritize areas for restoration where natural disturbance such as fire has occurred. It also does not address the need to evaluate unintended negative consequences, as well as the cost and the likelihood of success in restoration projects.

Priorities for re-establishment of sagebrush cover should be re-evaluated with "recently burned native areas" receiving first consideration. The post burn probability of expanding the range of invasive species or noxious weeds makes fire rehabilitation efforts a top priority. Extreme caution must be exercised with any proposal designed to convert nonnative perennial grasslands (especially those within lower elevation Wyoming big sagebrush sites) to a sagebrush dominated habitat with native understory. State and transition models should be utilized when setting project goals.

The expansion of juniper into sage grouse habitat is another invasive that allows avian depredation to further stalk birds and their nests. I support management objectives addressing invasives and juniper removal back to historic sites and the funding to assist their removal. Maintaining a minimal stubble height is a waste of time and resources. Stubble height during nesting and brood rearing leaves a tremendous amount of fuel for fire. And not all areas can ever achieve that minimal height due to soils, precipitation, etc .. One size does not fit all lands.

We are concerned by the proposed modification of the Bureau's mitigation strategy to align with the State no net loss mitigation strategy. The Bureau claims the net gain mitigation standard is an elusive standard that has no benefits and no authority can require a net conservation gain standard. Also, land designated as a PHMA, IHMA, and GHMA can be released from federal management if the Bureau demonstrates there is no net loss of the Greater Sage-Grouse or no adverse impact on the land. However, due to anticipated cumulative impacts in the planning area, American Bird Conservancy sees the net conservation gain standard as necessary to the vitality of the Greater Sage-Grouse in Idaho. The standard would help ensure the Greater Sage-Grouse population can recover by improving the sagebrush habitat condition in Idaho.

DEIS Section 4.5, 9. Modifying Mitigation Strategy to Align with the State Mitigation Strategy, Including Standards for No Net Loss. MD Mitigation (MT) 3 No Net Loss Mitigation Standard Under the Management Alignment Alternative, the 2015 ARMP A Decision Number MD MT 3 and others would be changed from ensuring mitigation that provides a net conservation gain for greater sagegrouse to ensuring mitigation that provides no net loss. We recommend the Final EIS include an explanation for the suggestion that the difference between no net loss and net gain for compensatory mitigation would be based on proponent's willingness.⁶ This could be accomplished by explaining the roles of the BLM and proponents in the BLM's compensatory mitigation decision making process. No Mitigation in General Habitat Management Areas The DEIS does not include sufficient information for how the BLM evaluated and interpreted science relevant to the decision to remove mitigation from GHMAs. The DEIS states that GHMAs typically contain lower quality or marginal greater sage-grouse habitat and that removing the compensatory mitigation requirement in GHMAs would result in six percent of leks in Idaho having an increased risk of loss and degradation. The DEIS does not explain how the above information was used in the development of this proposal or indicate the level of impact that an increased risk to six percent of leks in Idaho represents. We recommend the Final EIS include a

description of how the BLM found, evaluated and interpreted data and science relevant to the decision to remove mitigation in GHMA.

Maintain a strong "net conservation gain" standard. Sage-grouse habitat is largely found on federally-managed public lands, and in order to offset development and properly manage these lands, the BLM must have a strong science-based plan that includes this standard so as to give the species a chance at long-term recovery. A no net loss of habitat merely prevents additional habitat loss and is not adequate to achieve long-term conservation of sage-grouse.

Maintain or strengthen the mitigation policy. Good policy and practice is one of the best opportunities to achieve sustainable development and conservation goals. Where impacts cannot be avoided or minimized, well-designed compensatory mitigation programs can achieve the multiple-use, sustained yield objectives.

Page 2-14; Decision Number MD MT 3: This measure in the Management Alignment Alternative should be modified to require mitigation for direct and indirect impacts to GHMA in addition to PHMA and IHMA. The Management Alignment Alternative has downgraded the overall mitigation standard from a net conservation benefit to a no net loss, and has downgraded conservation in GHMA by removing requirements for lek buffers and Required Design Features. Although GHMA habitat quality is of lower value to sage-grouse than PHMA and IHMA, it still has conservation value. Not requiring any mitigation for impacts to GHMA essentially renders GHMA equivalent to non-habitat. This is an unacceptable loss of conservation. Mitigation derived from impacts to GHMA could be used to improve habitats in PHMA and IHMA and provide conservation benefits to sage-grouse rather than allowing un-mitigated impacts to GHMA.

In this regard, the DRMP/DEIS specifically requests comment about BLM's mitigation policy regarding sage-grouse. Id. at ES-6. Recently, the BLM has issued IM 2018-093 addressing compensatory mitigation including its previous use by BLM to achieve the net conservation gain standard. LS Power supports the new policy's emphasis on voluntary compensatory mitigation proffered by a project proponent. The policy also appropriately recognizes that some states may require compensatory mitigation as part of state approval of a project also sited on BLM lands. Governor Otter's plan at Appendix I incorporates the Idaho Sage-Grouse Mitigation Framework where compensatory mitigation is required. (Appx. I at I 1-12). Since BLM will no longer require compensatory mitigation, the state framework may not apply depending on how it is further developed by the State. Nevertheless, as noted at page 4-15 of the DRMP/DEIS, LS Power could voluntarily exceed the no net loss standard for mitigation and could do so by voluntarily offering to engage in compensatory mitigation.

Good mitigation policy and practice is also one of the best opportunities to achieve sustainable development and conservation goals. Where impacts cannot be avoided or minimized, well-designed compensatory mitigation programs can achieve the multiple-use, sustained yield objectives.

Development on existing leases should be managed under current regulations, which limit surface occupancy and disturbance. Years of research leave no doubt that sage-grouse do not do well in close proximity to energy development.

Restore No Surface Occupancy stipulations as mandatory for sage-grouse habitat when leasing for energy development. Allowing exceptions, in light of what we know with the science, will result in poorly planned development that negatively impacts habitat and leads to fewer birds.

Improve plan monitoring and oversight, including providing training to field staff and the necessary incentives to ensure proper implementation. The plans should contain metrics by which conservation success can be measured. Conservation metrics will help in effective management of the habitat and reduce wasting personnel time and limited funds.

Development on existing leases should be managed per regulations that are currently in place, which limit surface occupancy and disturbance. Years of research leaves no doubt that sage-grouse do not do well in close proximity to energy development. More development in the most important habitat will not help conserve the species.

Good mitigation policy and practice is one of the best opportunities to achieve sustainable development and conservation goals. Where impacts cannot be avoided or minimized, well-designed compensatory mitigation programs can achieve the multiple-use, sustained yield objectives.

This approach of a tiered level of mitigation (Le., core habitat has higher mitigation requirements) is consistent with Idaho's overall strategy. Maintaining Greater Sage-Grouse populations in the Core, and to a lesser extent, Important habitat zones is and should be the primary focus. In correspondence to Governor Otter, USFWS analyzed the State's foundational plan elements and determined that the Governor's Plan was consistent with the Conservation Objectives Team (COT) Report in this respect. BLM should honor those commitments in those letters to Idaho. Moreover, imposing onerous mitigation restrictions in the GHMA to maintain less than 5% of the State's birds is not reasonable and is inconsistent with the three-tier approach.

Simplot supports state lead development of habitat quantitation tools (HOT) that should be utilized for all mitigation projects (both private, state, and federal lands). There are a number of emerging methods for quantifying functional habitat units and several states have implemented their own HOT. Idaho has formed a team dedicated to developing a HOT that works best for Idaho. A HOT accounts for all habitat characteristics or attributes that influence Sage-Grouse habitat selection across multiple scales to produce a habitat unit, generally functional acre, to be used to calculate debits associated with disturbances or credits associated with conservation. Mitigation is driven by compensating for habitat debits (one habitat debit is equal to one habitat credit). The HOT provides for a quantitative tool that is based on best available science, rather than relying on arbitrary mitigation ratios, or other "one number fits all" approaches.

Because of the uncertainties related to fire breaks, green strips and increased targeted grazing, the most suitable places to conduct these activities are the buffer zones between the General and Important Habitat Management Areas where annual grasses predominate, the risk of wildfires is greatest, and key sage-strongholds are buffered from any unintended negative effects. We recommend that the BLM coordinate with the Idaho Department of Lands and private property owners to establish complementary fuel management treatments focused outside of the Priority and Important Habitat Management Areas.

Even with the most aggressive fuel reduction program, it is important to remember that large-scale fires are driven by extreme weather events and fuel reduction efforts may be of limited value during such times. Given this eventuality, it is important to act now to protect intact sagebrush habitat from noxious weeds and restore native vegetation where possible so these areas are more resilient and can recover more easily following wildfires. Resiliency is a key factor in the Sage-Grouse Conservation Objectives report. We support efforts to reduce exotic undesirable species and prevent expansion into areas providing sage-grouse habitat.

As mentioned in Alternative D-WFM-7: PPMA, p. 2-119, the BLM should consider allowing wildland fire use to remove junipers and restore sagebrush steppe habitat in high elevation areas with low cheatgrass risk, providing that the weather, topography and other conditions allow.

I. At the outset, and as an overriding theme, regardless of any other management actions or conservation measures, it does not require a rocket scientist, a habitat biologist, or even a mathematician to understand that if more acres are allowed by the BLM and Forest Service to burn than are rehabilitated on an annual basis, no other conservation measures (or "warnings" or "triggers") are going to mean anything to the conservation of the sage-grouse. If an herbivore does not consume the fuel loads, or if other on-the-ground management is not implemented to mitigate the continuing fuel loading, then fire will. The hundreds of thousands of acres consumed already in 2018 are the case in point. And if the agencies don't start directing serious and sincere large-scale efforts to control fine fuels, like cheatgrass, especially where it occurs in so-far-unburned areas, but also in recently-burned areas, then other conservation efforts will also fail.

In addition, the mitigation framework will be a key part of any plan to maintain and restore sage-grouse habitat. I am concerned that the Management Alignment Alternative calls for "no net loss" rather than a "net conservation gain." Mitigating human activities that are harmful to sage-grouse should be mandatory not voluntary. Weakening restrictions on development within priority habitat could trigger unnecessary litigation and possible re-listing of the species, thus increasing the uncertainty for developers and users.

The amended plans should do all they can to protect sage-grouse habitat across the west, including keeping key commitments to protect the most important habitat, prioritizing oil and gas leasing and development away from sage-grouse habitat, keeping "no surface occupancy" stipulations in place to protect habitat from drilling activities,

The plan should also reinstate protections for general habitat and no surface occupancy stipulations for oil and gas development in former Sagebrush Focal Areas in order to protect the most important habitat, as well as implementing a strong standard to avoid damage to habitat and to restore habitat where impacts are unavoidable.

I. Conservation partnerships BLM should encourage sage-grouse conservation partnerships with P4 Production or other potential mining industry partners. Our experience is that phosphate mining can co-exist with, and benefit, sage-grouse when coupled with appropriate conservation measures. Wildfires, BLM Idaho State Office July 31, 2018 Page 7 invasive weeds, and pinyon-juniper encroachment have degraded large areas of potential sagegrouse habitat and continue to threaten additional habitat losses. During project permitting, mining companies routinely agree to mitigate project effects through restoration of depleted habitats and protection of high value locations. Further, as part of mitigation, mining projects also potentially could help BLM address the primary threats to the sage-grouse in Idaho

of catastrophic wildfire and related cheatgrass invasion by providing resources for firefighting or fire protection to defend sagebrush habitat from wildfires. The Final RMP/EIS should recognize these potential benefits by ensuring that phosphate miners are provided flexibility to continue to operate in sagebrush country and make these contributions.

Chapter 4--Environmental Consequences: P4 Production supports modification of the mitigation strategy to align with Governor Otter's sage-grouse plan as noted in Section 4.5, No.9. As stated, "proponents will continue to vary in their willingness to provide mitigation that goes beyond the no-net-loss standard. Under either standard, the BLM is ensuring that development projects would not result in a net harm to Greater Sage-Grouse or its habitat." P4 Production is committed to sage-grouse conservation as shown by its history and in its comments on the 2015 ARMPA and this DRMPIDEIS. While P4 Production has stated its willingness to provide additional mitigation that approximates net conservation gain to the species, P4 Production does not believe that should be the standard for compensatory mitigation based on the legal infirmities associated with that standard.

1.4.11 Lek Buffers

On average, lek attendance was stable when no oil and gas development was present within 6,400m. However, attendance declined as development increased.⁵ For nesting habitat Zabihi et al. (2017) likewise found that avoidance of wellpads and access roads were the two most important factors predicting nest site selection. Importantly, Green et al. confirmed that declines in sage-grouse populations may continue even within Wyoming's "core areas," where density of wells is limited to approximately one pad per square mile. In addition, Kirol et al. (2015b) found that increases on coalbed methane wastewater ponds were correlated with decreased nest success in the Powder River Basin of Wyoming. To rectify these problems, BLM should impose, as terms of the Resource Management Plan, Conditions of Approval on all existing fluid mineral leases consistent with the recommendations of the Sage-Grouse National Technical Team, including no new surface occupancy on existing federal leases (with exceptions for occupancy of no more than 3% outside a 4-mile lek buffer, if the entire leasehold is within such habitat).

The decision by the FWS not to list sage-grouse under the ESA noted the importance of buffers to sagegrouse protection, and their role in the decision not to list: Sage-grouse leks are communal breeding centers that are representative of the breeding and nesting habitats. Conservation of these areas is crucial to maintaining sage-grouse populations. Protective buffers around leks conserve these important habitats... BLM and USFS may approve actions in PHMAs that are within the applicable lek buffer distance identified above only if the BLM or USFS determine that a buffer distance other than the distance identified above offers the same or greater level of protection to sage-grouse and its habitat. The BLM or USFS will make this determination based on best available science... For actions in GHMAs, the BLM and USFS will apply the lek buffer distances in Table 3 as required conservation measures to fully address any impacts to sage-grouse identified during the project-specific NEPA analysis. However, if it is not possible to locate or relocate the project outside of the applicable lek buffer distance(s) identified above, the BLM or USFS may approve the project only if: (1) Based on best available science, landscape features, and other existing protections, (e.g., land use allocations, State regulations), the BLM or USFS determine that a lek buffer distance other than the applicable distance identified above offers the same or a greater level of protection to sage-grouse and its habitat, including conservation of seasonal habitat outside of the analyzed buffer area; or (2) the BLM or USFS determines that impacts to sagegrouse and its habitat are minimized such that the project will cause minor or no new disturbance

(e.g., co-location with existing authorizations); and (3) any residual impacts within the lek buffer distances are addressed through compensatory mitigation measures sufficient to ensure a net conservation gain, as outlined in the Mitigation Strategy (see below). By applying lek buffers in addition to other measures, the Federal Plans provide an additional layer of protection to the habitat in closest proximity to leks and the areas documented in the literature to be the most important for breeding and nest success.³³ To develop relevant and practical lek buffer distances for the BLM plans, DOI commissioned the U.S. Geological Survey to review the scientific information on conservation buffer distances for sage-grouse. The resulting study³⁴ recommended there be 5 km (3.1 miles) between leks and infrastructure related to energy development.³⁵ It is important to stress that this distance does not result in 100% protection for sage-grouse: [T]he minimum distance inferred here (5 km [3.1 miles]) from leks may be insufficient to protect nesting and other seasonal habitats. Based on the collective information reviewed for this study, conservation practices that address habitats falling within the interpreted distances may be expected to protect as much as 75 percent to 95 percent of local population's habitat utilization.³⁶ Other scientific input continues to stress the importance of buffers: 33 U.S. Fish and Wildlife Service. Endangered and Threatened Wildlife and Plants: 12-Month Finding on a Petition to List Greater Sage-Grouse as an Endangered or Threatened Species. 80 Federal Register 59858 (October 2, 2015) (FWS 2015 Greater Sage-grouse Listing Decision) at p. 59880 (citations omitted). 34 Manier et al, Conservation Buffer Distance Estimates for Greater Sage-Grouse-A Review (2014). USGS Open File Report No. 2014-1239. <https://pubs.usgs.gov/of/2014/1239/pdf/ofr2014-1239.pdf> (2014 USGS Report). 35 See, e.g., Utah Plan, Appendix B, p. B-1; FWS 2015 Greater Sage-grouse Listing Decision, 80 Federal Register at 59880. 36 Manier et al., p. 2 (citations omitted). 21 ? 2016 Dahlgren study (UT): This study assesses distances between seasonal habitats to recommend buffer zones for conservation. Females and their broods from larger populations in contiguous sagebrush moved more than those in smaller, isolated populations, but small populations moved farther from leks to winter grounds. Distances from nests to leks were consistent with other research, but nest success slightly increased with distance from leks. Seasonal movements of Utah Greater Sage-Grouse were generally lower than reported rangewide, likely because of fragmented sagebrush habitats. Management actions that increase the area of usable sagebrush may benefit Utah Greater Sage-Grouse. Management plans can incorporate buffers based on, for example, observed distances between nests and leks to increase the conservation value of management actions. The authors recommended buffers of 5 and 8 kilometers between disturbed areas and Greater Sage-Grouse breeding and summer habitats, respectively.³⁷ ? 2018 Holloran Letter (importance of 2015 protections): Recommending management approaches and objectives established in 2015 BLM sage-grouse land use plans be used as minimum standards in sagebrush habitat.³⁸ BLM's argument in support of the changes in Idaho, despite its acknowledgment that infrastructure and development would be allowed much closer to leks, is that there is very little development of infrastructure in Idaho in either priority or important habitat.³⁹ If that is the case, then there is no real need for the proposed change. BLM also asserts that disturbance from development is not the major threat to sage-grouse in Idaho. While that is true, it is still a threat, one that buffers are designed to avoid. For these reasons, BLM must maintain, and, if anything, strengthen, current lek buffers.

c. Modifying Lek Buffers The Idaho DEIS concedes that imposing uniform lek buffers in Idaho (and presumably across all the Western States) was illogical and misguided. Idaho DEIS at ES-3.10 In general, the imposition of uniform lek buffer distances without regard for site specific project impacts ignores the unique circumstances and habitat impacted by most project operations. Notwithstanding an enthusiasm exhibited in the 2015 Idaho Greater Sage-Grouse LUPA for lek buffer uniformity, even with

accommodation to modify lek buffer requirements based on local data, best available science, landscape features, and other existing protections (e.g. land use allocation state regulations), there is little scientific basis for any default standard of lek buffers to be applied by the BLM in project specific context. Instead, and the Idaho DEIS so articulates, lek buffers must be developed in conjunction with local knowledge of Greater Sage-Grouse seasonal movements and population responses to management actions. For the Idaho LUPA, lek buffers must be analyzed to provide greater flexibility and adaptability to make changes to buffers as new information and science becomes available and if the site will allow for a more flexible approach. Commenters support a "not a one-size-fits-all approach" as stated in the DEIS. But more importantly, Commenters pause to offer how the imposition of potentially inflexible lek buffer requirements potentially collide with the full range of applicable laws that authorize and encourage mining on public lands, including the General Mining Law of 1872, the Surface Use Act, the Mining and Materials Policy Act, FLPMA, and the implementing regulations of those statutes. Commenters are concerned by how the Idaho DES refers to the rights under the mining laws and the disjointed methodology in which the Idaho DEIS uses short hand descriptions to characterize the scope and sources of rights under the 1872 Mining Law. Consideration should be given to include Idaho LUP revisions that allow for reconciliation of potential conflicts and implementation of existing surface management regulations (43 Code of Federal Regulations Subpart 3809) in order to appropriately complement baseline land use planning with appropriate analysis of project impacts at the project specific level.

Modifying Lek Buffers (MD SSS 35) We recommend the Final EIS summarize the scientific information used to develop the Management Alignment Alternative's proposal to reduce lek buffers for infrastructure and development in the 2,675,251 acres of Important Habitat Management Areas. The Management Alignment Alternative's proposal on buffers in IHMA's represents a major change relative to the no action alternative. Rather than lek buffers protecting 47% of IHMA's from roads, infrastructure related to energy development and surface disturbance, the Management Alignment Alternative's lek buffers protect 1% of IHMA from roads and 27% from infrastructure related to energy development and surface disturbance. The BLM's Principles and Practices of Integrating Science into Land Management Desk Guide may provide useful guidance to incorporate this information.

The 1-kilometer (0.62 mile) buffer between the sheep for trailing, watering, bedding/overnighting is often physically impossible for many reasons. The topography of the landscape with dense sagebrush, cliffs, fences and other attributes depending on the area may make the ability to move at this distance unfeasible. In areas with checkerboard land of private, state and federal some allotments may not even be as wide or long as 1 kilometer making any lek impossible to go around at that distance.

The BLM needs to do a better job of protecting Priority Habitat Management Areas by reducing oil/gas development impacts. New development should be prioritized outside these important population areas and strong buffers maintained around sage-grouse leks.

Page 2-16; Decision Number Appendix B: This measure in the Management Alignment Alternative should be modified to require the same lek buffer-distances in PHMA, IHMA, and GHMA as currently required under the No Action Alternative (i.e. no change to lek buffer-distances in the No Action Alternative under the Management Alignment Alternative). Maintenance of adequate lek buffers will be critical to conserving sagegrouse given no mitigation for impacts in PHMA, IHMA and GHMA due to IM 2018-093. The DEIS for BLM's proposed action should re-analyze the effects on the environment

resulting from the significant change of BLM issuing IM 2018-093 and changing policy which also fundamentally changes both alternatives in the DEIS. BLM should allow public comment on this revised DEIS.

Page 2-16; Decision Number Appendix B: This measure in the Management Alignment Alternative should be modified to require the same lek buffer-distances in IHMA as in PHMA. Under the Management Alignment Alternative, the lek buffers in PHMA are set at the lower end of the interpreted range of the lek buffer distances" in the referenced USGS Report. The proposed lek buffers in IHMA under the Management Alignment Alternative are substantially less than under PHMA, and could easily compromise the viability of sage-grouse leks in IHMA; this is not acceptable for conservation of sage-grouse. The general conservation strategy should be to adequately conserve sage-grouse in PHMA and IHMA, and ultimately to shift IHMA acres to PHMA and by improving habitat conditions over time for sage-grouse. The current proposed lek buffers in IHMA does just the opposite: it moves IHMA away from PHMA and degrades sage-grouse habitat conditions. This is particularly important given that sage-grouse habitat conditions will likely be on a downward trajectory for several years due to fire impacts and the delay in restored habitat coming on-line due mostly to the years it takes for restored vegetation characteristics to develop (see general comments below).

there is a lack of consistency on how buffers are being applied in state plans. For example, the Utah RMPA/EIS provides further clarification in regard to the role of buffers. On page 2-7 in the Utah RMPA/EIS there is a recognition that buffers were not established to "not allow activities" but to "assess and address" impacts to maintain lek persistence. The Idaho Plan is not consistent with this direction and includes language on page 2-17 referring to lek buffer distances as a "required conservation measure" and directs that: "Impacts should be avoided by locating the action outside of the applicable lek buffer-distance(s) identified above."

1.4.12 Criteria

On 1-4, under Planning Criteria, the statement "This RMPA/EIS will comply with orders of the Secretary, including SO 3353 (Greater Sage-Grouse Conservation and Cooperation with Western States), which strives for compatibility with state conservation plans" implies that any future Secretarial Orders would override the RMPA/EIS. This statement is unacceptable and BLM must clarify that issuance of new secretarial orders (or other policies) does not relieve the agency from its obligations to ensure actions are consistent with governing land use plans (see 43 C.F.R. § 1601.0-5(b)).

Appendix K: Appendix K presents a logical process by which large-scale anthropogenic projects may be reviewed by a Technical Team and Policy Team applying screening and development criteria using an approach that was presented in the Governor's sagegrouse plan. In the presentation Table 2-2, it is not clear whether this review process by the two teams applies equally to all large anthropogenic projects in all types of habitat including GHMA. If GHMA is not subject to this team review approach, or even if it is, that should be clarified.

1.4.13 Issues dismissed from detailed analysis

studies of sagebrush habitats in Idaho and ecologically comparable areas in Eastern Oregon have documented dramatic vegetative recovery after grazing was permanently discontinued. (Anderson & Holte 1981; Beschta et al. 2014; Batchelor et al. 2015) These studies show that reducing or eliminating grazing is one of the best ways to protect and preserve the remaining sagebrush habitat in Idaho. BLM

must seriously consider removing domestic livestock as a proven sage-grouse conservation method, and the plan amendments must provide managers with the authority to cancel or retire grazing permits wherever grazing is incompatible with sage-grouse habitat needs. The 2018 proposed Idaho amendment dismissed an analysis of removing livestock grazing in sage-grouse habitat. ES-4-5. But without this alternative, the public is deprived of knowing exactly how beneficial the cessation of grazing can be, undermining an informed decision.

In Idaho, only 62% of PACs designated by the Service were given the status of PHMAs under the Idaho - Southwest Montana ARMPA, omitting 3.8 million acres of prime sage-grouse habitats from the level of protection they deserved (Molvar 2015). Some of these excluded lands were designed as Important Habitat Management Areas and granted a weaker level of protection that is inadequate based on the best available science. All PACs in Idaho must be designated as PHMAs and given a level of protection equal to the NTT (2011) recommendations.

* The DRMP/DEIS does not address MD Veg 7 regarding the value of existing, non-native seedlings in sage-grouse habitat, nor does it address MD FIRE 34 or MD FIRE 35. Failure to address these issues raises concerns that these management directives will negatively impact both grazing interests and sage-grouse. Often, post-fire grazing restrictions only serve to exacerbate non-native grass infestations that create a negative cycle on both sage-grouse and livestock grazing. Nor is there a need to reduce grazing adjacent to burned areas, which only serves to further harm ranches that have already been negatively affected by fire restoration activities.

While wind energy development is not a priority in my legislative district, I note with concern the failure of the DRMP /DEIS to carry forward any analysis of renewable energy development in both priority and general habitat. Under the current scheme, established by the 2015 ARMPA, renewable energy development seems to be either excluded or avoided throughout sage-grouse habitat and does not adequately follow the Governor's Task Force recommendations incorporated into the Governor's plan that set forth a step-by-step process by which large infrastructure projects may be considered even in priority and important habitat.

Also, I am concerned about BLM's continued failure to adequately address the impact of predator control on sage-grouse populations. Any rancher can explain to the BLM in great detail the importance of predator control as evidenced by the significant cooperation provided by USDA's Wildlife Services in responding to ranchers' concerns with a multitude of predators and their impacts on livestock operations. Similarly, sage-grouse Page 5 suffer from significant predatory behavior and it is irresponsible to not adequately address and incorporate appropriate predator control measures into the DRMP /DEIS. Table 2-2 provides a detailed comparison of alternatives of relevance to my comments.

While wind energy development is not a priority in my legislative district, I note with concern the failure of the DRMP/DEIS to carry forward any analysis of renewable energy development in both priority and general habitat. Under the current scheme, established by the 2015 ARMPA, renewable energy development seems to be either excluded or avoided throughout sage-grouse habitat and does not adequately follow the Governor's Task Force recommendations incorporated into the Governor's plan that set forth a step-by-step process by which large infrastructure projects may be considered even in priority and important habitat.

Also, I am concerned about BLM's continued failure to adequately address the impact of predator control on sage-grouse populations. Any rancher can explain to the BLM in great detail the importance of predator control as evidenced by the significant cooperation provided by USDA's Wildlife Services in responding to ranchers' concerns with a multitude of predators and their impacts on livestock operations. Similarly, sage-grouse suffer from significant predatory behavior and it is irresponsible to not adequately address and incorporate appropriate predator control measures into the DRMP/DEIS.

The LUPAs fail to recognize that many range improvements are associated with water rights owned or held by the permittee. LUPA needs to identify that existing rights will not be impaired or taken.

The LUPA does not consider the unintended consequences of reduced or elimination of grazing, such as increased fuel loading and resulting fire intensity.

The document also does not discuss areas that have crossed an ecological threshold. Specifically, the Greater Sage-Grouse LUPA in (at least) Idaho includes the following Management Directions that demonstrate these flaws consequences, that were not addressed during the DEIS process: MD VEG 2: Implement vegetation rehabilitation or manipulation projects to enhance sagebrush cover or to promote diverse and healthy grass and forb understory to achieve the greatest improvement in Greater Sage-Grouse habitat based on FIAT assessments, HAF assessments, other vegetative assessment data and local, site specific factors that indicate sagebrush canopy cover or herbaceous conditions to not meet habitat management objectives (i.e. is minimal or exceeds optimal characteristics). This may necessitate the use of prescribed fire as a site preparation technique to remove annual grass residual growth prior to the use of herbicides in the restoration of certain lower elevation sites (e.g., Wyoming big sagebrush) but such efforts will be carefully planned and coordinated to minimize impacts to Greater Sage-Grouse seasonal habitats. MD VEG-7: During land health assessments, evaluate the relative value of existing nonnative seeding within Greater Sage-Grouse habitat as: 1) a component of a grazing system allowing improvement of adjacent native vegetation, 2) development of a forage reserve, 3) incorporation into a fuel break system (Davies et al. 2011) or 4) restoration/diversification for Greater Sage-Grouse habitat improvement. Where appropriate and feasible, diversify seedings, or restore to native vegetation when potential benefits to Greater Sage-Grouse habitat outweigh the other potential uses of the non-native seeding, with emphasis on PHMA and IHMA. Allow recolonization of seedings by sagebrush and other native vegetation.

The Federal and State plans regarding greater sage-grouse do little or nothing to address predation (predominately by ravens and other corvids) which is the most direct impact depressing greater sage-grouse populations;

State and Federal Plans Regarding Greater Sage-Grouse do Little or Nothing to Address Predation The mere presence of human activity seems to have little biologically relevant connection to sage-grouse population trends. However, specific human activities appear to correlate positively with greater sage-grouse populations. Predator control in particular appears to have a direct positive influence on greater sage-grouse population trends. The intensive development of meadows, hayfields, and surface water sources increased markedly in the Great Basin in the late 1800s and early 1900s as livestock grazing levels and predator control efforts increased. From this period through the mid 1900s, intensive predator control was practiced and greater sage-grouse populations boomed. In fact, predator control was encouraged, subsidized, and implemented on a vast scale by the Federal, State, and local governments alike. By the mid 1900s, Federal and State regulations were implemented and all of the

management practices discussed above were controlled and moderated. The greater sage-grouse populations moderated at about the same time. By the late 1960s, livestock numbers and grazing levels were significantly scaled back across the west, and predator control programs were largely curtailed. Greater sage-grouse population trends reversed and started to rapidly decline during the same period. Ravens are known to be effective predators on sage-grouse nests and are considered to restrain sage-grouse population growth in some locations. See 2010 FWS Findings, page 13927. According to the Breeding Bird Survey, Mojave Desert raven populations have increased more than 700 percent over the past 40 years, with a similar surge 5 See The Common Raven Boom in the Rugged West Isn't Necessarily a Good Thing at <https://www.audubon.org/news/the-common-raven-boom-rugged-west-isnt-necessarily-good-thing>. spreading through the Great Basin region⁵. By some accounts, present day raven populations in the Great Basin may be as much as 50 times greater than they were at around 1950. During meetings with the Elko County Commission between about 2013 and 2016 regarding greater sage-grouse, Nevada Department of Wildlife and U.S. Geological Survey biologists reported that several field studies have indicated that fewer than 15% of greater sage-grouse eggs ever get the chance to hatch because the vast majority are lost to predation, primarily by ravens and other corvids. Because ravens (and other corvids) are protected under the Migratory Bird Treaty Act, neither the Federal or State plans regarding greater sage-grouse management really address the predation issue. Given the magnitude of increase in corvid numbers (particularly ravens) after 1950 and the resulting degree of predation on greater sagegrouse eggs (and chicks), efforts to increase greater sage-grouse populations are doomed to be ineffective as long as they ignore the seriousness of the problem. Thus, it is imperative that an earnest analysis of the predation problem be included in the planning process and that the final decision regarding greater sage-grouse address the urgent need for the Migratory Bird Treaty Act to be amended so that it no longer prevents managers from being able to effectively control nuisance bird species in situations where excessive populations of such species interferes with other management goals and objectives.

Excessive Emphasis on Increasing Vegetative Hiding Cover for Greater Sage-Grouse Increases the Long-Term Risk for Catastrophic Wildfire Another human endeavor that appears to correlate positively with greater sage-grouse populations is livestock ranching, although the positive influences may be mostly indirect. During the late 1800s through the mid 1900s, high sheep and cattle numbers reduced fine wildfire fuel loads across the Great Basin, and wildfires were rare and small. Increased deposition of livestock dung also boosted insect abundance, particularly in closely grazed meadows and riparian areas, and the close grazing stimulated succulent herbaceous growth and increased the forb component in these meadows and riparian areas, thereby increasing the quantity and quality of the forage supply for sage-grouse. By the mid 1900s, Federal and State regulations were implemented and all of the grazing management practices discussed above were controlled and moderated. The greater sage-grouse population sizes moderated at about the same time. By the late 1960s, livestock numbers and grazing levels were significantly scaled back across the west. Fuel levels for wildfires increased, and the incidence of large-scale wildfires rose exponentially. Greater sage-grouse population trends reversed and started to rapidly decline during the same period. Thus, intensive livestock management which diminished the frequency and size of wildfires in the Great Basin seems to be highly relevant to the biology of the greater sage-grouse and helps explain the trajectory of their populations over time. Returning to these practices has the potential to again benefit greater sage-grouse populations. In contrast, proposed greater sage-grouse conservation measures to provide heavier cover levels through further livestock grazing reductions (and the lack of management practices to address ever increasing predation levels) is a prescription to assure that greater sage-grouse populations will ultimately decline. Heavier cover for

greater sagegrouse translates to higher fire fuel loads across the landscape. Substantial fuel loads make large-scale wildfires inevitable in many sagebrush communities. Repeat burns increase the likelihood that plant communities will cross a threshold and shift toward cheatgrass dominance, which in turn increases wildfire frequency, eliminating the ability of sagebrush communities to re-establish. Thus, conservation measures that intend to benefit greater sage-grouse by providing them with more hiding cover will ultimately harm the species by converting significant swaths of existing habitat to annual grasslands that provide no habitat value for greater sage-grouse whatsoever. This will concentrate the remaining birds in an ever shrinking area, making them more vulnerable to uncontrolled predator populations.

it is imperative that an earnest analysis of the predation problem be included in the planning process and that the final decision regarding greater sage-grouse address the urgent need for the Migratory Bird Treaty Act to be amended so that it no longer prevents managers from being able to effectively control nuisance bird species in situations where excessive populations of such species interferes with other management goals and objectives.

State and Federal Plans Regarding Greater Sage-Grouse do Little or Nothing to Address Predation The mere presence of human activity seems to have little biologically relevant connection to sage-grouse population trends. However, specific human activities appear to correlate positively with greater sage-grouse populations. Predator control in particular appears to have a direct positive influence on greater sage-grouse population trends. The intensive development of meadows, hayfields, and surface water sources increased markedly in the Great Basin in the late 1800s and early 1900s as livestock grazing levels and predator control efforts increased. From this period through the mid 1900s, intensive predator control was practiced and greater sage-grouse populations boomed. In fact, predator control was encouraged, subsidized, and implemented on a vast scale by the Federal, State, and local governments alike. By the mid 1900s, Federal and State regulations were implemented and all of the management practices discussed above were controlled and moderated. The greater sage-grouse populations moderated at about the same time. By the late 1960s, livestock numbers and grazing levels were significantly scaled back across the west, and predator control programs were largely curtailed. Greater sage-grouse population trends reversed and started to rapidly decline during the same period. Ravens are known to be effective predators on sage-grouse nests and are considered to restrain sage-grouse population growth in some locations. See 2010 FWS Findings, page 13927. According to the Breeding Bird Survey, Mojave Desert raven populations have increased more than 700 percent over the past 40 years, with a similar surge 5 See The Common Raven Boom in the Rugged West Isn't Necessarily a Good Thing at <https://www.audubon.org/news/the-common-raven-boom-rugged-west-isnt-necessarily-good-thing>. spreading through the Great Basin region⁵. By some accounts, present day raven populations in the Great Basin may be as much as 50 times greater than they were at around 1950. During meetings with the Elko County Commission between about 2013 and 2016 regarding greater sage-grouse, Nevada Department of Wildlife and U.S. Geological Survey biologists reported that several field studies have indicated that fewer than 15% of greater sage-grouse eggs ever get the chance to hatch because the vast majority are lost to predation, primarily by ravens and other corvids. Because ravens (and other corvids) are protected under the Migratory Bird Treaty Act, neither the Federal or State plans regarding greater sage-grouse management really address the predation issue. Given the magnitude of increase in corvid numbers (particularly ravens) after 1950 and the resulting degree of predation on greater sagegrouse eggs (and chicks), efforts to increase greater sage-grouse populations are doomed to be ineffective as long as they ignore the seriousness of the problem. Thus, it is imperative that an earnest analysis of the predation problem be included in the planning process and that

the final decision regarding greater sage-grouse address the urgent need for the Migratory Bird Treaty Act to be amended so that it no longer prevents managers from being able to effectively control nuisance bird species in situations where excessive populations of such species interferes with other management goals and objectives.

There continues to be no discussion in the RMPAIEIS of the consequences of prohibiting or limiting access to hundreds of thousands of acres of phosphate ore. The RMPAIEIS and supporting analysis fails to discuss the effects on fertilizer availability, fertilizer sources and prices, and implications for national food security. Reasonably Foreseeable Development Scenario (RFDS) have been developed for oil and gas leasing and geothermal development but there is no analysis for non-energy mineral development. The RMPAIEIS needs to include a complete and thorough analysis of the economic effects of closing 16,270,500 acres, or 59% of the federal non-energy leasable mineral estate decision area (including all federal non-energy leasable mineral estate in PHMA outside KPLAs) to prospecting and leasing.

Valid existing rights need to be clearly identified and consistently addressed in all state plans. Currently there are discrepancies on how valid existing rights are being incorporated into the various state plans. Fringe leases and the development of existing leases should be recognized as a "Valid Existing Right." and as such, should be specifically included in the definition of Valid Existing Right in the glossary. Currently there is no definition for Valid Existing Right in the RMPAIEIS glossary. Because the premise is that they will be developed (as a Valid Existing Right), the acreage associated with existing leases should not be used to calculate disturbance and density thresholds.

Federal support to address wildfire and invasive species threats The federal government must provide adequate funding and personnel to implement the management actions aimed at addressing the major threats to sage-grouse in Idaho of catastrophic wildfire and invasive species. None of the plan amendments will be successful in achieving BLM's sage-grouse conservation objectives unless the federal government commits to doing its part to address the threats to the species' habitat on federal lands or on lands subject to federal management. Moreover, if BLM does not provide adequate management support to control wildfire or invasive species, the onus of the Final RMP/EIS restrictions will fall on the public land users who might be precluded from using the public lands because of the federal government's failure to control the major threats to sage-grouse.

I.4.14 New Alternative

Connect sage-grouse habitats. The federal government developed fifteen plans covering the sage-grouse's eleven-state range, but failed to stitch them together into a matrix that can provide for the species across federal jurisdictions and state boundaries. It is essential that these various plans work together and with the federal plan.

Restore degraded sage-grouse habitat. Sage-grouse have already lost nearly half their range to agriculture and development. If there is to be any hope for the different state and federal plans to work together, this loss of habitat must cease. The federal sage-grouse conservation strategy should be updated to support active restoration of areas that can still be used by sage-grouse and other wildlife.

The sage grouse amendment should create a system of management that rewards ranchers and land managers for proper livestock grazing.

Based upon the above comments, Petan urges that the following actions be taken: 1] the BLM and USFS should issue Records of Decision in this case enacting a true no action alternative that repeals the 2011 BLM IMs and does not amend any land use plans;

agencies should continue to monitor greater sage-grouse population numbers and trends within priority portions of its range, particularly within the southwest Wyoming Basin (a conservation priority, see FWS Findings⁶, page 1393), within the Owyhee Wilderness complex[‡] in Idaho, and within the Black Rock Wilderness/Sheldon National Wildlife Refuge complex[§] in Nevada, with the aim of maintaining at least three separate greater sage-grouse populations across the species range that exceed the minimum effective population of 5,000 individual birds, and implementing additional sage-grouse conservation and protection measures within any of these three priority areas if its population declines below 5,750 greater sage-grouse^{**} (unless one or more other greater sage-grouse population(s) within that sub-region exceeds a population size of 5,750 birds to achieve the overall aim); [‡] The Owyhee Wilderness complex includes the North Fork Owyhee, Owyhee River, Pole Creek, Little Jacks Creek, Big Jacks Creek, and Bruneau-Jarbridge Rivers wilderness areas. [§] The Black Rock Wilderness/Sheldon National Wildlife Refuge complex includes the Black Rock Desert, North Black Rock Range, High Rock Canyon, East Fork High Rock Canyon, Little High Rock Canyon, High Rock Lake, Calico Mountain, Pahute Peak, North Jackson Mountain, and South Jackson Mountain wilderness areas, and the Sheldon National Wildlife Refuge. ^{**} The population size at which the current rate of decline would result in numbers falling below the minimum effective population of 5,000 individuals within ten years.

in order to preserve their unique genetic characteristics, efforts to conserve and enhance the Gunnison Sage-Grouse (presently about 5,000 birds)⁸ should continue until their population increases to more than 5,750 individual birds; and, 5] in order to preserve their unique genetic characteristics, efforts to conserve and enhance the Bi-State population of greater sage-grouse (presently about 3,000 birds, see FWS Findings⁶, page 13993) should continue until their population increases to more than 5,750 individual birds.

* Such wilderness/refuge complexes already operate under regulatory mechanisms which minimize human disturbance and limit or prohibit anthropogenic development. [†] The population size at which the current rate of decline would result in numbers falling below the minimum effective population of 5,000 individuals within ten years.

[†] The population size at which the current rate of decline would result in numbers falling below the minimum effective population of 5,000 individuals within ten years.

efforts to conserve and enhance the Gunnison Sage-Grouse (presently about 5,000 birds) should continue in order to preserve their unique genetic characteristics (although such efforts should not be conducted under the umbrella or color of the ESA); and, 5] efforts to conserve and enhance the Bi-State population (presently about 3,000 birds) should continue in order to preserve their unique genetic characteristics (although such efforts should not be conducted under the umbrella or color of the ESA).

Connect sage-grouse habitats. The federal government developed fifteen plans covering the sage-grouse's eleven-state range, but failed to stitch them together into a matrix that can provide for the species across federal jurisdictions and state boundaries.

I.4.15 Preferred Alternative

Second, the Bureau's Preferred Management Alignment Alternative varies from the No Action Alternative in major areas. Initially the triggers were to be analyzed twice a year to see if any of the adaptive management triggers had been met, but now the Bureau has cut that to an annual analysis. This annual analysis will inhibit the Bureau's response to changes to the Greater Sage-Grouse that occur through the year.

The Alliance specifically supports BLM's adoption of the Management Alignment Alternative because of changes it makes to the following resource issues: * Sagebrush focal area designations * Disturbance and density caps * Lek buffers * Waivers, exceptions, and modifications for no surface occupancy stipulations * Required design features * The mitigation strategy, including the standard for no net loss.

The Alliance supports and urges BLM to adopt the Management Alignment Alternative. Under this alternative, the proposed revisions to the operative resource management plan amendments in Idaho bring GRSG conservation measures in closer alignment with Idaho's Conservation Plan for the Greater Sage-Grouse. Coordination with the Idaho Plan is consistent with Interior Secretarial Order 3353: Greater Sage-Grouse Conservation and Cooperation with Western States, and it acknowledges the breadth of the State of Idaho and collaborative stakeholder's efforts to study and work to protect GRSG.

I.4.16 Range of Alternatives

In the Executive summary, Table 2-2 and throughout, the elimination of lek buffers and shifting required design features to best management practices in general habitat management areas (GHMA) reduces protections and threatens sage-grouse in this habitat - even though it represents a small proportion (~5%) of the total habitat for grouse. This arbitrary and unexplained decision does not comport with the best available science concerning development activities in designated habitats. The USGS 2018 Synthesis and Potential Management Implications states that "no substantial new information was identified in the review of the literature since 2015 regarding effects of discrete anthropogenic activity (energy development, power lines, roads, agricultural conversion) on sage-grouse, although some information was developed that continues to add to the understanding of these activities." BLM should restore these important requirements in the Final EIS, or risk undermining the "regulatory certainty" achieved by the 2015 plans. We would point out that range-wide greater sage-grouse populations are still occupying basically the same amount of habitat base, which continues to support approximately the same population range that was recently proposed for listing. The not-warranted decision was predicated not only on stopping habitat loss, but also improving and expanding quality habitat conditions. General habitat could offer opportunities to restore and expand habitat, and thus populations, but removing protections reduces these options. Again, we recommend retaining higher levels of protection in GHMA provided in the no action alternative.

The range of alternatives is insufficient. The Draft EISs only consider one alternative, the "Management Alignment Alternative" and refer to the 2015 Sage-grouse Plans as the "No Action Alternative." This does not meet BLM's obligations under NEPA. The range of alternatives is "the heart of the environmental impact statement." 40 C.F.R. § 1502.14. NEPA requires BLM to "rigorously explore and objectively evaluate" a range of alternatives to proposed federal actions. See 40 C.F.R. §§ 1502.14(a) and 1508.25(c). NEPA's requirement that alternatives be studied, developed, and described both guides the substance of environmental decision-making and provides evidence that the mandated decision-making

process has actually taken place. Informed and meaningful consideration of alternatives -- including the no action alternative -- is thus an integral part of the statutory scheme. *Bob Marshall Alliance v. Hodel*, 852 F.2d 1223, 1228 (9th Cir. 1988), cert. denied, 489 U.S. 1066 (1989) (citations and emphasis omitted). "An agency must look at every reasonable alternative, with the range dictated by the nature and scope of the proposed action." *Northwest Envtl Defense Center v. Bonneville Power Admin.*, 117 F.3d 1520, 1538 (9th Cir. 1997). An agency violates NEPA by failing to "rigorously explore and objectively evaluate all reasonable alternatives" to the proposed action. *City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1310 (9th Cir. 1990) (quoting 40 C.F.R. § 1502.14). This evaluation extends to considering more environmentally protective alternatives and mitigation measures. See, e.g., *Kootenai Tribe of Idaho v. Veneman*, 313 F.3d 1094, 1122-1123 (9th Cir. 2002) (and cases cited therein). By only meaningfully considering one alternative and not considering alternatives that would be more environmentally protective, BLM has failed to consider a reasonable range of alternatives. 6 Available at <https://www.blm.gov/press-release/blm-listens-idaho-state-partners> 6 I. Alternatives are measured against purpose and need; BLM has not considered a reasonable range of alternatives in the Draft EIS based on the restated purpose and need. When developing an EIS, the "range of reasonable alternatives is measured against the 'Purpose and Need' section...." *Cal. ex rel. Lockyer v. U.S. Dep't. of Agriculture*, 459 F. Supp. 2d 874, 905 (N.D. Calif., 2006), aff'd, 2009 U.S. App. LEXIS 19219 (9th Cir. 2009). The statement of "purpose and need" is the basis upon "which the agency is responding in proposing the alternatives including the proposed action." 40 C.F.R. § 1502.13 and *City of Carmel-by-the-Sea v. U.S. Dep't. of Transportation*, 123 F.3d 1142, 1155 (9th Cir. 1997). Therefore, if the purpose and need of the 2018 Draft EIS for the Greater Sage-Grouse changes from the purpose and need for the 2015 EIS, then the range of alternatives must necessarily change as well. Even the 2018 Draft EIS recognizes that "[t]he BLM's purpose and need for this planning action helps define the scope of proposed alternative actions . . ." Idaho DEIS at ES-2. In *Lockyer*, the Forest Service argued that it could base its EIS for the new 2005 version of the "Roadless Rule" upon the EIS (and its alternatives) for the 2001 Roadless Rule that it replaced. The court found: This argument fundamentally misconstrues the role of the consideration of reasonable alternatives, which lies at the heart of any NEPA analysis. Failure to consider reasonable alternatives thwarts the goals of informed decision-making and meaningful public comment before the environmental die is cast.

BLM must evaluate additional management alternatives. BLM must consider additional alternatives, including alternatives that are more environmentally protective than the Management Alignment Alternative. The purpose and need of the 2015 Sage-grouse Plans is to "conserve, enhance, and restore Greater Sage-Grouse habitat by eliminating or minimizing threats to their habitat" (Rocky Mountain Record of Decision, p. 1-21), while the 2018 amendments are based on a purpose to "enhance cooperation with the states." BLM should consider an alternative that is explicitly focused on enhancing cooperation with the states while conserving, enhancing and restoring sage-grouse habitat. For instance, the projection of on-the-ground activities set out in Table ES-1 of the 2018 EISs shows a reduction in restoration efforts, but a more conservation-oriented alternative would consider increasing these projects. Similarly, this alternative would evaluate how to enhance cooperation with the states while retaining more of the core protections and management approaches that made the previous plans the basis for the FWS determination that listing was no longer warranted under the ESA. This alternative would be more environmentally protective and provide more certainty. We have developed a proposed alternative that would accomplish these goals which is included here as Attachment I. We ask that the BLM fully consider this alternative and that it be included as an alternative in either the final EIS for this project or in a supplemental EIS. 8 BLM should also have considered alternatives to complete additional

analysis of key protective provisions that it is proposing to eliminate through the DEISs: net conservation gain and SFAs. The DEISs state: The public did not have the opportunity to comment specifically on a net conservation gain approach to compensatory mitigation during the 2015 land use planning process. In addition, the DOI and the BLM are evaluating whether the implementation of compensatory mitigation standard on public lands is appropriate and consistent with applicable legal authorities. We request public comment about how the BLM should consider and implement mitigation with respect to the Greater Sage-Grouse, including alternative approaches to requiring compensatory mitigation in BLM land use plans. See, e.g. Idaho DEIS at ES-6. The Management Alignment Alternative in the DEISs Idaho, as well as for Utah and Wyoming proposes to remove this standard. Idaho DEIS at ES-4 to -5; Utah DEIS at ES-8; Wyoming DEIS at ES-6. Rather than seeking comments only on eliminating this approach, BLM should evaluate an alternative that would retain the approach, while leaving the agency flexibility to determine applicable standards by working with the states. The DEISs also propose eliminating SFAs in Utah, Wyoming, Nevada and Idaho. Utah DEIS at 2-6; Wyoming DEIS at ES-6; Nevada DEIS at I-8; Idaho DEIS at 2-7. BLM's scoping notice stated that the agency "seeks comments on the SFA designation" in response to the decision in *Western Exploration, LLC v. U.S. Dep't of the Interior*, 250 F. Supp. 3d 718 (D. Nev. 2017), which found BLM must conduct supplemental NEPA analysis in order to support the designation. 82 Fed. Reg. 47248, 47249 (Oct. 11, 2017). BLM should evaluate the impacts of the SFAs without the previously-proposed mineral withdrawal, which has now been withdrawn, in light of how those designations and the important protective measures they provide (in addition to the withdrawal protections) benefit sage-grouse habitat and how application can be better coordinated with the states.⁷

The No-Action Alternative in the Draft EIS is the baseline, not a real alternative. The 2018 Draft EISs for the Greater Sage-Grouse purport to compare two alternatives - the "No Action Alternative" versus the "Management Alignment Alternative." See, e.g. Utah DEIS at ES-6 to -7 and 2-5. But the "no action alternative generally does not satisfy the proposed action's purpose and need; its inclusion in the EIS is required by NEPA as a basis for comparison." Lockyer at 905, quoting Ronald E. Bass, Albert I. Herson & Kenneth M. Bogdan, *The NEPA Book: A Step-by-Step Guide on How to Comply with the National Environmental Policy Act*, 95 (2d. ed. 2001). Because the No Action Alternative fails to satisfy the purpose and need of the 2018 Draft EISs, the Draft EISs propose only one alternative: the Management Alignment Alternative. When there is only one alternative, it is not, by definition, an alternative at all. "[T]he agency must consider a range of alternatives that covers the full spectrum of possibilities." *Sierra Club v. Watkins*, 808 F. Supp. 852, 872 (D.D.C. 1991). By proposing the "Management Alignment Alternative" as the only option to the status quo, BLM has failed to "consider a range of alternatives that covers the full spectrum of possibilities." *Id.* at 872.

This can be accomplished through incorporating the standards in the conservation checklist which has been attached for your convenience into each of the draft resource management plans. We request that the Bureau withdraw and then revise the draft RMPA/EIS for Idaho to include this conservation alternative.

From our analysis, American Bird Conservancy believes the Bureau's proposed Idaho plan would weaken existing protection and fail to address foreseeable impacts of mineral extraction. The plan leaves the Greater Sage-Grouse at greater risk of becoming endangered. The Bureau's inclusion of a conservation alternative is urgently needed if grouse are to be conserved. We urge the Bureau to

withdraw the draft RMPA/EIS to include a conservation alternative to reduce habitat loss and population declines of the Greater Sage-Grouse in Idaho.

The BLM should restore No Surface Occupancy stipulations as mandatory for sage-grouse habitat when leasing for energy development. Allowing exceptions, in light of what we know with the science, will result in poorly planned development that negatively impacts habitat and leads to fewer birds.

Restore degraded sage-grouse habitat. Sage-grouse have already lost nearly half their range to agriculture and development. The federal sage-grouse conservation strategy should be updated to support active restoration of areas that can still be used by sage-grouse and other wildlife.

Comments on Table 2-2 (Detailed Comparison of Alternatives, pages 2-7 to 2-27) regarding modifications to the Management Alignment Alternative (specific changes to the conservation commitment/measures are in bold): Page 2-13; Decision Number MD LG 15: Although livestock grazing is not as significant a threat as invasive annual plants and wildfire, it is one of the most wide-spread uses of Idaho rangelands and improper grazing is a threat that can have negative effects on sage-grouse habitats on a large scale. This measure in the Management Alignment Alternative should contain a commitment to a specific reasonable timeline when BLM will complete the review of all grazing permits/leases in PHMA and IHMA to determine if they are meeting Land Health Standards. The commitments to manage livestock grazing to meet DRMPA habitat 2 objectives are meaningless if BLM does not complete land Health Standard evaluations in a timely manner so that permits not meeting standards can be modified as necessary.

Page 2-14; Decision Number MD MT 3: This measure in the No Action and Management Alignment Alternatives should be modified to clarify that mitigation for direct and indirect impacts to PHMA, IHMA, and GHMA will not be required consistent with IM 2018-093. The final EIS should fully analyze the effects to the environment of no mitigation to both alternatives, and open another public comment period on this major change to the DRMPA and DEIS.

Page 2-16; Decision Number Appendix B: This measure in the Management Alignment Alternative should be modified to require the same lek buffer-distances in PHMA, IHMA, and GHMA as currently required under the No Action Alternative (i.e. no change to lek buffer-distances in the No Action Alternative under the Management Alignment Alternative). Maintenance of adequate lek buffers will be critical to conserving sagegrouse given no mitigation for impacts in PHMA, IHMA and GHMA due to IM 2018-093.

Page 2-16; Decision Number Appendix B: This measure in the Management Alignment Alternative should be modified to require the same lek buffer-distances in IHMA as in PHMA. Under the Management Alignment Alternative, the lek buffers in PHMA are set at "the lower end of the interpreted range of the lek buffer distances" in the referenced USGS Report. The proposed lek buffers in IHMA under the Management Alignment Alternative are substantially less than under PHMA, and could easily compromise the viability of sage-grouse leks in IHMA; this is not acceptable for conservation of sage-grouse. The general conservation strategy should be to adequately conserve sage-grouse in PHMA and IHMA, and ultimately to shift IHMA acres to PHMA and by improving habitat conditions over time for sage-grouse. The current proposed lek buffers in IHMA does just the opposite: it moves IHMA away from PHMA and degrades sage-grouse habitat conditions. This is particularly important given that sage-grouse habitat conditions will likely be on a downward trajectory for several years due to fire

impacts and the delay in restored habitat coming on-line due mostly to the years it takes for restored vegetation characteristics to develop (see general comments below).

Page 2-14; Decision Number MD MT 3: This measure in the Management Alignment Alternative should be modified to require mitigation for direct and indirect impacts to GHMA in addition to PHMA and IHMA. The Management Alignment Alternative has downgraded the overall mitigation standard from a net conservation benefit to a no net loss, and has downgraded conservation in GHMA by removing requirements for lek buffers and Required Design Features. Although GHMA habitat quality is of lower value to sage-grouse than PHMA and IHMA, it still has conservation value. Not requiring any mitigation for impacts to GHMA essentially renders GHMA equivalent to non-habitat. This is an unacceptable loss of conservation. Mitigation derived from impacts to GHMA could be used to improve habitats in PHMA and IHMA and provide conservation benefits to sage-grouse rather than allowing un-mitigated impacts to GHMA.

Page 2-13; Decision Number MD IG 15: Although livestock grazing is not as significant a threat as invasive annual plants and wildfire, it is one of the most wide-spread uses of Idaho rangelands and improper grazing is a threat that can have negative effects on sage-grouse habitats on a large scale. This measure in the Management Alignment Alternative should contain a commitment to a specific reasonable timeline when BLM will complete the review of all grazing permits/leases in PHMA and IHMA to determine if they are meeting Land Health Standards. The commitments to manage livestock grazing to meet RMPA habitat objectives are meaningless if BLM does not complete land Health Standard evaluations in a timely manner so that permits not meeting standards can be modified as necessary.

The BLM should either: 1) exempt from IM 2018-093 the alternative that BLM ends up selecting for its final decision on this proposed action, thereby requiring compensatory mitigation for impacts to sage-grouse HMAs as currently proposed in all alternatives, or 2) withdraw the DRMPA and DIES, re-analyze the environmental effects of the alternatives, as modified by the IM, and put the revised documents out again for public comment.

Table 2-2 provides a detailed comparison of alternatives of relevance to LS Power. * MD SSS 6 - LS Power supports the integration of flexibility into RMPs to be able to adjust habitat management area boundaries without the need for a plan amendment. The DRMP/DEIS should be revised to make clear that this concept of mapping flexibility will be extended to assessments of site-scale suitability of sage-grouse habitat as required by IM 2018-025 and that when a project proponent suggests a site in a habitat management area, BLM may adjust the habitat management area boundaries to match the on-the-ground suitability of the habitat for sage-grouse. This could, for example, result in amending PHMA maps to include areas of IHMA or GHMA, thus allowing application of IHMA or GHMA management directions for a project located there. This approach is also consistent with Governor Otter's plan, Appendix I at p. 11. Governor Otter's plan recognizes that broad, programmatic habitat maps must be verified on the ground to determine if a particular site is inside or outside a particular management zone and that the BLM and the State must determine actual habitat quality at a specific location where a project is proposed.

* MD RE 1 - As noted, PHMA should not be designated and managed simply as exclusionary zones for utility-scale wind testing and development. This management direction amply illustrates the disparate treatment of renewable energy (wind, solar and hydro power) and the treatment accorded to fossil

fuels. This disparate treatment should be eliminated with equal opportunity for development afforded to renewables, including wind, and fossil fuels such as fluid minerals.

* MD SSS 30 - The outright exclusion of wind energy from priority habitat seems to be contradicted by the filtering process used for anthropogenic disturbance development in PHMA as outlined in MD SSS 30. LS Power supports this filtering process since it provides a pathway for possible project approval. It is recommended this process be elevated in coordination with new Appendix K, and references to outright exclusions be eliminated from the final EIS/RMP.

* Appendix K - LS Power supports the new Appendix K as a logical process by which largescale anthropogenic projects such as wind farms and transmission lines may be reviewed by a Technical Team and Policy Team against screening and development criteria. As noted in the description of this appendix, this approach provides "the foundation for flexibility in Greater Sage-Grouse habitat management in Idaho." This appendix seems to offer a counterpart to the fluid minerals NSO exceptions policy. LS Power advocates that Appendix K be revised to make absolutely clear that large-scale anthropogenic disturbance projects in priority habitat for wind testing, development, and transmission are subject to this process and are no longer subject to outright exclusions of the type presented in MD RE I.

The Management Alignment Alternative appropriately recognizes that sage-grouse populations depend on a network of suitable habitats on private, state, and federal lands and that the sustainability of ranching operations is important to this relationship. However, I feel the plan should identify and require more research and monitoring to determine more accurately how the timing and intensity of livestock grazing affect sage-grouse habitat.

1.4.17 Alternatives - Other

To mitigate the severe threat posed by West Nile virus, the sage grouse plan amendments and revisions must include a prohibition on the construction of retention or infiltration ponds associated with coalbed methane development in Priority Habitats, and require that all coalbed methane wastewater be injected underground into aquifers of equal or lower quality (to prevent contamination of groundwater supplies by coalbed methane byproducts and salty wastewater).

In order to bring the Sage-grouse RMP amendments up to scientific standards for road location and development, BLM must apply NTT (2011) recommendations as well as road density limits in accord with the best available science. BLM should adopt the following measures into the plan amendments: New primary, secondary, or high-activity roads should be excluded within 1.9 miles of leks, and all new road construction or location should be excluded within 0.6 miles of leks (with no exceptions, waivers, or modifications); limit new road construction to realignments of existing routes where realignment has minimal impact on sage grouse, and require travel management planning to designate routes within Priority Habitat Management Areas within 5 years of plan amendment adoption.

If sage grouse are unable to survive the winter season due to impacts to their wintering habitats, there will be no sage grouse in Priority Habitats or outside them in the planning area. BLM has already conceded that this is necessary: "Doherty et al. (2008) demonstrated that Greater Sage-Grouse in the Powder River Basin avoided otherwise suitable wintering habitats once they have been developed for energy production, even after timing and lek buffer stipulations had been applied." Buffalo RMP Revision

DEIS at 367. In addition, Carpenter et al. (2010) found that wintering sage grouse avoided otherwise suitable habitats within a 1.2-mile radius of wellsites; Smith et al. (2014) also found winter avoidance of energy infrastructure. Dzialek et al. (2012: 12) confirmed these relationships for wintering sage grouse in Wyoming, and concluded: First, we can say with increasing confidence that the winter pattern of occurrence among sage-grouse shows consistency throughout disparate portions of its distribution. Second, avoidance of human activity appears to be a general feature of winter occurrence among sage-grouse. This indicates a broad consistency in sage grouse sensitivity to human development in wintering habitats throughout the species' range. The Nevada Final EIS provided a literature review of scientific studies on sage grouse winter habitat use, and concludes that distance from development and density of development are key factors. Holloran et al. (2015) determined that increasing wellpad density had a negative impact on sage grouse winter habitat use regardless of whether liquid gathering systems were used to reduce human activity levels or not, and also found a negative impact of distance to wellsites (within 2.8 km or 1.75 miles for wintering grouse) and distance to roads. Smith et al. (2016) found that density of major roads, lower slope, surface disturbance, and proportion of big sagebrush were key predictors for sage-grouse winter habitat selection. In Colorado, Walker et al. (2016) found that low slope and sagebrush abundance were key factors. In accordance with this review of the best available science, BLM should apply the following restrictions on development in designated winter habitats: (1) close all lands within 1.75 miles of winter habitats to future oil and gas leasing, coal location, non-energy minerals leasing, mineral materials sales, and seek withdrawal of these lands from locatable mineral entry; (2) for valid existing lease rights, apply a limit of 3% surface disturbance and one energy or mining site per square-mile section.

In Idaho, only 62% of PACs designated by the Service were given the status of PHMAs under the Idaho - Southwest Montana ARMPA, omitting 3.8 million acres of prime sage-grouse habitats from the level of protection they deserved (Molvar 2015). Some of these excluded lands were designed as Important Habitat Management Areas and granted a weaker level of protection that is inadequate based on the best available science. All PACs in Idaho must be designated as PHMAs and given a level of protection equal to the NTT (2011) recommendations.

Instead, the Final EIS and ROD should consider an alternative (relative to livestock grazing) that amends the existing 2015 ARMPA to remove all direction therein, and simply defer to the continued implementation of the rangeland health standards as the "adequate regulatory mechanism" as related to livestock grazing upon the public lands.

1.4.18 Assumptions and Methodology

Improve plan monitoring and oversight, including providing training to field staff and the necessary incentives to ensure proper implementation. The plans should contain metrics by which conservation success can be measured. Conservation metrics will help in effective management of the habitat and reduce wasting personnel time and limited funds.

Issue 6: Recommendation 22: Monitoring schedules should be set and prioritized by the local office level on an annual or periodic bases based upon staff-levels and budgets. Local offices should not over-obligate their staff with monitoring requirements, but instead provide a framework to ensure all areas are receiving adequate staff time to manage the resource. Issue 6: DEIS Comment 23: The proposed alternative attempts to address this by removing reference to any SFAs. Prioritizing field checks is not covered by the Governor's Plan, and this item should be removed prior to any Final EIS or ROD. If BLM

refuses this recommendation, the following, which includes edits (shown in track changes) to the language in the proposed alternative, would be more adequate: MD LG 17: Allotments with PHMA, and focusing on those with declining sage grouse populations, defined by a soft or hard adaptive management trigger being engaged and/or with land health concerns, especially those containing riparian areas, including wet meadows, will be prioritized for field checks to help ensure compliance with the terms and conditions of the grazing permits. Field checks can include monitoring for actual use, utilization and use supervision.

Any language relating to a reduction in grazing use due to allowable use level must be removed. Allowable use levels are not hard-and-fast, particularly as to the methods to monitor such levels, and as to the reason(s) for any failures (which can be inclusive of factors unrelated to livestock grazing, like insects, wild horses, wild burros, and wildlife).

When using the indicators to guide management actions or during land health assessments, consider that the indicators are sensitive to the ecological processes operating at the scale of interest and that a single habitat indicator does not necessarily define habitat suitability for an area or particular scale.

However, the basic premise that management changes were needed to avoid a potential listing of greater sage-grouse as either endangered or threatened under the ESA is demonstrably false, rendering the 2010 FWS Findings determination that a listing for the species was "warranted, but precluded" erroneous. A careful and considered analysis of the information presented within the 2010 FWS Findings document demonstrates that the greater sage-grouse does not qualify to be categorized as either endangered or threatened as defined by the ESA, so there was no need to change existing management direction anywhere within the species range to avoid a potential listing under the ESA when the 2015 IUPAs were approved. Thus, the only alternative that is reasonable and rational as a final decision in this case is to vacate the 2015 IUPAs entirely and return to the management that was in place before the 2015 amendments were implemented (and before BLM implemented interim sage-grouse conservation measures through their December 27, 2011 Instruction Memorandums).

The Premise that Changes to Prior Management Practices were Needed to Avoid Listing under the ESA is Demonstrably False The entire premise that started efforts to alter greater sage-grouse management at both the state and federal level has been the presumption that changes to existing management practices were needed to avoid a potential listing of the species (as either endangered or threatened) under the Endangered Species Act (ESA) which resulted from the U.S. Fish and Wildlife Service's 2010 Findings for Petitions to List the Greater Sage-Grouse (2010 FWS Findings²). The 2010 FWS Findings determined that listing greater sage-grouse under the ESA was "warranted, but precluded" by other priorities. In response, the BLM adopted land use plan amendments in 2015 that implemented new greater sage-grouse management actions (2015 IUPAs) across ten western states. See 2018 Draft RMPA-EIS, section I.1. The 2015 IUPAs included amendments that affected BLM RMPs in Idaho, including the RMPs that direct management for Riddle's BLM grazing allotment.

Improve plan monitoring and oversight, including providing training to field staff and the necessary incentives to ensure proper implementation. The plans should contain metrics by which conservation success can be measured. Conservation metrics will help in effective management of the habitat and reduce wasting personnel time and limited funds.

I.4.19 Sage-grouse

The proposed amendment also emphasizes that the 2010 Finding determined that livestock grazing is a secondary threat to sage-grouse. Draft at I-7. But actually, the Finding states that the degree of impact of grazing "varies depending on grazing management practices and local ecological conditions." The evaluation of Factor A under the ESA listing determination 2 Hanser, S.E., Deibert, P.A., Tull, J.C., Carr, N.B., Aldridge, C.L., Bargsten, T.C., Christiansen, T.J., Coates, P.S., Crist, M.R., Doherty, K.E., Ellsworth, E.A., Foster, L.J., Herren, V.A., Miller, K.H., Moser, Ann, Naeve, R.M., Prentice, K.L., Remington, T.E., Ricca, M.A., Shinneman, D.J., Truex, R.L., Wiechman, L.A., Wilson, D.C., and Bowen, Z.H., 2018, Greater sage-grouse science (2015-17)-Synthesis and potential management implications: U.S. Geological Survey Open-File Report 2018-1017, 46 p., <https://doi.org/10.3133/ofr20181017>. 43 recognized variability across the range and that "some threats are of high intensity in some areas but are low or non-existent in other areas." At 52. Certainly, livestock grazing is not an insignificant threat in Idaho, where grazing the predominant use of sage-grouse habitat on BLM lands.

Wastewater ponds associated with coalbed methane development form breeding habitat for the *Culex tarsalis* mosquitoes that transmit West Nile virus, and have been directly linked to increases in these mosquito populations (Zou et al. 2006, Doherty 2007). The National Technical Team (2011: 19) observed "ponds created by coal bed natural gas development may increase the risk of West Nile virus mortality in late summer (Walker et al. 2004, Zou et al. 2006, Walker et al. 2007b)." In addition, Kirol et al. (2015b) found that coalbed methane wastewater ponds subsidize sage-grouse nest predators, and that pond shoreline length was the single greatest correlate with sage-grouse nest failure. Greater sage grouse have essentially no ability to develop immunity to West Nile virus (Naugle et al. 2004), and outbreaks of West Nile have led to catastrophic population losses of sage grouse in habitats developed for coalbed methane in the past (Walker et al. 2004). Sinai et al. (2017) found that sage-grouse did not produce antibodies against West Nile, and in addition were susceptible to avian leukosis virus. Taylor et al. (2012) found that the synergy of oil, gas and coalbed methane impacts and West Nile would result in the functional extinction of the Powder River Basin sage grouse population in Wyoming as a result of the next major West Nile virus outbreak.

Geophysical exploration can result in numerous impacts to sage grouse, including crushing sagebrush, creating linear disturbances through sagebrush habitat that facilitate the movements of sage grouse predators, causing direct disturbance to birds, leading to stress and/or displacement from important habitats, and direct collision mortality. For these reasons, the National Technical Team (2011) recommended, "Allow geophysical operations only by helicopter-portable drilling methods and in accordance with seasonal timing restrictions and/or other restrictions that may apply." The existing RMPAs neglect to provide definable seasonal restrictions on geophysical exploration in important sage grouse habitats, and also does not prescribe that low-impact techniques (i.e., heliportable methods) be applied, and the amendments to the RMPAs need to redress this deficiency.

Sage grouse avoid habitats surrounding roads (Braun 1986, Holloran 2005, Wisdom et al. 2011). According to BLM's own NEPA analysis: Impacts on Greater Sage-Grouse accrue over varying distances from origin depending on the type of development: ... ? Interstate highways at 4.7 miles (7.5 kilometers) and paved roads and primary and secondary routes at 1.9 miles (3 kilometers) based on indirect effects measured through road density studies (Connelly et al. 2004; Holloran 2005; Lyon 2000) Nevada - Northeastern California Greater Sage-grouse RMP Amendment DEIS at 605. BLM has admitted that roads fragment habitats and interfere with natural movements of sensitive species, and with regard to

road upgrades, "Any exceptions resulting in road upgrades could further fragment habitat, cause vegetation loss, erosion, and the spread of invasive, nonnative plant species." Wyoming Greater Sage-grouse RMP Amendment DEIS at 4-313 and 4-294, respectively. 57 BLM's own National Technical Team (2011: 11) recommended that at minimum, vehicle traffic in Priority Habitats be limited to designated roads and trails, use existing roads for access, limit construction to realignments of existing routes that minimize impacts to sage grouse, prohibit road upgrades that change route category, consider seasonal road closures, and conduct travel planning within 5 years, reclaiming roads and trails not designated for vehicular use. Road densities are also an issue, because sage grouse avoid habitats adjacent to roads. Holloran (2005) found that road densities greater than 0.7 linear miles per square mile within 2 miles of leks resulted in significant negative impacts to sage grouse populations. This road density should be applied as a maximum density in Priority and General Habitats, and in areas that already exceed this threshold; existing roads should be decommissioned and revegetated to meet this standard on a per-square-mile-section basis. BLM's proposed plan amendment fails to provide adequate limits on road density. Limiting road and trail networks and off-road vehicle travel also is critical in limiting the spread of invasive weeds. According to BLM's own NEPA analysis, "Roads and trails are one of the main vectors of invasive weed spread, which leads to increase in FRCC and ecosystems moving away from natural fire regimes (CEC 2012)." Nevada - Northeastern California Greater Sage-grouse RMP Amendment DEIS at 701. Off-road vehicle travel must be adequately regulated to protect sage grouse under new plans. According to BLM's own analysis, off-road vehicles are noisy, and typically exceed the background noise levels by more than 10 dBA. Northwest Colorado Greater Sage-grouse RMP Amendment DEIS at 399. This level of noise exceedance has significant negative consequences for sage grouse, as outlined in the section of this protest addressing noise. Off-road vehicle use also results in habitat degradation and destruction, disturbance of sage grouse, and proliferation of invasive weeds (NTT 2011; see also Manier et al. 2011).

BLM cannot rely on perch inhibitors to reduce impacts to sage grouse, as these do not address the behavioral avoidance of sage grouse of tall structures, and don't even completely prevent raptor perching. Prather (2010) provided an empirical test of the effectiveness of perch inhibitors on smaller distribution lines in Utah, and found that they had no significant effect in terms of reducing raptor perching activity. Lammers and Collopy (2007) found similar results for larger transmission lines in Nevada.

winter concentration areas should receive at least the level of protection from permitted industrial activities as recommended by NTT (2011) for priority habitats. As it stands now, unlimited surface disturbance is allowed in all winter concentration areas and winter habitat outside of priority habitats, risking significant winter habitat loss. This EIS must discuss these impacts resulting from development and sagebrush removal in winter habitat or respond to comments noting these impacts. Nor does it provide any sense of the long-term impact of winter habitat loss on the persistence of local sage grouse in the planning area. Moreover, BLM must identify baseline winter habitat and winter concentration areas to create a science-based understanding of any plan amendment's impacts on wintering sage grouse. Even if it were proper for BLM to postpone the identification of winter habitat, the EIS must analyze any specific plans as to how and when this will occur or the criteria these areas must meet for winter habitat protections to apply. And the planning amendment must provide for interim protections for these areas until mapping is complete. In the absence of interim protections, it is thus entirely possible that sage-grouse wintering areas will be irreparably damaged and sage-grouse populations lost before they can receive minimal protections that apply today under the ARMPAs, let alone the full set of

protections needed for winter habitat based on the science. At minimum, any leasing or development of parcels that potentially contain winter habitat should be suspended until winter habitat and winter concentration areas are fully mapped and designated appropriate protections. This is extremely critical: Without any restrictions on sagebrush removal in wintering habitats, the habitat loss will be permanent. See Minnick 2015 (well sites lacked favorable soil conditions decades after reclamation, preventing sagebrush regrowth); cf. Final EIS 4-315 (winter concentration areas "could be difficult to restore to original conditions...due to the composition and size of sagebrush in these areas"). Indeed, to the extent the EIS relies on winter habitat restoration as "mitigation" for any habitat loss, this is wishful thinking. Even a short-term loss of winter habitat would likely be detrimental to sage grouse dependent on these areas.

The NSO buffers in the plan are likely insufficient to protect wintering sage grouse. While surface disturbance could be prohibited up to 3.1 miles around leks, sage-grouse will still avoid development within 1.75 miles of wellpads and other development during winter (Holloran et al. 2015), or within 1.9 miles of wellpads during the breeding season (Holloran 2005), as discussed above. Thus, development near these buffer zones could still cause sage grouse to avoid otherwise suitable winter areas falling within lek buffer zones. No analysis shows that enough winter habitat will be left undisturbed under existing ARMPAs to support local populations. Absent a clear definition of "winter habitat" and "winter concentration area" and the distinction between the two, BLM should adopt a plan that provides adequate disturbance and vegetation protection for all identified winter habitats. In the current Plans, it is unclear whether these terms are interchangeable or distinct concepts. The NTT defines "winter concentration areas" as: Sage-grouse winter habitats which are occupied annually by sage-grouse and provide sufficient sagebrush cover and food to support birds throughout the winter (especially periods with above average snow cover). Many of these areas support several different breeding populations of sage-grouse. Sage-grouse typically show high fidelity for these areas, and loss or fragmentation can result in significant population impacts. NTT 2011, p. 37. Winter habitat, on the other hand, may be areas that have favorable sagebrush conditions for sage grouse throughout the winter, regardless of whether sage grouse annually occupy these areas. Wintering areas not utilized in typical years may become critical in severe winters. Caudill 2013. Thus, all winter habitat should be protected. Finally, as detailed in previous comments, BLM's winter habitat health objectives must have scientific support. These objectives should require 20-30% crown cover with shrub heights 25-35 cm above the median snow level, or greater than 40 cm in height, whichever is taller. See Center for Biological Diversity Nevada RMPA DEIS Comment, p. 22. PHMA designations may not be adequate to protect sage-grouse wintering habitats. For example, in Wyoming, Dinkins et al. (2016) found that PHMAs protected 62.5% of breeding locations in Wyoming, but only 50% of wintering habitats. These researchers recommended designating winter concentration areas outside PHMAs for elevated habitat protections. BLM should suspend mineral leasing and all other development activities until all winter habitat is identified. Identified winter habitats, whether inside or outside of Priority Habitats, should be closed to future mineral leasing and materials sales and withdrawn from locatable minerals entry. For valid existing rights both agencies should impose a 3% surface disturbance limit and one pad limit, both calculated per square mile section of winter habitat; No Surface Occupancy within 1.75 miles of the edge of wintering habitats; and no high-volume roads within 1.9 miles of wintering habitats. Wintering habitats should be seasonally closed to all vehicular access between November 30 and March 15. If BLM will not protect all winter habitat as 66 requested, BLM should suspend mineral leasing and all other development activities in winter habitat until winter concentration areas are identified. These winter concentration areas should receive the same protections as the NTT recommends for priority habitats. BLM should also tailor winter habitat

objectives to 20-30% crown cover with shrub heights 25-35 cm above the median snow level, or greater than 40 cm in height, whichever is taller.

Multiple scientific studies document that livestock grazing and sage-grouse conservation can beneficially co-exist. Top threats to Greater Sage-Grouse include rangeland wildfire, invasive weeds, and development pressure, not livestock grazing. Livestock grazing is not even in the top-ten list of threats. Yet, despite this, BLM has erroneously imposed landscape-wide regulatory changes on the grazing livestock industry for purposes of conserving habitat for a single species through an inflexible framework that is overly restrictive and fails to account for the site-specific conditions necessary to make informed decisions. The LUPA elevates livestock grazing as a priority threat, even though improper livestock grazing is listed only as a secondary threat. Being only a secondary threat, any decision from this process should amend all Plans to remove any elements as related to permitted livestock grazing, and to defer Greater Sage-Grouse management to the BLM via continued implementation of 43 C.F.R. Part 4100, subpart 4180 (see Issue #2) so as to provide focus on "improper grazing" where it may or may not exist, as opposed to "proper grazing". If BLM erroneously decides against this recommendation, it is critical that BLM work closely with key stakeholders to develop grazing strategies that can be applied to LUPAs across the West for consistency (see Issue #3).

After Washington DC bureaucratic administrators altered the State Plan in 2015, grazing was raised to a high threat showing the lack of understanding by those bureaucratic administrators of the importance of grazing and the protection of habitat. Grazing is only considered a secondary threat to sage grouse if done so improperly. The State Task Force worked to give permittees incentive to maintain good habitat and/or improve where possible. Rather than punish, use grazing as a tool for protection and restoration.

The Federal and State plans place excessive emphasis on increasing vegetative hiding cover for the birds, thereby increasing the long-term risk for catastrophic wildfire which is a primary threat to greater sage-grouse and their habitat throughout the Great Basin.

Conservation measures that intend to benefit greater sage-grouse by providing them with more hiding cover ultimately harm the species by increasing fuel levels which increase the long-term risk of catastrophic wildfires and convert significant swaths of existing habitat to annual grasslands that provide no habitat value for sage-grouse whatsoever. This concentrates the remaining birds in an ever shrinking area, making them more vulnerable to uncontrolled predator populations.

Grazing is a secondary threat to sage grouse with excess grasses and fire primary. Grazing should be considered a tool to manage excess buildup of grasses and control fire hazards through good cooperative management. Permittee's good grazing practices should be rewarded not restricted.

Grazing is considered a secondary threat to sage grouse. It is important to incentivize good grazing practices rather than punish or limit all grazing.

MD MR 8 : Delete: MD MR 8 Add: *Issue Written Orders of the Authorized Officer (43 CFR 3161.2) requiring reasonable protective measures consistent with the lease terms where necessary to avoid or minimize impacts on Greater Sage-Grouse populations or habitat.*

In its 2010 finding, the FWS identified a number of specific threats to Greater Sage-Grouse in the Great Basin Region; including the widespread present and potential impacts of wildfire, the loss of native

habitat to invasive species, and conifer encroachment. Mining was not identified as a primary threat. For that reason, measures that do not have a discernable positive affect on the species or activities that already have adequate regulatory mechanisms in place (e.g., rangeland health standards or section 3809 plans for mining) need to be reevaluated and removed from consideration. Diverting those precious resources from the primary threats of wildfire and invasive species has no rational basis.

The Federal and State plans place excessive emphasis on increasing vegetative hiding cover for the birds, thereby increasing the long-term risk for catastrophic wildfire which is a primary threat to greater sage-grouse and their habitat throughout the Great Basin.

Conservation measures that intend to benefit greater sage-grouse by providing them with more hiding cover ultimately harm the species by increasing fuel levels which increase the long-term risk of catastrophic wildfires and convert significant swaths of existing habitat to annual grasslands that provide no habitat value for sage-grouse whatsoever. This concentrates the remaining birds in an ever shrinking area, making them more vulnerable to uncontrolled predator populations.

I.4.20 Livestock Grazing

In regard to identified threats to the conservation of sage grouse, we have for decades argued that properly managed livestock grazing is not a threat-in fact it is a benefit to the species. Properly managed livestock grazing, which reduces fuel loading across the landscape in which the species lives, benefits conservation by reducing a primary threat of wildfire. As we have seen in the Soda Fire in our County and the Murphy Complex fire before that, reducing grazing leaves fine fuels which result in significantly larger, hotter, and, thus, more destructive fires. We have noted in many previous comments that reduction of grazing activity, such as that recently done on the "Owyhee 68" Permit Renewals cannot be beneficial as it leads to catastrophic fire activity. We hope that in implementing this plan, BLM will take note of the above and manage more effectively for fuel reduction across the landscape.

II. Secretarial and Agency Policy Actions Supporting Livestock Production in Sage-Grouse Habitat Secretary Zinke and the current BLM leadership have taken numerous, significant actions to reorient the direction of the Department's analysis and management of sagegrouse habitat. Any final EIS and Record of Decision ("ROD") should be consistent with this new orientation. As will be explained in detail below, there are instances within the DRMP /DEIS where BLM has failed to sufficiently modify the 2015 Approved Resource Management Plan Amendments ("ARMPA") to meet the direction set by the President, the Secretary, and current BLM leadership. Secretary's Order No. 3353, Greater Sage-Grouse Conservation and Cooperation with Western States, issued June 7, 2017, established the Sage-Grouse Review Team to, in part, review the 2015 sage-grouse plans and enhance cooperation with Idaho and other western states. Deputy Secretary Bernhardt issued Order No. 3360, "Rescinding Authorities Inconsistent with Secretary's Order No. 3349." The Deputy Secretary rescinded the Departmental Manual Part 600 addressing landscape-scale mitigation policy, BLM's Manual 1794 on mitigation, and BLM's Mitigation Handbook H-1794-1. He further called for revision of BLM Instruction Memoranda on off-site mitigation. The Deputy Secretary also issued a memorandum dated August 4, 2017, entitled "Improving the BLM's 2015 Sage-Grouse Plans." Among elements of the memorandum adopting recommendations of the Review Team are a call for changes in assessment tools and the infamous Table 2-2 from the 2015 ARMPA setting habitat objectives on rangelands. Importantly, the Deputy Secretary also directed BLM to increase flexibility in grazing management. The Review Team's memorandum to the Secretary, attached to the Deputy Secretary's memorandum, recognizes that

"proper grazing management is compatible with conserving Greater Sage-Grouse habitat and, in some situations, may support or benefit habitat management." For its part, BLM has issued several instruction memoranda addressing adaptive management, soft and hard triggers, and proper use of the habitat objective table from the 2015 ARMPA. BLM also recently issued IM 2018-093 eliminating mandatory compensatory mitigation. Clearly, from the Secretary to the Deputy Secretary to the Review Team, down to the BLM, this Administration recognizes livestock grazing as a proper element of multiple use management and compatible with sage-grouse conservation. In contradiction to this, BLM's proposed amendments to the 2015 Idaho plans fail to fully address the numerous constraints imposed on livestock grazing on BLM lands or the rationale behind them. Next, I will describe the more significant problems with the 2015 ARMPA that need to be addressed in the current planning process.

The DRMP /DEIS does not address MD Veg 7 regarding the value of existing, non-native seedlings in sage-grouse habitat, nor does it address MD FIRE 34 or MD FIRE 35. Failure to address these issues raises concerns that these management directives will negatively impact both grazing interests and sage-grouse. Often, post-fire grazing restrictions only serve to exacerbate non-native grass infestations that create a negative cycle on both sage-grouse and livestock grazing. Nor is there a need to reduce grazing adjacent to burned areas, which only serves to further harm ranches that have already been negatively affected by fire restoration activities.

The DEIS considers the Issue at pages ES-4 and I-7 as "Issue Number" 8, stating: Modifying Decisions for Livestock Grazing Commensurate with the Threat Posed * Improper livestock grazing is a secondary threat in Idaho that should be managed using existing regulations. The USFWS's 2010 Warranted but Precluded determination recognized rangeland health standards as an adequate regulatory mechanism. The 2015 ROD/ARMPA imposes uniform and unnecessary grazing standards and does not incentivize proper livestock grazing (e.g., the grazing permit renewal thresholds requirement for allotments in SFAs is unnecessary). In addition, BLM made significant changes to livestock grazing post-DEIS, including inclusion of grazing in the SFA scheme, changing objectives to standards in Table 2.2, requiring a "defined response", and imposing a new monitoring system HAF. Emphasis supplied. However, in considering the Issue, BLM spins away from the Issue by deferring to the Governor's Plan as likely being the necessary "regulatory mechanism". This is revealed in two (2) part of the DEIS. The first part is revealed in the "Purpose" of the DEIS, stating: 7 The purpose of this resource management plan amendment/environmental impact statement (RMPA/EIS) is to enhance cooperation with the states by modifying the approach to Greater Sage-Grouse management in existing RMPs to better align with individual state plans and/or conservation measures and DOI and BLM policy. The second part is revealed in the Appendix I of the DEIS, wherein the DEIS appends a copy of the Federal Alternative of Governor Otter ("Governor's Plan" or "Idaho's Plan"). Such Alternative speaks: (a) at PDF pages 121, 123, 127 of 172 of the Governor's Plan providing a sufficient "regulatory mechanism"; (b) at PDF page 121 that the Governor's "Task Force was charged with providing recommendations on actions for developing a state-wide regulatory mechanism to preclude the need to list the species under the ESA" (emphasis supplied); and (c) at PDF page 124 that the "Idaho Sage Grouse Management Approach includes ... implementation of regulatory mechanisms to support the overall management and conservation of the species." Based thereon, without explicitly saying so, the apparent preferred alternative / proposed action is to adopt and implement the Federal Alternative of Governor Otter as being itself an "adequate regulatory mechanism", as opposed to taking the Recommended approach stated in our scoping comments and stated in "Issue Number" 8. However, with due respect, any Final EIS and ROD should not adopt such approach. Instead, the Final EIS and ROD should consider an

alternative (relative to livestock grazing) that amends the existing 2015 ARMPA to remove all direction therein, and simply defer to the continued implementation of the rangeland health standards as the "adequate regulatory mechanism" as related to livestock grazing upon the public lands. See DEIS at page 2-31 (wherein DOI "request public comment about how the BLM should consider and implement mitigation with respect to the Greater Sage-Grouse, including alternative approaches to requiring compensatory mitigation in BLM land use plans").

Issue #5: Post Fire Restoration and Rehabilitation Requirements May not Reflect Achievable Conditions and are not based on Best Available Science - not covered in DEIS. The LUPA has significant flaws in assessing restoration and rehabilitation potential and impacts for post fire rehabilitation and continually and irrationally raises livestock grazing to a primary threat. Any Final EIS needs to provide opportunity for land managers and permittees flexibility to work together to sustain livestock operations during times of restoration projects. This can be done by utilizing year around grazing permits, with annual grazing plans to adjust for natural impacts or needs to focus grazing in other areas to allow adequate use. In addition, there is no scientific need to reduce or change grazing activities adjacent to a burned area. This would only provide irrational impacts to grazing operations which have already been impacted by fire restoration activities. Specifically, the Greater Sage-Grouse LUPA in (at least) Idaho includes the following Management Directions which demonstrate these flaws / consequences: MD FIRE 34: Provide adequate rest from livestock grazing to allow natural recovery of existing vegetation and successful establishment of seeded species within burned/ESR areas. All new seedlings of grasses and forbs should not be grazed until at least the end of the second growing season, and longer when needed to allow plants to mature and develop robust root systems which will stabilize the site, compete effectively against cheatgrass and other invasive annuals, and remain sustainable under long-term grazing management. Adjust other management activities, as appropriate, to meet ESR objectives. || MD FIRE 35: Adjust, as appropriate, livestock management on adjacent unburned areas to mitigate the effect of the burn on local Greater Sage-Grouse populations. MD FIRE 36: Following seedling establishment, modify grazing management practices as needed to achieve long-term vegetation and habitat objectives. Issue 5: Recommendation 6: Impacts from fire are already addressed by hard and soft triggers. MD FIRE 35 must be removed from the Idaho LUPA. All related MD within LUPAs must allow managers to make management decisions in a timely manner when restoration efforts fail. See <https://agresearchmag.ars.usda.gov/2017/sep/grasses/> (last checked on 12/1/2017) (wherein recent research by Lance Vermeire, USDA-Agricultural Research Service, who is an ecologist, "found grazing within a year after a wildfire doesn't harm grass and can provide just as much forage as sites that haven't burned").

Issue 6: DEIS Comment 9 - While the DEIS does correctly remove SFAs, it continues to prioritize permit renewal within Sage-grouse habitat. BLM should instead focus permit renewals based on Field Office priority. If BLM insists on keeping prioritization within habitat, the Final EIS should consider and analyze the modification of such Management Direction (as stated below with track edits) and the ROD should implement a proposed action that adopts the modified Management Direction, which more closely aligns with the Governor's Plan prioritization, as identified on page 35, item b. (DEIS at PDF page 155 of 172). The MD should be modified to state the following: MD LG 15: Generally, the BLM will prioritize (1) the review of grazing permits/leases, in particular to determine if modification is necessary prior to renewal, and (2) the processing of grazing permit/leases based on land health conditions or concerns related to rangeland health standards and applicable land use plan objectives. If similar issues are found in both PHMA and IHMA, than those in PHMA should be addressed first followed by those in

IHMA. In setting workload priorities, precedence will be given to existing permits/leases in these areas not meeting Land Health Standards and that have declining sage-grouse populations, defined by a soft or hard population adaptive management trigger being engaged. Sage-grouse populations that are stable or trending upward will be a lower priority for permit renewal and the assessment process, with focus on those containing riparian areas, including wet meadows. The BLM may use other criteria for prioritization to respond to urgent natural resource concerns (e.g., fire) and legal obligations.

Issue 6: DEIS Comment 16 - This recommendation is omitted for any discussion in the DEIS. It is critical that BLM consider and analyze this issue in the Final EIS, and implement a proposed action in the ROD that adopts the recommendation. Issue 6: Recommendation 16: As previously discussed in Issue #6, the LUPA elevates livestock grazing and related range improvements to a priority threat. Complete removal of this focus must occur, but at a minimum all of the language above can be modified with one management direction applied to all states. Any modified MD should ensure that range improvements remain within the suite of actions to be considered to achieve applicable Standards and Objective, as is already prescribed in 43 C.F.R. 4180.2(c). Issue 6: DEIS Comment 17 - This recommendation is omitted for any discussion in the DEIS. It is critical that BLM consider and analyze this issue in the Final EIS, and implement a proposed action in the ROD that adopts the recommendation. D. Trailing - Idaho and Oregon LUPAs - not covered in DEIS. BLM has elevated livestock trailing (aka crossing permits) to a primary threat by requiring RDF (aka "required design feature").

Issue 6: DEIS Comment 24: This recommendation is omitted for any discussion in the DEIS. It is critical that BLM consider and analyze this issue in the Final EIS, and implement a proposed action in the ROD that adopts the recommendation. In addition, it should be noted that Forage Reserves are covered under Governor's Plan at page 48, item 15. Stating that: "Identify and when feasible, establish strategically located forage reserves focusing on areas unsuitable for sage-grouse habitat restoration or lower 25 priority habitat restoration areas." See DEIS at PDF page 168 of 172. However, with due respect, any Final EIS and ROD should not adopt Forage Reserves but instead such forage should be allocated in accordance with preference or in accordance with the conflict in application process, i.e. 43 C.F.R. 4130.1-2. The rationale is that these forage reserves are simply a fire-waiting-to-happen and these the use of these forage reserves would likely increase conflict between permittees and between BLM and permittees. Issue 6: Recommendation 24: Any language relating to a reduction in grazing use due to allowable use level must be removed. Allowable use levels are not hard-and-fast, particularly as to the methods to monitor such levels, and as to the reason(s) for any failures (which can be inclusive of factors unrelated to livestock grazing, like insects, wild horses, wild burros, and wildlife). In addition, the imposition of allowable use levels impairs the ability for a permittee and BLM to implement adaptive management strategies. If, however, any amended Plan intends to impose allowable use levels, the implementation of such levels should be subject to a "Decision Tree" assessment process, like that prescribed in Idaho, as to the implementation of annual indicators, like allowable use levels. See USDI-BLM-Idaho Instruction Memorandum No. ID-2005-074 dated June 2, 005 (wherein Idaho BLM prescribes the applicable of a "Decision Tree" analysis in implementation of annual indicators, like allowable use levels). Issue 6: DEIS Comment 25: This recommendation is omitted for any discussion in the DEIS. It is critical that BLM consider and analyze this issue in the Final EIS, and implement a proposed action in the ROD that adopts the recommendation. The Governor's Plan provides that if livestock grazing is determined to be a factor in not meeting desired conditions (page 14), action items covered under (J - Adaptive Management for Livestock Grazing) should be followed. This is the language that should be carried forward in any Final EIS and ROD.

Issue 6: Recommendation 25: This MDs presuppose authority to relinquish or retire grazing permits within a designated Grazing District. The USDI-Solicitor Memorandum dated May 13, 2003, clarified M-37008, in relation to retiring grazing permits. See <https://www.doi.gov/sites/doi.opengov.ibmcloud.com/files/uploads/M-37008.pdf> (last checked on 12/1/2017). See also <https://www.blm.gov/policy/im-2013-184-0> (IM 2013- 184, relating to the "Relinquishment of Grazing Permitted Use on the Bureau of Land Management Administered Lands") (last checked 12/1/2017). This Memorandum speaks for itself but confirmed that: "[a]ny decision to retire livestock grazing on federal lands is not permanent, unless made permanent through congressional action. Any such decision is subject to reconsideration and reversal during subsequent land use planning." As applied here, it is our contention that this MDs is contrary to the Solicitor's Memorandum since the MD allows the BLM to consider and decide the effectiveness of any relinquishment or retirement via some non-congressional action process or some non-land use planning process. To this end, these MDs and MAs should be deleted, or in the alternative modified to conform to the Solicitor Memorandum dated May 13, 2003. Issue 6: DEIS Comment 26: This recommendation is omitted from any discussion in the DEIS. It is critical that BLM consider and analyze this issue in the Final EIS, and implement a proposed action in the ROD that adopts the recommendation. In addition, the Management Direction to consider whether relinquished permits should remain available for livestock grazing or be used for other resource management objectives is not provided for in the Governor's Plan.

Issue #9: Idaho Appendix E is unwarranted because current regulations require agency to address issues when standards are not met; language will result in litigation; and the inability of agency staff to address litigation will displace livestock unnecessarily. The LUPA in Idaho includes an Appendix E relating to "Anthropogenic Disturbance And Adaptive Management", which irrationally elevates livestock grazing to a primary threat and puts unreasonable harm on grazing permittees. Specifically, this Appendix E in the Greater Sage-Grouse LUPAs in (at least) Idaho which demonstrate these flaws / consequences: Idaho Appendix E, 4.8. Adaptive Grazing Management Response ... BLM would focus resources to accelerate land health assessments and/or assessment of specific habitat metrics in the areas where deficiencies in site-level habitat metrics are suspected to be a causal factor in tripping a soft or hard trigger. If it is identified that one or more site-level habitat objectives is not being met due to livestock, and an imminent likelihood of resource damage may occur from continued grazing, decisions could be issued in accordance with 41 I.O.3-3(b) to provide immediate protection of resource while a full review of the grazing allotments and grazing permits is conducted. BLM would then focus resources at the state level to accelerate the grazing permit renewal in the area where the trigger has been tripped in order to expedite progress towards meeting land health standards. 29 This Appendix is not required, relative to livestock grazing upon the public lands, as well as the national forest system lands. BLM and USFS have grazing regulations and administrative processes to modify permits if applicable standards/objectives, including those associated with sage grouse, are not being met. See, for example, 43 C.F.R. 4180.2(c). See Issue #2. In addition, this Appendix intends to trump the grazing rules by stating / suggesting that the claimed non-achievement of a sage grouse objective would be / could be a means for a full force and effect decision. This statement/suggestion violates the criteria for FFE decision, as prescribed by 43 C.F.R. 41 I.O.3-3(b). Issue 9, Recommendation 28: While there may be an interest to prioritize permit renewals or permit modifications within certain sage-grouse habitat areas, there is not any legal basis or rational basis to immediately implement changes therein, absent the requisite findings under 43 C.F.R. 41 I.O.3-3(b). The LUPAs are not required, relative to livestock grazing upon the public lands, as BLM has grazing regulations and administrative processes to modify permits, including as related to sage grouse.

See, for example, 43 C.F.R. 4180.2(c). At a minimum, the entire grazing portion of the Idaho LUPA needs to be replaced with Alternative E, Federal Alternative of Governor C.L. "Butch" Otter. Issue 9, DEIS Comment 29: While the proposed alternative somewhat addresses Appendix E, it does not remove the livestock grazing portion. This recommendation is omitted for any discussion in the DEIS. It is critical that BLM consider and analyze this issue in the Final EIS, and implement a proposed action in the ROD that adopts the recommendation.

Modifying Decisions for Livestock Grazing Commensurate with the Threat Posed * Improper livestock grazing is a secondary threat in Idaho that should be managed using existing regulations. The USFWS's 2010 Warranted but Precluded determination recognized rangeland health standards as an adequate regulatory mechanism. The 2015 ROD/ARMPA imposes uniform and unnecessary grazing standards and does not incentivize proper livestock grazing (e.g., the grazing permit renewal thresholds requirement for allotments in SFAs is unnecessary). In addition, BLM made significant changes to livestock grazing post-DEIS, including inclusion of grazing in the SFA scheme, changing objectives to standards in Table 2.2, requiring a "defined response", and imposing a new monitoring system HAF.

The LUPA has significant flaws in assessing restoration and rehabilitation potential and impacts for post fire rehabilitation and continually and irrationally raises livestock grazing to a primary threat. Any Final EIS needs to provide opportunity for land managers and permittees flexibility to work together to sustain livestock operations during times of restoration projects. This can be done by utilizing year around grazing permits, with annual grazing plans to adjust for natural impacts or needs to focus grazing in other areas to allow adequate use. In addition, there is no scientific need to reduce or change grazing activities adjacent to a burned area. This would only provide irrational impacts to grazing operations which have already been impacted by fire restoration activities.

The LUPAs are not required, relative to livestock grazing upon the public lands, as BLM has grazing regulations and administrative processes to modify permits, including as related to sage grouse. See, for example, 43 C.F.R. 4180.2(c). At a minimum, the entire grazing portion of the Idaho LUPA needs to be replaced with Alternative E, Federal Alternative of Governor C.L. "Butch" Otter.

Professional range managers, ranchers, the academic community involved in rangeland resource management and the Agricultural Research Service have been advising the BLM for many years of the need to reduce the presence of annual grasses and the fuel load they produce to break the fire cycle which is the primary threat to Sage grouse. The BLM in California's annual grasslands has demonstrated the ability to manage those grasslands far more effectively than the BLM has done in Idaho. The BLM's refusal in Idaho to reduce fuel loads with grazing, the only method available which is affordable and can be employed quickly has resulted in the massive loss of Sage grouse habitat to fire and annual grasses. Secretary Zinke has recently issued clear written guidance to the BLM of the need to consider fuel reduction and fire control practices in all management decisions. If the BLM will only listen to that guidance and utilize the information provided by ranchers with intimate knowledge of their allotment and the techniques developed by academia and the ARS, the poor grazing practices which can be a threat to Sage grouse habitat will cease and good grazing practices which can improve Sage grouse habitat as well as the health of the range for all resources can begin.

Reduce manageable impacts in sage-grouse habitat. Some threats to sage-grouse are difficult to manage, such as wildfire and invasive species. The federal conservation strategy should compensate for those

impacts by emphasizing management of land uses that we can control, such as livestock grazing, which contributes to unnatural fire and the spread of invasive species.

This measure in the Management Alignment Alternative should contain a commitment to a specific reasonable timeline when BLM will complete the review of all grazing permits/leases in PHMA and IHMA to determine if they are meeting Land Health Standards. The commitments to manage livestock grazing to meet RMPA habitat objectives are meaningless if BLM does not complete land Health Standard evaluations in a timely manner so that permits not meeting standards can be modified as necessary.

MD LG 15: Generally, the BLM will prioritize (1) the review of grazing permits/leases, in particular to determine if modification is necessary prior to renewal, and (2) the processing of grazing permits/leases based on land health conditions or concerns *related to rangeland health standards.* If similar issues are found in both PHMA and IHMA, *then* those in PHMA should be addressed first followed by those in IHMA. In setting workload priorities, precedence will be given to existing permits/leases in these areas not meeting Land Health Standards *and that have declining sage-grouse populations, defined by a soft or hard population adaptive management trigger being engaged. Sage-grouse populations that are stable or trending upward will be a lower priority for permit renewal and the assessment process.* DELETE: "with focus on those containing riparian areas, including wet meadows." The BLM may use other criteria for prioritization to respond to urgent natural resource concerns (e.g., fire) and legal obligations.

MD LG 16 : Grazing within the *PHMA and IHMA* will be managed according to the process outlined in the text below *and the grazing permit renewal process will be managed according to 43 CFR Part 4100, Subpart 4180 and as outlined in the process below.* a. Incorporate the Greater Sage-Grouse *desired conditions* in Table *2.2* and management considerations into relevant resource management plans as desired conditions and manage livestock grazing recognizing that these conditions may not be achievable (1) due to the existing ecological condition, ecological potential, or existing vegetation; or (2) due to casual events unrelated to existing livestock grazing; *and 3) that they are not intended to be prescriptive at the allotment level. * b. (Addressed above in MD LG 15) b. Conduct habitat assessments using *appropriate monitoring methods and* where appropriate, a *make a* determination of factors causing any failure to achieve the *desired conditions* in Tables *2.2*. The assessment(s) shall be conducted at a resolution *and scale* sufficient to document the habitat condition and will include local, spatial and inter-annual variability. Any determination relative to the habitat characteristics (Tables *2.2*) shall be based upon existing ecological condition, ecological potential, and existing vegetation information to ensure the assessment recognizes whether or not these habitat characteristics are achievable. c. The assessment will rely on published characteristics of Greater Sage-Grouse habitat and the Ecological Site Descriptions, and Tables *2.2*, and where available and applicable, rangeland health determinations made in accordance with 43 CFR 4180.2(c). d. After conducting the assessment in *(d)*, if the current grazing system achieves *Idaho rangeland health standards 2, 3 and 4,* absent substantial and compelling information no further grazing management changes are necessary to achieve desired conditions for sagegrouse habitat. e. If the process and conditions outlined in *(d)* demonstrate that livestock grazing is limiting achievement of the desired conditions (Tables 2.2), renewed permits will include measures, including but not limited to the actions outlined in Appendix C, Grazing Section of BMPs to achieve desired habitat conditions. These measures must be tailored to address the specific management issues. f. Adaptive management changes related to existing grazing permits should only be undertaken where improper grazing is determined to be the casual factor in not meeting habitat characteristics, specific to site capability, based upon monitoring over with appropriate spatial variability.

See Appendix C (Required Design Features). g. Where management changes are needed and necessary pursuant to (f), implement management actions that are narrowly tailored to address the specific habitat objective applied at the allotment and/or activity plan level, including but not limited to the actions outlined in Appendix C, Grazing Section of BMPs. (The Governor's Plan is attached as Appendix I for references to this section.)

...Grazing DELETE: "97. Avoid building new wire fences within 2 kilometers of occupied leks (Stevens 2011). If this is not feasible, ensure that high-risk segments are marked with collision diverter devices or as latest science indicates. 98. Place new, taller structures, including corrals, loading facilities, water storage tanks, and windmills, out of line of sight or at least 1 kilometer (preferably 3 kilometers) from occupied leks, where such structures would increase the risk of avian predation. 100. Fence wetlands (e.g., springs, seeps, wet meadows, and/or riparian areas) where appropriate, to maintain or foster progress toward proper functioning condition and to facilitate management of Greater Sage-Grouse habitat objectives. Where constructing fences or enclosures to improve riparian and/or upland management, incorporate fence marking or other BMPs/RDFs as appropriate. 103. Design new spring developments in Greater Sage-Grouse habitat to maintain or enhance the free flowing characteristics of springs and wet meadows. Modify developed springs, seeps, and associated pipelines to maintain the continuity of the predevelopment riparian area within priority Greater Sage Grouse habitat where practicable and appropriate. 104. Install ramps in new and existing livestock troughs and open water storage tanks to facilitate the use of and escape from troughs by Greater Sage-Grouse and other wildlife. " 97. Utilize *temporary range infrastructure (troughs, fences, supplements)* where feasible and appropriate to meet management objectives. 98. During lekking periods, as determined locally (approximately March 15-May 1 in lower elevations and March 25-May 15 in higher elevations), livestock trailing will be avoided to the extent possible within 1 kilometer (0.62 miles) of occupied leks between 6:00 p.m. and 9:00 a.m. to avoid disturbance to lekking and roosting Greater Sage-Grouse. Over-nighting, watering, and sheep bedding locations on public lands *will be avoided to the extent possible* by at least 1 kilometer from occupied leks during the lekking season to reduce disturbance from sheep, human activity, and guard animals. When trailing livestock during the lekking or nesting season, use roads or existing trails to the extent possible. 99. Work with permittees in locating sheep over-nighting, watering, and sheep bedding locations to minimize impacts on Greater Sage-Grouse seasonal habitats. *Adaptive Management Measures for Livestock Grazing (Appendix J from Idaho Executive Order 2015-04): In the development, administration, and implementation of grazing management programs, flexible grazing management practices over relatively large landscapes can be utilized, singly or in combination, to help successfully achieve desired conditions through BMPs such as, but not limited to: *

*100. Employ grazing management systems that ensure adequate nesting and early brood rearing habitat within the breeding landscape. 101. When use-pattern mapping or monitoring demonstrates an opportunity to adjust livestock distribution to benefit occupied sage-grouse breeding habitat, include as appropriate herding, salting, and water-source management (e.g., turning troughs/pipelines on/off, extending pipelines/moving troughs) in grazing programs. 102. If available and feasible, utilize exotic perennial grass seedings and/or annual grasslands to meet desired conditions or outcomes across the landscape of use of occupied sage-grouse habitat. 103. Modify authorized seasons of use within grazing permits to provide greater flexibility in managing livestock for the benefit of sage-grouse. 104. Where appropriate, maintain herbaceous vegetation at the end of the growing/grazing season to contribute to nesting and brood-rearing habitat quality during the coming nesting season. Table 2.2. 105. Ensure that permittees are informed of management and movement requirements related to avoidance of recent burns, habitat rehabilitation, or other restoration sites. 106. Manage livestock grazing of riparian areas, meadows,

springs, and seeps in a manner that promotes vegetative structure and composition appropriate to the site. In some cases enclosure fencing may be an option. However, recognize the availability and quality of desired herbaceous species may be improved by periodic grazing use of the enclosure. 107. Implement management actions (grazing decisions, allotment management plan/conservation plan development, or other agreements) to modify grazing management to meet seasonal sage-grouse desired conditions. Employ proper grazing management by providing flexibility in scheduling the intensity, timing, duration and frequency of livestock grazing use over time that best promotes management objectives. During drought periods, prioritize evaluating effects of drought in the PHMA relative to grouse needs for food and cover. Ensure that post-drought management allows for vegetation recovery, based on ecological potential, that meets sage-grouse needs in priority sage-grouse habitat areas. During periods of higher than average precipitation, prioritize effects of the increase in available forage and fuels. 108. When using salt or mineral supplements: a) place them in existing disturbed sites, areas with reduced sagebrush cover-e.g., seedings or cheatgrass sites-to reduce impacts to sage-grouse breeding habitat, b) where feasible use salts or mineral supplements to improve management of livestock for the benefit of sage-grouse habitat. 109. In general, avoid constructing new fences in high and moderate risk areas (Stevens 2013). If this is not feasible, ensure that high and moderate-risk segments are marked with collision diverter devices or as latest science indicates. Where feasible, place new, taller structures, such as corrals, loading facilities, water-storage tanks, windmills, etc., at least as far as the corresponding buffer set back from occupied leks for the corresponding HMA to reduce opportunities for avian predators. Careful consideration, based on local conditions (e.g. topography) should also be given to the placement of new fences or rangeland infrastructure near other important seasonal habitats (winter-use areas, movement corridors etc.) to reduce potential impacts. 110. New spring developments in sage-grouse habitat should be designed to maintain or enhance the free-flowing characteristics of springs and wet meadows. Analyze developed springs, seeps and associated pipelines to determine if modifications are necessary to maintain the continuity of the predevelopment riparian area within sage-grouse habitat. *

Make modifications where necessary, considering impacts to other water users when such considerations are neutral or beneficial to sage-grouse. 111. Ensure that new and existing livestock troughs and open water storage tanks are fitted with ramps to facilitate the use of and escape from troughs by sage-grouse and other wildlife. Do not use floating boards or similar objects, as these are too unstable and are ineffective. 112. Identify and when feasible, establish strategically located forage reserves focusing on areas unsuitable for sage-grouse habitat restoration or lower priority habitat restoration areas. 113. Consider initiating vegetative management projects where sagebrush canopy cover exceeds desired conditions to promote a perennial grass and forb understory. West Nile Virus 114. Minimize the construction of new ponds or reservoirs except as needed to meet important resource management and/or restoration objectives. 115. Maintenance of healthy wetlands at spring sources helps control mosquitoes and their larvae by providing habitat for natural predators such as birds, dragonflies, and amphibians. Protecting the wetland at the spring source with a fence is an option to consider. 116. For most spring developments or wells, mosquito breeding habitat usually is not an issue. Flowing cold (less than 50° Fahrenheit) water and steep sides of the stock tanks are not conducive for egg laying or larvae production. If flows are low, the water is warm, or moss production is an issue in the tank, mosquito breeding habitat could exist in the tank. Maintain stock tanks and ponds/reservoirs such that they are not conducive to mosquito reproduction (little or no silt, algae, or vegetation accumulation). Consider the following options as appropriate: a. Construct water return features and maintain functioning float valves to prohibit water from being spilled on the ground surrounding the trough and/or tank and return water to the original water source, to the extent practicable. b. Drain and clean tanks at the end of the season to prevent them from filling with fill with silt or debris, causing

warmer water and heavy vegetation growth conducive to mosquito reproduction. c. Draining tanks after the period of use is completed, particularly in warmer weather, also reduces potential habitat by eliminating stagnant standing water. d. Maintain a properly functioning overflow to prevent water from flowing onto the pad and surrounding area, to eliminate or minimize pooling of water that is attractive to breeding mosquitoes. e. Clean or deepen overflow ponds to maintain colder temperatures to reduce mosquito habitat. f. Install and maintain float valves on stock tank fill pipes to minimize overflow. g. Harden stock tank pads to reduce tracks that can potentially hold water where mosquitoes may breed. h. Build ponds with steep shorelines to reduce shallow water (>60 centimeters) and aquatic vegetation around the perimeter of impoundments to deter colonizing by mosquitos (Knight et al. 2003, cited in NTT report page 61). i. Consider removing and controlling trees and shrubs to reduce shade and wind barriers on pit and reservoir shorelines if not needed for wildlife, fish, or recreational values. j. Impoundments that remain accessible to livestock and wildlife can cause tracking and nutrient enrichment from manure that can create favorable mosquito breeding habitat. Where this is a concern, it may be desirable to fence the reservoir and pipe the water to a tank.

As a sheep producer and permittee, I am concerned with the Grazing section on page 2-24. Bullet point 101 does not work in reality. 1. The dates seem off, even though we are the last part of the state to warm up. Lekking is over in the lower country by the end of March and done in the upper country by the middle of April - May 1st. 2. My operations bedding grounds are about every 1 to 1.5 miles. The Sage Grouse like to lek on the established sheep bed grounds. These often become their favorite leks because it is clear and not overgrown with sage brush and other shrubs. The land around us has heavy brush cover. a. Since they use our established bedding grounds it is not feasible to be 1 kilometer (0.62 miles) away from a lek. When possible, we do try to avoid the leks that seem to be very active (it changes every year) however we have also had them move in on us even though the sheep are present. b. Our trails and bed grounds are near established road systems, so that there are no new disturbances. Having us move bedding grounds could change this. c. We also have neighbors who have cattle fences that are a quarter mile from the lek. This also prevents us from being able to move as far away as .62 miles. d. In some areas the sage brush canopy can even be an obstacle for .62 miles. 3. The times are not practical. In our area the sheep tend to bed down between 7:30 -8pm depending on daylight savings. They graze quietly in the evenings as it cools before they bed down. The sheep are up at 5 am grazing. The Sage Grouse come in when they are out grazing. The sheep usually come in for water and to rest around 10:30 am and the birds have left. 4. The Sage Grouse do not seem to be disturbed by the sheep. 5. Bullet point 102 is important when it talks about working with the permittees. The local offices need to work closely with all of their permittees. We are willing to work around some leks, but it cannot feasibly be All leks. a. Site specific management where the local range con and the permittee work closely together will be needed to manage all allotments. Each allotment has different landscapes with different habitats, leks and operations. Restricting them to a one size fits all limits everyone preventing the agency and permittee from making the best decisions. Please consider reviewing this grazing section, 101 will only be limiting and should be removed. The focus needs to be on site specific management with the range con and permittee. Not specifically for water and sheep bedding, but in general for all permittees, so that wildlife like sage grouse and ranching operations can both benefit and be supported.

Grazing is only considered a secondary threat to sage grouse and BLM already regulates my grazing program. What should be regulated are the natural predators of the sage grouse, such as ravens, crows, hawks and other birds that wreck the nest and kill the young. Also the coyotes and fox kill the adults as

well as the young. Grazing cattle nearby keeps some of these predators away from the sage grouse nests.

MD LG 15: Generally, the BLM will prioritize (1) the review of grazing permits/leases, in particular to determine if modification is necessary prior to renewal, and (2) the processing of grazing permits/leases based on land health conditions or concerns *related to rangeland health standards.* If similar issues are found in both PHMA and IHMA, *then* those in PHMA should be addressed first followed by those in IHMA. In setting workload priorities, precedence will be given to existing permits/leases in these areas not meeting Land Health Standards *and that have declining sage-grouse populations, defined by a soft or hard population adaptive management trigger being engaged. Sage-grouse populations that are stable or trending upward will be a lower priority for permit renewal and the assessment process.* ~~DELETE:~~ "with focus on those containing riparian areas, including wet meadows." The BLM may use other criteria for prioritization to respond to urgent natural resource concerns (e.g., fire) and legal obligations.

MD LG 16 : Grazing within the *PHMA and IHMA* will be managed according to the process outlined in the text below *and the grazing permit renewal process will be managed according to 43 CFR Part 4100, Subpart 4180 and as outlined in the process below.* a. Incorporate the Greater Sage-Grouse *desired conditions* in Table *2.2* and management considerations into relevant resource management plans as desired conditions and manage livestock grazing recognizing that these conditions may not be achievable (1) due to the existing ecological condition, ecological potential, or existing vegetation; or (2) due to casual events unrelated to existing livestock grazing; *and 3) that they are not intended to be prescriptive at the allotment level.* b. (Addressed above in MD LG 15) b. Conduct habitat assessments using *appropriate monitoring methods and* where appropriate, a *make a* determination of factors causing any failure to achieve the *desired conditions* in Tables *2.2*. The assessment(s) shall be conducted at a resolution *and scale* sufficient to document the habitat condition and will include local, spatial and inter-annual variability. Any determination relative to the habitat characteristics (Tables *2.2*) shall be based upon existing ecological condition, ecological potential, and existing vegetation information to ensure the assessment recognizes whether or not these habitat characteristics are achievable. c. The assessment will rely on published characteristics of Greater Sage-Grouse habitat and the Ecological Site Descriptions, and Tables *2.2*, and where available and applicable, rangeland health determinations made in accordance with 43 CFR 4180.2(c). d. After conducting the assessment in *(d)*, if the current grazing system achieves *Idaho rangeland health standards 2, 3 and 4,* absent substantial and compelling information no further grazing management changes are necessary to achieve desired conditions for sagegrouse habitat. e. If the process and conditions outlined in *(d)* demonstrate that livestock grazing is limiting achievement of the desired conditions (Tables 2.2), renewed permits will include measures, including but not limited to the actions outlined in Appendix C, Grazing Section of BMPs to achieve desired habitat conditions. These measures must be tailored to address the specific management issues. f. Adaptive management changes related to existing grazing permits should only be undertaken where improper grazing is determined to be the casual factor in not meeting habitat characteristics, specific to site capability, based upon monitoring over with appropriate spatial variability. *See Appendix C (Required Design Features).* g. Where management changes are needed and necessary pursuant to (f), implement management actions that are narrowly tailored to address the specific habitat objective applied at the allotment and/or activity plan level, including but not limited to the actions outlined in Appendix C, Grazing Section of BMPs. (The Governor's Plan is attached as Appendix I for references to this section.)

We are concerned that some of the vegetative and post-fire restoration objectives will negatively impact both grazing interests and the species. (See Veg-7, ESR-3, & ESR-4) * In many cases, grazing restrictions post-fire only serve to exacerbate the invasive species problem which creates a cyclical negative impact on sage-grouse. (See MD Fire 34) * There is no scientific need to reduce or change grazing activities adjacent to a burned area. This would only provide irrational impacts to grazing operations which have already been impacted by fire restoration activities. (See MD Fire 35)

I.4.21 Fluid Minerals

OBJ MR 2 Where a proposed fluid mineral development project on an existing lease can adversely affect Greater Sage-Grouse populations or habitat in PHMA, IHMA, *and GHMA* the BLM will work with the lessees, operators, or other project proponents to avoid and minimize impacts and to compensate for unavoidable impacts to the extent compatible with lessees' rights to drill and produce fluid mineral resources. The BLM will work with the lessee, operator, or project proponent in developing an APD or Geothermal Drilling Permit (GDP) for the lease to apply the mitigation hierarchy to impacts on Greater Sage-Grouse or its habitat and will ensure that the best information about the Greater Sage-Grouse and its habitat informs and helps to guide development of such federal leases.

OBJ MR 2 Where a proposed fluid mineral development project on an existing lease can adversely affect Greater Sage-Grouse populations or habitat in PHMA, IHMA, *and GHMA* the BLM will work with the lessees, operators, or other project proponents to avoid and minimize impacts and to compensate for unavoidable impacts to the extent compatible with lessees' rights to drill and produce fluid mineral resources. The BLM will work with the lessee, operator, or project proponent in developing an APD or Geothermal Drilling Permit (GDP) for the lease to apply the mitigation hierarchy to impacts on Greater Sage-Grouse or its habitat and will ensure that the best information about the Greater Sage-Grouse and its habitat informs and helps to guide development of such federal leases.

I.4.22 Solid Minerals

There continues to be no discussion in the RMPAIEIS of the consequences of prohibiting or limiting access to hundreds of thousands of acres of phosphate ore. The RMPAIEIS and supporting analysis fails to discuss the effects on fertilizer availability, fertilizer sources and prices, and implications for national food security. Reasonably Foreseeable Development Scenario (RFDS) have been developed for oil and gas leasing and geothermal development but there is no analysis for non-energy mineral development. The RMPAIEIS needs to include a complete and thorough analysis of the economic effects of closing 16,270,500 acres, or 59% of the federal non-energy leasable mineral estate decision area (including all federal non-energy leasable mineral estate in PHMA outside KPLAs) to prospecting and leasing.

The impacts of applying additional RDFs, buffers, disturbance and density factors to areas of high phosphate potential (i.e., KPLAs) open to leasing, needs to be addressed. The impacts from removing this resource needs to be analyzed not only at the national level but also for the impacts to local economies.

Additional analysis and disclosure of the entire range of impacts associated with implementing the Management Alignment Alternative and its effect on the development of phosphate resources in Idaho needs to be included in the RMPAIEIS.

Protecting valid existing rights and future phosphate mining BLM should consider the economic and strategic importance of phosphorus in developing sage-grouse conservation measures that could impact phosphate mining. Food production requires application of fertilizers containing phosphorus in order to sustain crop yields. Modern agriculture is dependent on phosphorus derived from phosphate rock. Southeast Idaho's open-pit phosphate mines are a major supplier of phosphate, producing approximately 12% of the nation's and 4% of the world's phosphate. See http://www.blm.gov/id/st/en/prog/energy_minerals/minerals/phosphate/Phosphate.html. However, current global phosphate reserves are projected to be depleted in 50-100 years. See Codell et. al., The Story of BLM Idaho State Office July 31, 2018 Page 8 Phosphorus: Global food security and food for thought, 19 Global Env'tl. Change 292 (2009). While phosphorus demand is projected to increase, the expected global peak in phosphorus production is predicted to occur around 2030. See id. BLM should take a hard look at the depletion of global phosphate reserves and related food scarcity, and the potential impacts that sage-grouse conservation measures that close areas to or unduly burden phosphate mining might have on phosphate and food supplies. BLM should ensure that existing and future phosphate mining or prospecting activities are fully provided for and considered in the BLM's planning process consistent with the BLM's multiple-use obligations. In particular, current KPLA's are comprised of typical land parcel descriptions, i.e., Section, Township and Range, that often do not properly capture the complete near-surface phosphate resource. Even though existing rights on KPLA's have been highlighted, immediately adjacent areas within one mile should be given additional consideration for development as proponents attempting to develop these resources are commonly required to apply for Exploration Licenses that often eventually result in lease modification applications. It would be very shortsighted for BLM to retain restrictions associated with protecting Greater Sage-Grouse so extreme as to cause a proponent to avoid developing the complete phosphate resource. Additionally, environmental consequences could also be exacerbated if the phosphate resource in a localized area was only partially mined and reclaimed. Given the BLM's multiple use mandates for land use planning, the Final RMP/EIS should not provide restrictions that manage solely for sage-grouse conservation to the exclusion of phosphate mining. The mining industry is familiar with ESA processes and has successfully worked with the Fish and Wildlife Service to ensure mine development does not place candidate or listed species in jeopardy. BLM should encourage similar collaboration for species conservation and should avoid any industry-stifling blanket prohibitions that fail to take into consideration individual project proposals, site-specific circumstances, and mitigating actions. P4 Production encourages the BLM to consider, and incorporate in its conservation measures, allowances for agency flexibility to work with the phosphate mining industry toward effective conservation while permitting multiple uses of the public lands.

Also, BLM should consider the effects of improved sage-grouse populations such as a new lek occurring adjacent to or upon a proponent's phosphate project area. Companies are very committed to embracing Greater Sage-Grouse friendly activities and practices but certainly have concerns regarding how these activities might inadvertently penalize a proponent's ability to develop future phosphate resources. It would be prudent for BLM to address this potential situation up front such that Greater Sage-Grouse conservation can be actively promoted without stifling future development opportunities.

I.4.23 Lands and Realty

IPC's service area has significant overlap with greater sage grouse habitat in Idaho; actions the Bureau of Land Management (BLM) implement to protect greater sage grouse could affect our ability to meet future electrical energy needs, as IPC is mandated to do, and the ongoing operation and maintenance (O&M) activities that ensure the continued delivery of electrical energy in a safe and reliable manner.

Issue 3: Recommendation 3: Due to existing management practices, and complications of managing allotments with separate RMPs, Simplot L&L recommends that the Idaho and Nevada LUPA be amended to allow the Idaho LUPA to cover all BLM lands within Nevada that are currently managed by Idaho BLM. [This recommendation should equally be made to similar situations in other states.]

Issue 7: DEIS Comment 27: This recommendation is omitted from any discussion in the DEIS. It is critical that BLM consider and analyze this issue in the Final EIS, and implement a proposed action in the ROD that adopts the recommendation. In addition, travel management restrictions should not apply to livestock management tasks, such as water hauling, motorized herding, etc.. In addition, the Governor's Plan doesn't not limit/restrict travel management as related to livestock management practices.

MD WHB 2: MD WHB 2 Complete rangeland health assessments for HMAs containing Greater Sage-Grouse habitat using an interdisciplinary team of specialists (e.g. range, wildlife, and riparian). The priority for conducting assessments is HMAs with known land health issues and where local populations of Greater Sage-Grouse are in decline *according to the adaptive management trigger standards.* When similar issues are found in multiple HMAs, then the priority should be 1) HMAs containing PHMA; 2) HMAs containing IHMA; 3) HMAs containing GHMA; 4) HMAs containing Greater Sage-Grouse habitat outside of PHMA, IHMA, and GHMA mapped habitat; 5) HMAs without Greater Sage-Grouse Habitat.

MD WHB 2: MD WHB 2 Complete rangeland health assessments for HMAs containing Greater Sage-Grouse habitat using an interdisciplinary team of specialists (e.g. range, wildlife, and riparian). The priority for conducting assessments is HMAs with known land health issues and where local populations of Greater Sage-Grouse are in decline *according to the adaptive management trigger standards.* When similar issues are found in multiple HMAs, then the priority should be 1) HMAs containing PHMA; 2) HMAs containing IHMA; 3) HMAs containing GHMA; 4) HMAs containing Greater Sage-Grouse habitat outside of PHMA, IHMA, and GHMA mapped habitat; 5) HMAs without Greater Sage-Grouse Habitat.

1.4.24 Socioeconomics

The Bureau of Land Management, in 2013, implemented an Instruction Memorandum (IM) requiring the use of Habitat Equivalency Analysis (HEA) to help determine impacts to vegetative and wildlife areas.¹⁷ The results are then used to determine a financial value of mitigation, which must be paid as condition of the Record of Decision.¹⁸ The first mine to have gone through this process, spent over \$1 million in HEA studies, paid almost \$1.7 million to a 3rd party trust as a result of the HEA study, then paid an additional \$432,000 and deeded a 160-acre ranch (value not disclosed) to the Idaho Department of Fish and Game.¹⁹ There are multiple issues associated with IM No. ID-2013-040 including the use of an economic model to determine mitigation, additional studies which add considerable time (multiple years) and expense to the process of evaluating a proposed project and finally that the National Environmental Policy Act (NEPA) does not require compensatory mitigation, which is clearly the outcome of this IM.

1.4.25 Wild Horse and Burro

* BLM needs to further amend existing RMPs in Idaho regarding control of wild horses and burros beyond that proposed by MD WHB 2. As you know, wild horses and burros chronically damage the range resources by greatly exceeding the carrying capacity where the herds live. This is not simply a matter of competition with domestic livestock; it is a matter of rangeland health. It is unconscionable

that BLM does not take further steps to bring populations within established Appropriate Management Levels for the benefit of sage-grouse and all other aspects of rangeland health.

I.4.26 Recreation

MD REC 2 In PHMA and IHMA, do not construct new recreation facilities (campgrounds, parking lots, trailheads, and staging areas) larger than 0.25 acres *unless* subject to appropriate buffers and RDFs and appropriate mitigation. Locate and design facilities to avoid or minimize impacts on Greater Sage-Grouse habitat. New trails in PHMA and IHMA should be designed to avoid or minimize impacts on Greater Sage-Grouse habitat. New *non-motorized* trails would not be subject to buffers but may be subject to timing restrictions to avoid impacts on Greater Sage-Grouse *during the lekking/nesting season. Motorized trails would also be subject to buffers and seasonal timing restrictions. *

MD REC 2 In PHMA and IHMA, do not construct new recreation facilities (campgrounds, parking lots, trailheads, and staging areas) larger than 0.25 acres *unless* subject to appropriate buffers and RDFs and appropriate mitigation. Locate and design facilities to avoid or minimize impacts on Greater Sage-Grouse habitat. New trails in PHMA and IHMA should be designed to avoid or minimize impacts on Greater Sage-Grouse habitat. New *non-motorized* trails would not be subject to buffers but may be subject to timing restrictions to avoid impacts on Greater Sage-Grouse *during the lekking/nesting season. Motorized trails would also be subject to buffers and seasonal timing restrictions. *

I.4.27 Cumulative impacts

The BLM is required by NEPA to consider cumulative impacts on sage-grouse in this DEIS, but the DEIS purports that the cumulative impacts analysis from the 2015 sage-grouse plan amendments suffice to meet the requirement for the current proposed plan amendment. This is a flawed assumption given that no new information was analyzed. As previously stated, the BLM used 2012-13 data in their analyses for the 2015 land use plan amendments, new scientific information, project development, fire and other factors have been occurred since 2013. The BLM should review the list of projects shown in Tables 4-3, 4-4, or 4-6 (depending on the state) causing cumulative impacts and ensure they are as comprehensive as is required to include "the incremental impact[s] . . . when added to other past, present, and reasonably foreseeable future actions." We note again the projects we have mentioned were not considered in the 2015 sage-grouse plan amendment EISs. These are "collectively significant actions taking place over a period of time" that must be considered in the cumulative impacts analysis, but which have not been.

BLM's cumulative impacts analysis is insufficient and invalid. The BLM is required to consider the cumulative environmental impacts to sage-grouse and sage-grouse habitat in the sage-grouse land use plan amendment EIS it has prepared. Cumulative environmental impacts are: The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions. 40 C.F.R. § 1508.7. "Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." *Id.* Cumulative impacts must be considered in the scope of an EIS. *Id.* § 1508.25(c). Despite the requirement to consider cumulative environmental impacts in the sage-grouse land use plan amendment EISs, the BLM has failed to do this adequately. For one, the BLM claims that the cumulative effects analysis from the 2015 sage-grouse land use plan amendments meets the cumulative effects analysis requirement that is needed now. The inappropriateness and legal invalidity of this claim was discussed above. As noted, tiering is only

appropriate when a subsequent narrower environmental analysis relies on an earlier broader environmental analysis. See 40 C.F.R. § 1508.28 (a) (stating that tiering is appropriate when a program, plan, or policy environmental impact statement is used to support a new analysis of "lessor scope" or which is site-specific). But we do not have that here; the scope of the current analysis is as broad as the 2015 analysis. There is no "step down" present here, therefore the cumulative impacts analysis from the 2018 plans cannot "incorporate[] by reference the analysis in the 2015 Final EIS." Idaho DEIS at 4-18 In addition, BLM cannot simply incorporate the previous analysis by reference without justifying how it is appropriate and summarizing how it applies, neither of which has been done in the Draft EIS. See, 43 C.F.R. § 46.135(a). BLM also must ensure any incorporation by reference does not impede review by the public, which it surely does here. See 40 C.F.R. § 1502.21. Moreover, the purpose and need for the 2018 EISs differs from that of the 2015 EISs, which underscores why neither tiering nor incorporation by reference is appropriate. Secondly, in each of the six 2018 EISs the BLM lists a number of projects that it claims reflect the cumulative effects impacts that are applicable here. See, e.g., Table 4-6 in the Idaho DEIS. But this list of projects fails to incorporate many relevant projects that should be considered in the cumulative effects analysis. In Wyoming, for example, neither the Normally Pressured Lance or Converse County oil and 13 gas projects are listed. See Idaho DEIS at Table 4-6, pages 4-21 to -34. These are two mammoth projects, that will involve drilling thousands of oil and gas wells which will have significant impacts on sagegrouse and sage-grouse habitats. See, <https://www.blm.gov/programs/planning-and-nepa/plans-indevelopment/wyoming/npl> and <https://www.blm.gov/programs/planning-and-nepa/plans-indevelopment/wyoming/converse-county-oil-and-gas-project>. (presenting the Normally Pressured Lance and Converse County EISs). Neither of these projects were considered in the 2015 EISs. In addition, while in Wyoming (and the other states), past and upcoming oil and gas lease sales are mentioned, see, e.g., Idaho DEIS at Table 4-6 at 4-33, the list is incomplete. The June Wyoming lease sale (198,588 acres) is mentioned but neither the upcoming September (366,151 acres) or December (698,589 acres) lease sales are discussed. See <https://eplanning.blm.gov/epl-frontoffice/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPagelD=125997> and http://rockymountainwild.org/upcoming_lease. The same is true in other states. For example, in Utah, the Utah DEIS says 646 acres of oil and gas leases will be offered in Habitat Management Areas (HMA) in June, but it fails to mention the 158,944 acres (with 45,227 acres that had been previously offered) that will be offered for lease in September. See <https://eplanning.blm.gov/epl-frontoffice/eplanning/planAndProjectSite.do?methodName=renderDefaultPlanOrProjectSite&projectId=103243&dctmId=0b0003e8810c3ec2>. The same is true in other states. The BLM should review the list of projects shown in Tables 4-3, 4-4, or 4-6 (depending on the state) causing cumulative impacts and ensure they are as comprehensive as is required to include "the incremental impact[s] . . . when added to other past, present, and reasonably foreseeable future actions." We note again the projects we have mentioned were not considered in the 2015 sage-grouse plan amendment EISs. These are "collectively significant actions taking place over a period of time" that must be considered in the cumulative impacts analysis, but which have not been. Under Council on Environmental Quality (CEQ) guidance, BLM must consider the current aggregate effects of past actions in a cumulative impacts analysis. CEQ, Guidance on the Consideration of Past Actions in Cumulative Effects Analysis, available at https://ceq.doe.gov/docs/ceq-regulations-andguidance/regs/Guidance_on_CE.pdf. This means the BLM must consider what the impacts of implementing the 2015 plans has been on cumulative impacts. BLM cannot just incorporate the 2015 plans by reference as its cumulative effects analysis, rather it must consider the "identifiable present effects of past actions," which the 2015 plans clearly are. Under the 2015 plans BLM has taken hundreds of actions, and in total those actions have had cumulative environmental impacts. An analysis of those cumulative impacts is missing from the current EISs, which is

not permissible. "A cumulative impact analysis "must be more than perfunctory; it must provide 'a useful analysis of the cumulative impacts of past, present, and future projects.'" N. Plains Res. Council, Inc. v. Surface Transp. Bd., 668 F.3d 1067, 1076 (9th Cir. 2011) (quoting Kern v. U.S. Bureau of Land Mgmt., 284 F.3d 1062, 1075 (9th Cir. 2002) (additional citation omitted)). "To be useful to decision makers and the public, the cumulative impact analysis must include "some quantified or detailed information; . . . general statements about possible effects and some risk do not constitute a hard look absent a justification regarding why more definitive information could not be provided.'" 668 F.3d at 1076 (quoting Ocean Advocates v. U.S. Army Corps of Eng'rs, 402 F.3d 846, 868 (9th Cir. 2004)) (additional citation omitted). Here the BLM has offered nothing more than a perfunctory cumulative impacts analysis. There is no useful analysis of past projects; the dozens if not hundreds of approved projects implementing the 2015 sage-grouse plans. There is no quantifiable or detailed information about those projects, and there are not even any general statements about the cumulative impacts of those projects, many of which have undergone a NEPA analysis. Based on the above, it is evident the cumulative impacts analyses in the Idaho DEIS is invalid and must be expanded to fully address the cumulative impacts from the amendments.

The DEIS for BLM's proposed action should re-analyze the effects on the environment resulting from the significant change of BLM issuing IM 2018-093 and changing policy which also fundamentally changes both alternatives in the DEIS. BLM should allow public comment on this revised DEIS.

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Appendix B

Buffers

Appendix B. Buffers

APPLYING LEK BUFFER-DISTANCES WHEN APPROVING ACTIONS

Buffer Distances and Evaluation of Impact on Leks

Evaluate impact on leks from actions requiring NEPA analysis. In addition to any other relevant information determined to be appropriate (e.g., state wildlife agency plans), the BLM will apply the lek buffer-distances described below, unless justifiable departures are determined to be appropriate.

PHMA—The BLM will apply the lek buffer-distances specified as the lower end of the interpreted range in the report (*Distance Estimates for Greater Sage-Grouse—A Review* ([Open File Report 2014-1239](#)), unless justifiable departures are determined to be appropriate (see below). The lower end of the interpreted range of the lek buffer-distances is as follows:

- Linear features (roads) within 3.1 miles of leks
- Infrastructure related to energy development within 3.1 miles of leks
- Tall structures (e.g., communication or transmission towers and transmission lines) within 2 miles of leks
- Low structures (e.g., fences and rangeland structures) within 1.2 miles of leks
- Surface disturbance (continuing human activities that alter or remove the natural vegetation) within 3.1 miles of leks
- Noise and related disruptive activities
 - Repeated/sustained disturbance including those that do not result in habitat loss at least 2 miles from leks
 - Temporary noise including those that do not result in habitat loss (e.g., motorized recreational events) at least 0.25 miles from leks

IHMA—The BLM will apply the lek buffer-distances as follows, unless justifiable departures are determined to be appropriate (see below):

- Linear features (e.g., roads) within 0.8 miles of leks
- Infrastructure related to energy development (e.g., oil, gas, wind, and solar) within 2 miles of leks
- Tall structures (e.g., electrical, communication, and meteorological)
 - Transmission lines/towers within 1.2 miles of leks, with a 1.2- to 2-mile buffer, subject to the exemption criteria; applicable to this variable and select variables in GHMA below
 - Distribution lines/poles within 0.6 miles of leks
 - Communication and meteorological towers within 2 miles of leks
- Low structures (e.g., fences and rangeland structures) within 0.6 miles of leks
- Surface disturbance (continuing human activities that alter or remove the natural vegetation) within 2 miles of leks

- Noise and related disruptive activities
 - Repeated/sustained noise disturbances, including those that do not result in habitat loss at least 2 miles of leks
 - Temporary noise disturbances, including those that do not result in habitat loss (e.g., motorized recreation events) at least 0.25 miles from leks

GHMA—The BLM will apply the lek buffer-distances as follows, subject to the following exception criteria:

- Linear features (e.g., roads) within 0.25 miles of leks
- Infrastructure related to energy development (e.g., oil, gas, wind, and solar) within 0.6 miles of leks; 2-mile feasibility/practicality conditions
- Tall structures (e.g., electrical, communication, and meteorological) within 0.6 miles of leks
- Low structures (e.g., fences and rangeland structures) within 0.12 miles of leks
- Surface disturbance (continuing human activities that alter or remove the natural vegetation) within 2 miles of leks

Noise and related disruptive activities

- Repeated/sustained disturbances, including those that do not result in habitat loss at least 2 miles from leks
- Temporary disturbances, including those that do not result in habitat loss (e.g., motorized recreation events) at least 0.25 miles from leks

Buffer Exception Criteria for IHMA and GHMA—It is impracticable, technically or economically, to locate the project outside of the buffer area and impacts are avoided through project siting and design to the extent reasonable or Impacts are minor or nonexistent and impacts are avoided through project siting and design to the extent reasonable; the buffers do not apply to vegetation treatments specifically designed to improve or protect Greater Sage-Grouse habitat

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

For Actions in GHMA

The BLM will apply the lek buffer-distances identified above as required conservation measures to fully address the impact on leks identified in the NEPA analysis. Impacts should first be avoided by locating the action outside the applicable lek buffer-distances identified above.

The BLM may approve actions in GHMA that are within the applicable lek buffer-distance identified above only under the following:

- Impacts should first be avoided by locating the action outside the applicable lek buffer-distances identified above.
- If it is not possible to relocate the project outside the applicable lek buffer-distances identified above, the BLM may approve the project only if
 - Based on best available science, landscape features, and other existing protections, (e.g., land use allocations and state regulations), the BLM determines that a lek buffer-distance other than the applicable distance identified above offers the same or a greater level of protection to Greater Sage-Grouse and its habitat, including conservation of seasonal habitat outside of the analyzed buffer area **or**
 - The BLM determines that impacts on Greater Sage-Grouse and its habitat are minimized such that the project will cause minor or no new disturbance, such as collocation with existing authorizations, **and**
 - Any residual impacts in the lek buffer-distances are addressed to achieve a no net loss standard

For Actions in PHMA and IHMA

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

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

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Appendix S-I

Review of the NTT and COT Report's Relevance to
the Planning Process; Incorporation of the NTT,
COT, and USGS Summary of Science into the Idaho
Planning Process

Appendix S-I. Review of the NTT and COT Report's Relevance to the Planning Process; Incorporation of the NTT, COT, and USGS Summary of Science into the Idaho Planning Process

S-I.1 BLM NATIONAL TECHNICAL TEAM REPORT (2011)

In 2010, the U.S. Fish and Wildlife Service (USFWS) determined that Greater Sage-Grouse warranted listing under the Endangered Species Act, but was precluded from listing due to other priorities. In response to this determination, the BLM initiated a land use planning process in 2011. To help inform that process the BLM assembled a “National Technical Team” (NTT), comprising state and federal resource specialists and scientists to review the scientific literature available at that time. On December 21, 2011 the NTT finalized a document entitled *A Report on National Greater Sage-Grouse Conservation Measures*, also known as the National Technical Team Report (NTT Report). The report was developed to provide “the latest science and best biological judgement” from the available literature (NTT Report, Introduction, page 5). Though the NTT Report is not itself science, the NTT used the best science available at that time to inform the conservation measures it identified for BLM decision-makers to consider through the land use planning and NEPA process.

On December 27, 2011, the BLM issued policy in Instruction Memorandum 2012-044 requiring BLM offices to “consider all applicable conservation measures when revising or amending its RMPs in Greater Sage Grouse habitat” (IM-2012-44, Policy/Action). The IM clarified a distinction between “all applicable conservation measures” and those included in the NTT Report by noting in the following sentence that “the conservation measures developed by the NTT...must be considered and analyzed, as appropriate, through the land use planning process” (ibid). Each BLM planning effort complied with this policy by including an alternative based entirely on the conservation measures identified by the NTT. This was Alternative B in the 2013 Draft EIS and 2015 Final EIS, and by extension in the 2018 Draft and Final EISs. Through this alternative and corresponding analysis, the BLM complied with its policy for considering the conservation measures in the NTT Report.

It is critical to clarify that neither the NTT nor the BLM's policy intended that the conservation measures in the NTT Report were to be automatically applied across the range without intervening consideration through detailed land use planning and NEPA analysis. In the same paragraph that directs the BLM to “consider all applicable conservation measures” from the NTT Report, IM-2012-044 also notes that “while these conservation measures are range-wide in scale, it is expected that at the regional and sub-regional planning scales there may be some adjustments of these conservation measures in order to address local ecological site variability.” Moreover, the NTT understood that the measures in its report would be evaluated alongside competing land use planning considerations and with follow-up environmental analysis relating to the conservation efficacy of its measures. As the NTT Report described, the conservation measures are not themselves management decisions but rather have been prepared “to assist [the BLM] in making management decisions.” (NTT Report, Introduction, page 5.) In

other words, “the conservation measures described in [the] report *are not an end point* but, rather, a *starting point* to be used in the BLM’s planning processes” (ibid, page 5) (emphasis added).

The principle of local adaptation of scientific results and recommended conservation measures derived from them is present in other documents with sage-grouse conservation recommendations. In 2014, three years after the NTT Report, the Department of the Interior requested the U.S. Geological Survey (USGS) prepare a report that compiled and summarized published scientific studies regarding buffer distances around sage-grouse habitats. In the report titled *Conservation Buffer Distance Estimates for Greater Sage-Grouse – A Review* (Open File Report 2014-1239), USGS scientists note that “responses of individual birds and populations, coupled with variability in land-use patterns and habitat conditions, add variation in research results. This variability presents a challenge for land managers and planners seeking to use research results to guide management and plan for sage-grouse conservation measures. Variability between sage-grouse populations and their responses to different types of infrastructure can be substantial across the species’ range. Logical and scientifically justifiable departures from the ‘typical response,’ based on local data and other factors, may be warranted when implementing buffer protections or density limits in parts of the species’ range” (USGS Open File Report 2014-1239, page 2). A simple statement from the report indicates this variability, where the USGS scientists noted that “there is no single distance that is an appropriate buffer for all populations and habitats across the sage-grouse range” (ibid, pg. 2).

Further, the BLM’s policy requiring consideration of the conservation measures in the NTT Report allowed for individual planning efforts to make adjustments to the report’s conservation measures. IM-2012-044 states that “the NTT-developed conservation measures were derived from goals and objectives developed by the NTT” and that “these goals and objectives are a *guiding philosophy* that should *inform* the goals and objectives developed for individual land use plans. However, *it is anticipated that individual plans may develop goals and objectives that differ and are specific to individual planning areas*” (emphasis added). The anticipation for variability across the range is even more explicit when the IM notes that “while [the NTT Report’s] conservation measures are range-wide in scale, *it is expected that at the regional and sub-regional planning scales there may be some adjustments of these conservation measures in order to address local ecological site variability*” (emphasis added). With specific consideration of this variability, each BLM planning and NEPA effort developed and analyzed a range of alternative approaches for sage-grouse habitat management in each sub-region/state. Through this process, the BLM considered local and regional differences, analyzing the effect of each alternative approach locally and cumulatively.

As the NTT developed its conservation measures, it did not take into consideration other legal and regulatory requirements associated with land use planning and NEPA. For example, the NTT’s range-wide conservation measures did not take into account State or local greater sage-grouse conservation efforts. In its foundational legislation for the BLM, Congress specifically declared that it neither enlarged nor diminished the authority of the states in managing fish and wildlife. In recognizing this role, as well as local knowledge and expertise, Congress directed the BLM to develop its land use plans to “be consistent with State and local plans to the maximum extent” (Federal Land Policy and Management Act {FLMPA}, Section 202 (c)(9)).

Other laws, regulations, and policies were not taken into account by the NTT as they developed their conservation measures. For example, the NTT Report’s conservation measure that declares that

priority sage-grouse habitat areas should be found unsuitable for all surface mining of coal entirely overlooks the specific process to determine unsuitability prescribed in 43 Code of Federal Regulations (CFR) 3461. Elsewhere the NTT Report states that “a 4-mile [no surface occupancy (NSO) stipulation] likely would not be practical given most leases are not large enough to accommodate a buffer of this size, and lek spacing within priority habitats is such that lek-based buffers may overlap and preclude all development” (NTT Report, page 21) and therefore presents a conservation measure to close priority sage-grouse habitat areas to fluid mineral leasing. This is not consistent with BLM planning guidance directing planning teams that “when applying leasing restrictions, the least restrictive constraint to meet the resource protection objective should be used” (BLM-H-1601 Appendix C page 24); whether or not a lease is large enough to accommodate a large NSO should not be a consideration if NSO provides the necessary protection.

In recognition of instances where the NTT Report's conservation measures were not consistent with law, regulation, or policy the BLM's policy direction in IM-2012-044 directs that “when considering the [NTT Report's] conservation measures...BLM offices should ensure that implementation of any of the measures is consistent with applicable statute and regulation. Where inconsistencies arise, BLM offices should consider the conservation measure(s) to the fullest extent consistent with such statute and regulation.”

Each BLM planning effort fully considered the broad, range-wide recommendations from the NTT Report through the required NEPA process. This consideration was accomplished, as directed by Congress, using a “systematic interdisciplinary approach to achieve integrated consideration of physical, biological, economic, and other sciences” (FLPMA Section 202(c)(2)). Through careful consideration of the NTT's conservation measures, as well as local expertise, monitoring, partnerships, and other resource and land uses, the BLM developed sage-grouse management goals, objectives, and management actions that accounted for the variability of habitat and resources across the range. Through the combination of both the 2015 and 2019 planning processes the BLM aligned with the statutory requirement that the BLM resolve, “to the extent practical, inconsistencies between Federal and non-Federal Government plans” (FLPMA Sec. 202(c)(9)). Through these efforts, the BLM has met its statutory and regulatory responsibilities related to the conservation measures contained in the NTT Report.

What the NTT Report and its Conservation Measures Are:

- The NTT Report included science-based management considerations for greater sage-grouse to promote sustainable sage-grouse populations.
- The conservation measures were to be considered and analyzed through the BLM's land use planning process.
- The conservation measures are range-wide in scale, not accounting for local variability.
- The conservation measures were a starting point to be used in the BLM's planning process.
- The NTT Report was developed by a team of resource specialists and scientists familiar with greater sage-grouse literature and BLM programs.

What the NTT Report and its Conservation Measures Are Not:

- Unlike FLPMA's requirement for Land Use Plans to coordinate with state and local plans and policies, the NTT Report was not developed with input from or consideration of plans, policies, or programs of State, Tribal, or local government agencies.
- The conservation measures were not developed using a systematic interdisciplinary approach, as required by FLPMA for land use plans.
- The NTT Report presented conservation measures that would provide food and habitat for one species of wildlife, but did not consider other FLPMA requirements for BLM to manage for other species and resources while also recognizing the need for sources of minerals, food, timber and fiber from public lands.
- The NTT Report is not a land use plan, amendment, or revision.
- The conservation measures were based on best available science at the time and do not provide for future updates in scientific knowledge or technological advancements.

S-I.2 US FISH AND WILDLIFE CONSERVATION OBJECTIVES TEAM REPORT (2013)

In 2012 the director of the USFWS convened a Conservation Objectives Team (COT) of state and USFWS representatives. The team developed a peer-reviewed report (COT Report) that delineated objectives based on the “best scientific and commercial data available at the time of its release” (COT Report, page ii). The COT Report, released in March 2013, identifies conservation objectives, measures, and options for each of the Greater Sage-Grouse threats assessed. The COT Report also identified Priority Areas for Conservation (PACs) which were identified as “the most important areas needed for maintaining sage-grouse representation, redundancy, and resilience across the landscape” (ibid, page 13). Unique compared to the NTT Report, the COT Report identified threats to each PAC, recognizing that threats vary across the range, and therefore corresponding management should vary to address those threats. The preface to the report is clear that the COT report “is guidance only” and that the “identification of conservation objectives and measures does not create a legal obligation beyond existing legal requirements” (ibid, page ii). Further, the preface notes that the objectives “are subject to modification as dictated by new findings, changes in species’ status, and the completion of conservation actions” (ibid, page ii).

The COT Report clearly identifies the necessity to adapt sage-grouse conservation goals, objectives, and measures due to variability across the range. The COT noted that “due to the variability in ecological conditions and the nature of the threats across the range of the sage-grouse, *developing detailed, prescriptive species or habitat actions is not possible at the range-wide scale*” (emphasis added) (COT Report, Section 5- Conservation Objectives, page 31). The COT Report summarizes the relationship between its range-wide conservation goals, objectives, and measures and the state-specific planning efforts, noting that “specific strategies or actions necessary to achieve the following conservation objectives must be developed and implemented at the state or local level, with the involvement of all stakeholders” (ibid).

The BLM received the COT Report when developing its 2013 Draft EIS and fully considered it prior to Draft EIS publication, providing for public review of the BLM’s evaluation. Upon receipt of the Report the BLM evaluated the range of alternatives and determined that the threats addressed by the COT Report were all addressed in the range of alternatives; this was presented to the public in Appendix C in the 2013 Draft EIS. The BLM also evaluated the impacts to Greater Sage-Grouse from the alternatives

and determined that the COT Report objectives were all addressed within the range of alternatives; this was presented to the public in the 2013 Draft EIS Chapter 2 Table 2.4 (Comparison of Alleviated Threats to GRS in the Utah Sub-Region).

Following public comments and development of the 2015 Proposed Plan, Section 2.5 of the Final EIS updated the crosswalk between the USFWS threats and the BLM program areas, showing that all the threats for which the BLM has discretion were addressed. Section 2.11.7 notes that all conservation measures and objectives identified in the COT report were considered within the 2015 Final EIS range of alternatives. Finally, a table was added to the 2015 Final EIS Executive Summary that showed the management actions from the 2015 Proposed Plan that addressed the COT Report threats.

On October 2, 2015, the USFWS determined that “listing the sage-grouse as a threatened or endangered species is not warranted...” (Federal Register Vol. 80, No. 191, 59936). One of the rationale for this determination was that “the new Federal land-management paradigm is established in 98 amended Federal Plans that reduce and minimize threats to the species in the most important habitat for the species” (ibid). Through this language, it is clear that the 2015 planning efforts incorporated the recommendations from the COT Report to a degree that met the report’s goal of “long-term conservation of sage-grouse and healthy sagebrush shrub and native perennial grass and forb communities by maintaining viable, connected, and well-distributed populations and habitats across their range, through threat amelioration, conservation of key habitats, and restoration activities” (COT Report, page 13).

What the COT Report and its Objectives, Measures and Options Are:

- The COT Report sought to identify reasonable objectives, based upon the best scientific and commercial data available at the time of its release, for the conservation and survival of greater sage-grouse.
- The COT Report is guidance to federal land management agencies, state sage-grouse teams, and others developing efforts to achieve conservation for greater sage-grouse.
- The COT Report was clear that its objectives were subject to modification based on new findings, changes in species’ status, and the completion of conservation actions.
- The COT Report was developed by a team of state and USFWS representatives selected by their respective state or agency.

What the COT Report and its Objectives, Measures and Options Are Not:

- The COT Report is not a recovery plan, conservation strategy, or conservation agreement.
- The COT Report did not include input from BLM biologists or BLM field staff familiar with local habitat conditions and threats.
- The COT Report is not itself science, but includes objectives, measures, and options that were developed based on science.
- The COT Report was not developed with input from the BLM, its managers, planners, wildlife program leads, or field biologists and as such includes objectives, measures and options that do not consider statutory, regulatory, or policy requirements.

S-1.3 EXCERPTS FROM THE ID DEIS MAY 2018

- Chapter 1: Purpose of and Need for Action. Section 1.4. Page 4. Planning Criteria: This RMPA/EIS will incorporate, as appropriate, information in a USGS report that identified and annotated Greater Sage-Grouse science published since January 2015 (Carter et al. 2018) and a report that synthesized and outlined the potential management implications of this new science (Hanser et al. 2018).
- Chapter 2
 - a. p. 2-24: No Action “125. Build ponds with steep shorelines to reduce shallow water (>60 cm) and aquatic vegetation around the perimeter of impoundments to deter colonizing by mosquitos (Knight et al. 2003, cited in NTT report page 61)”.
 - b. p. 2-25 Management Alignment alternative: same text as on p. 2-24
- Chapter 3. Affected Environment. Section 3.1 Introduction (p. 1) – includes this paragraph “Based on available information, including the USGS reports described below, the BLM has concluded that the existing condition is not substantially different from that of 2015; therefore, the data and information presented in the 2015 Final EIS are incorporated into this RMPA/EIS.” On p. 2: “USGS Reports” “The review discussed the science related to six major topics identified by USGS and BLM...” Six paragraphs follow – one for each of the 6 listed topics:
 1. Multiscale habitat suitability and mapping tools: The BLM has completed a plan maintenance action whereby the agency has clarified its ability to modify the habitat objective indicator values based upon local, site-specific information. p.3
 2. Discrete human activities: The science developed since 2015 corroborates prior knowledge about the impact of discrete human activities on Greater Sage-Grouse. New science suggests that strategies to limit surface disturbance may be successful at limiting range-wide population declines; however, it is not expected to reverse the declines, particularly in areas of active oil and gas operations (Hanser et al. 2018, p. 2). This information may have relevance when considering the impact of changes to management actions designed to limit discrete disturbances. p.3
 3. Diffuse activities: This information was considered when determining the scoping issues addressed in Chapter 1, Section 1.5. p.3
 4. Fire and invasive species: These concepts inform restoration and management strategies and help prioritize application of Greater Sage-Grouse management resources (Hanser et al. 2018, p. 2). p.3
 5. Restoration effectiveness: Restoration activities occur mainly at the implementation level, and the BLM maintains the flexibility to incorporate new tools in the agency's project planning for restoration actions. p.4
 6. Population estimation and genetics: New information continues to reaffirm BLM's understanding that Greater Sage-Grouse is a species that selects for large, intact landscapes and habitat patches. p.4
- Chapter 4: Section 4.6 Cumulative Effects Analysis: While the analysis for the 2015 Final EIS is quite recent, the BLM has reviewed conditions in Idaho to verify that they have not changed significantly. The BLM's assessment that science related to Greater Sage-Grouse and current conditions have not changed significantly is based, in part, on the USGS science review (see Chapter 3). It is also based on the BLM's review of additional past, present, and reasonably foreseeable actions in 2018. Since the nature and context of the cumulative effects scenario has

not appreciably changed since 2015, and the 2015 analysis covered the entire range of the Greater Sage-Grouse, the cumulative effects analysis in the 2015 Final EIS applies to this planning effort and provides a foundation for the BLM to identify any additional cumulative impacts. p.18. And further down the page: The 2015 Final EIS analyzed the cumulative impacts of the No-Action Alternative and the Governor's Alternative. The Management Alignment Alternative's effects are entirely within the range of effects of these two alternatives. The 2015 Final EIS is quite recent and the science and conditions in Idaho have not changed significantly, based on the USGS science review and current conditions described in Chapter 3. Because of this, the cumulative effects analysis in the 2015 Final EIS is still applicable. The range-wide and plan-specific cumulative effects analyses from the 2015 Final EIS is hereby incorporated by reference into this RMPA/EIS (2015 Final EIS Chapter 5).

- Chapter 5: Consultation and Coordination – U.S. Fish and Wildlife Service is listed.
- Chapter 6: References – both NTT and COT are listed
- Table of Content, Acronym and Abbreviations – neither NTT or COT appears
- Appendix F – Required Design Features: RDFs are listed by program similar to the NTT report but no reference to the NTT or COT
- Chapter 8: Index – does not include NTT, COT or FWS

S-I.4 EXCERPTS FROM CHAPTER 2 ID FEIS JUNE 2015 FOR NTT AND COT:

Page	NTT	COT
2-8	Developed one No Action Alternative (Alternative A) and three preliminary action alternatives. The first action alternative (Alternative B) is based on A Report on National Greater Sage-Grouse Conservation Measures (NTT 2011), and the two additional action alternatives (Alternative C and F) are based on proposed alternatives submitted by various conservation groups.	-
2-8	Customized the objectives and actions from the NTT-based alternative (Alternative B) to develop a third action alternative (Alternative D) that strives for balance among competing interests	-
2-9	-	2.5 BLM/Forest Service Resource Programs for Addressing GRSG Threats The action alternatives are directed towards responding to USFWS-identified issues and threats to GRSG and its habitat. The USFWS threats do not necessarily align with BLM and Forest Service resource program areas, and are often integrated into several different agency resource program areas. Table 2-1, USFWS Threats to GRSG and Their Habitat, Applicable BLM and Forest Service Proposed Plan Resource Program Areas Addressing these Threats, provides a cross-walk between each of the USFWS listing decision and COT identified threats and the BLM and the Forest Service resource program areas and shows how those threats were addressed in the BLM and the Forest Service land use plan.
2-11 to 2-13	-	Table 2-1 USFWS Threats to GRSG and Their Habitat, Applicable BLM and Forest Service Proposed Plan Resource Program Areas Addressing these Threats. (middle column heading – top of 3 pages) COT Report-Identified Threats to GRSG and Its Habitat (2013).
2-43	-	FM-15: If prescribed fire is used in GRSG habitat, the NEPA analysis for the Burn Plan will address: <ul style="list-style-type: none"> • why alternative techniques were not selected as a viable options; • how GRSG goals and objectives would be met by its use; • how the COT Report objectives would be addressed and met; • a risk assessment to address how potential threats to GRSG habitat would be minimized.

Appendix S-I. Review of the NTT and COT Report's Relevance to the Planning Process; Incorporation of the NTT, COT, and USGS Summary of Science into the Idaho Planning Process

Page	NTT	COT
2-80	2.8.3 Alternative B BLM and Forest Service management actions, in concert with other state and federal agencies and private landowners, play a critical role in the future trends of GRSG populations. The BLM National Policy Team, as part of the National Greater Sage-Grouse Planning Strategy, established the NTT in August 2011. The NTT's mission was to develop and describe conservation measures to be considered while new or revised range-wide and long term regulatory mechanisms were developed through LUPAs to conserve, enhance, and restore the portions of GRSG habitat on BLM- and Forest Service-administered lands. The BLM and Forest Service used GRSG conservation measures in A Report on National Greater Sage-Grouse Conservation Measures (Sage-Grouse National Technical Team 2011, also referred as to the NTT Report) to form management direction under Alternative B.	-
2-81	.8.5 Alternative D This is the Idaho and Southwestern Montana Sub-region alternative. It describes conservation measures to conserve, enhance, and restore GRSG habitat on BLM- and Forest Service-administered lands, while balancing resources and resource use among competing human interests, land uses, and the conservation of natural and cultural resource values, and sustaining and enhancing ecological integrity across the landscape, including plant, wildlife, and fish habitat. This alternative incorporates the NTT strategy and includes local adjustments to A Report on National Greater Sage-Grouse Conservation Measures (NTT 2011) and habitat boundaries to provide a balanced level of protection, restoration, enhancement, and use of resources and services to meet ongoing programs and land uses.	-
2-103	Table 2-10. Alternative E: E-GOAL-1: Conserve the GRSG and its habitat to avoid a listing under the ESA (see NTT 2011).	-

S-I.5 SUMMARY TABLE OF TABLE 2-12, CHAPTER 2, 2015 FEIS. COMPARISON OF ALLEVIATED THREATS TO GRSG IN THE IDAHO AND SOUTHWEST MONTANA SUB-REGION:

p. 2-205. Summary for <i>Fire, Fuels Treatments including Prescribed Fire</i> :	All action alternatives will decrease habitat loss from prescribed fire and wildfire by limiting prescribed fire and prioritizing wildfire suppression efforts in the sub-region, which respond to the Conservation Objectives Team report objectives. Alternatives B, D, E, F and the Proposed Plan would also try to lessen the future probability of large fires in GRSG by putting in fire breaks which would further benefit GRSG. Alternatives B, C, D, F and the Proposed Plan all move to lessen habitat loss from treatments within winter habitat to varying degrees, which is consistent with the objective to retain sagebrush. Alternative C is passive toward fire and fuels management emphasizing natural restorative processes following a reduction in anthropogenic disturbance. In Alternative C, reduction in the threat of wildfire would occur over the long term from overall improvement of habitat. The Proposed Plan would allow prescribed fire if net benefit for GRSG, and would use an adaptive management approach.
p. 2-206. Summary for <i>Invasive Species</i> :	All action alternatives respond to the COT report objectives by implementing actions to maintain and restore healthy sagebrush communities. Alternative D provides the lowest surface disturbance threshold (no unmitigated loss of habitat), which would reduce opportunities for incursion of nonnative species. Alternatives B, C, F and the Proposed Plan propose 3 percent thresholds in PHMA. Alternatives B, D, E, F and the Proposed Plan prioritize restoration of areas with invasive weed infestations and emphasize restoration, which would further reduce habitat degradation. Alternative C prioritizes restoration of invasive infestations but limits restoration to natural processes following a reduction in anthropogenic uses (livestock removal, fencing and roads infrastructure removal).
p. 2-206 Summary for <i>Pinyon-Juniper Encroachment</i> :	All action alternatives except Alternative C would respond to the pinyon-juniper objective in the Conservation Objectives Team report. The objective is to remove pinyon-juniper from areas of sagebrush that are most likely to support GRSG at a rate that is at least equal to rate of pinyon-juniper incursion. Alternatives D and E directly address juniper removal and prioritization and the Proposed Plan includes enhanced monitoring and mitigation. Alternatives B, C, and F talk more generally about restoration and thus may not provide the greatest assurance for improvement of GRSG habitat.
p. 2-207 Summary for <i>Livestock Grazing, Structure Range Improvements and Wild Horses</i> :	All action alternatives would manage grazing to better meet the ecological conditions that maintain or restore healthy sagebrush shrub and native perennial grass and forb communities and conserve the essential habitat components for GRSG (e.g., shrub cover, nesting cover), which responds to the Conservation Objectives Team report objective. All action alternatives emphasize GRSG in decision making for livestock grazing; however, Alternative C would remove grazing from PHMA and Alternative F would reduce grazing. Grazing management would be similar between Alternatives B, D, E, and the Proposed Plan with slightly different guidance or priorities. For wild horses there would be a focus on GRSG habitat and priority for gathers in GRSG habitat for Alternatives B, D, F and the Proposed Plan. These alternatives include evaluation of HMAs and Wild Horse Territories to consider adjustments in AML to meet GRSG habitat standards. Alternatives C and E do not directly address WHB.

Appendix S-I. Review of the NTT and COT Report's Relevance to the Planning Process; Incorporation of the NTT, COT, and USGS Summary of Science into the Idaho Planning Process

p. 2-208. Summary for <i>Infrastructure - Right-of-way</i> :	All alternatives respond to the conservation objective for infrastructure identified in the Conservation Objectives Team report, which is to avoid development within priority areas for conservation. Alternatives B, C, D, and F all close certain areas to new ROWs. The difference between these alternatives is the amount of GRS habitat that would be closed and the type of ROWs that would be prohibited or restricted. Alternative C closes all occupied GRS habitat to new ROWs and is the most restrictive. Alternatives B and F include the same restrictions as Alternative C; however, these restrictions would be applied to a smaller geographic area. Alternative D and the Proposed Plan would provide fewer restrictions, as all GRS habitat would be ROW avoidance with exclusions for certain ROWs in PHMA. Also under Alternative E, some GRS habitat would be managed as ROW avoidance. This may eliminate habitat loss, degradation, and fragmentation in important seasonal habitats. However, because there are few if any exclusions under this alternative, there is less assurance of protection for GRS on federal land. All alternatives seek to avoid conflict with GRS habitat, to utilize existing corridors, and to co-locate within existing development footprints.
p. 2-209. Summary for <i>Infrastructure – Roads</i> :	All alternatives respond to the Conservation Objectives Team report objective to varying degrees. All alternatives would limit OHV travel to existing or designated routes in certain areas, which would eliminate unauthorized route creation. The difference between alternatives is the amount of GRS habitat that would be changed from an open to a limited category. Alternative A would have the fewest acres limited to existing roads and trails, followed by Alternatives B and F. Under Alternatives C, D, E, and the Proposed Plan all GRS habitat would be limited to existing roads and trails.
p. 2-209. Summary for <i>Infrastructure – Fences</i> :	Some of the alternatives respond to the intent of the Conservation Objectives Team report objectives, which is to minimize impacts from fences on GRS. Alternatives B, D, and F would consider more of the conservation options identified in the Conservation Objectives Team report. For example, marking fences would decrease bird/fence collisions, and removal of unneeded fences would decrease collisions and opportunities for avian predation. Alternative E in Idaho would only include marking fences.
p. 2-210. Summary for <i>Energy Development (Non-renewable)</i> :	To varying degrees all action alternatives respond to the Conservation Objectives Team report objective for energy, which is that energy development should be designed to ensure that it will not impinge on stable or increasing GRS population trends. Alternatives B, C, and F close areas to new leasing. The difference between these alternatives is the amount of GRS habitat that would be closed. Alternative C closes all occupied GRS habitat to new leasing and is the most restrictive. Alternatives B and F include the same restrictions as Alternative C; however, these restrictions would be applied to a smaller geographic area. Management under Alternative D and the Proposed Plan would be less restrictive than Alternatives B, C, and F. Stipulations such as NSO, CSU, and TL would restrict the amount, location, and timing of development. These restrictions would reduce habitat loss, degradation, and fragmentation in seasonal habitats. Alternative E would provide the fewest restrictions on fluid mineral leasing and development. Under Alternatives B, C, F and the Proposed Plan RDFs would be attached to new and existing leases. Applying required design features to existing leases may eliminate habitat loss, degradation, and fragmentation. However, the effectiveness of these measures would be limited in areas where there is already extensive development. Under Alternative D, design features would not be required, but would be discretionary. There would be no restrictions on existing leases under Alternative E.
p. 2-211. Summary for <i>Renewable Energy Sources – Wind Energy</i> :	To varying degrees all alternatives respond to the conservation objective for energy, which is to ensure that development will not impinge upon stable or increasing population trends. Alternatives B, C, D, F and the Proposed Plan provide protection from wind development to GSRG and their habitat since all four stipulate that wind development is excluded from PHMA. Population declines could occur under Alternatives A and E, as wind development would be allowed. Stipulations on development would reduce habitat loss, fragmentation, degradation, and disturbance.

Appendix S-I. Review of the NTT and COT Report's Relevance to the Planning Process; Incorporation of the NTT, COT, and USGS Summary of Science into the Idaho Planning Process

p. 2-210. Summary for <i>Mining – Solid Minerals, Non-energy Leasables, Locatables, and Mineral Materials</i> :	To varying degrees all action alternative respond to the COT report objectives, which is to maintain GRSG population and no net loss of GRSG habitat in in areas affected by mining. Alternatives B, C and F would be closed or withdrawn to other minerals. Therefore, future impacts on GRSG would not occur, which address the objectives in the COT report. Under Alternative D and the Proposed Plan, surface use restrictions would be placed on development to protect breeding, and some nesting and early brood-rearing habitat, which would provide opportunities for nest success and chick survival. Additional stipulations (CSU and TL) would restrict the type, amount, location, and timing of development. These restrictions would reduce habitat loss, degradation and fragmentation. Under Alternative E in Idaho, impacts would continue, as management would be the same as Alternative A. Some impacts would be reduced in Utah through the application of stipulations. As such, there is less assurance of protection for nesting GRSG. Alternatives B, C, F and the Proposed Plan would require RDFs along with other conservation measures to reduce habitat loss, fragmentation, degradation, and disturbance to the extent possible on valid rights. Under Alternative D, design features would not be required, but would be discretionary. There would be no restrictions on existing leases under Alternative E.
p. 2-211. Summary for <i>Renewable Energy Sources – Wind Energy</i> :	To varying degrees all alternatives respond to the conservation objective for energy, which is to ensure that development will not impinge upon stable or increasing population trends. Alternatives B, C, D, F and the Proposed Plan provide protection from wind development to GSRG and their habitat since all four stipulate that wind development is excluded from PHMA. Population declines could occur under Alternatives A and E, as wind development would be allowed. Stipulations on development would reduce habitat loss, fragmentation, degradation, and disturbance.
p. 2-211. Summary for <i>Recreation/Travel Management</i> :	To varying degrees, all action alternatives respond to the COT report objective, which is that areas subject to recreation activities should maintain healthy native sagebrush communities based on local ecological conditions and with consideration of drought conditions, and managed direct and indirect human disturbance (including noise) to avoid interruption of normal GRSG behavior. PHMA would be limited to existing roads under Alternatives B and F. Under Alternatives C, D, E, and the Proposed Plan all GRSG habitat would be limited to existing roads. Once travel management planning is completed, this would be changed to a limited to designated routes category. These alternatives would prevent proliferation of new routes, and would include direction for seasonal closures, route realignment, and provisions for valid existing rights. Recreation management under all action alternatives would aim to reduce impacts on GRSG and habitat.
p. 2-212. Summary for <i>Agriculture/Urbanization</i> :	To varying degrees, all action alternatives respond to the COT report objective to limit urban and exurban development in GRSG habitats and maintain intact native sagebrush communities by managing land tenure, consolidating and otherwise minimizing the impacts of infrastructure supporting adjacent development, and burial/removal of infrastructure. Alternatives B, C, D, F and the Proposed Plan favor land acquisition as a tool for conserving important habitat on private lands. All alternatives prescribe ROW exclusion or avoidance (see Infrastructure) and colocation of infrastructure to minimize footprint. Alternatives B, D, and F contain specific actions directed at burial or removal of existing infrastructure such as power lines. Alternatives B, C, D, F and the Proposed Plan call for retention of all GRSG habitats in public ownership. Impacts would continue to occur under Alternative E, which is the same as Alternative A.

- End of tables of excerpts from the ID GRSG 2015 and 2018 NEPA Docs. Nov 25, 2019 -

S-I.6 COT, NTT AND USGS 2018 GENERAL INFORMATION

Outline:

- 1) COT and NTT Reports
 - a) Introduction
 - b) Description of each document
 - c) How the reports were considered in 2015 and 2019 LUP decision
 - d) How/which parts were implemented
- 2) USGS 2018 Annotated Bibliography: Research on Sage-Grouse since 2015
 - a) Description
 - b) How it was considered in 2018

I.a. Introduction to COT and NTT reports:

Upon review of the best available science and commercial information, the FWS concluded in 2010 that the Greater Sage-Grouse warranted protection under the ESA. Two factors leading to the decision to list the species as “warranted but precluded” were threats to habitat and the inadequacy of existing regulatory mechanisms.

I.b.i. Sage-Grouse National Technical Team (NTT). A Report on National Greater Sage-Grouse Conservation Measures. December 2011. https://eplanning.blm.gov/epl-front-office/projects/lup/9153/39961/41912/WySG_Tech-Team-Report-Conservation-Measure_2011.pdf

In 2011, in response to the FWS 2010 warranted but precluded finding, the BLM initiated a land use planning process and assembled a National Technical Team (NTT) made up of state and federal sage-grouse experts to review all of the best available science on sage-grouse and habitat impacts and make recommendations for conservation measures that should apply inside Priority Habitats. The report describes the scientific basis for the conservation measures proposed within each BLM program area.

Among the key recommendations of the National Technical Team’s final report (NTT 2011) were recommendations to: (1) close Priority Habitats to future mining claims and leasing for oil, gas, and coal; (2) apply four-mile NSO buffers around sage-grouse leks for existing oil and gas leases; and (3) cap cumulative habitat disturbance at 3% of the landscape and one industrial site per square-mile.

I.b.ii. Conservation Objectives Team (COT). Greater Sage-Grouse Final Report. February 2013. <https://www.fws.gov/greatersagegrouse/documents/COT-Report-with-Dear-Interested-Reader-Letter.pdf>

In 2012, at the request of the Sage-Grouse Task Force, a group of state and federal representatives (Conservation Objectives Team (COT)) produced a report that identified the most significant areas for Greater Sage-Grouse conservation (Priority Areas for Conservation (PACs)), the principal threats within those areas, and the degree to which such threats need to be reduced or ameliorated to conserve the Greater Sage-Grouse so that it would not be in danger of extinction or likely to become so in the foreseeable future.

I.c. How COT and NTT were considered in 2015 and 2019 LUP decisions:

2015: As directed in the BLM Washington Office IM 2012-044, the conservation measures developed by the National Technical Team were to be considered and analyzed, as appropriate, through the land use planning and NEPA processes by all BLM state and field offices that contain occupied Greater Sage-Grouse habitat. IM 2012-144 <https://www.blm.gov/policy/im-2012-044> also directed the BLM to refine the Preliminary Priority Habitat and Preliminary General Habitat data through the land use planning process. The 2013 Draft Sage-Grouse RMP amendments and revisions/Draft EISs contained one alternative based on the conservation measures developed by the National Technical Team and evaluated through the 2012-2015 planning process. (NOTE – do we need to mention that the COT Report was published in February and the draft EISs were published in August?)

2019: The BLM considered the entire range of alternatives from the 2015 Final EIS to identify issues meriting reconsideration, given the BLM's goal of enhancing alignment with state plans. In this manner, the BLM will continue to appropriately manage Greater Sage-Grouse and its habitat through this planning effort in tandem with the 2015 ROD/ARMPA.

I.d. How/which parts of NTT were implemented (does this mean – incorporated into the 2015 ROD?):

The 2015 Proposed LUPA incorporated management based on the National Technical Team recommendations.

2 USGS 2018 Annotated Bibliography: Research on Sage-Grouse since 2015

2.a. Description:

In June 2017, Secretarial Order 3353 Greater Sage-Grouse Conservation and Cooperation with Western States established a team to review the federal land management agencies' Sage-Grouse Plan Amendments or Revisions completed on or before September 2015.
https://www.doi.gov/sites/doi.gov/files/uploads/so_3353.pdf

In 2018, additional constraints on land uses or development without a documented need would not meet the purpose of SO 3353. The BLM did not discover new information that would indicate the agency should increase the level of conservation, management, and protection to achieve its land use plan objective. As part of the consideration of whether to amend the 2015 Greater Sage-Grouse RMPs, the BLM requested the USGS to develop an annotated bibliography of Greater Sage-Grouse science published since January 2015 (Carter et al. 2018; see Section 3.1). In addition, SO 3353 directs the BLM to promote habitat conservation, while contributing to economic growth and energy independence. As analyzed in the 2015 Final EIS, all of the previously analyzed alternatives, including one proposing constraints stricter than the current management plan, were predicted to result in a loss of development opportunities on public lands.

2.b. How USGS Bibliography was considered in 2018

As part of the consideration of whether to amend some, all, or none of the 2015 Greater Sage-Grouse land use plans, the BLM requested the USGS to develop an annotated bibliography of Greater Sage-Grouse science published since January 2015 (Carter et al. 2018) and a report that synthesizes and outlines the potential management implications of this new science (Hanser et al. 2018).

S-1.7 HOW THE 2019 ARMPA CHANGES AFFECT ALIGNMENT WITH USFWS CONSERVATION OBJECTIVES TEAM OBJECTIVES

This appendix includes a description of the 2013 USFWS Conservation Objectives Team (COT) Report, including how the 2013 Draft EIS and 2015 Final EIS included sections that documented how the report's objectives were all addressed in the considered range of alternatives. The October 2, 2015 USFWS determination that listing sage-grouse as threatened or endangered was partially based on the 2015 ARMPAs incorporating management that reduced or minimized threats. This section summarizes an assessment of how the 2019 ARMPA management changes affect alignment with the COT Report objectives. Based on this assessment, the management in the 2019 ARMPA does not change alignment of the BLM Utah's plan with the COT objectives and the corresponding support of the COT Report's goal of "long-term conservation of sage-grouse and healthy sagebrush shrub and native perennial grass and forb communities by maintaining viable, connected, and well-distributed populations and habitats across their range, through threat amelioration, conservation of key habitats, and restoration activities" (COT Report, page 13).

S-1.7.1 Issue: Sagebrush Focal Area Designations/Withdrawal Recommendation

Removal of the SFAs does not affect meeting the COT objectives. SFAs are not identified as required to meet any specific COT objective, and are not even mentioned in the COT Report. SFAs are a subset of PHMA and are managed as PHMA with some additional management, however that additional management overlaps significantly with management of PHMA. The sagebrush focal area (SFA) designation and associated management direction was removed to eliminate redundancy. In the 2015 ARMPA, the SFA designation overlaid the PHMA designation and was determined to be unnecessary as a protective measure since the PHMA designation serves to protect Greater Sage-Grouse habitat and populations from the threats experienced in Idaho. A proposed SFA mineral withdrawal was canceled with a Notice of Cancellation published in the Federal Register on October 11, 2017. Both SFA and PHMA are managed as "no surface occupancy" for fluid Mineral leasing, the only difference is that PHMA allows for a limited exception. The exceptions must meet a stringent series of criteria to be approved as described in MD MR 3. Finally, both SFA and PHMA are the top two priorities for vegetative treatments, permit renewals, monitoring, and compliance checks. The removal of SFA designations will have no measurable effect on the conservation of Greater Sage-Grouse in Idaho because the Management Direction proposed for PHMA would remain in place and continue to protect Greater Sage-Grouse habitat. SFA removal will add flexibility for responsible development with stringent requirements including mitigation to achieve a no net loss goal and objective to Greater Sage-Grouse habitat in PHMA.

The removal of SFA designations would have no measurable effect on the conservation of Greater Sage-Grouse in Idaho because the Management Direction proposed for PHMA would remain in place and continue to protect Greater Sage-Grouse habitat. SFA removal would add flexibility for responsible development with stringent requirements including mitigation to achieve a no net loss to Greater Sage-Grouse habitat in PHMA.

S-1.7.2 Issue: Administering Disturbance and Density Caps

Removing the project level disturbance cap does not affect meeting the COT objectives. The COT Report does not specifically call for implementation of a disturbance cap. Rather, the COT objectives discuss the importance of minimizing disturbance to sage-grouse habitat.

Removal of the 3 percent project level disturbance cap would allow BLM to intentionally cluster developments within areas already degraded by discrete anthropogenic activities in Greater Sage-Grouse habitat as long as the overall disturbance within the BSU remains below 3 percent. The 3 percent project scale disturbance cap has the potential to spread development into undeveloped areas of Greater Sage-Grouse habitat just to avoid reaching the 3 percent project scale disturbance cap in already fragmented areas. All 8 BSUs in Idaho are well under the 3 percent BSU scale Disturbance Cap (most are less than 1 percent) and are expected to remain low because of the no-net-loss mitigation standard and the other restrictions to development in PHMA and IHMA.

Most development is centered along population centers in Idaho and most Greater Sage-Grouse habitat is located away from habitat. This reduces the current potential for development related habitat loss or disturbance but as Idaho's population continues to grow, development in the future may be pushed more and more into Greater Sage-Grouse habitat.

S-1.7.3 Issue: Modifying Mitigation Strategy

The COT Report recommends the pursuit of a “no net loss” goal for sage-grouse habitat, noting that “when avoidance is not possible, meaningful minimization and mitigation of the impacts should be implemented” (page 31). It also recommends that “efforts should be made to restore the components lost within the PAC (e.g., redundancy or representation) in other areas such that there is no net loss of sage-grouse or their habitats” (page 37). The 2019 ARMPA implements this recommendation by adopting a goal and objective to “undertake planning decisions, actions and authorizations ‘to minimize or eliminate threats affecting the status of [GRSG] or to improve the condition of [GRSG] habitat’” (MD SSS 30; MD MR 3; MD LR 14; Section 2.12) (2019 ROD Section 1.6).

The COT Report does not specify how to achieve its objective of “no net loss” of sage-grouse habitat. The approach taken by the BLM in the 2019 ARMPA, which includes the goal and objective described above (see MD MT 3; Appendix E-Anthropogenic Disturbance and Adaptive Management and F-Mitigation Framework), while relying on avoidance and minimization, implementation of state mitigation requirements and standards, and voluntary mitigation undertaken by project proponents, as well as additional BLM and State investments to protect and restore sage-grouse habitat, is fully consistent with the COT report's recommendation to pursue a “no net loss” objective for sage-grouse habitat.

S-1.7.4 Issue: Modifying Habitat Objectives

The COT Report includes general descriptions of Greater Sage-Grouse seasonal habitat needs. It cites several references where various habitat characteristics (vegetation type, density, height, etc.) are detailed. However, the COT chose not to prescribe or recommend a range-wide standard of metrics for habitat characteristics in the COT Report. Instead, the COT objectives are more general, recommending that habitats be managed “in a manner consistent with local ecological conditions that maintains or restores healthy sagebrush shrub and native perennial grass and forb communities and conserves the essential habitat components for sagegrouse (e.g. shrub cover, nesting cover)” (COT Report, page 45 – emphasis added).

Consistent with this approach, the 2019 ARMPA makes changes to the specific habitat objective indicators and values (percent cover, height, composition, etc.) based on peer-reviewed literature specific to Greater Sage-Grouse use of habitats throughout Idaho. These changes update the metrics from the 2015 ARMPA based on finalization and publication of the Greater Sage-Grouse habitat

characteristics for Utah. These changes are precisely aligned with the COT objective to manage habitats “consistent with local ecological conditions” (COT Report, page 45), as well as modifying the specificity of habitat objectives “as dictated by new findings” (COT Report, page ii).

The 2019 decision clarified the intent of the Desired Conditions Table 2-2. It also modified the grass height objective from “7 inches” to “adequate nesting cover” based on best science. This change reflects that adequate nesting cover may change to be more or less than the standard 7 inches over time as science advances. These changes are in alignment with the COT objectives for habitat.

S-I.7.5 Issue: Waivers, Exceptions, and Modifications for NSO Stipulations

The COT objective for energy development is that it “should be designed to ensure that it will not impinge upon stable or increasing sage-grouse population trends” (COT Report, page 43). It goes on to note that “addressing energy development and any subsequent successful restoration activities in sagebrush ecosystems *will require consideration of local ecological conditions*, which cannot be prescribed on a range-wide level” (ibid, emphasis added).

The 2019 ARMPA does not change the 2015 fluid mineral leasing no surface occupancy (NSO) stipulation for PHMA. As such, the strategy to avoid any potential detrimental impacts of energy development did not change. However, as described in the 2018 Final EIS, PHMA in Idaho allows NSO with limited exception in PHMA. The change from NSO with no exception to NSO with limited exception should not result in increased habitat loss or degradation because the proposed exception criteria and screening and development criteria (MD SSS 29 and 30) require offsetting impacts to achieve a no net loss to Greater Sage-Grouse or its habitat. The limited exception would allow BLM to develop fluid mineral leases in PHMA under limited situations consistent with its multiple use mandate.

S-I.7.6 Issue: Modifying Habitat Management Area Boundaries

The COT Report clearly anticipates updating boundaries with the objective that “PAC boundaries should be adjusted based on new information regarding habitat suitability and refined mapping techniques, new genetic connectivity information, and new or updated information on seasonal range delineation” (COT Report, page 37). Language was already in the 2015 ARMPA addressing such adjustments. The 2019 ARMPA added additional detail to clarify boundary adjustments through the process of collecting and incorporating new information MD SSS 6 considers the fact that habitat conditions and our understanding of Greater Sage-Grouse can change over time as new science emerges and the climate changes; therefore, it may be necessary to modify habitat boundaries and designations within Idaho. To effectively respond to changes, the BLM and cooperating agencies have developed a two-team approach, detailed in the management alignment alternative, that would become Appendix K. The process and sideboards identified in the two-team approach should reduce the risk of habitat adjustments being made that disregard the science and the needs of Greater Sage-Grouse.

S-I.7.7 Issue: Application of Lek Buffers and Required Design Features

Buffers are not mentioned in any COT objectives or conservation measures. They are, however, mentioned in the COT Report in the energy development section. That section states, that “if avoidance is not possible within PACs...development should only occur in non-habitat areas...with an adequate buffer that is sufficient to preclude impacts to sage-grouse habitat from noise, and other human activities” (COT Report, page 43).

Avoidance is the primary tool in both the 2015 and 2019 ARMPAs. These decisions retain the existing buffers in PHMA. Buffers are largest in PHMA, they were reduced in IHMA, and they are the smallest in GHMA. This change was made to align with the Governor's three-tier habitat approach where there are the most protections in the best habitat (i.e., PHMA) and there are fewer protections (smaller buffers) in the lesser quality habitats. RDFs in GHMA will be applied as Best Management Practices (BMPs). This decision also reorganized and streamlined the RDFs for easier application when designing implementation projects.

S-1.7.8 Issue: Grazing Systems and Prioritization of Grazing Permits

The COT Report includes a table that characterizes threats to Greater Sage-Grouse by population. One of the threats assessed included grazing. For all 12 Utah populations assessed, threats from grazing were identified as "not known to be present" (see COT Report, Table 2, pages 16 through 29).

The COT Report objective for livestock grazing in general is to "conduct grazing management...in a manner consistent with local ecological conditions that maintains or restores healthy sagebrush shrub and native perennial grass and forb communities and conserves the essential habitat components for sage-grouse (e.g. shrub cover, nesting cover)" (COT Report, page 45). It goes on to note that "areas which do not currently meet this standard should be managed to restore these components." There are also objectives for range management structures ("avoid or reduce the impact of range management structures on sage-grouse"), and fences ("Minimize the impact of fences on sage-grouse populations"). The 2019 ARMPA livestock grazing management aligns with these objectives.

Livestock grazing management direction was revised to incorporate key components of the Governor's sage grouse plan into BLM Management Direction (MD). This included 1) removing the threshold and response requirement during livestock permit renewal and 2) reiterating that grazing is guided by the C.F.R. 4100 Regulations. The BLM will continue to apply its Idaho Rangeland Health Standards in livestock permit renewals. If the BLM determines that Idaho Rangeland Health Standards are not being met, and if grazing is determined to be a causal factor and impacting Greater Sage Grouse or its habitat, then the BLM will take appropriate action.

The 2019 ARMPA livestock grazing objectives and management actions are consistent with the COT report.

Appendix S-2

Cumulative Effects Supporting Information

Appendix S-2 Cumulative Effects Supporting Information

S-2.1 RANGEWIDE IMPACTS FROM PAST, PRESENT, AND REASONABLY FORESEEABLE ACTIONS

Table 1 represents the past, present, and reasonably foreseeable actions across the entire range for Greater Sage-Grouse, which are separated by state. When assessing the cumulative impact of the DSEIS on Greater Sage-Grouse and its habitat, there are multiple geographic scales that the BLM has considered, including the appropriate WAFWA MZ. WAFWA MZs have biological significance to Greater Sage-Grouse. Established and delineated in 2004 in the *Conservation Assessment of Greater Sage-Grouse and Sagebrush Habitats* (Connelly et al. 2004), the WAFWA MZs are based on floristic provinces that reflect ecological and biological issues and similarities, not political boundaries.

Table 1
Rangewide Impacts from Past, Present, and Reasonably Foreseeable Actions

Action	Type	Effects
Great Basin		
Habitat Restoration Programmatic EIS	Great Basin-wide programmatic habitat restoration project	Programmatic document effects will be realized when the field implements projects. This action will provide opportunities to improve and enhance habitat through vegetation treatments.
Fuel Breaks Programmatic EIS	Great Basin-wide programmatic habitat fuel break project	Programmatic document effects will be realized when the field implements projects. This action will help to reduce the loss of habitat due to catastrophic fires.
Forest Service Greater Sage-Grouse Plan Amendments	Programmatic LUP amendments for Greater Sage-Grouse on Forest Service Lands in ID, UT, NV, CO, and WY	Programmatic document effects will be realized when the field undertakes projects to implement the LUP amendment. The FS is resolving protests. They have not made a decision.
Northwest Colorado		
Integrated program of work	Habitat restoration and improvement projects	Potential localized, short-term, adverse impacts on Greater Sage-Grouse habitat, with beneficial long-term impacts. Actions are consistent with those foreseen in the 2015 Final EIS and are therefore within the range of cumulative effects analyzed in the 2015 Final EIS.
Travel management	White River Field Office: Area-wide travel designations being considered through an ongoing plan amendment Little Snake Field Office: Travel Management plan, identifying route designations consistent with criteria in the 2015 LUPA	These actions represent implementation of objectives from 2015 ARMPA to prioritize travel management in Greater Sage-Grouse habitat. Impacts are covered in the cumulative impacts of the 2015 Final EIS as reasonably foreseeable.

Action	Type	Effects
Continued oil and gas development (60 parcels sold Sept 2019; Potential lease sale of 6 parcels December 2019; Future lease sales of 39 parcels in March 2020).	Disturbance and fragmentation	Development is consistent with the reasonably foreseeable development scenarios analyzed as part of the 2015 Final EIS and the associated field office RMPs. Additional impacts are expected to be within the range analyzed in 2015 Final EIS cumulative impacts analysis.
<i>Plans</i>		
Northwest Colorado Programmatic Vegetation Treatment Environmental Assessment (DOI-BLM-CO-N000-2017-0001-EA) decision	Programmatic NEPA document for streamlining habitat treatments in sagebrush	-
Idaho		
Wildland fires 2015–2017	BLM: Past acres burned on BLM-administered land	534,744 acres of HMA burned since the ROD was signed in 2015. Post-fire rehabilitation was implemented. Too soon to determine the effectiveness of rehabilitation.
Habitat treatments 2015–2017	BLM: Past habitat improvement projects	431,295 acres treated to restore or improve potential Greater Sage-Grouse habitat. Too soon to determine the effectiveness of treatment.
ROWs issued 2015–2017	BLM: Past ROWs issued on BLM-administered land	97 ROWs were issued in the planning area but fewer than 10 were in Greater Sage-Grouse habitat and resulted in new habitat loss. The effects were mitigated, using the mitigation hierarchy.
Soda Fire restoration	BLM: Present habitat restoration and fuel break construction	Restoration of previously burned Greater Sage-Grouse habitat. Results in a net benefit to Greater Sage-Grouse habitat.
Twin Falls Vegetation Project	BLM: Present habitat treatment project that improves Greater Sage-Grouse habitat district-wide	Restoration of Greater Sage-Grouse habitat and improved rangeland conditions. Results in a net benefit to Greater Sage-Grouse habitat.
Idaho Falls Vegetation Project	BLM: Present habitat treatment project that improves Greater Sage-Grouse habitat district-wide	Restoration of Greater Sage-Grouse habitat and improved rangeland conditions. Results in a net benefit to Greater Sage-Grouse habitat.
Natural gas-producing well near Weiser, Idaho	Private: Present active gas well on private land	Well is not in Greater Sage-Grouse habitat.
Conifer removal	NRCS: Present (2018) 1,862 acres of conifer removal on private land to improve Greater Sage-Grouse habitat	Conifer removal would improve Greater Sage-Grouse habitat and open areas to Greater Sage-Grouse that were previously unavailable because of juniper encroachment.
Weed treatments	NRCS: Present (2018) 95 acres of weed treatments on private land to reduce noxious weeds in Greater Sage-Grouse habitat	Weed treatments allow the native vegetation to outcompete weeds on treated acres.

Action	Type	Effects
Water development	NRCS: Present (2018) 21,308 feet of pipeline and 40 watering tanks installed on private land	Water development to move livestock out of natural springs and wet meadows.
Pending ROWs 2015–2017	BLM: Future ROW under analysis on BLM-administered land. For example, ROWs include existing distribution lines, gravel pits, roads, canal diversions, etc.	123 ROW applications have been submitted and are pending review and analysis.
Boise District Vegetation Project	BLM: Future habitat treatment project that improves Greater Sage-Grouse habitat district-wide	Restoration of Greater Sage-Grouse habitat and improved rangeland conditions result in a net benefit to Greater Sage-Grouse habitat.
Tristate Fuel Breaks Project	BLM: Future Greater Sage-Grouse habitat protection	Fuel breaks would protect habitat from wildfires. Some sagebrush may be lost during fuel break construction. Results in a net benefit to Greater Sage-Grouse habitat.
Bruneau-Owyhee Sage-Grouse Habitat Project	BLM: Ongoing removal of juniper encroaching into Greater Sage-Grouse habitat	Bruneau-Owyhee Sage-Grouse Habitat Project would remove encroaching juniper from Greater Sage-Grouse habitat and render the habitat usable for Greater Sage-Grouse. Results in a net benefit to Greater Sage-Grouse habitat.
Conifer removal	NRCS: Future (2019–2023) 5,541 acres of conifer removal on private land to improve Greater Sage-Grouse habitat	Conifer removal would improve Greater Sage-Grouse habitat and open areas to Greater Sage-Grouse that were previously unavailable because of juniper encroachment.
Weed treatments	NRCS: Future (2019–2023) 357 acres of weed treatments on private land to reduce noxious weeds in Greater Sage-Grouse habitat	Weed treatments allow the native vegetation to outcompete weeds on treated acres.
Water development	NRCS: Present (2019–2023) 82,502 feet of pipeline and 46 watering tanks installed on private land	Water development to move livestock out of natural springs and wet meadows.
Nevada and Northeast California		
Wildland Fires 2015-2017	BLM: Past – Acres burned on BLM administered land	Approximately 1.3 million acres of HMA burned between 2015-2017. Post-fire restoration is being implemented as described below.
Fire Restoration (Emergency Stabilization and Rehabilitation)	BLM: Past and Present – Habitat restoration following wildland fires	1.8 million acres of habitat are either currently being treated or scheduled to be treated according to specific prescriptions outlined in Emergency Stabilization and Burned Area Rehabilitation plans following wildfire.
Habitat Treatments	BLM: Past – Habitat improvement projects	Over 176,000 acres of Greater Sage-Grouse habitat was treated between 2015-2017 to maintain or improve conditions for Greater Sage-Grouse. Treatments included conifer removal, fuel breaks, invasive species removal and habitat protection/restoration.

Action	Type	Effects
Land Use and Realty (issued and pending) 2015-2018	BLM: Past ROWs issued on BLM land	227 ROWs were issued in the planning area between 2015-2017. This includes amendments and reauthorizations, which may not have resulted in new disturbance. For ROWs occurring in Greater Sage-Grouse habitat, effects were offset using the mitigation hierarchy.
	BLM: Future pending	85 ROW applications are pending review and analysis. New ROWs would be held to the compensatory mitigation process described in this Proposed RMPA/Final EIS. However, no additional impacts from those described in the Draft EIS and 2015 Final EIS are expected. In addition, BLM Nevada is also currently evaluating a proposed withdrawal for expansion of the Fallon Naval Air Station, Fallon Range Training Complex for defense purposes.
Oil and Gas	BLM: Past	BLM has offered for lease 425,711 acres in HMAs; 407,478 of that total was leased. Lease stipulations apply as described in the leases according to HMA category.
	BLM: Past and Future	BLM's scheduled lease sale on June 12, 2018 included offering a total 110,556 acres of HMAs for lease. After the sale, 30,591 acres in HMA were sold. On September 11, 2018, BLM held another lease sale, where 13,163 acres in HMA were sold. The final lease sale of 2018 for BLM Nevada is scheduled for December 11, 2018 and this sale will not include any parcels within HMA for lease. 165 parcels have been moved from the November 12, 2019 O&G lease sale, New sale date TBD. These parcels are all located in the Ely District. 220 parcels within Greater Sage-Grouse habitat have been moved to April 2020 lease sale.

Action	Type	Effects
Geothermal	BLM: Past and Present	<p>Between 2015 and 2017, the BLM has offered for lease 24,468 acres within HMAs. Lease stipulations apply as described in the leases as analyzed in the 2015 Final EIS.</p> <p>Six geothermal development permits have been approved and drilled on existing pads on existing leases. McGinness Hills Phase 3 Environmental Assessment authorized up to 42 acres of disturbance on existing leases, which will be offset according to the mitigation hierarchy.</p> <p>Juniper Geothermal Project: Proposed activity – still waiting for baseline data to begin the EA. Analysis has not yet started but EA will analyze the 2015 and 2019 habitat types under separate alternatives.</p> <p>North Valley (San Emidio II) Geothermal Development Project. Analysis has not yet started but EA will analyze the 2015 and 2019 habitat types under separate alternatives.</p> <p>Baltazor Geothermal Project Pre NEPA. Analysis has not yet started but EA will analyze the 2015 and 2019 habitat types under separate alternatives.</p> <p>North Valley (San Emidio II) Geothermal Development Project</p>
Geothermal	Forest Service: Future Pending	6,901 acres of HMA pending Forest Service concurrence to lease, no pending geothermal development permits. If in HMAs, stipulations would be as described in 2015.
Locatable Mineral Projects	BLM: Past and Present	Between 2015 and 2017, the BLM has approved 18 new mines and/or expansions in the planning area, which is within the reasonably foreseeable development scenario outlined in the 2015 Final EIS (Section 5.1.16).
	BLM: Future Pending	The BLM is currently reviewing 20 plans of development for new mines or expansions, which is within the reasonably foreseeable development scenario outlined in the 2015 Final EIS (Section 5.1.16).
Fuel Breaks Programmatic EIS	BLM: Future – Great Basin-wide programmatic habitat fuel break project	Programmatic document effects will be realized when the field implements projects.

Action	Type	Effects
Greater Sage-Grouse Conservation	Forest Service- Future	Forest Service has indicated they will also be amending their land use plans. Specific details of their proposed changes are not yet known, but it is anticipated they propose alignment with state management plans and strategies.
Tri-State-Calico Complex Wild Horse and Burro Gather	BLM: Future	Removing wild horses will protect the rangelands from overgrazing and provide better habitat conditions for sage-grouse.
Thomas Creek Range Improvement Project (CA)	BLM: Future	Vegetation improvement project to improve the range for sage-grouse and other sage obligate species.
Juniper and Fuel Break Maintenance (CA)	BLM: Future	Juniper removal and fuelbreak project to remove encroaching juniper and protect the treatments with from wildfire.
Twin Peaks Horse Gather (CA)	BLM: Future	Removing wild horses will protect the rangelands from overgrazing and provide better habitat conditions for sage-grouse.
Oregon		
Emergency Stabilization and Rehabilitation in South Bull Ridge RNA	Aerial herbicide application	Preliminary results indicate success in treating annual grasses (2017).
Emergency Stabilization and Rehabilitation in South Ridge Bully Creek RNA	Aerial herbicide application	Preliminary results indicate success in treating annual grasses (2015).
Emergency Stabilization and Rehabilitation in North Ridge Bully Creek RNA	Aerial herbicide application	Preliminary results indicate success in treating annual grasses (2015).
Trout Creek Mountain	Grazing permit renewal	Grazing permit renewal allotment includes the East Fork Trout Creek Research Natural Area (2016).
Utah		
Fire and Fuels		
Wildland Fires 2015-2017	Acres burned on BLM administered land	Approximately 61,262 acres of PHMA/GHMA burned between 2015-2017. Post-fire restoration is being implemented across all population areas that are affected. Effects: Potential loss of habitat value due to the removal of vegetation by fire.

Action	Type	Effects
Fire Restoration (Emergency Stabilization and Rehabilitation)	Acres of habitat restoration following wildland fires	<p>Approximately 173,100 acres of HMA were treated/restored between 2015-2017. All of these acres are being restored in according to specific prescriptions outlined in Emergency Stabilization and Burned Area Rehabilitation plans following wildfire across all population areas that are affected.</p> <p>Effect: Potentially improve or increase habitat due to vegetative restoration activities.</p>
Vegetation		
Habitat Treatments	Acres of habitat improvement projects	<p>Past: Over 219,000 acres of Greater Sage-Grouse habitat was treated between 2015-2017 to maintain or improve conditions for Greater Sage-Grouse across all populations. Treatments included conifer removal, fuel breaks, invasive species removal and habitat protection/restoration.</p> <p>Effect: Potentially improve or increase habitat due to vegetative restoration activities.</p> <p>Future: Over 524,702 acres of Greater Sage-Grouse habitat is being proposed for treatment over the next 5 years. Treatments will include conifer removal, fuel breaks, invasive species removal and habitat protection/restoration across all populations.</p> <p>Effect: Potentially improve or increase habitat due to vegetative restoration activities.</p>

Action	Type	Effects
Lands and Realty		
Land Use and Realty (issued and pending) 2015-2019	ROWs issued or pending on BLM land	<p>Past: Throughout the planning area (all BLM field offices in Utah except Saint George and Monticello) regardless of Greater Sage-Grouse habitat, 1,092 ROWs were issued between 2015 and 2019. However, only 109 of these were within PHMA.</p> <p>Effect: These numbers include amendments and reauthorizations, which would likely not have resulted in any new disturbance. For ROWs occurring in Greater Sage-Grouse habitat, effects were offset using the mitigation hierarchy.</p> <p>Future: Throughout the entire planning area, 225 ROW applications are pending review and analysis. Of these, only 30 are within PHMA.</p> <p>Effect: New ROWs would be held to the compensatory mitigation process described in this Proposed RMPA/Final EIS. However, no additional impacts from those described in the Draft EIS and 2015 Final EIS are expected.</p>
Zephyr Transmission Line	500 kV transmission line	<p>Application received – could impact the Bald Hills, Uintah, Carbon, Strawberry, Emery, and Sheeprocks populations.</p> <p>Effects: May remove vegetation due to construction activities. Towers may provide perching opportunities for avian predators. However, most of these impacts should be removed by management standards identified in the selected alternative.</p>
Parker Knoll Pump Storage Hydroelectric Federal Energy Regulatory Commission Project	Create electricity using a two-reservoir, gravity-fed system; approximately 200 acres of Greater Sage-Grouse habitat would be lost; mitigation involves Greater Sage-Grouse habitat-improvement work in areas adjacent to the lost habitat.	<p>Still in planning and pre-NEPA stages – could impact the Parker Mountain population.</p> <p>Effects: May remove vegetation due to construction activities. Increased maintenance activities could lead to an increase in collision mortalities. Any associated tall structures may provide perching opportunities for avian predators. However, most of these impacts should be removed by management standards identified in the selected alternative.</p>

Action	Type	Effects
Benefit Utility Project	Five rights-of-way across public lands for infrastructure (a road, 3 pipelines, and 2 powerlines) to support development of a mine on private lands. Estimated 1,037 acres of disturbance for the rights-of-way (7,000-9,000 acre mine and 320-acre processing plant).	<p>ROD issued in September 2018. Issuance and constructions of ROWs still pending – could impact a portion of the Uintah population (Dead Man Bench GHMA).</p> <p>Effects: May remove vegetation due to construction activities. Increased maintenance activities could lead to an increase in collision mortalities. Any associated tall structures may provide perching opportunities for avian predators. However, most of these impacts should be removed by management standards identified in the selected alternative.</p>
Congressionally Directed Land Tenure Adjustments	Land Tenure Adjustments from the BLM to the State of Utah	<p>Table 1-2 in Chapter 1 shows the acres of public land with mapped PHMA and GHMA, establishing the summary of all past lands actions.</p> <p>In the National Defense Authorization Act for Fiscal Year 2017 Congress directed a land exchange between the BLM and State Institution and Trust Lands Administration (SITLA). This includes, approximately 2,400 acres of GHMA in the Sheeprocks area being studied for transfer to the State of Utah.</p> <p>In March 2019 Congress provided for land transfers in the John D. Dingell, Jr. Conservation, Management, and Recreation Act. This could include the BLM acquiring 2,065 acres of PHMA and 1,360 acres of GHMA in the Uinta population. It could also include the transfer of SITLA land in Congressional designations outside of Greater Sage-Grouse habitat for BLM lands throughout the state. While the list of involved lands has not been finalized, preliminary potential parcels include approximately 51,400 acres of PHMA and 1,870 acres of GHMA in the Rich, Carbon, Emery, Uinta, and Sheeprocks populations.</p> <p>Effects: Since compliance with the state's 2019 sage-grouse plan and the Governor's Executive Order on sage-grouse is voluntary for SITLA, transfers of PHMA from BLM would decrease the level of certainty for sage-grouse protection. However, since the lands involved in these Congressionally directed</p>

Action	Type	Effects
Congressionally Directed Land Tenure Adjustments (continued)	(see above)	transfers has not been finalized at this time, the specific lands involved and, if transferred, their potential future uses are not known. It would be speculative to analyze beyond the above statement.
Leasable Minerals (Oil and Gas, Non-energy Leasable Minerals, Coal, and Oil Shale and Tar Sands)		
Oil and Gas Leases	Acres of BLM land leased for Oil and Gas development	<p>Past: From 2105-2017 the BLM has leased approximately 25,000 acres in HMAs, of which approximately 25 of those acres were located in PHMA. Lease stipulations apply as described in the leases according to HMA category. In addition there have been 58 lases sold in September of 2019.</p> <p>Effects: The act of leasing would have no direct effect.</p> <p>Future: The BLM is required to conduct quarterly lease sales which could include parcels in HMA. Lease stipulations would still be as described in 2015. BLM is also planning a March 2020 lease sale for 21 parcels. Leases have been sold and issued. Eight leases were issued in SLFO and 88 leases were issued in the VFO that were in Greater Sage-Grouse habitat identified in the 2015 Greater Sage-Grouse ARPMA.</p> <p>Effect: The act of leasing would have no direct effect, as no specific disturbance is taken as a result of purchasing a lease.</p> <p>Leasing could occur in any of the populations, but would be most likely to impact the Uintah, Carbon, Emery, and Rich populations due to mineral potential.</p>

Action	Type	Effects
Oil and Gas Wells	Oil and Gas exploration and development	<p>Based upon the reasonable and foreseeable development assumptions in Chapter 4, it is anticipated that 2,968 oil and gas wells will be drilled within occupied Greater Sage-Grouse habitat within the population areas, of which 2,289 wells are anticipated to be producing wells. Exploration wells expected in all populations. Development wells anticipated in Uintah, Carbon, Emery, and Rich populations.</p> <p>Effect: The development of wells within these areas could lead to fragmentation and loss of habitat due to construction activities. Increased noise levels associated with traffic and compressors may impact lek attendance. Increased traffic associated with day-to-day operations may also increase the potential for collision mortality. However, most of these impacts should be removed by management standards identified in the selected alternative.</p>
Asphalt Ridge Tar Sands Development	Lease approximately 6,000 acres of Tar Sands Lands described in the Asphalt Ridge Tract, which is directly adjacent to existing approximately 16,000 acres of State leases	<p>Still in planning and NEPA stages – could impact the Uintah population.</p> <p>Effect: As a largely underground operation on BLM-administered lands, this would disturb a small amount of land associated with ancillary features. On the portions of the mine that would be mined through surface means, habitat would be lost and noise, dust, and light would affect adjacent areas.</p>
Flat Canyon Coal Lease by application	The Flat Canyon Coal Lease Tract is approximately 2,692 acres of federal coal reserves	<p>Forest Service completed the consent to BLM. Approximately 23 acres out of the 2,692 acres are within the Emery Population Area.</p> <p>Effect: The act of leasing would have no direct effect. However, the activities associated with development of the lease could result in loss of habitat and vehicle mortality due to increased traffic. Most of these impacts should be removed by management standards identified in the selected alternative.</p>

Action	Type	Effects
Alton Coal Tract Lease-by-Application	Add 3,576 acres of federal surface or mineral estate to existing 300-acre mine on private land.	<p>ROD issued in August 2018. The lease sale and issuance was completed in February 2019, and as such was developed to be in conformance with the 2015 Utah Greater Sage-Grouse ARMPA. Development of the mine is still pending. As described in the July 2018 Alton Final EIS, development of the mine could impact a part of the southern habitat in the Panguitch population.</p> <p>Effect: Activities associated with development of the lease could result in loss of habitat and vehicle mortality due to increased traffic. Most of these impacts should be removed by management standards identified in the selected alternative, or offset by habitat improvements.</p>
Williams Draw Coal Lease by Application	The proposed action includes 4,200 acres of federal surface and mineral estate; the proposal may have several vents, drilling exploration holes on the surface and underground, and load-out facilities	<p>Still in planning and NEPA stages; could impact the Carbon population.</p> <p>Effect: The act of leasing would have no direct effect. However, the activities associated with development of the lease could result in loss of habitat and vehicle mortality due to increased traffic. Most of these impacts should be removed by management standards identified in the selected alternative.</p>
Greens Hollow Coal Lease by Application	Proposal includes 6,700 acres; a vent is proposed off site; minimal surface disturbances with the exception for exploration drilling	<p>The area has been leased, but development is on hold due to litigation. Would affect the Emery population.</p> <p>Effect: This is an expansion of an existing underground mine. Activities associated with development of the lease could result in the loss of a small amount of habitat from development of ancillary features (vent fan). Most mining activity (portal, truck traffic, etc.) occurs down the cliff face, far removed from the habitat. Most of these impacts would be removed by management standards identified in the selected alternative.</p>

Action	Type	Effects
Flat Canyon Coal Lease by Application	Lease by Application 3,792 acres; and Exploration License, 595 acres	<p>Leased and under production in the Carbon population.</p> <p>Effect: The act of leasing would have no direct effect. However, the activities associated with development of the lease could result in loss of habitat and vehicle mortality due to increased traffic. Most of these impacts should be removed by management standards identified in the selected alternative.</p>
Gilsonite Leasing	16,810 acres that are currently under prospecting permit application; the permits would either be issued or a Known Gilsonite Leasing Area would be established, thus allowing competitive leasing	<p>The prospecting permit applications have been in place since the late 1980s; Known Gilsonite Leasing Area report ongoing, after which NEPA will begin to address backlogs for these areas in the Uintah population.</p> <p>Effect: Activities associated with development or prospecting of the permit / lease could result in loss of habitat and vehicle mortality due to increased traffic. Most of these impacts should be removed by management standards identified in the selected alternative.</p>
Phosphate Fringe Acreage Lease	1,627 acres of fringe acreage lease on BLM-administered lands	<p>NEPA has started and awaiting a Development Scenario to complete the NEPA for this expansion of an existing phosphate mine in the Diamond Mountain portion of PHMA in the Uintah population.</p> <p>Effect: The act of leasing would have no direct effect. However, the activities associated with development of the lease could result in loss of habitat and vehicle mortality due to increased traffic. Most of these impacts should be removed by management standards identified in the selected alternative.</p>
Phosphate Competitive Lease Application	1,186 acres on National Forest System lands	<p>NEPA has started and awaiting a Development Scenario to complete the NEPA for this area in the Uintah population.</p> <p>Effect: Activities associated with development of the lease could result in loss of habitat and vehicle mortality due to increased traffic. Most of these impacts should be removed by management standards identified in the selected alternative.</p>

Action	Type	Effects
Other Items		
Hard Rock Prospecting Permits being considered on Bankhead Jones	Hard rock exploration permits	<p>Pending Consideration for this area in the Sheeprocks population.</p> <p>Effect: Activities associated with development of the lease could result in loss of habitat, vehicle mortality due to increased traffic and disruption of seasonal use areas. Most of these impacts should be removed by management standards identified in the selected alternative.</p>
Gooseberry Narrows Reservoir	Bureau of Reclamation project on Forest Service and private land; project is approximately 1,200 acres	<p>EIS is complete, pending EPA review and approval for this portion of the Carbon population.</p> <p>Effect: Activities associated with construction and operation of the reservoir would result in loss of habitat within the project area and a potential increase for vehicle mortality due to increased traffic. However, the habitat lost within the project area may be supplemented by improving the quality and seasonal functionality of the adjacent habitat. Most of the impacts should be removed by management standards identified in the selected alternative.</p>
Uinta Basin Railway	Development of a railway that begins in the Uinta Basin, and terminates at a location that connects to the national rail system.	<p>The project is in the early stages of consideration. Scoping was conducted by the Surface Transportation Board in June-August, 2019. The EIS is currently being developed. There is not a preferred alternative, but based on the early alternatives, one alternative alignment could affect GHMA in the Uinta Population, and others could affect PHMA in the Emma Park portion of the Carbon Population.</p> <p>Effect: Construction of the railway could result in a direct loss of habitat. Use of the railway could result in noise that would displace birds from preferred habitats. The occurrence and magnitude of these impacts would vary based on alternative alignment and mitigation measures applied.</p>

Action	Type	Effects
Motorized Travel Plan Implementation	Implementation of motorized route designation plans across the planning region	<p>Implementation actions underway statewide, with travel planning reasonably foreseeable in the Sheeprocks, Uintah, Carbon and Panguitch populations.</p> <p>Effect: The development of a motorized travel plan would potential help to reduce fragmentation of habitat and centralizing disturbance into areas of lesser importance.</p>
Grand Staircase-Escalante National Monument Management Plan	Development of a resource management plan	<p>Final EIS issued in August 2019. Still in planning stages for this area that overlaps the Panguitch population. This action would provide a framework to manage both the remaining monument areas and the areas no longer within the monument boundaries.</p> <p>Effect: Since no alternative proposes different management for Greater Sage-Grouse from sage-grouse planning process, there will be no cumulative effects not already address in the impact analysis above. Further, there are no major reasonably foreseeable developments in the areas no longer in the monument and near the PHMA. As such, there are no impacts anticipated to add to those already disclosed in the impacts analysis above.</p>
Forest Service Greater Sage-Grouse Planning	Forest Service and Utah Division of Wildlife Resources	<p>Forest Service is in the process of amending their land use plans. Their proposed changes are similar with those considered in this EIS, and would increase alignment with state management plans and strategies. Applicable to all Greater Sage-Grouse populations with National Forest System Lands.</p> <p>Effect: This effort will help to align the Forest Service's plan to be more consistent with the State of Utah's plan and provide the adequate management actions necessary to protect and conserve the Greater Sage-Grouse.</p>

Action	Type	Effects
State of Utah Greater Sage-Grouse Management	Update of the State's Conservation Plan for Greater Sage-Grouse in Utah, as well as implementation of the State's compensatory mitigation rule	<p>Past: The Conservation Plan for Greater Sage-Grouse in Utah was finalized in 2013; it was designed to be updated every 5 years. While it requires a 4:1 mitigation ratio in the State's Greater Sage-Grouse Management Areas (SGMA), there was no established approach to implement that mitigation process to the State's 11 SGMA's.</p> <p>Effect: The plan established the management actions necessary for the State of Utah to continue to enhance and conserve the Greater Sage-Grouse while still allowing for economic opportunities.</p> <p>Future: The State updated their Greater Sage-Grouse plan in January 2019, incorporating the compensatory mitigation rule that provides a process to develop a banking system to apply the state's 4:1 mitigation ratio that is designed to improve habitat for Greater Sage-Grouse.</p> <p>Effect: This effort will help to refine and identify areas to improve management actions and allow for the incorporation of new and local science to better balance Greater Sage-Grouse management across the state. It provides management to maintain and improve Greater Sage-Grouse populations, as well as a framework for managing habitat on state and private land. It will also provide an opportunity for economic development to occur while offsetting the impacts to habitat quality.</p>
Wyoming		
Wildland Fires 2015-2017	BLM: Past – Acres burned on BLM administered land	Approximately 137,000 acres of HMA burned between 2015 and 2017. Post-fire restoration and habitat treatments are being implemented, as described below, to diminish impacts of habitat lost to wildland fire.
Fire Restoration (Emergency Stabilization and Rehabilitation)	BLM: Past and Present – Habitat restoration following wildland fires	Approximately 4,030 acres of BLM-administered habitat are either currently being treated or scheduled to be treated according to specific prescriptions outlined in Emergency Stabilization and Burned Area Rehabilitation plans following wildfire.

Action	Type	Effects
Habitat Treatments	BLM: Past – Habitat improvement projects	More than 96,000 acres of Greater Sage-Grouse habitat were treated between 2015 and 2017 to maintain or improve conditions for Greater Sage-Grouse. Treatments included conifer removal, fuel breaks, invasive species removal and habitat protection/ restoration.
Land Use and Realty (issued and pending) 2015-2018	BLM: Past ROWs issued on BLM land	BLM Wyoming issued approximately 3,000 ROWs in the planning area between 2015-2017. This includes amendments and reauthorizations, which may not have resulted in new disturbance. For ROWs occurring in Greater Sage-Grouse habitat, effects were offset by the management prescriptions in the RMPs and ARMPA.
	BLM: Future pending	There are approximately 590 ROW applications pending review and analysis. New ROWs under the 2018 Proposed Plan would align with the management prescriptions of the Core Area Strategy and State of Wyoming Mitigation Framework. No additional cumulative impacts are anticipated, beyond those described.
		Miller Mountain Land Exchange would resolve public access issues and improve landscape scale management of resources by consolidating BLM lands in the area.
Oil and Gas		Chokecherry and Sierra Madre Wind Energy Development Project, Phase II Turbine Development (EA3)
	BLM: Past	BLM Wyoming has offered for lease 861,634 acres; 812,123 acres of that total was leased. Leases followed management prescriptions in the RMPs and ARMPA and stipulations apply as described in the leases according to HMA category.
	BLM: Future pending	BLM Wyoming has a scheduled lease sale in June 2018 that will offer 198,588 acres for lease. Specific projects include: 69 APDs and 56 ROWs in the Rawlins FO, 50 to 75 APDs in the Buffalo FO; The Converse County Development project and 276 APDs in the Casper FO; 50 APDs and 100+ ROWs in the Pinedale FO, and 70 new ROW applications in the Kemmerer FO.
		The actions in the 2018 Proposed Plan to not propose to change stipulations analyzed in the 2014 and 2015 plans.

Action	Type	Effects
Locatable Mineral Projects	BLM: Past and Present	Between 2015-2017, the BLM has approved 17 new mines and/or expansions within the planning area (including non-habitat). The 2018 Proposed Plan does not propose changes to any decisions associated with locatable minerals, which were sufficiently analyzed on the existing plans.
	BLM: Future pending	The BLM is currently reviewing 26 plans of operation for new mines, mine expansions and notice-level activities. This number also includes 10 pending mine patents, which are in the process of being patented into private ownership. The 2018 Proposed Plan does not propose changes to any decisions associated with locatable minerals, and future impacts would be analyzed in future EISs, adhering to existing requirements of the RMPs and ARMPA.
Leasable Mineral Projects (Coal)	BLM: Past and Present	Two coal lease modifications were issued in 2018, totaling 1,306.61 acres. For lease modifications occurring in Greater Sage-Grouse habitat, effects were offset by the management prescriptions in the RMPs and ARMPA.
	BLM: Future pending	BLM Wyoming is currently reviewing 4 coal lease applications/modifications totaling 10,148.56 acres. No management decisions for leasable minerals are proposed for change under the 2018 Proposed Plan.
Greater Sage-Grouse Conservation	Forest Service: Future	Forest Service has indicated they will also be amending their land use plans. Specific details of their proposed changes are not yet known, but it is anticipated they will propose alignment with state management plans and strategies.

S-2.2 CUMULATIVE EFFECTS ANALYSIS – HABITAT AND ALLOCATION DECISION SUMMARIES FOR THE NO ACTION & MANAGEMENT ALIGNMENT ALTERNATIVES BY MANAGEMENT ZONE

Data representing the final plan allocation decisions and habitat delineations collected by the BLM upon the completion of the 2015 planning process has been updated or corrected relative to the final allocation decisions from the 2015 plans to reflect maintenance related changes, adaptive management responses, or refined source data. The BLM used these data to represent the No Action alternative for the current plan analysis. The BLM then identified 2015 data which are not subject to change in any alternatives associated with the 2018 planning process. These data were carried forward as the alternative allocation decision data. The BLM was also able to provide allocation decision data representing changes included in the 2018 Draft EIS alternatives, which were then used in the comparative analysis. Decision data are summarized by habitat type within each Management Zone (see Figure 1) and are presented in this Appendix in both approximate acreage of BLM managed lands within each habitat designation as well as percent of BLM lands within a habitat designation to which an allocation decision applies. For programs where allocation decisions change, information is presented separately. In cases where no change has occurred, both alternatives are presented together. BLM Montana is currently not undergoing a plan amendment process, however data were included in this cumulative effects summary. A summary of data submitted for this analysis can be found in **Table I**, detailing which areas did not provide data for analysis. In these cases, summaries reflect submitted data only. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Table 2

Data Submission Summary for Cumulative Effects Analysis. Y = Data submitted, N = No data submitted, followed by which area within the State that did not provide data.

Program Area	Colorado	Idaho	Montana & The Dakotas	Nevada/NE California	Oregon	Utah	Wyoming
Geothermal Energy	Y	Y	N – Miles City, Lewistown, Billings, UMRBNM	Y	Y	Y	N – Bighorn Basin
Land Tenure	Y	Y	Y	Y	Y	Y	Y
Livestock Grazing	Y	Y	Y	Y	Y	Y	Y
Locatable Minerals	Y	Y	Y	Y	Y	Y	Y
Non-Energy Leasable Minerals	Y	Y	N – Miles City, Billings	Y	Y	Y	N – Bighorn Basin, Buffalo, Wyoming (9-Plan)
Fluid Mineral Leasing (Oil & Gas)	Y	Y	N - Lewistown	Y	Y	Y	Y
Rights-of-Ways	Y	Y	Y	Y	Y	Y	Y
Salable-Mineral Materials Disposals	Y	Y	Y	Y	Y	Y	Y
Solar Energy	Y	Y	Y	Y	Y	Y	N – Bighorn Basin, Buffalo, Lander, Wyoming (9-Plan)
Trails and Travel Management	Y	Y	Y	Y	Y	Y	Y
Wind Energy	Y	Y	Y	Y	Y	Y	Y

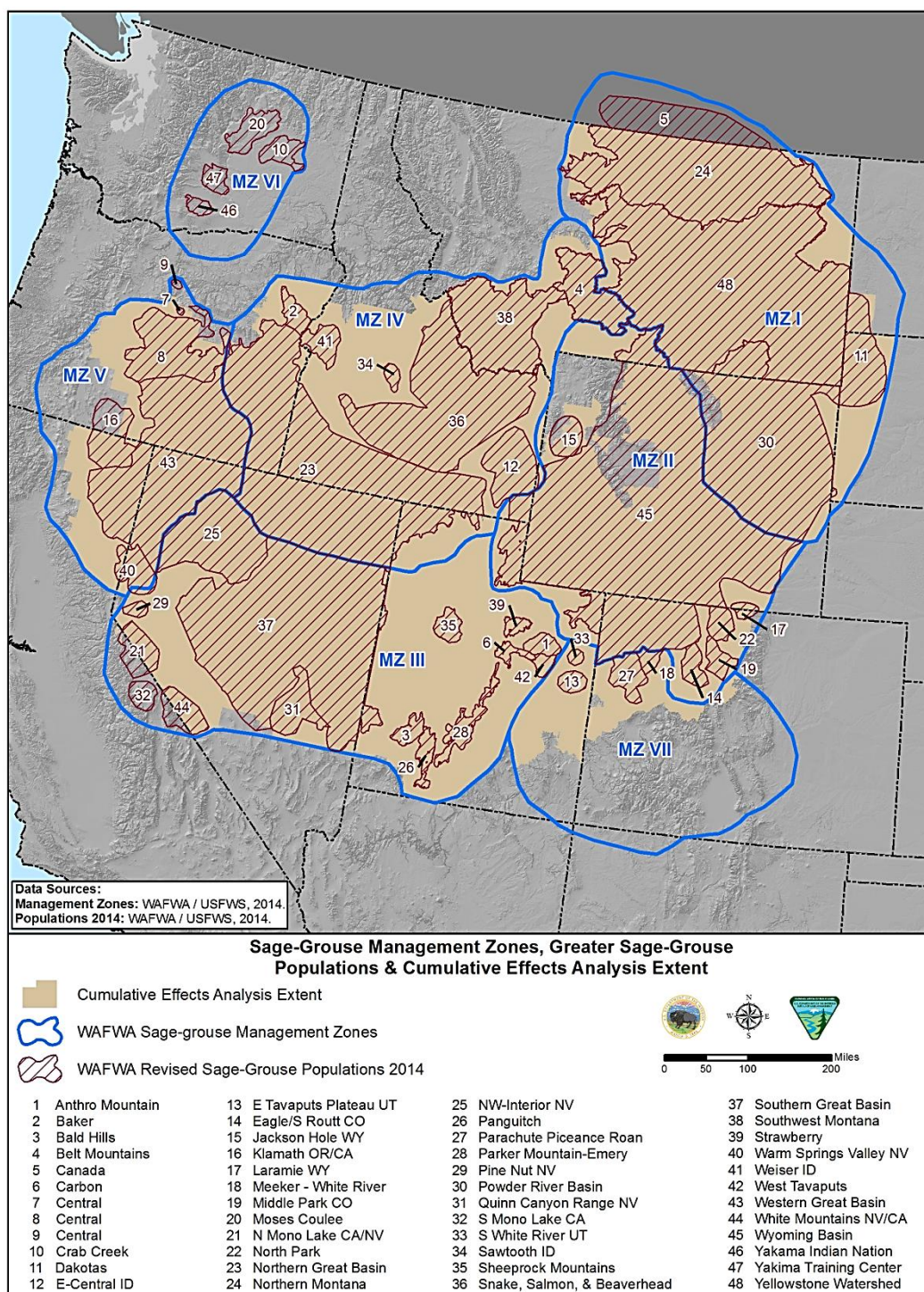


Figure I – Cumulative Effects Analysis Extent, Sage-Grouse Management Zones and Populations

S-2.2.1 Management Zone I – WY, MT, ND, SD

I. Habitat Management

Table 3 – Habitat Management Areas within MZ I

Acres and percentages reflect all lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of HMA in MZ I							
No Action				Management Alignment			
PHMA	GHMA	RHMA ¹	Non-HMA	PHMA	GHMA	RHMA	Non-HMA
12,122,000	28,339,000	437,000	33,467,000	12,122,000	28,339,000	437,000	33,467,000

Approximate Percent of MZ I that is HMA							
No Action				Management Alignment			
PHMA	GHMA	RHMA	Non-HMA	PHMA	GHMA	RHMA	Non-HMA
16%	38%	1%	45%	16%	38%	1%	45%

**No Action & Management Alignment- MZ I -
Habitat Management Areas within the Planning
Area**

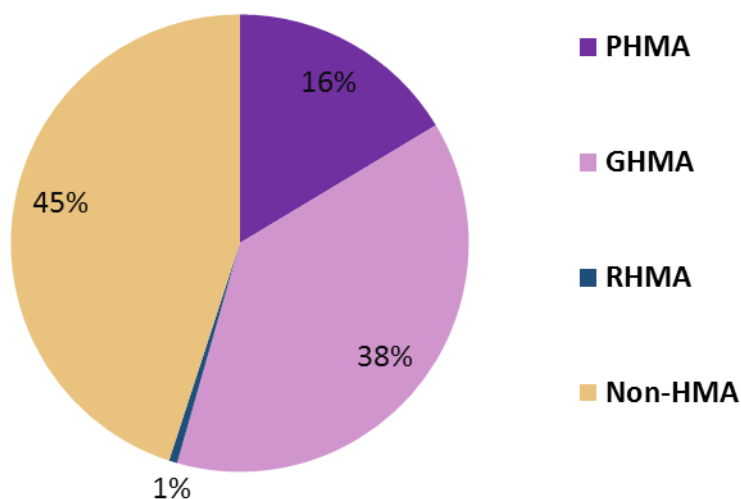


Figure 2 - Habitat Management Areas within MZ I

Percentages reflect all lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

¹ Restoration Habitat Management Area (RHMA)

II. Geothermal Energy

Table 4 – Geothermal Energy Decisions within MZ I

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding.

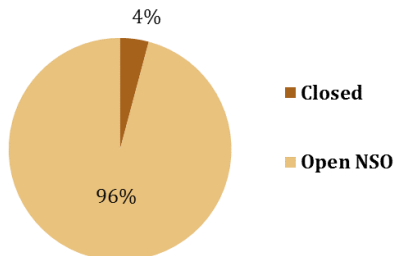
¹ Data not available for portions of MT and WY. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only.

They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

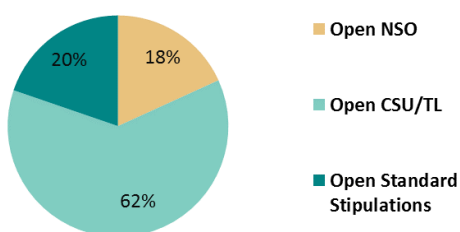
Approximate Acres of Geothermal Decisions¹ in MZ I by Habitat Management Area Type					
Geothermal Energy	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Closed	86,000	0	NA	86,000	172,000
Open NSO	1,988,000	130,000	NA	230,000	2,349,000
Open CSU/TL	0	443,000	NA	1,071,000	1,514,000
Open Standard Stipulations	0	141,000	NA	372,000	514,000
Total	2,074,000	714,000	NA	1,760,000	4,548,000

Approximate % of Habitat Management Area by Geothermal Decision¹ within Habitat in MZ I					
Geothermal Energy	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Closed	4%	0%	NA	5%	4%
Open NSO	96%	18%	NA	13%	52%
Open CSU/TL	0%	62%	NA	61%	33%
Open Standard Stipulations	0%	20%	NA	21%	11%
Total	100%	100%	NA	100%	100%

**No Action & Management Alignment -
PHMA - Geothermal Energy**



**No Action & Management Alignment - GHMA -
Geothermal Energy**



**No Action & Management Alignment - Non-
HMA - Geothermal Energy**

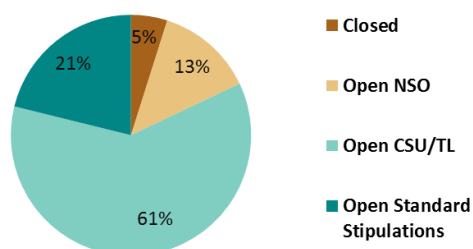


Figure 3 – Geothermal Energy Decisions within MZ I

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. ¹ Data not available for portions of MT and WY. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

III. Land Tenure

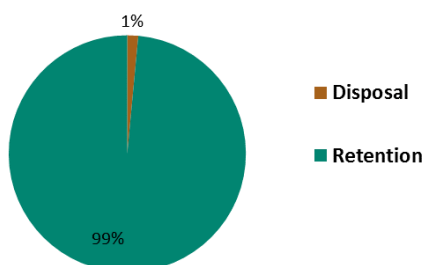
Table 5 – Land Tenure Decisions within MZ I

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

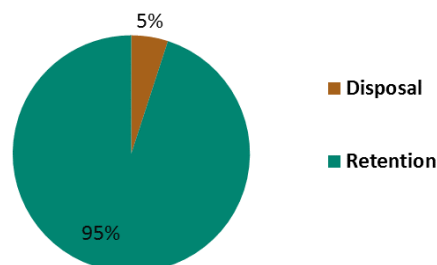
Approximate Acres of Land Tenure Decisions in MZ I by Habitat Management Area Type					
Land Tenure	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Disposal	49,000	167,000	0	143,000	359,000
Retention	3,259,000	2,997,000	159,000	1,538,000	7,953,000
Total	3,308,000	3,164,000	159,000	1,681,000	8,312,000

Approximate % of Habitat Management Area by Land Tenure Decision within Habitat in MZ I					
Land Tenure	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Disposal	1%	5%	0%	9%	4%
Retention	99%	95%	100%	91%	96%
Total	100%	100%	100%	100%	100%

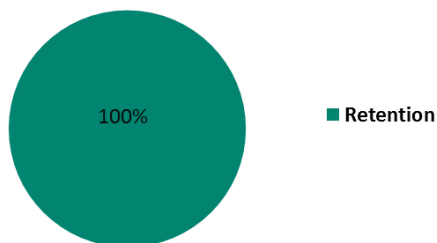
No Action & Management Alignment - PHMA
- Land Tenure



No Action & Management Alignment - GHMA - Land Tenure



No Action & Management Alignment - RHMA - Land Tenure



No Action & Management Alignment - Non-HMA - Land Tenure

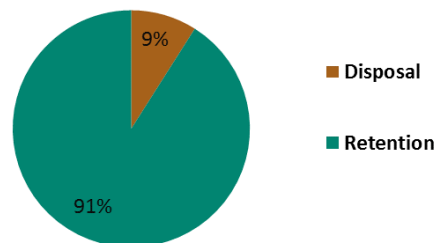


Figure 4 – Land Tenure Decisions within MZ I

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

IV. Livestock Grazing

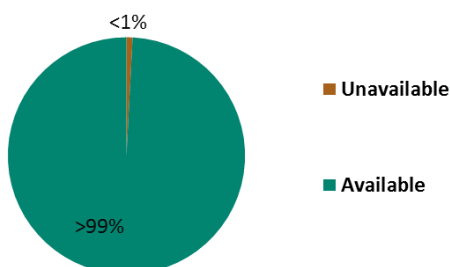
Table 6 – Livestock Grazing Decisions within MZ I

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

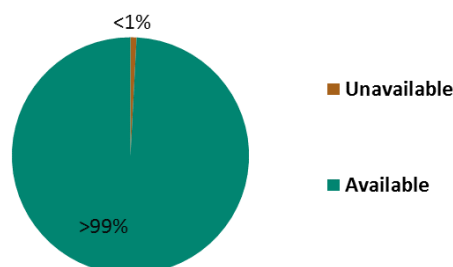
Approximate Acres of Livestock Grazing Decisions in MZ I by Habitat Management Area Type					
Livestock Grazing	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Unavailable	3,000	8,000	0	12,000	23,000
Available	3,303,000	3,186,000	158,000	1,632,000	8,279,000
Total	3,306,000	3,194,000	158,000	1,644,000	8,302,000

Approximate % of Habitat Management Area by Livestock Grazing Decision within Habitat in MZ I					
Livestock Grazing	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Unavailable	<1%	<1%	0%	<1%	<1%
Available	100%	100%	100%	100%	100%
Total	100%	100%	100%	100%	100%

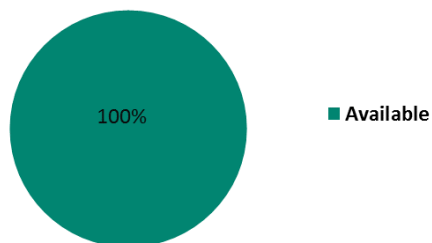
No Action & Management Alignment -
PHMA - Livestock Grazing



No Action & Management Alignment -
GHMA - Livestock Grazing



No Action & Management - RHMA -
Livestock Grazing



No Action & Management - Non-HMA -
Livestock Grazing

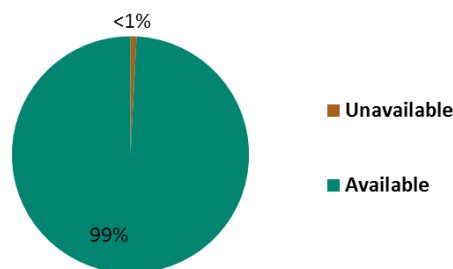


Figure 5 – Livestock Grazing Decisions within MZ I

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

V. Locatable Minerals**Table 7 – Locatable Minerals Decisions within MZ I**

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages. ² MT Recommended Withdrawals Decisions in PHMA will be removed via plan maintenance.

Approximate Acres of Locatable Minerals Decisions² in MZ I by Habitat Management Area Type					
Geothermal Energy	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Existing Withdrawals	22,000	203,000	0	240,000	465,000
Recommended Withdrawals	1,094,000	166,000	0	46,000	1,306,000
Open	4,053,000	7,132,000	164,000	2,688,000	14,037,000
Total	5,169,000	7,501,000	165,000	2,974,000	15,808,000

Approximate % of Habitat Management Area by Locatable Minerals Decisions² within Habitat in MZ I					
Geothermal Energy	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Existing Withdrawals	<1%	3%	<1%	8%	3%
Recommended Withdrawals	21%	2%	0%	2%	8%
Open	79%	95%	100%	90%	89%
Total	100%	100%	100%	100%	100%

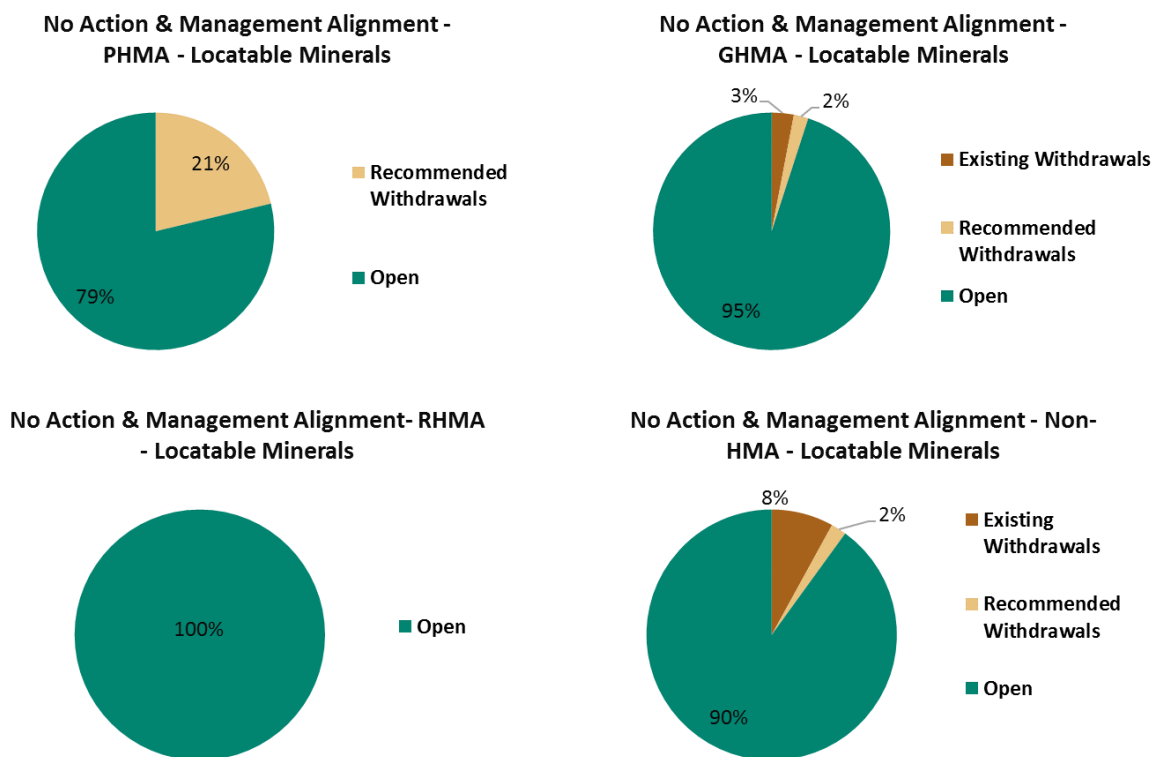


Figure 6 – Locatable Mineral Decisions within MZ I

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages. ² MT Recommended Withdrawals Decisions in PHMA will be removed via plan maintenance.

VI. Non-Energy Leasable Minerals**Table 8 – Non-Energy Leasable Minerals Decisions within MZ I**

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding.

³ Data not available for portions of MT and WY. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only.

They represent data available at the time of consolidation and may be revised as Plans are finalized.

Consult each individual EIS for final/official acreages.

Approximate Acres of Non-Energy Leasable Minerals³ Decisions in MZ I by Habitat Management Area Type					
Livestock Grazing	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Closed	2,432,000	296,000	NA	355,000	3,083,000
Open	1,900,000	6,205,000	NA	2,463,000	10,568,000
Total	4,332,000	6,501,000	NA	2,818,000	13,651,000

Approximate % of Habitat Management Area by Non-Energy Leasable Minerals³ Decision within Habitat in MZ I					
Livestock Grazing	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Closed	56%	5%	NA	13%	23%
Open	44%	95%	NA	87%	77%
Total	100%	100%	NA	100%	100%

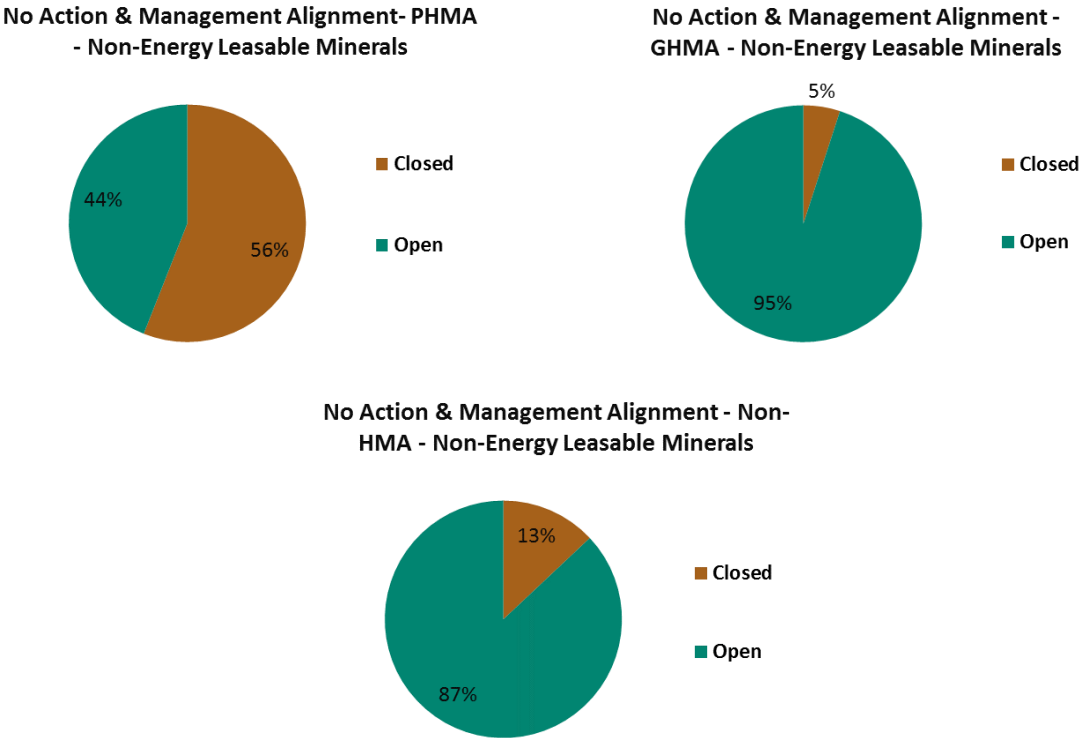


Figure 7 – Non-Energy Leasable Minerals Decisions within MZ I

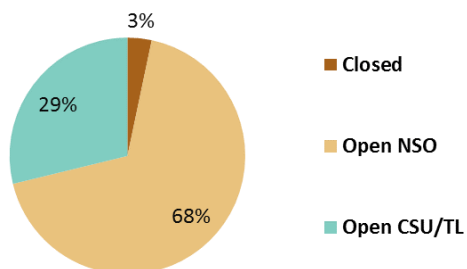
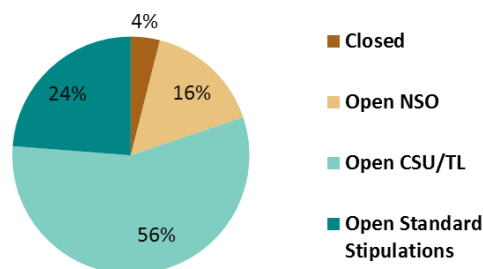
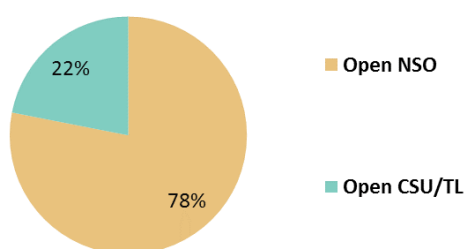
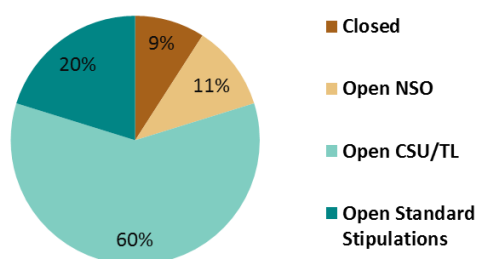
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. ³ Data not available for portions of MT and WY. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

VII. Fluid Minerals (Oil & Gas)**Table 9 – Fluid Minerals (Oil & Gas) Decisions within MZ I**

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. ⁴Data not available for portions of MT. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Fluid Minerals (Oil a& Gas) Decisions⁴ in MZ I by Habitat Management Area Type					
Fluid Minerals (Oil and Gas)	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Closed	196,000	328,000	0	346,000	870,000
Open NSO	3,730,000	1,485,000	228,000	406,000	5,849,000
Open CSU/TL	1,582,000	5,280,000	64,000	2,155,000	9,082,000
Open Standard Stipulations	0	2,223,000	0	744,000	2,967,000
Total	5,508,000	9,316,000	292,000	3,651,000	18,768,000

Approximate % of Habitat Management Area by Fluid Minerals (Oil a& Gas) Decision⁴ within Habitat in MZ I					
Fluid Minerals (Oil and Gas)	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Closed	3%	4%	0%	9%	5%
Open NSO	68%	16%	78%	11%	31%
Open CSU/TL	29%	57%	22%	59%	48%
Open Standard Stipulations	0%	24%	0%	20%	16%
Total	100%	100%	100%	100%	100%

No Action & Management Alignment -
PHMA - Fluid Mineral Leasing (Oil & Gas)No Action & Management Alignment -
GHMA - Fluid Mineral Leasing (Oil & Gas)No Action & Management Alignment -
RHMA - Fluid Mineral Leasing (Oil & Gas)No Action & Management Alignment - Non-
HMA - Fluid Mineral Leasing (Oil & Gas)**Figure 8 – Fluid Minerals (Oil & Gas) Decisions within MZ I**

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. ⁴Data not available for a portion of MT. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

VIII. Rights-of-Ways

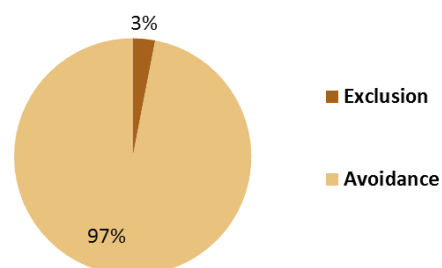
Table 10 – Rights-of-Ways Decisions within MZ I

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

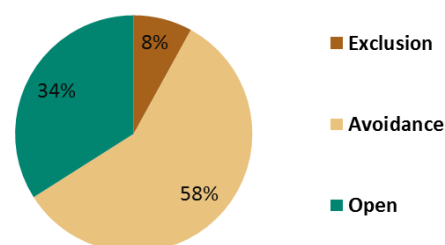
Approximate Acres of Rights-of-Ways Decisions in MZ I by Habitat Management Area Type					
Geothermal Energy	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Exclusion	110,000	240,000	0	86,000	436,000
Avoidance	3,163,000	1,819,000	72,000	282,478	5,336,478
Open	5,000	1,067,000	87,000	1,206,000	2,364,000
Total	3,278,000	3,126,000	159,000	1,574,478	8,136,478

Approximate % of Habitat Management Area by Rights-of-Ways Decision within Habitat in MZ I					
Geothermal Energy	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Exclusion	3%	8%	0%	5%	5%
Avoidance	97%	58%	45%	18%	66%
Open	0%	34%	55%	77%	29%
Total	100%	100%	100%	100%	100%

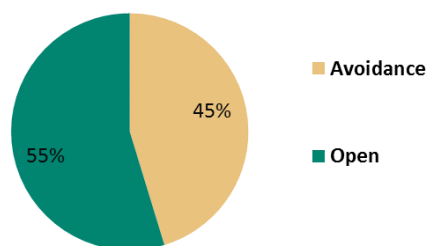
No Action & Management Alignment -
PHMA - Rights of Ways



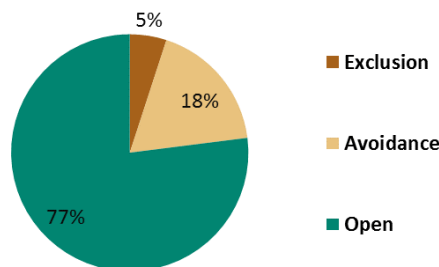
No Action & Management Alignment -
GHMA - Rights of Ways



No Action & Management Alignment -
RHMA - Rights of Ways



No Action & Management Alignment - Non-
HMA - Rights of Ways

**Figure 9 – Rights-of-Ways Decisions within MZ I**

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

IX. Salable Minerals Materials

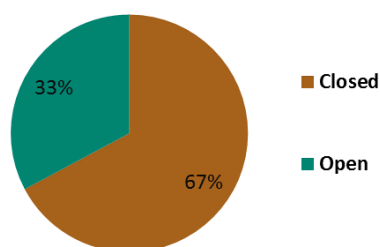
Table 11 – Salable Minerals Decisions within MZ I

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

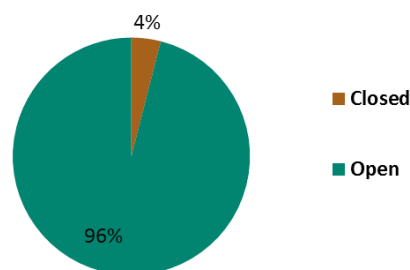
Approximate Acres of Salable Minerals Materials Decisions in MZ I by Habitat Management Area Type					
Livestock Grazing	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Closed	3,870,000	402,000	9,000	424,000	4,705,000
Open	1,882,000	8,787,000	267,000	2,990,000	13,926,000
Total	5,752,000	9,189,000	276,000	3,414,000	18,631,000

Approximate % of Habitat Management Area by Salable Minerals Materials Decision within Habitat in MZ I					
Livestock Grazing	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Closed	67%	4%	3%	12%	25%
Open	33%	96%	97%	88%	75%
Total	100%	100%	100%	100%	100%

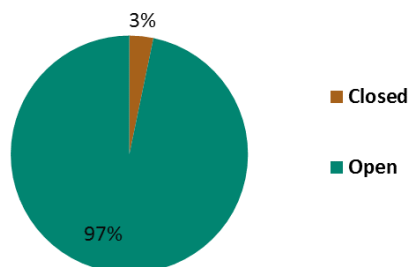
No Action & Management Alignment -
PHMA - Salable Minerals Materials



No Action & Management Alignment -
GHMA - Salable Minerals Materials



No Action & Management Alignment -
RHMA - Salable Minerals Materials



No Action & Management Alignment -
Non-HMA - Salable Minerals Materials

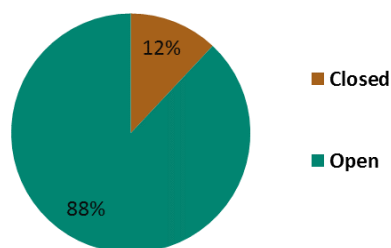


Figure 10 – Salable Minerals Materials Decisions within MZ I

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

X. Solar Energy**Table 12 – Solar Energy Decisions within MZ I**

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding.

⁵ Data not available for Wyoming. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Solar Energy Decisions⁵ in MZ I by Habitat Management Area Type					
Geothermal Energy	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Exclusion	2,709,000	249,000	93,000	239,000	3,290,000
Avoidance	0	1,844,000	55,000	172,000	2,071,000
Open	0	0	0	1,144,000	1,145,000
Total	2,709,000	2,093,000	148,000	1,555,000	6,506,000

Approximate % of Habitat Management Area by Solar Energy Decision⁵ within Habitat in MZ I					
Geothermal Energy	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Exclusion	100%	12%	63%	11%	51%
Avoidance	0%	88%	37%	15%	32%
Open	0%	0%	0%	74%	18%
Total	100%	100%	100%	100%	100%

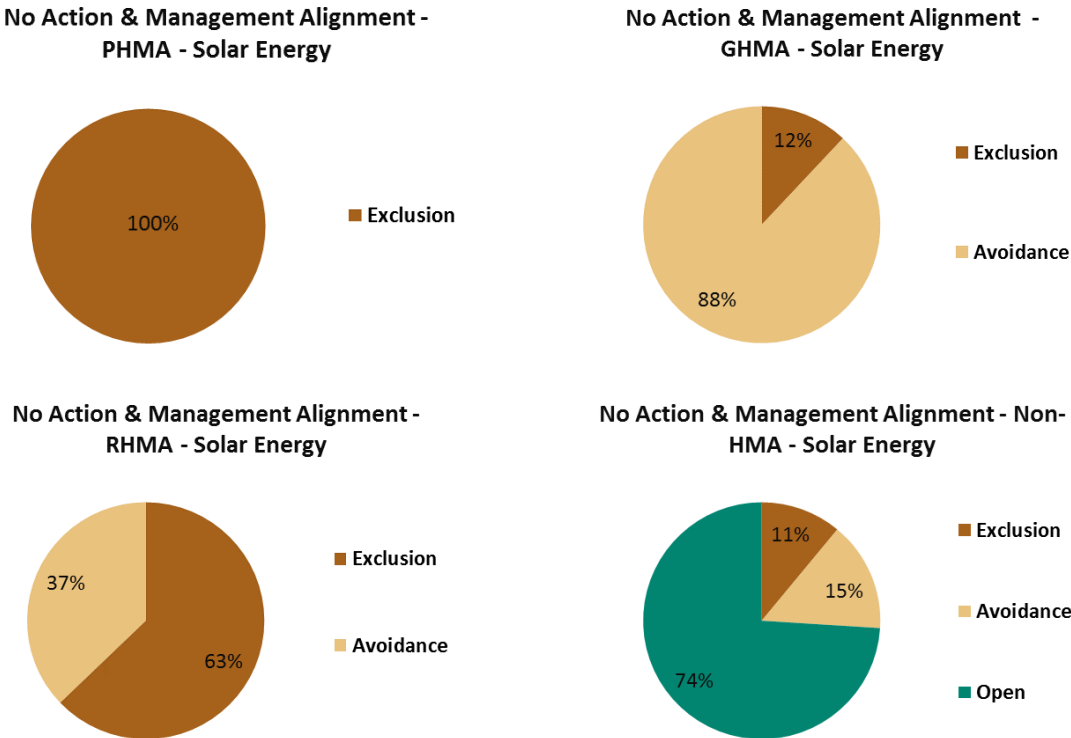


Figure 11 - Solar Energy Decisions within MZ I

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding.
⁵ Data not available for Wyoming. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

XI. Trails and Travel Management**Table 13 – Trails and Travel Management Decisions within MZ I**

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Trails and Travel Management Decisions in MZ I by Habitat Management Area Type					
Geothermal Energy	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Closed	2,000	39,000	0	11,000	52,000
Limited	3,306,000	3,125,000	159,000	1,655,000	8,245,000
Open	0	0	0	0	0
Total	3,308,000	3,164,000	159,000	1,666,000	8,297,000

Approximate % of Habitat Management Area by Trails and Travel Management Decision within Habitat in MZ I					
Geothermal Energy	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Closed	0%	1%	0%	1%	1%
Limited	100%	99%	100%	99%	99%
Open	0%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%

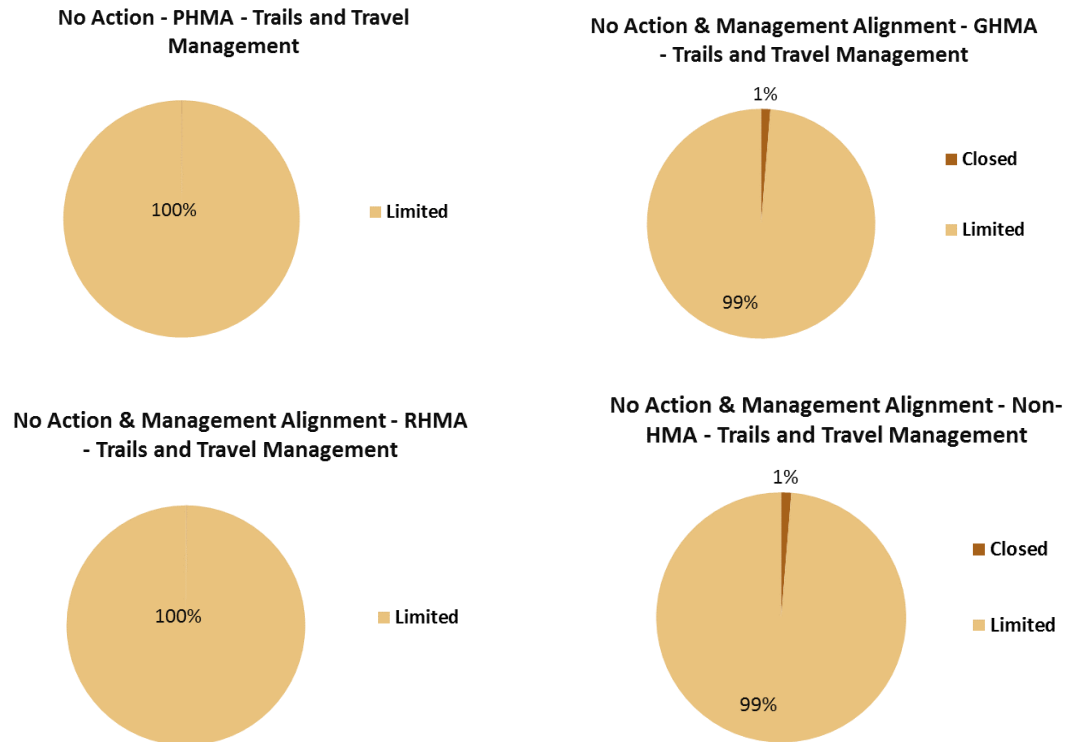


Figure I2 – Trails and Travel Management Decisions within MZ I

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

XII. Wind Energy

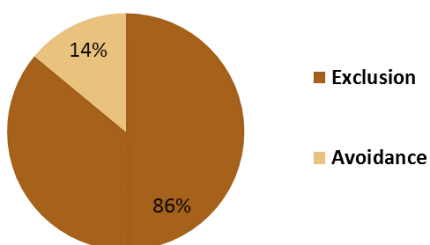
Table 14 – Wind Energy Decisions within MZ I

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

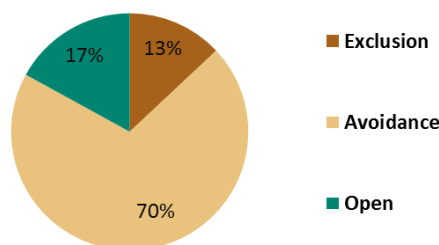
Approximate Acres of Wind Energy Decisions in MZ I by Habitat Management Area Type					
Geothermal Energy	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Exclusion	2,966,000	384,000	93,000	419,000	3,862,000
Avoidance	493,000	2,090,000	55,000	594,000	3,232,000
Open	0	513,000	0	655,000	1,168,000
Total	3,459,000	2,987,000	148,000	1,668,000	8,262,000

Approximate % of Habitat Management Area by Wind Energy Decision within Habitat in MZ I					
Geothermal Energy	No Action & Management Alignment				
	PHMA	GHMA	RHMA	Non-HMA	Total
Exclusion	86%	13%	63%	25%	47%
Avoidance	14%	70%	37%	36%	39%
Open	0%	17%	0%	39%	14%
Total	100%	100%	100%	100%	100%

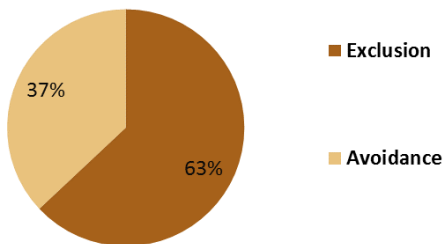
No Action & Management Alignment -
PHMA - Wind Energy



No Action & Management Alignment -
GHMA - Wind Energy



No Action & Management Alignment -
RHMA - Wind Energy



No Action & Management Alignment - Non-
HMA - Wind Energy

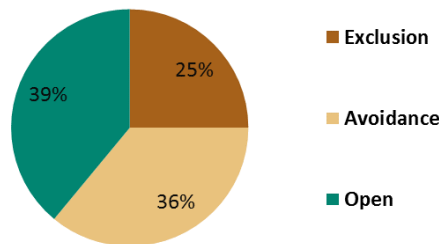


Figure 13 – Wind Energy Decisions within MZ I

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

S-2.2.2 Management Zones II/VII – WY, CO, UT, ID

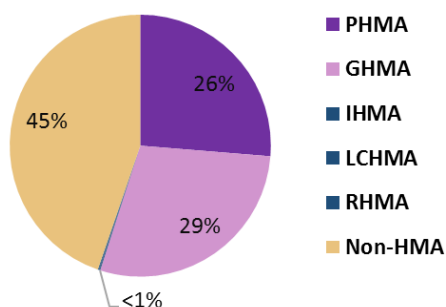
I. Habitat Management

Table 15 – Habitat Management Areas within MZs II/VII

Acres and percentages reflect all lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of HMA in MZs II/VII					
No Action					
PHMA	IHMA	GHMA	LCHMA ²	RHMA	Non-HMA
16,699,000	69,000	18,220,000	295,000	8,000	28,409,000
Management Alignment					
PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA
16,664,000	69,000	17,394,000	295,000	8,000	29,270,000
Approximate Percent of MZs II/VII that is HMA					
No Action					
PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA
26%	<1%	29%	<1%	<1%	45%
Management Alignment					
PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA
26%	<1%	27%	<1%	<1%	46%

No Action - MZ II & VII - Habitat within the Planning Area



Management Alignment - MZ II & VII - Habitat within the Planning Area

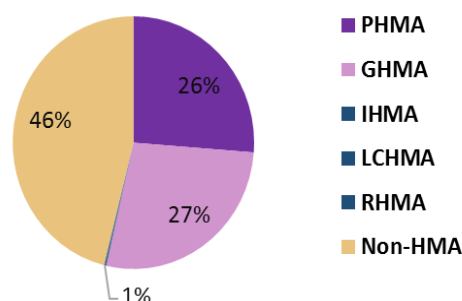


Figure 14 – Habitat Management Areas within MZs II/VII

Percentages reflect all lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

² Linkage Connectivity Habitat Management Area (LCHMA)

II. Geothermal Energy

Table 16 – Geothermal Energy Decisions within MZ II/VII

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding.

⁶ Data not available for portions of MT and WY. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only.

They represent data available at the time of consolidation and may be revised as Plans are finalized.

Consult each individual EIS for final/official acreages.

Approximate Acres of Geothermal Energy Decisions⁶ in MZ II/VII by Habitat Management Area Type							
Geothermal Energy	No Action						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Closed	781,000	1,000	285,000	1,000	NA	2,342,000	3,409,000
Open NSO	2,271,000	29,000	342,000	54,000	NA	1,917,000	4,615,000
Open CSU/TL	983,000	0	1,316,000	81,000	NA	3,511,000	5,891,000
Open Standard Stipulations	0	0	245,000	8,000	NA	2,407,000	2,660,000
Total	4,037,000	29,000	2,187,000	144,000	NA	10,179,000	16,575,000

Geothermal Energy	Management Alignment						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Closed	565,000	1,000	260,000	1,000	NA	2,355,000	3,181,000
Open NSO	2,451,000	29,000	348,000	54,000	NA	1,923,000	4,804,000
Open CSU/TL	983,000	0	1,109,000	81,000	NA	3,719,000	5,891,000
Open Standard Stipulations	0	0	140,000	8,000	NA	2,512,000	2,660,000
Total	4,000,000	29,000	1,857,000	144,000	NA	10,509,000	16,538,000

Approximate % of Habitat Management Area by Geothermal Energy Decision⁶ in MZ II/VII							
Geothermal Energy	No Action						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Closed	19%	<1%	13%	1%	NA	23%	21%
Open NSO	56%	100%	16%	38%	NA	19%	28%
Open CSU/TL	24%	0%	60%	56%	NA	34%	36%
Open Standard Stipulations	0%	0%	11%	6%	NA	24%	16%
Total	100%	100%	100%	100%	NA	100%	100%

Geothermal Energy	Management Alignment						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Closed	14%	<1%	14%	1%	NA	22%	19%
Open NSO	61%	100%	19%	38%	NA	18%	29%
Open CSU/TL	25%	0%	60%	56%	NA	35%	36%
Open Standard Stipulations	0%	0%	8%	6%	NA	24%	16%
Total	100%	100%	100%	100%	NA	100%	100%

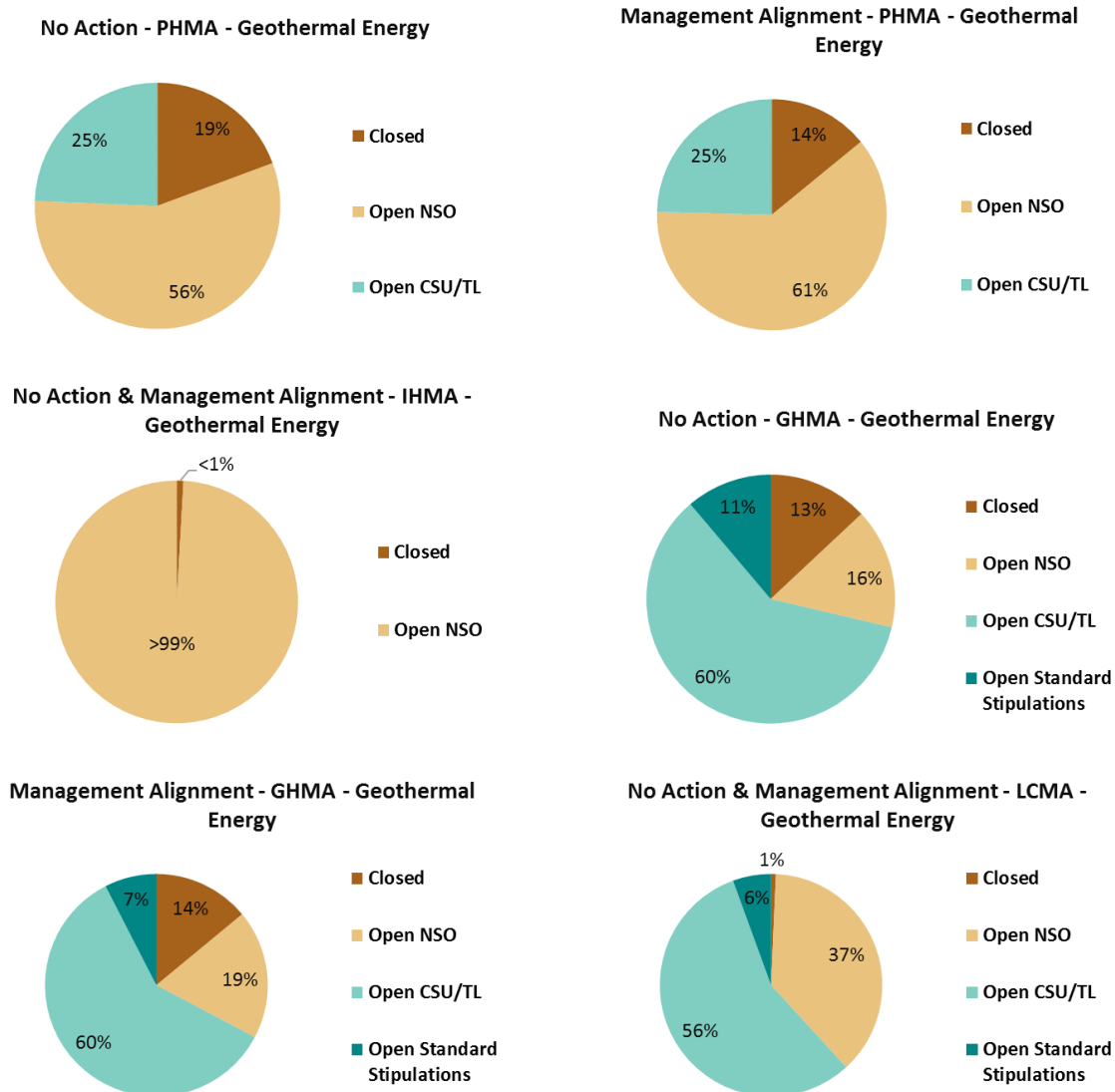
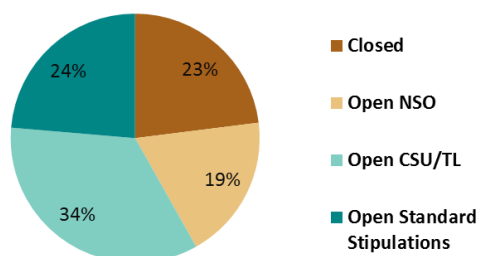


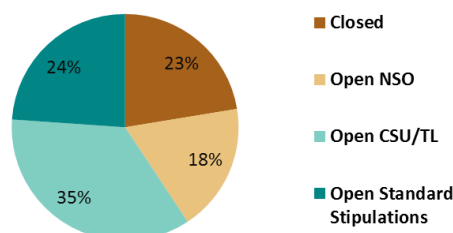
Figure 15 – Geothermal Energy Decisions within MZ II/VII

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. ⁶ Data not available for portions of MT and WY. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

No Action - Non-HMA - Geothermal Energy



Management Alignment - Non-HMA - Geothermal Energy

**Figure 15 (cont'd) - Geothermal Energy Decisions within MZ II/VII**

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. ⁶ Data not available for portions of MT and WY. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

III. Land Tenure

Table 17 – Land Tenure Decisions within MZ II/VII

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Land Tenure Decisions in MZ II/VII by Habitat Management Area Type							
Land Tenure	No Action						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
Disposal	57,000	0	154,000	0	0	115,000	325,000
Retention	8,894,000	18,000	8,972,000	82,000	7,000	11,837,000	29,811,000
Total	8,951,000	18,000	9,126,000	82,000	7,000	11,952,000	30,136,000

Land Tenure	Management Alignment						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
Disposal	57,000	0	154,000	0	0	115,000	325,000
Retention	8,894,000	18,000	8,685,000	82,000	7,000	12,125,000	29,811,000
Total	8,951,000	18,000	8,839,000	82,000	7,000	12,239,000	30,136,000

Approximate % of Habitat Management Area by Land Tenure Decision in MZ II/VII							
Land Tenure	No Action & Management Alignment						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
Disposal	1%	0%	2%	0%	0%	1%	1%
Retention	99%	100%	98%	100%	100%	99%	99%
Total	100%	100%	100%	100%	100%	100%	100%

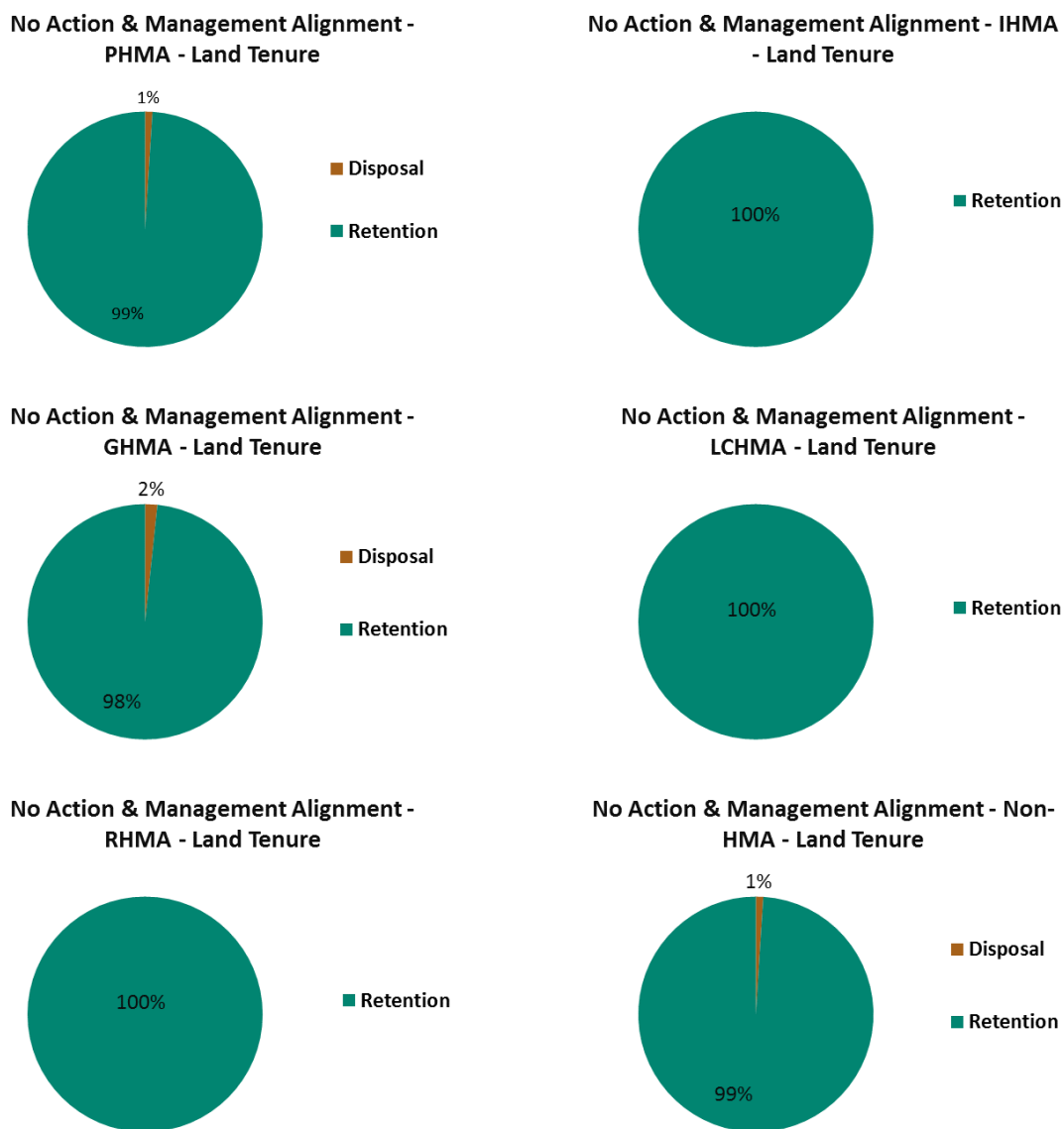


Figure 16 – Land Tenure Decisions within MZ II/VII

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

IV. Livestock Grazing

Table 18 – Livestock Grazing Decisions within MZ II/VII

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Livestock Grazing Decisions in MZ II/VII by Habitat Management Area Type							
Livestock Grazing	No Action						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Unavailable	40,000	0	40,000	0	0	316,000	395,000
Available	8,872,000	18,000	9,069,000	81,000	7,000	8,193,000	26,241,000
Total	8,912,000	18,000	9,109,000	81,000	7,000	8,508,000	26,635,000

Livestock Grazing	Management Alignment						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Unavailable	40,000	0	40,000	0	0	316,000	395,000
Available	8,872,000	18,000	8,784,000	81,000	7,000	8,479,000	26,241,000
Total	8,912,000	18,000	8,824,000	81,000	7,000	8,794,000	26,635,000

Approximate % of Habitat Management Area by Livestock Grazing Decision in MZ II/VII							
Livestock Grazing	No Action & Management Alignment						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Unavailable	<1%	0%	<1%	0%	0%	4%	1%
Available	100%	100%	100%	100%	100%	96%	99%
Total	100%	100%	100%	100%	100%	100%	100%

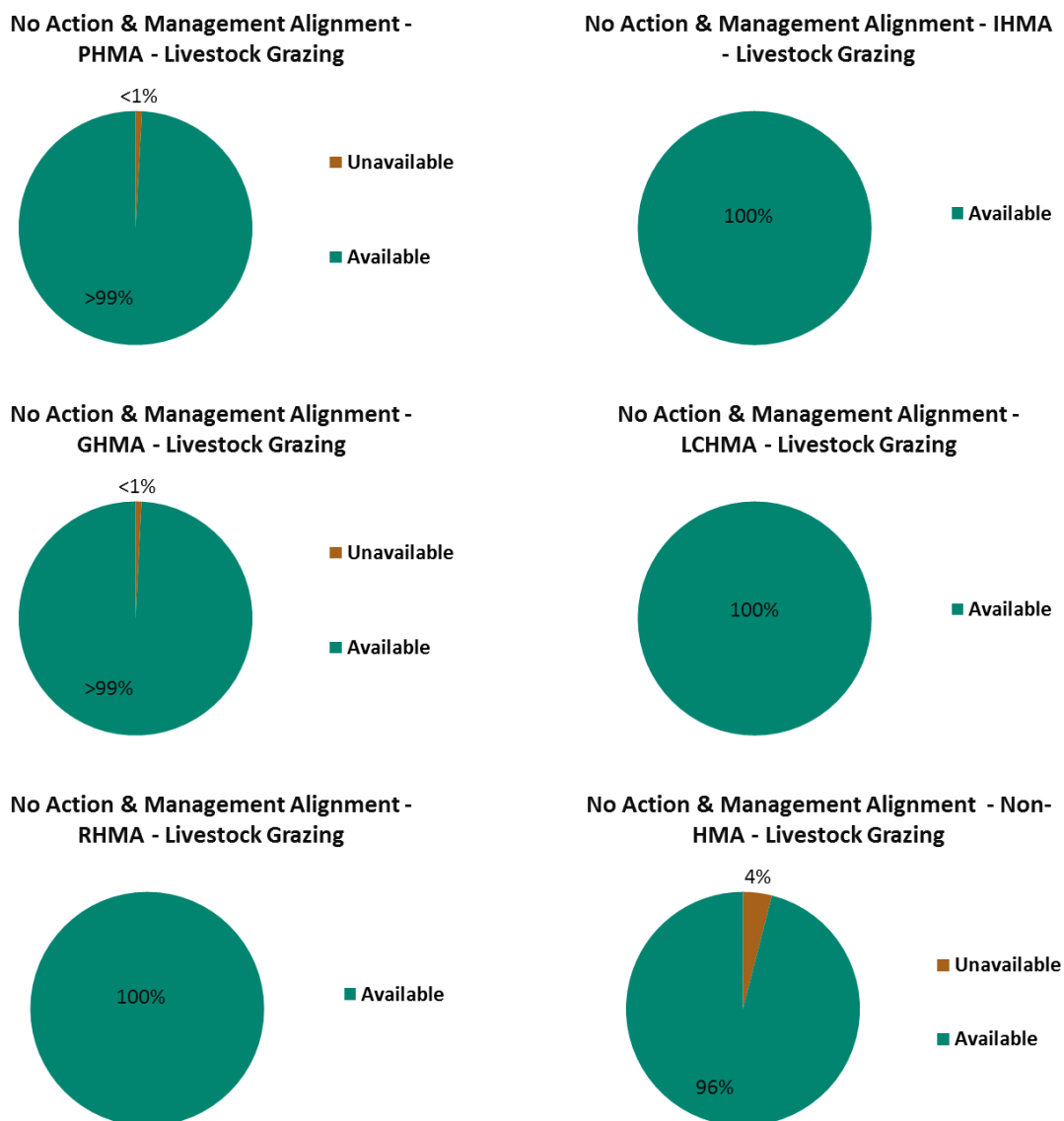


Figure 17 – Livestock Grazing Decisions within MZ II/VII

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

V. Locatable Minerals**Table 19 – Locatable Minerals Decisions within MZ II/VII**

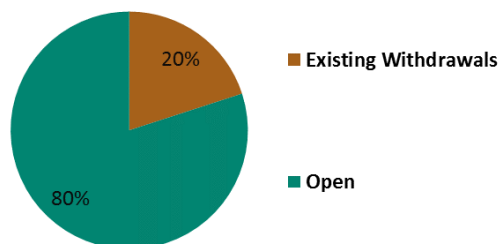
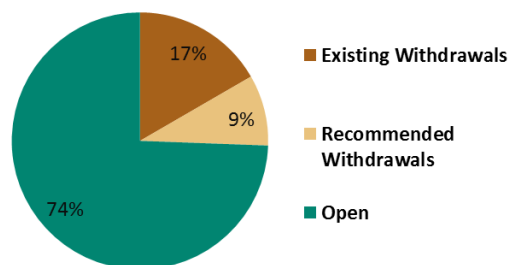
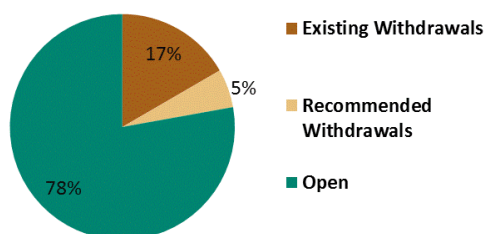
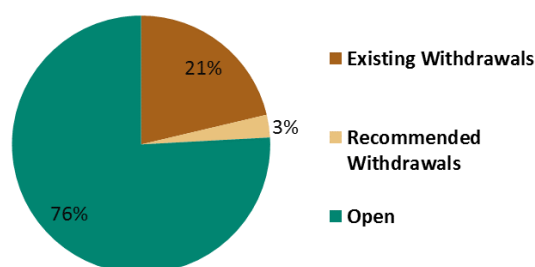
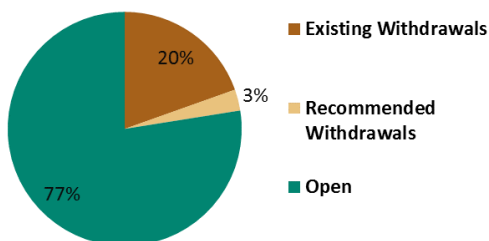
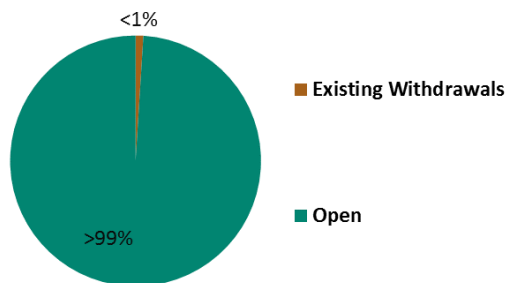
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Locatable Minerals Decisions in MZ II/VII by Habitat Management Area Type							
Locatable Minerals	No Action						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
Existing Withdrawals	1,863,000	7,000	2,394,000	1,000	0	4,804,000	9,068,000
Recommended Withdrawals	998,000	0	320,000	0	0	302,000	1,620,000
Open	8,323,000	27,000	8,529,000	137,000	7,000	10,250,000	27,273,000
Total	11,185,000	33,000	11,243,000	137,000	7,000	15,357,000	37,962,000

Locatable Minerals	Management Alignment						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
Existing Withdrawals	1,863,000	7,000	2,125,000	1,000	0	5,072,000	9,068,000
Recommended Withdrawals	618,000	0	318,000	0	0	302,000	1,238,000
Open	8,703,000	27,000	8,420,000	137,000	7,000	10,361,000	27,656,000
Total	11,185,000	33,000	10,863,000	137,000	7,000	15,736,000	37,962,000

Approximate % of Habitat Management Area by Locatable Minerals Decision in MZ II/VII							
Locatable Minerals	No Action						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
Existing Withdrawals	17%	20%	21%	<1%	0%	31%	24%
Recommended Withdrawals	9%	0%	3%	0%	0%	2%	4%
Open	74%	80%	76%	100%	100%	67%	72%
Total	100%	100%	100%	100%	100%	100%	100%

Locatable Minerals	Management Alignment						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
Existing Withdrawals	17%	20%	20%	<1%	0%	32%	24%
Recommended Withdrawals	6%	0%	3%	0%	0%	2%	3%
Open	78%	80%	78%	100%	100%	66%	73%
Total	100%	100%	100%	100%	100%	100%	100%

**No Action & Management Alignment - IHMA
- Locatable Minerals****No Action - PHMA - Locatable Minerals****Management Alignment - PHMA - Locatable
Minerals****No Action - GHMA - Locatable Minerals****Management Alignment - GHMA - Locatable
Minerals****No Action & Management Alignment -
LCHMA - Locatable Minerals****Figure I8 – Locatable Minerals Decisions within MZ II/VII**

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

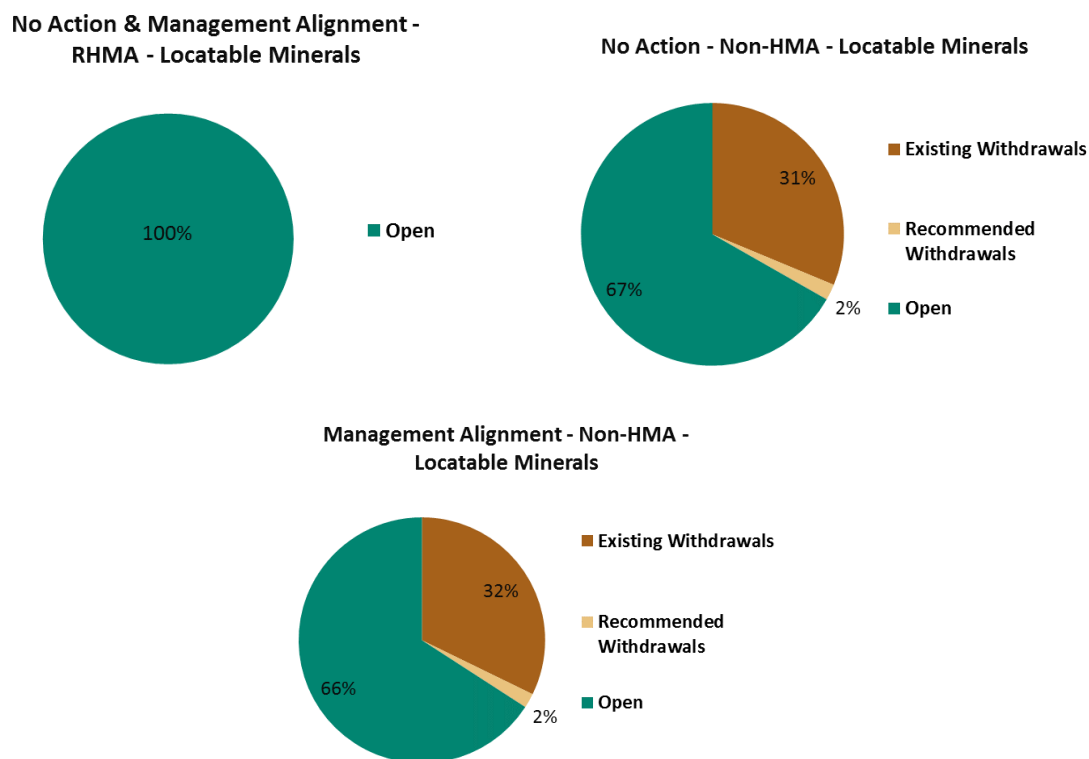


Figure 18 (cont'd) – Locatable Minerals Decisions within MZ II/VII

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

VI. Non-Energy Leasable Minerals

Table 20 – Non-Energy Leasable Minerals Decisions within MZ II/VII

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding.
⁷Data not available for portions of MT and WY. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Non-Energy Leasable Minerals Decisions ⁷ in MZ II/VII by Habitat Management Area Type							
Non-Energy Leasable Minerals	No Action						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Closed	3,617,000	7,000	1,256,000	1,000	NA	4,591,000	9,471,000
Open	6,052,000	23,000	7,330,000	137,000	NA	10,221,000	23,763,000
Total	9,669,000	30,000	8,586,000	137,000	NA	14,812,000	33,233,000

Non-Energy Leasable Minerals	Management Alignment						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Closed	3,581,000	7,000	1,244,000	1,000	NA	4,603,000	9,436,000
Open	6,052,000	23,000	6,972,000	137,000	NA	10,614,000	23,799,000
Total	9,633,000	30,000	8,216,000	137,000	NA	15,217,000	33,233,000

Approximate % of Habitat Management Area by Non-Energy Leasable Minerals Decision ⁷ in MZ II/VII							
Non-Energy Leasable Minerals	No Action						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Closed	37%	23%	15%	<1%	NA	31%	28%
Open	63%	77%	85%	100%	NA	69%	72%
Total	100%	100%	100%	100%	NA	100%	100%

Non-Energy Leasable Minerals	Management Alignment						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Closed	37%	23%	15%	<1%	NA	30%	28%
Open	63%	77%	85%	100%	NA	70%	72%
Total	100%	100%	100%	100%	NA	100%	100%

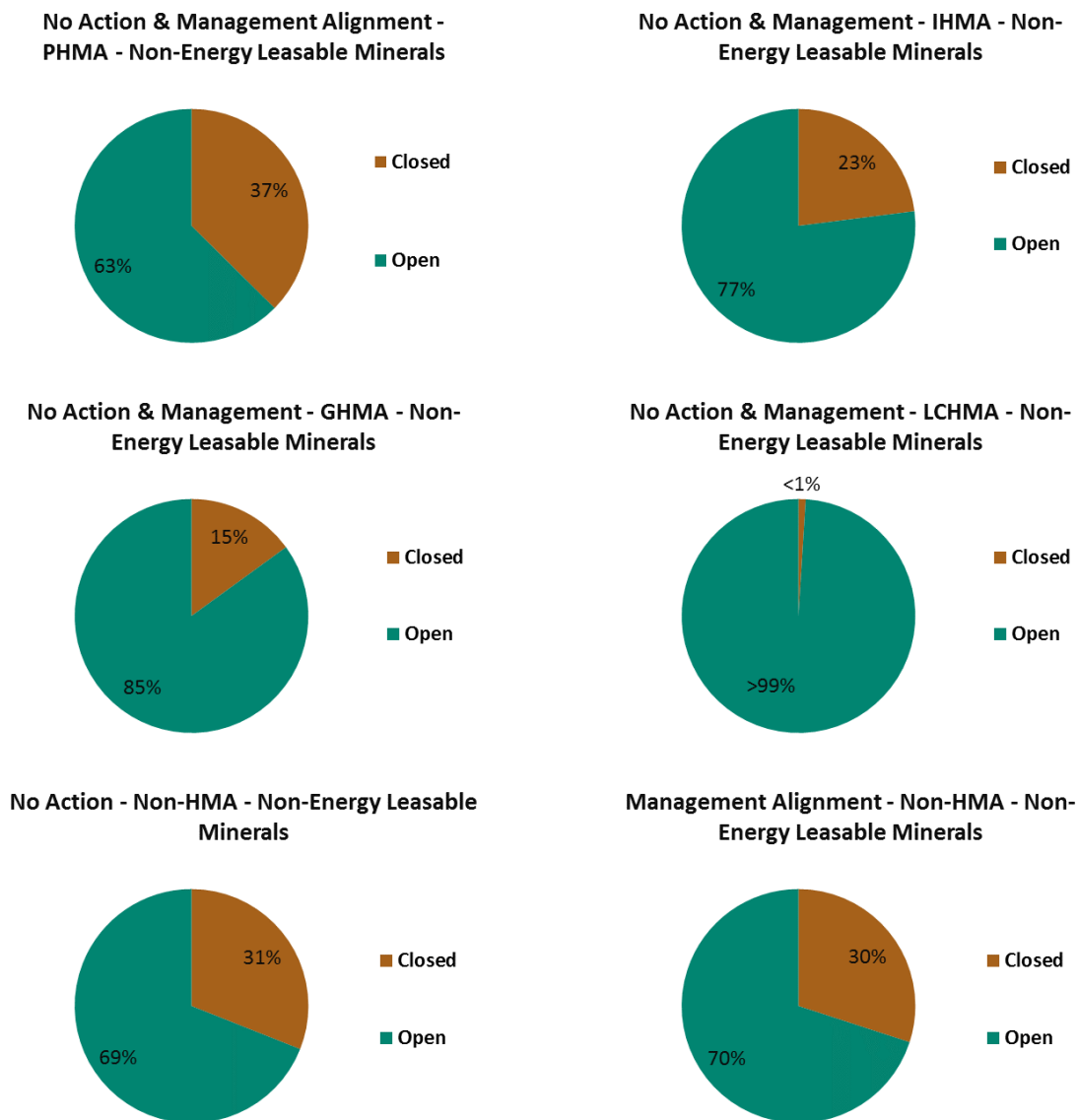


Figure 19 - Non-Energy Leasable Minerals Decisions within MZ II/VII

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. ⁷Data not available for portions of MT and WY. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

VII. Fluid Minerals (Oil & Gas)**Table 21 – Fluid Minerals (Oil & Gas) Decisions within MZ II/VII**

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages

Approximate Acres of Fluid Minerals (Oil & Gas) Decisions in MZ II/VII by Habitat Management Area Type							
Fluid Minerals (Oil & Gas)	No Action						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Closed	1,294,000	7,000	1,178,000	1,000	0	4,773,000	7,252,000
Open NSO	4,399,000	23,000	1,425,000	54,000	5,000	2,628,000	8,535,000
Open CSU/TL	5,689,000	0	6,517,000	81,000	2,000	4,748,000	17,036,000
Open Standard Stipulations	0	0	2,297,000	8,000	0	2,895,000	5,200,000
Total	11,382,000	29,000	11,416,000	144,000	8,000	15,046,000	38,024,000

Fluid Minerals (Oil & Gas)	Management Alignment						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Closed	1,078,000	7,000	1,153,000	1,000	0	4,787,000	7,024,000
Open NSO	4,578,000	23,000	1,430,000	54,000	5,000	2,634,000	8,725,000
Open CSU/TL	5,689,000	0	6,310,000	81,000	2,000	4,956,000	17,036,000
Open Standard Stipulations	0	0	2,193,000	8,000	0	3,000,000	5,200,000
Total	11,345,000	29,000	11,086,000	144,000	8,000	15,376,000	37,988,000

Approximate % of Habitat Management Area by Fluid Minerals (Oil & Gas) Decision in MZ II/VII							
Fluid Minerals (Oil & Gas)	No Action						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Closed	11%	21%	10%	<1%	0%	32%	19%
Open NSO	39%	79%	12%	38%	63%	17%	22%
Open CSU/TL	50%	0%	57%	56%	37%	32%	45%
Open Standard Stipulations	0%	0%	20%	6%	0%	19%	14%
Total	100%	100%	100%	100%	100%	100%	100%

Fluid Minerals (Oil & Gas)	Management Alignment						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Closed	10%	21%	10%	<1%	0%	31%	18%
Open NSO	40%	79%	13%	38%	63%	17%	23%
Open CSU/TL	50%	0%	57%	56%	37%	32%	45%
Open Standard Stipulations	0%	0%	20%	6%	0%	20%	14%
Total	100%	100%	100%	100%	100%	100%	100%

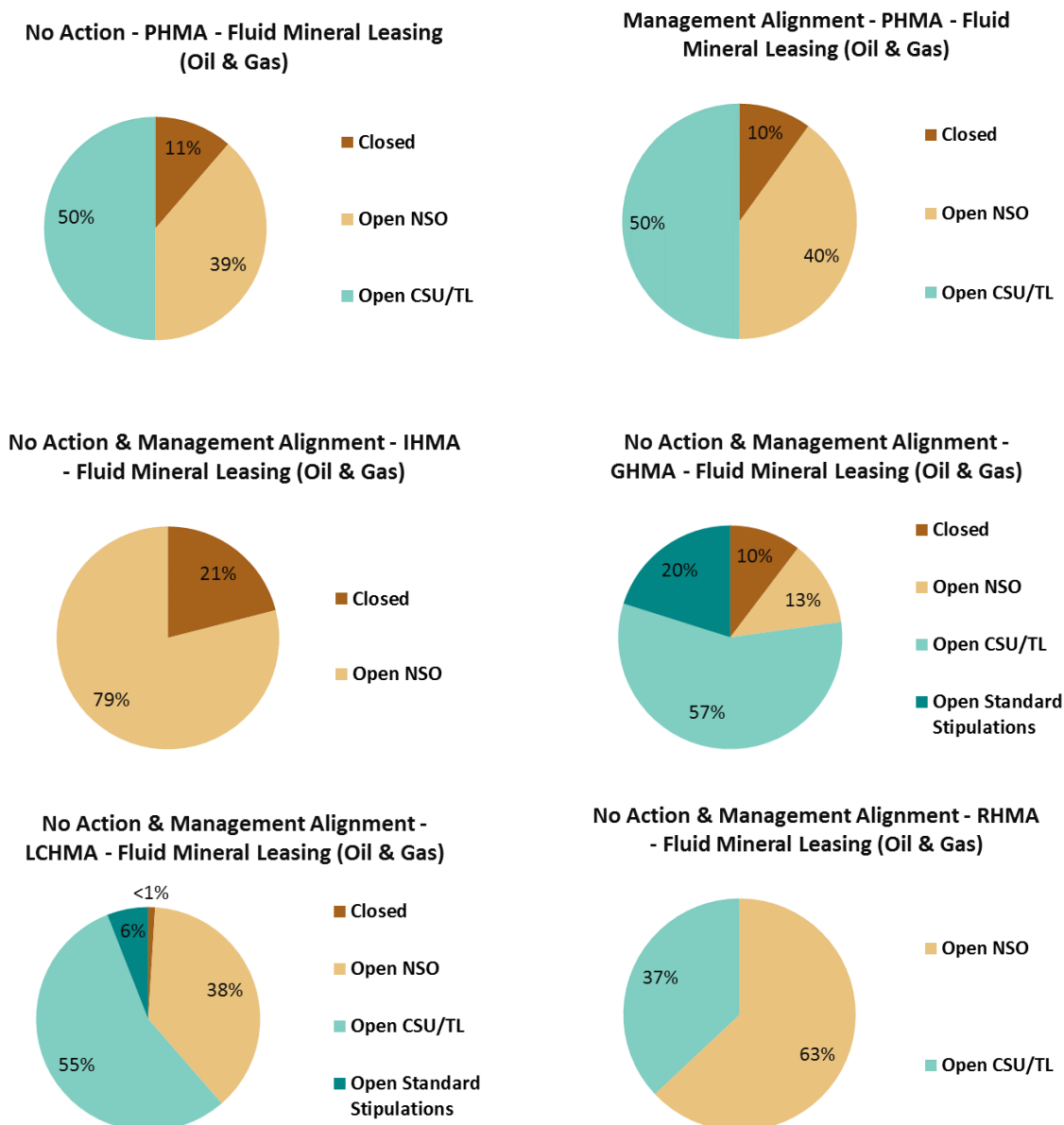
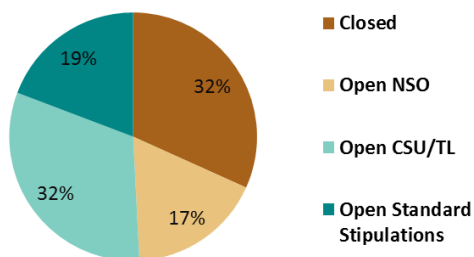
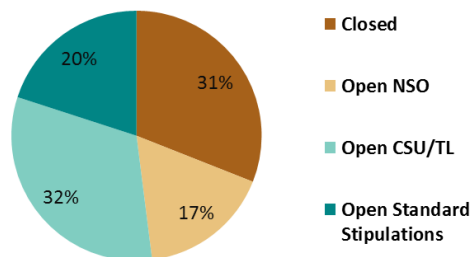


Figure 20 – Fluid Minerals (Oil & Gas) Decisions within MZ II/VII

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

No Action - Non-HMA - Fluid Mineral Leasing
(Oil & Gas)

Management Alignment - Non-HMA - Fluid Mineral Leasing (Oil & Gas)

**Figure 20 (cont'd) – Fluid Minerals (Oil & Gas) Decisions within MZ II/VII**

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

VIII. Rights-of-Ways

Table 22 – Rights-of-Ways Decisions within MZ II/VII

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Rights-of-Ways Decisions in MZ II/VII by Habitat Management Area Type							
Rights-of-Ways	No Action						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Exclusion	561,000	0	654,000	0	0	1,255,000	2,471,000
Avoidance	8,119,000	18,000	3,132,000	16,000	7,000	1,172,000	12,465,000
Open	71,000	16,000	5,256,000	51,000	0	5,067,000	10,460,000
Total	8,752,000	34,000	9,041,000	67,000	7,000	7,494,000	25,395,000

Rights-of-Ways	Management Alignment						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Exclusion	561,000	0	651,000	0	0	1,258,000	2,471,000
Avoidance	8,119,000	18,000	3,132,000	16,000	7,000	1,172,000	12,465,000
Open	71,000	16,000	4,971,000	51,000	0	5,351,000	10,460,000
Total	8,752,000	34,000	8,754,000	67,000	7,000	7,781,000	25,395,000

Approximate % of Habitat Management Area by Rights-of-Ways Decision in MZ II/VII							
Rights-of-Ways	No Action						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Exclusion	6%	0%	7%	0%	0%	17%	10%
Avoidance	93%	53%	35%	24%	100%	16%	49%
Open	1%	47%	58%	76%	0%	68%	41%
Total	100%	100%	100%	100%	100%	100%	100%

Rights-of-Ways	Management Alignment						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Exclusion	6%	0%	7%	0%	0%	16%	10%
Avoidance	93%	53%	36%	24%	100%	15%	49%
Open	1%	47%	57%	76%	0%	69%	41%
Total	100%	100%	100%	100%	100%	100%	100%

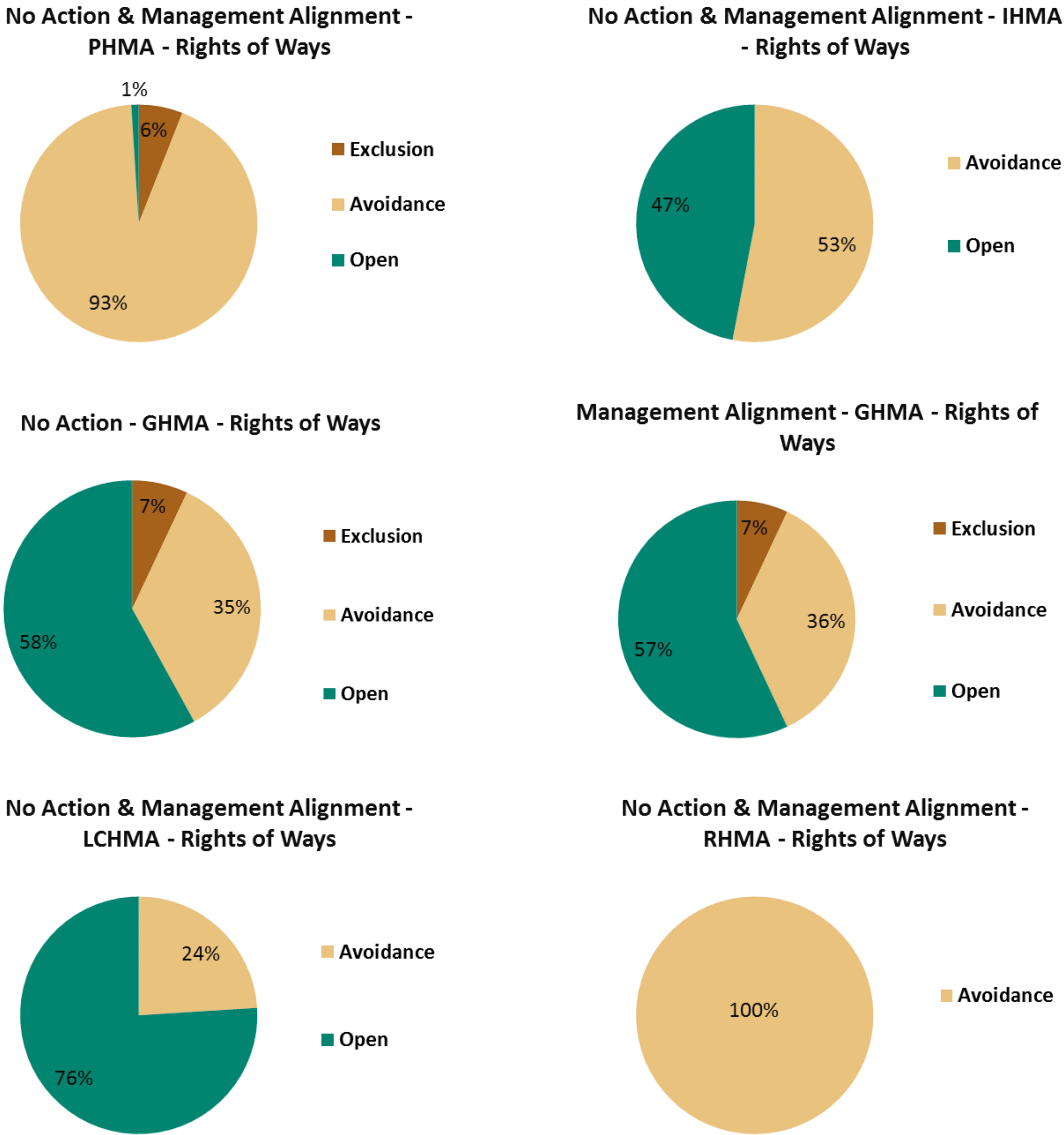


Figure 2I – Rights-of-Ways Decisions within MZ II/VII

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

No Action & Management Alignment - Non-HMA - Rights of Ways

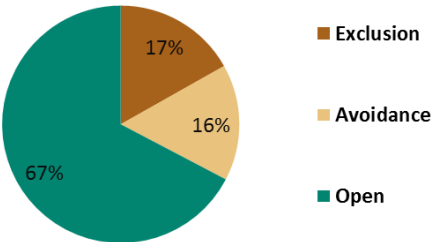


Figure 21 (cont'd) – Rights-of-Ways Decisions within MZ II/VII

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

IX. Salable Minerals Materials

Table 23 – Salable Minerals Materials Decisions within MZ II/VII

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

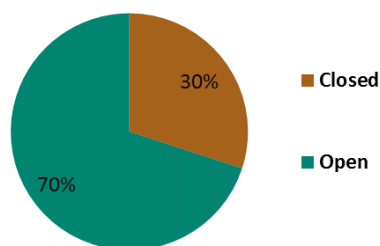
Approximate Acres of Salable Minerals Materials Decisions in MZ II/VII by Habitat Management Area Type							
Salable Minerals Materials	No Action						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Closed	3,241,000	0	1,401,000	27,000	0	3,592,000	8,263,000
Open	7,671,000	28,000	9,745,000	115,000	7,000	9,675,000	27,239,000
Total	10,912,000	28,000	11,145,000	142,000	7,000	13,268,000	35,502,000

Salable Minerals Materials	Management Alignment						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Closed	3,241,000	0	1,399,000	27,000	0	3,594,000	8,263,000
Open	7,671,000	28,000	9,413,000	115,000	7,000	10,006,000	27,239,000
Total	10,912,000	28,000	10,813,000	142,000	7,000	13,600,000	35,502,000

Approximate % of Habitat Management Area by Salable Minerals Materials Decision in MZ II/VII							
Salable Minerals Materials	No Action						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Closed	30%	0%	13%	19%	0%	26%	23%
Open	70%	100%	87%	81%	100%	74%	77%
Total	100%	100%	100%	100%	100%	100%	100%

Salable Minerals Materials	Management Alignment						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Closed	30%	0%	13%	19%	0%	27%	23%
Open	70%	100%	87%	81%	100%	73%	77%
Total	100%	100%	100%	100%	100%	100%	100%

No Action & Management Alignment -
PHMA - Salable Minerals Materials



No Action & Management Alignment - IHMA
- Salable Minerals Materials

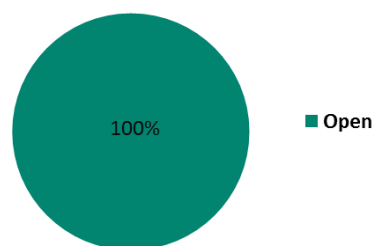


Figure 22 – Salable Minerals Materials Decisions within MZ II/VII

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

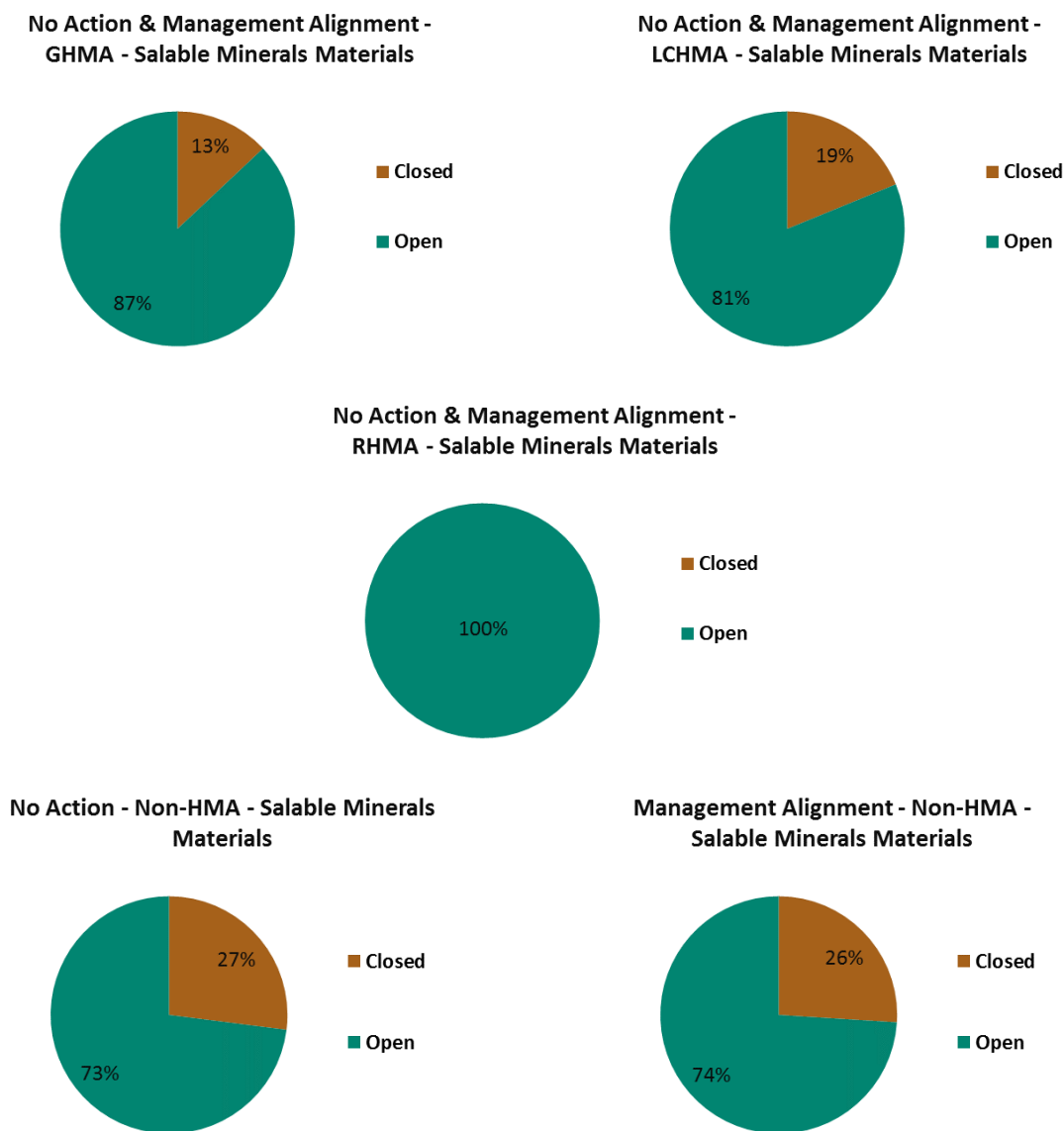


Figure 22 (cont'd) – Salable Minerals Materials Decisions within MZ II/VII

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

X. Solar Energy

Table 24 – Solar Energy Decisions within MZ II/VII

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. ⁸ Data not available for WY. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

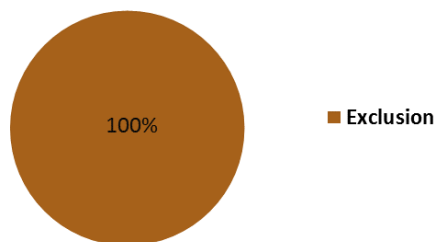
Approximate Acres of Solar Energy Decisions ⁸ in MZ II/VII by Habitat Management Area Type							
Solar Energy	No Action						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
Exclusion	1,494,000	0	317,000	0	7,000	4,352,000	6,169,000
Avoidance	2,000	18,000	764,000	83,000	0	742,000	1,610,000
Open	0	0	1,000	0	0	2,170,000	2,171,000
Total	1,496,000	18,000	1,082,000	83,000	7,000	7,265,000	9,950,000

Solar Energy	Management Alignment						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
Exclusion	1,494,000	0	30,000	0	7,000	4,639,000	6,169,000
Avoidance	2,000	18,000	764,000	83,000	0	742,000	1,610,000
Open	0	0	1,000	0	0	2,170,000	2,171,000
Total	1,496,000	18,000	795,000	83,000	7,000	7,551,000	9,950,000

Approximate % of Habitat Management Area by Solar Energy Decision ⁸ in MZ II/VII							
Solar Energy	No Action						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
Exclusion	100%	0%	29%	0%	100%	60%	62%
Avoidance	0%	100%	71%	100%	0%	10%	16%
Open	0%	0%	<1%	0%	0%	30%	22%
Total	100%	100%	100%	100%	100%	100%	100%

Solar Energy	Management Alignment						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
Exclusion	100%	0%	4%	0%	100%	61%	62%
Avoidance	0%	100%	96%	100%	0%	10%	16%
Open	0%	0%	<1%	0%	0%	29%	22%
Total	100%	100%	100%	100%	100%	100%	100%

No Action & Management Alignment -
PHMA - Solar Energy



No Action & Management Alignment -
IHMA - Solar Energy

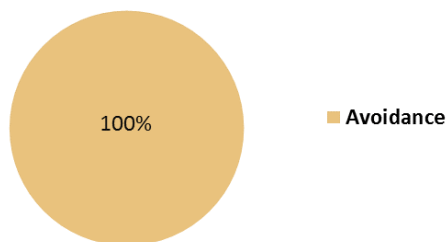


Figure 23 – Solar Energy Decisions within MZ II/VII

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. ⁸ Data not available for WY. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

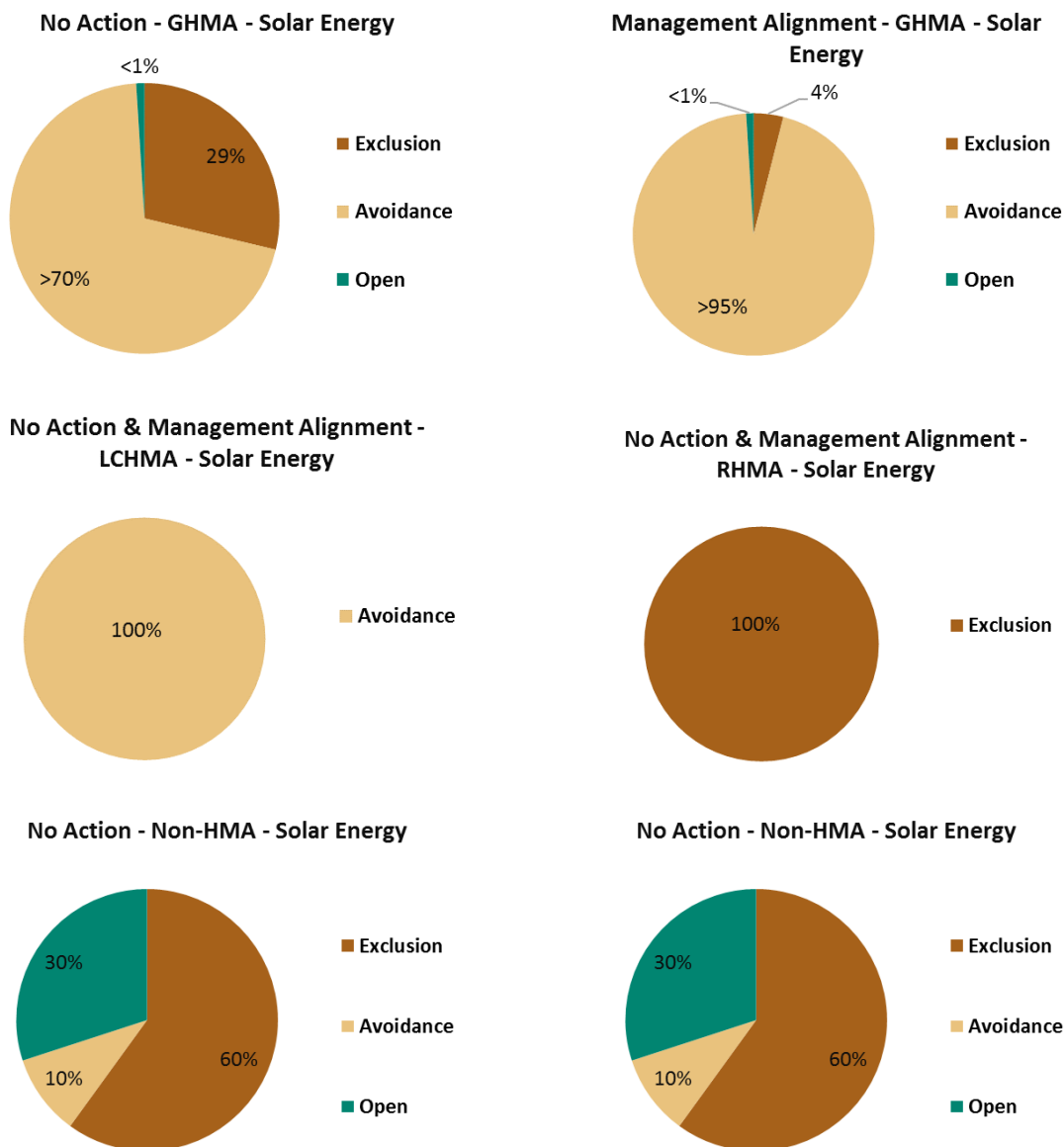


Figure 23 (cont'd) – Solar Energy Decisions within MZ II/VII

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. ⁸ Data not available for WY. Calculations reflect only the portions of the MZ where data was available. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

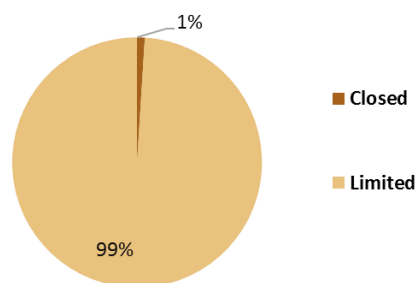
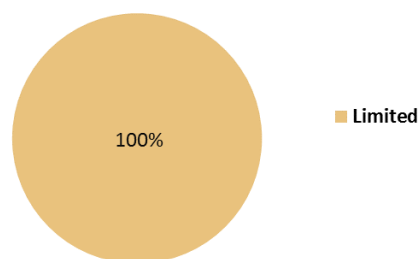
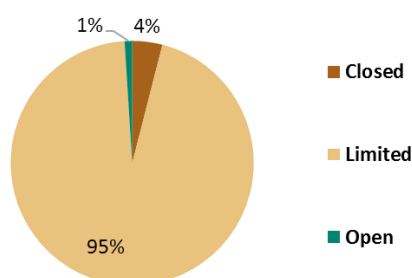
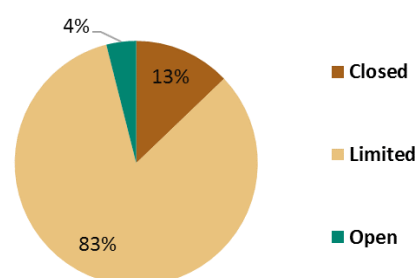
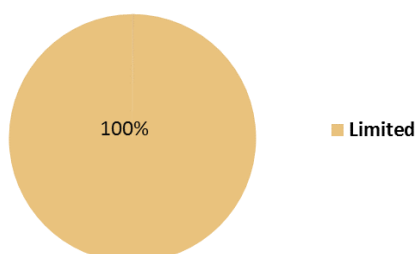
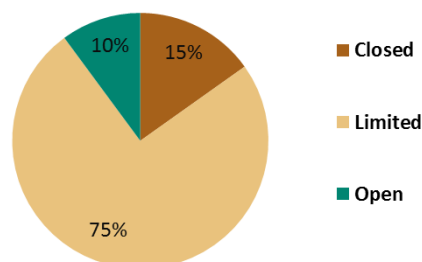
XI. Trails and Travel Management**Table 25 – Trails and Travel Management Decisions within MZ II/VII**

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Trails and Travel Management Decisions in MZ II/VII by Habitat Management Area Type							
Trails and Travel Management	No Action						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Closed	103,000	0	369,000	11,000	0	1,304,000	1,787,000
Limited	8,840,000	18,000	8,696,000	69,000	7,000	6,337,000	23,966,000
Open	4,000	0	54,000	3,000	0	891,000	953,000
Total	8,947,000	18,000	9,121,000	82,000	7,000	8,531,000	26,706,000

Trails and Travel Management	Management Alignment						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Closed	103,000	0	366,000	11,000	0	1,307,000	1,787,000
Limited	8,840,000	18,000	8,413,000	69,000	7,000	6,620,000	23,966,000
Open	4,000	0	54,000	3,000	0	891,000	953,000
Total	8,947,000	18,000	8,834,000	82,000	7,000	8,819,000	26,706,000

Approximate % of Habitat Management Area by Trails and Travel Management Decision in MZ II/VII							
Trails and Travel Management	No Action & Management Alignment						
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	Total
Closed	1%	0%	4%	13%	0%	15%	7%
Limited	99%	100%	95%	84%	100%	74%	90%
Open	0%	0%	1%	4%	0%	10%	4%
Total	100%	100%	100%	100%	100%	100%	100%

No Action & Management Alignment - PHMA -
Trails and Travel ManagementNo Action & Management Alignment - IHMA -
Trails and Travel ManagementNo Action & Management Alignment - GHMA
- Trails and Travel ManagementNo Action & Management Alignment -
LCHMA - Trails and Travel ManagementNo Action & Management Alignment - RHMA
- Trails and Travel ManagementNo Action & Management Alignment - Non-
HMA - Trails and Travel Management**Figure 24 – Trails and Travel Management Decisions within MZ II/VII**

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

XII. Wind Energy

Table 26 – Wind Energy Decisions within MZ II/VII

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

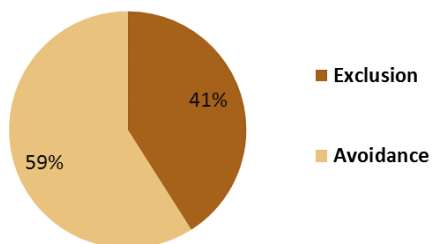
Approximate Acres of Wind Energy Decisions in MZ II/VII by Habitat Management Area Type							
Wind Energy	No Action						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
Exclusion	3,660,000	0	1,041,000	0	7,000	1,327,000	6,035,000
Avoidance	5,294,000	18,000	2,805,000	83,000	0	1,103,000	9,304,000
Open	0	0	5,272,000	0	0	5,045,000	10,317,000
Total	8,953,000	18,000	9,119,000	83,000	7,000	7,476,000	25,656,000

Wind Energy	Management Alignment						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
Exclusion	3,660,000	0	1,038,000	0	7,000	1,330,000	6,035,000
Avoidance	5,294,000	18,000	2,805,000	83,000	0	1,103,000	9,304,000
Open	0	0	4,988,000	0	0	5,329,000	10,317,000
Total	8,953,000	18,000	8,831,000	83,000	7,000	7,763,000	25,656,000

Approximate % of Habitat Management Area by Wind Energy Decision in MZ II/VII							
Wind Energy	No Action						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
Exclusion	41%	0%	11%	0%	100%	18%	24%
Avoidance	59%	100%	31%	100%	0%	15%	36%
Open	0%	0%	58%	0%	0%	67%	40%
Total	100%	100%	100%	100%	100%	100%	100%

Wind Energy	Management Alignment						Total
	PHMA	IHMA	GHMA	LCHMA	RHMA	Non-HMA	
Exclusion	41%	0%	12%	0%	100%	17%	24%
Avoidance	59%	100%	32%	100%	0%	14%	36%
Open	0%	0%	56%	0%	0%	69%	40%
Total	100%	100%	100%	100%	100%	100%	100%

No Action & Management Alignment -
PHMA - Wind Energy



No Action & Management Alignment - IHMA
- Wind Energy

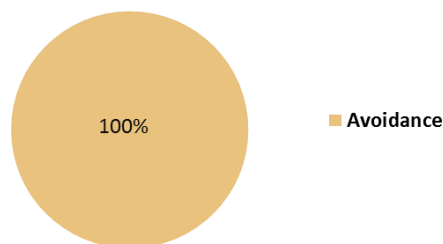


Figure 25 – Wind Energy Decisions within MZ II/VII

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

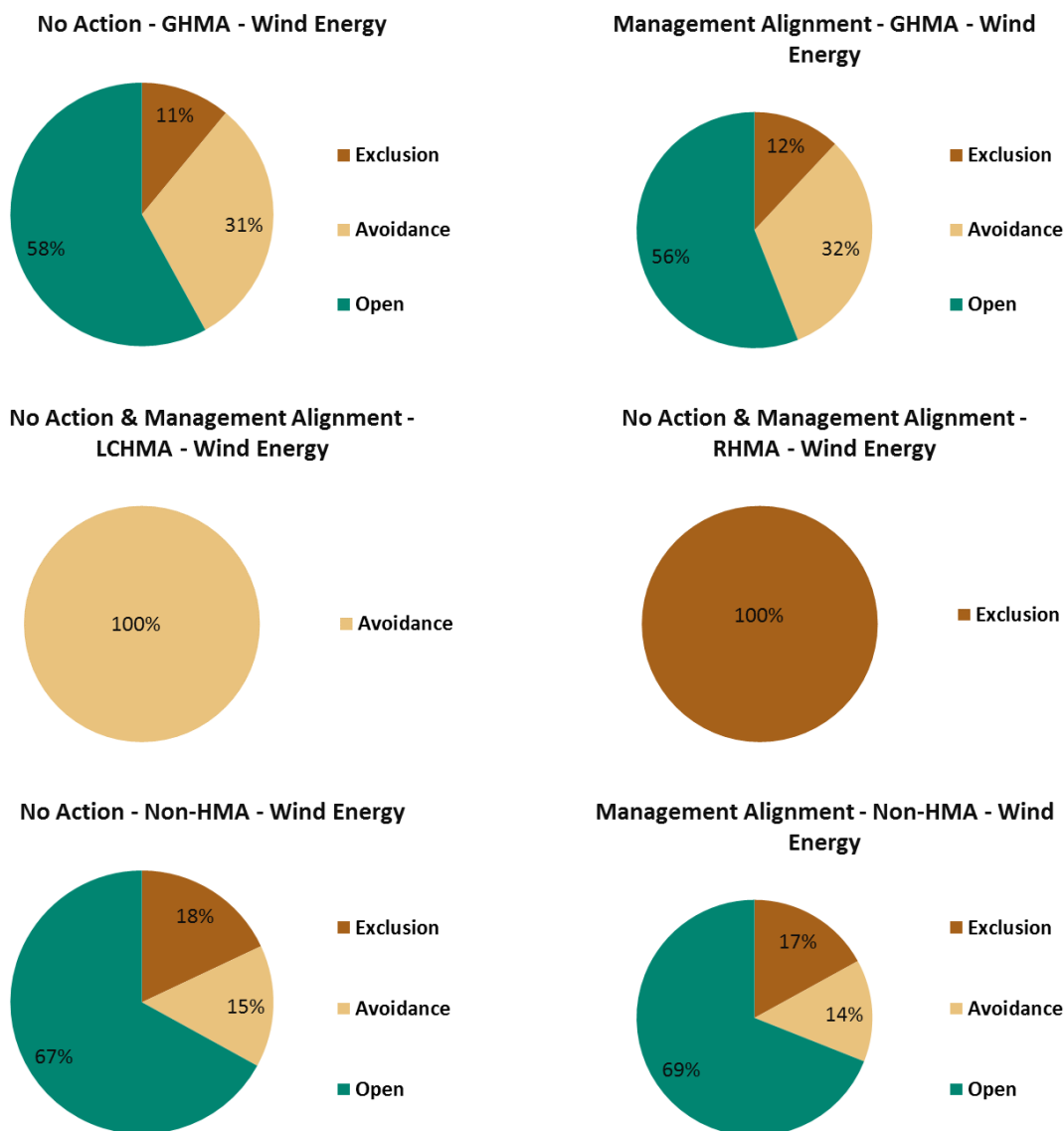


Figure 25 (cont'd) – Wind Energy Decisions within MZ II/VII

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

S-2.2.3 Management Zone III – UT, NV

I. Habitat Management

Table 27 – Habitat Management Areas within MZ III

Acres and percentages reflect all lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of HMA in MZ III									
No Action					Management Alignment				
PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA
7,093,000	5,953,000	5,651,000	42,000	54,928,000	6,974,000	4,474,000	4,253,000	42,000	57,925,000

Approximate Percent of MZ III that is HMA									
No Action					Management Alignment				
PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA
10%	8%	8%	<1%	75%	9%	6%	6%	<1%	79%

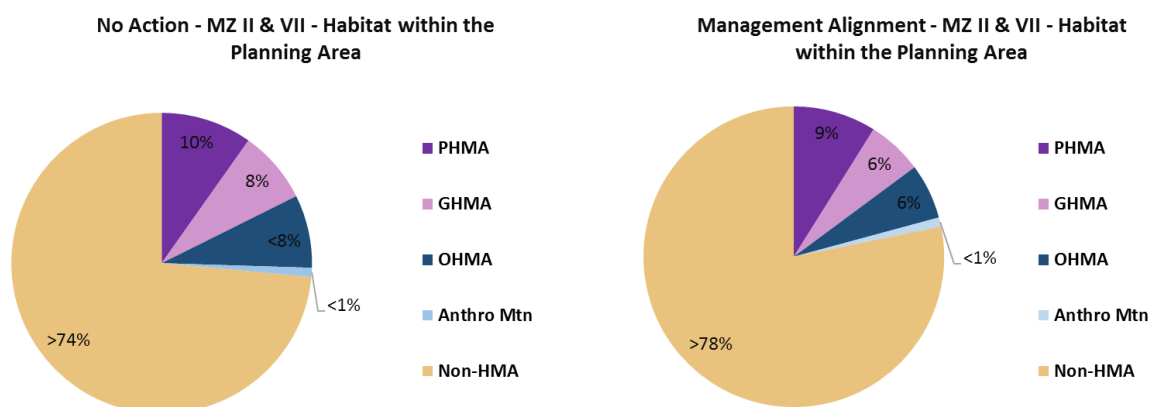


Figure 26 – Habitat Management Areas within MZ III

Percentages reflect all lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

II. Geothermal Energy

Table 28 – Geothermal Energy Decisions within MZ III

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Geothermal Energy Decisions in MZ III by Habitat Management Area Type						
Geothermal Energy	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Closed	126,000	165,000	230,000	7,000	4,948,000	5,476,000
Open NSO	5,358,000	23,000	0	35,000	3,939,000	9,354,000
Open CSU/TL	0	3,628,000	0	0	2,135,000	5,763,000
Open Standard Stipulations	0	86,000	4,042,000	0	26,065,000	30,193,000
Total	5,484,000	3,902,000	4,272,000	42,000	37,087,000	50,787,000

Geothermal Energy	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Closed	124,000	176,000	159,000	7,000	4,990,000	5,457,000
Open NSO	5,483,000	0	0	35,000	3,961,000	9,479,000
Open CSU/TL	0	3,565,000	0	0	2,191,000	5,756,000
Open Standard Stipulations	0	0	3,534,000	0	26,554,000	30,088,000
Total	5,607,000	3,741,000	3,693,000	42,000	37,696,000	50,780,000

Approximate % of Habitat Management Area by Geothermal Energy Decision in MZ III						
Geothermal Energy	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Closed	2%	4%	5%	17%	13%	11%
Open NSO	98%	1%	0%	83%	11%	18%
Open CSU/TL	0%	93%	0%	0%	6%	11%
Open Standard Stipulations	0%	2%	95%	0%	70%	59%
Total	100%	100%	100%	100%	100%	100%

Geothermal Energy	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Closed	2%	5%	4%	17%	13%	11%
Open NSO	98%	0%	0%	83%	11%	19%
Open CSU/TL	0%	95%	0%	0%	6%	11%
Open Standard Stipulations	0%	0%	96%	0%	70%	59%
Total	100%	100%	100%	100%	100%	100%

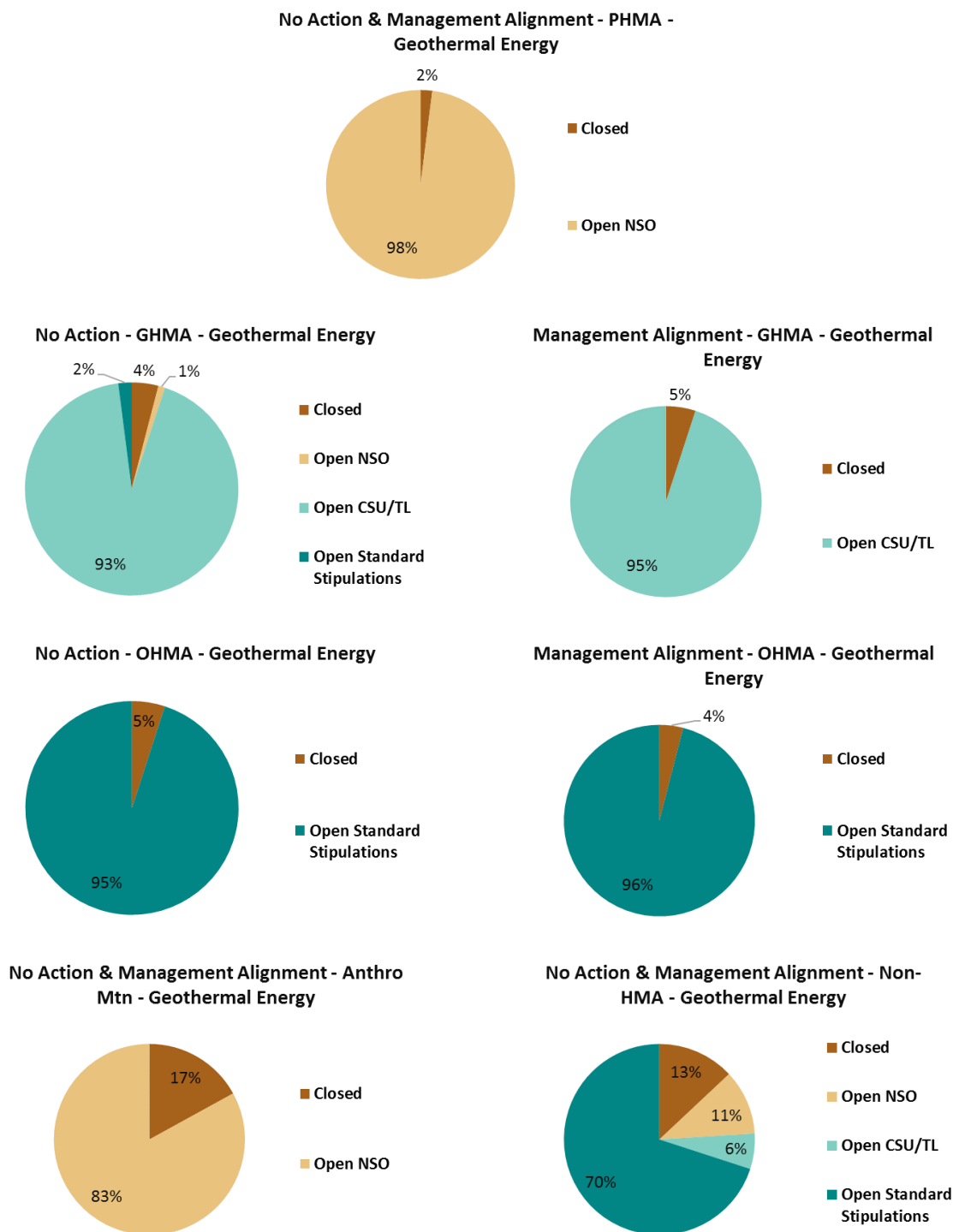


Figure 27 – Geothermal Energy Decisions within MZ III

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

III. Land Tenure

Table 29 – Land Tenure Decisions within MZ III

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Land Tenure Decisions in MZ III by Habitat Management Area Type						
Land Tenure	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Disposal	0	0	280,000	NA	2,178,000	2,458,000
Retention	4,722,000	3,875,000	3,992,000	NA	30,234,000	42,824,000
Total	4,722,000	3,875,000	4,272,000	NA	32,413,000	45,283,000

Land Tenure	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Disposal	3,000	62,000	304,000	NA	2,214,000	2,583,000
Retention	4,844,000	3,679,000	3,389,000	NA	30,782,000	42,694,000
Total	4,847,000	3,741,000	3,693,000	NA	32,996,000	45,277,000

Approximate % of Habitat Management Area by Land Tenure Decision in MZ III						
Land Tenure	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Disposal	0%	0%	7%	NA	7%	5%
Retention	100%	100%	93%	NA	93%	95%
Total	100%	100%	100%	NA	100%	100%

Land Tenure	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Disposal	0%	2%	8%	NA	7%	6%
Retention	100%	98%	92%	NA	93%	94%
Total	100%	100%	100%	NA	100%	100%



Figure 28 – Land Tenure Decisions within MZ III

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

IV. Livestock Grazing

Table 30 – Livestock Grazing Decisions within MZ III

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Livestock Grazing Decisions in MZ III by Habitat Management Area Type						
Livestock Grazing	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Unavailable	0	0	0	NA	129,000	129,000
Available	4,722,000	3,868,000	4,265,000	NA	31,559,000	44,415,000
Total	4,722,000	3,868,000	4,265,000	NA	31,688,000	44,544,000

Livestock Grazing	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Unavailable	0	0	0	NA	129,000	129,000
Available	4,845,000	3,741,000	3,690,000	NA	32,135,000	44,410,000
Total	4,845,000	3,741,000	3,690,000	NA	32,264,000	44,539,000

Approximate % of Habitat Management Area by Livestock Grazing Decision in MZ III						
Livestock Grazing	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Unavailable	0%	0%	0%	NA	<1%	<1%
Available	100%	100%	100%	NA	100%	100%
Total	100%	100%	100%	NA	100%	100%

Livestock Grazing	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Unavailable	0%	0%	0%	NA	<1%	<1%
Available	100%	100%	100%	NA	100%	100%
Total	100%	100%	100%	NA	100%	100%

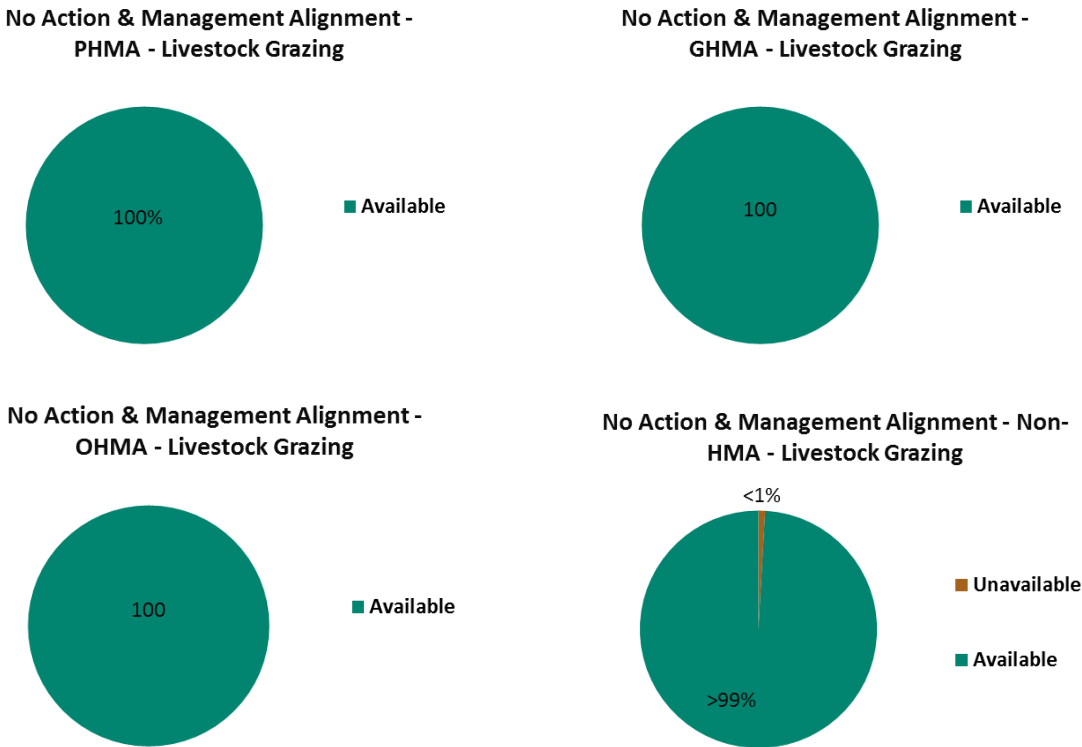


Figure 29 – Livestock Grazing Decisions within MZ III

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

V. Locatable Minerals

Table 31 – Locatable Minerals Decisions within MZ III

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Locatable Minerals Decisions in MZ III by Habitat Management Area Type						
Locatable Minerals	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Existing Withdrawals	56,000	143,000	52,000	0	3,350,000	3,602,000
Recommended Withdrawals	4,000	0	0	0	49,000	53,000
Open	5,429,000	3,788,000	4,219,000	42,000	34,853,000	48,332,000
Total	5,489,000	3,931,000	4,272,000	42,000	38,253,000	51,987,000

Locatable Minerals	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Existing Withdrawals	61,000	100,000	42,000	0	3,398,000	3,601,000
Recommended Withdrawals	4,000	0	0	0	50,000	53,000
Open	5,552,000	3,641,000	3,650,000	42,000	35,444,000	48,330,000
Total	5,617,000	3,741,000	3,693,000	42,000	38,892,000	51,985,000

Approximate % of Habitat Management Area by Geothermal Energy Decision in MZ III						
Locatable Minerals	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Existing Withdrawals	1%	4%	1%	0	9%	7%
Recommended Withdrawals	<1%	0%	0%	0%	<1%	<1%
Open	99%	96%	99%	100%	91%	93%
Total	100%	100%	100%	100%	100%	100%

Locatable Minerals	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Existing Withdrawals	1%	3%	1%	0%	9%	7%
Recommended Withdrawals	<1%	0%	0%	0%	0%	<1%
Open	99%	97%	99%	100%	91%	93%
Total	100%	100%	100%	100%	100%	100%

**No Action & Management Alignment -
PHMA - Locatable Minerals**

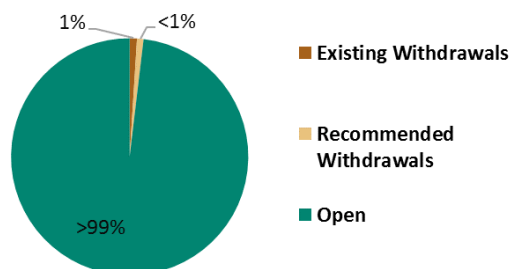


Figure 30 – Locatable Minerals Decisions within MZ III

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.



Figure 30 (cont'd) – Locatable Minerals Decisions within MZ III

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

VI. Non-Energy Leasable Minerals

Table 32 – Non-Energy Leasable Minerals Decisions within MZ III

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Non-Energy Leasable Minerals Decisions in MZ III by Habitat Management Area Type						
Non-Energy Leasable Minerals	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Closed	5,486,000	165,000	230,000	42,000	4,948,000	10,871,000
Open	0	3,766,000	4,042,000	0	33,308,000	41,116,000
Total	5,486,000	3,931,000	4,272,000	42,000	38,256,000	51,987,000

Non-Energy Leasable Minerals	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Closed	5,611,000	176,000	159,000	42,000	4,990,000	10,978,000
Open	0	3,565,000	3,534,000	0	33,904,000	41,004,000
Total	5,611,000	3,741,000	3,693,000	42,000	38,894,000	51,981,000

Approximate % of Habitat Management Area by Non-Energy Leasable Minerals Decision in MZ III						
Non-Energy Leasable Minerals	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Closed	100%	4%	5%	100%	13%	21%
Open	0%	96%	95%	0%	87%	79%
Total	100%	100%	100%	100%	100%	100%

Non-Energy Leasable Minerals	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Closed	100%	5%	4%	100%	13%	21%
Open	0%	95%	96%	0%	87%	79%
Total	100%	100%	100%	100%	100%	100%

No Action & Management Alignment -
PHMA - Non-Energy Leasable Minerals

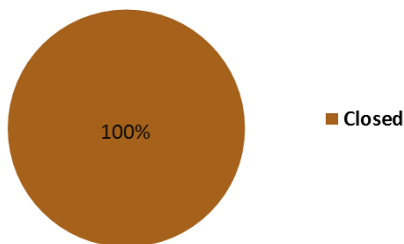


Figure 31 – Non-Energy Leasable Minerals Decisions within MZ III

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

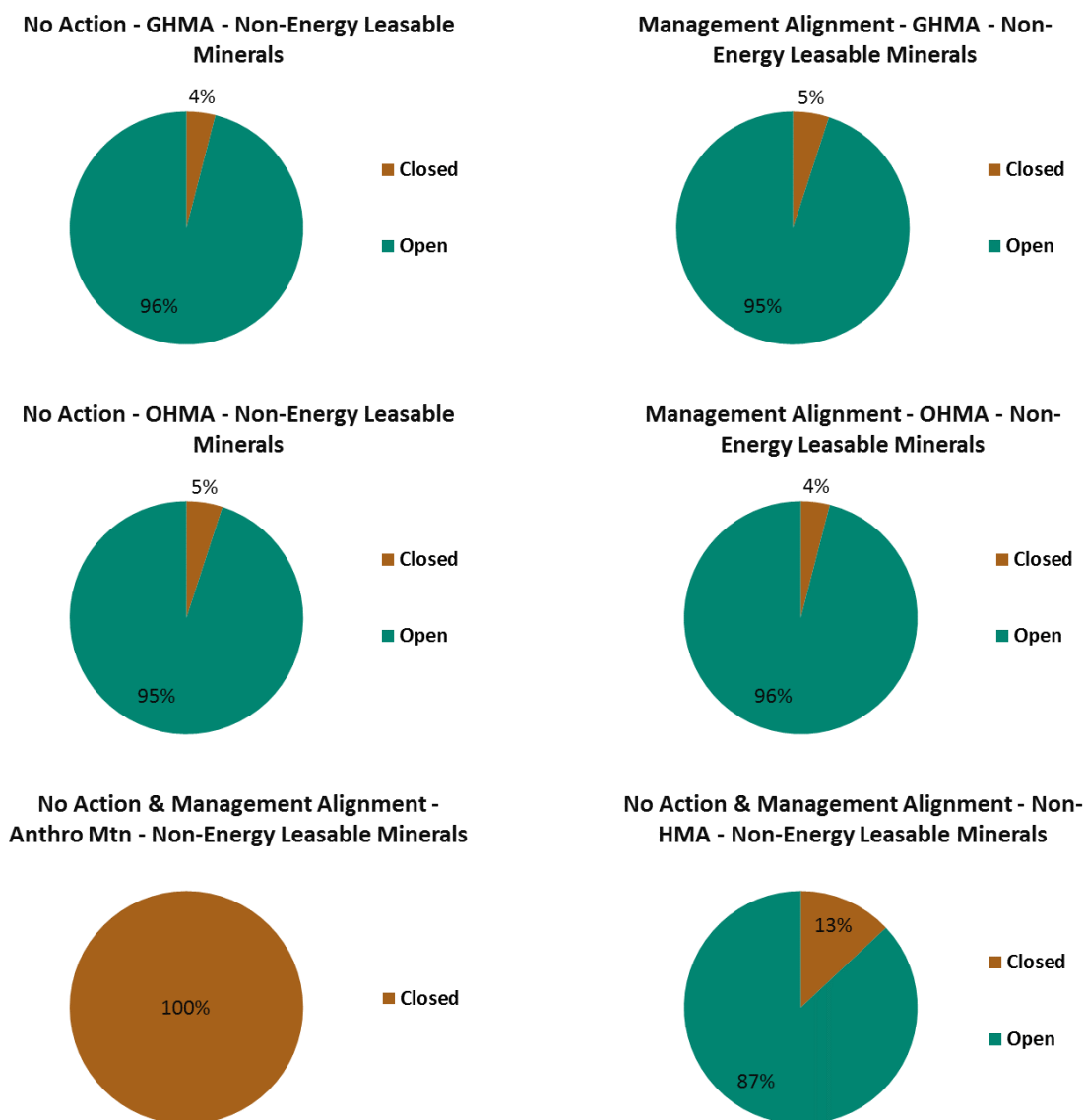


Figure 31 (cont'd) – Non-Energy Leasable Minerals Decisions within MZ III

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

VII. Fluid Minerals (Oil & Gas)**Table 33 – Fluid Mineral (Oil & Gas) Decisions within MZ III**

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Fluid Mineral (Oil & Gas) Decisions in MZ III by Habitat Management Area Type						
Fluid Mineral (Oil & Gas) Decisions	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Closed	126,000	165,000	230,000	7,000	4,948,000	5,476,000
Open NSO	5,358,000	23,000	0	35,000	3,431,000	8,847,000
Open CSU/TL	0	3,628,000	0	0	2,135,000	5,763,000
Open Standard Stipulations	0	86,000	4,042,000	0	26,502,000	30,630,000
Total	5,484,000	3,902,000	4,272,000	42,000	37,016,000	50,716,000

Fluid Mineral (Oil & Gas) Decisions	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Closed	144,000	176,000	159,000	7,000	4,990,000	5,476,000
Open NSO	5,464,000	0	0	35,000	3,454,000	8,952,000
Open CSU/TL	0	3,565,000	0	0	2,191,000	5,756,000
Open Standard Stipulations	0	0	3,534,000	0	26,991,000	30,525,000
Total	5,607,000	3,741,000	3,693,000	42,000	37,626,000	50,710,000

Approximate % of Habitat Management Area by Fluid Mineral (Oil & Gas) Decision in MZ III						
Fluid Mineral (Oil & Gas) Decisions	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Closed	2%	4%	5%	17%	13%	11%
Open NSO	98%	1%	0%	83%	9%	17%
Open CSU/TL	0%	93%	0%	0%	6%	11%
Open Standard Stipulations	0%	2%	95%	0%	72%	60%
Total	100%	100%	100%	100%	100%	100%

Fluid Mineral (Oil & Gas) Decisions	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Closed	3%	5%	4%	17%	13%	11%
Open NSO	97%	0%	0%	83%	9%	18%
Open CSU/TL	0%	95%	0%	0%	6%	11%
Open Standard Stipulations	0%	0%	96%	0%	72%	60%
Total	100%	100%	100%	100%	100%	100%

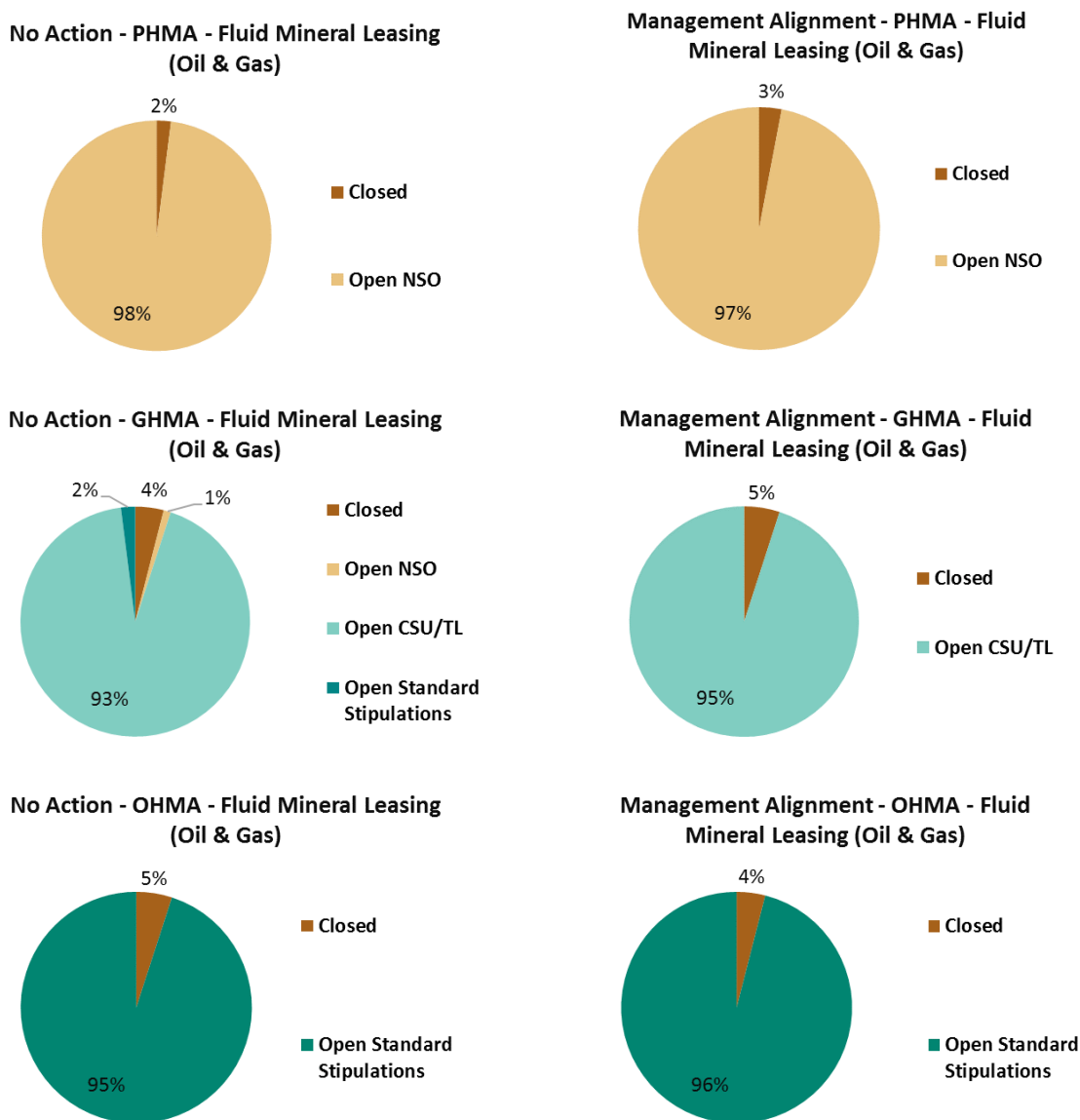


Figure 32 – Fluid Mineral (Oil & Gas) Decisions within MZ III

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

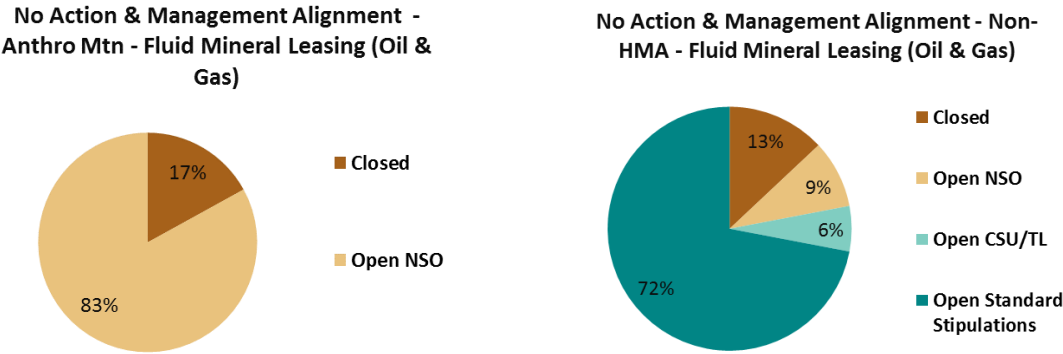


Figure 32 (cont'd) – Fluid Mineral (Oil & Gas) Decisions within MZ III

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

VIII. Rights-of-Ways

Table 34 – Rights-of-Ways Decisions within MZ III

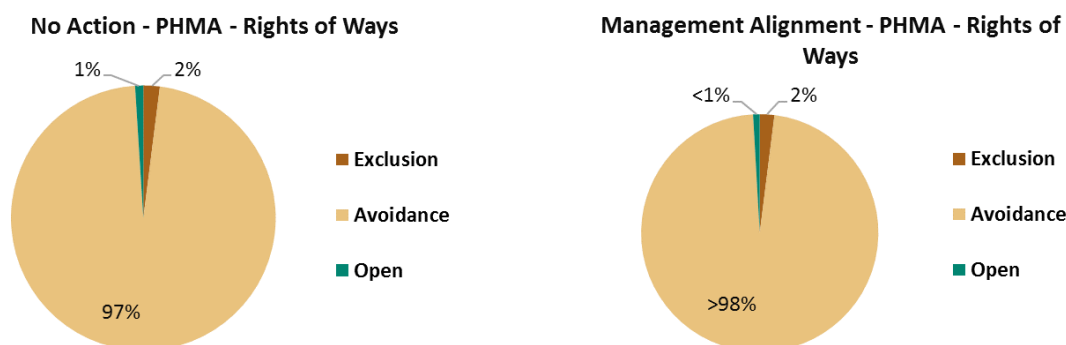
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Rights-of-Ways Decisions in MZ III by Habitat Management Area Type						
Rights-of-Ways	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Exclusion	86,000	164,000	230,000	NA	3,794,000	4,274,000
Avoidance	4,591,000	3,495,000	0	NA	799,000	8,884,000
Open	46,000	216,000	4,043,000	NA	27,890,000	32,195,000
Total	4,722,000	3,875,000	4,272,000	NA	32,483,000	45,353,000

Rights-of-Ways	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Exclusion	104,000	176,000	159,000	NA	3,837,000	4,275,000
Avoidance	4,726,000	3,565,000	0	NA	373,000	8,664,000
Open	17,000	0	3,534,000	NA	28,857,000	32,408,000
Total	4,847,000	3,741,000	3,693,000	NA	33,066,000	45,348,000

Approximate % of Habitat Management Area by Rights-of-Ways Decision in MZ III						
Rights-of-Ways	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Exclusion	2%	4%	5%	NA	12%	9%
Avoidance	97%	90%	0%	NA	2%	20%
Open	1%	6%	95%	NA	86%	71%
Total	100%	100%	100%	NA	100%	100%

Rights-of-Ways	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Exclusion	2%	5%	4%	NA	12%	9%
Avoidance	98%	95%	0%	NA	1%	19%
Open	<1%	0%	96%	NA	87%	71%
Total	100%	100%	100%	NA	100%	100%

**Figure 33 – Rights-of-Ways Decisions within MZ III**

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.



Figure 33 (cont'd) – Rights-of-Ways Decisions within MZ III

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

IX. Salable Minerals Materials**Table 35 – Salable Minerals Materials Decisions within MZ III**

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Salable Minerals Materials Decisions in MZ III by Habitat Management Area Type						
Salable Minerals Materials	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Closed	4,722,000	172,000	230,000	NA	4,646,000	9,770,000
Open	0	3,707,000	4,042,000	NA	27,834,000	35,583,000
Total	4,723,000	3,878,000	4,272,000	NA	32,479,000	45,353,000

Salable Minerals Materials	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Closed	4,847,000	176,000	159,000	NA	4,694,000	9,876,000
Open	0	3,565,000	3,534,000	NA	28,372,000	35,471,000
Total	4,847,000	3,741,000	3,693,000	NA	33,066,000	45,347,000

Approximate % of Habitat Management Area by Non-Energy Leasable Minerals Decision in MZ III						
Salable Minerals Materials	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Closed	100%	4%	5%	NA	14%	22%
Open	0%	96%	95%	NA	86%	78%
Total	100%	100%	100%	NA	100%	100%

Salable Minerals Materials	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Closed	100%	5%	4%	NA	14%	22%
Open	0%	95%	96%	NA	86%	78%
Total	100%	100%	100%	NA	100%	100%



Figure 34 – Salable Minerals Materials Decisions within MZ III

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

X. Solar Energy

Table 36 – Solar Energy Decisions within MZ III

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Solar Energy Decisions in MZ III by Habitat Management Area Type						
Solar Energy	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Exclusion	4,731,000	3,886,000	3,417,000	NA	24,421,000	36,454,000
Avoidance	2,000	4,000	857,000	NA	7,637,000	8,499,000
Open	0	0	1,000	NA	340,000	341,000
Total	4,732,000	3,889,000	4,274,000	NA	32,398,000	45,294,000

Solar Energy	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Exclusion	4,858,000	3,748,000	3,699,000	NA	24,867,000	37,172,000
Avoidance	0	0	0	NA	7,770,000	7,770,000
Open	0	0	0	NA	346,000	346,000
Total	4,858,000	3,748,000	3,699,000	NA	32,983,000	45,288,000

Approximate % of Habitat Management Area by Solar Energy Decision in MZ III						
Solar Energy	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Exclusion	100%	100%	80%	NA	75%	80%
Avoidance	<1%	<1%	20%	NA	24%	19%
Open	0%	0%	<1%	NA	1%	1%
Total	100%	100%	100%	NA	100%	100%

Solar Energy	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Exclusion	100%	100%	100%	NA	75%	82%
Avoidance	0%	0%	0%	NA	24%	17%
Open	0%	0%	0%	NA	1%	1%
Total	100%	100%	100%	NA	100%	100%

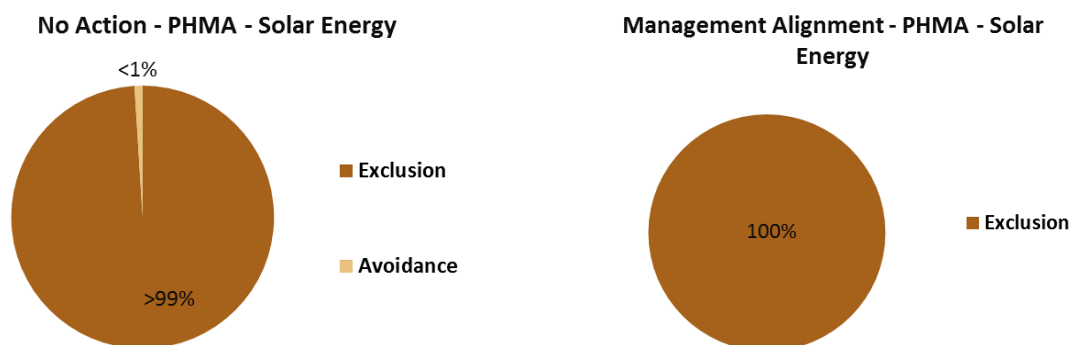


Figure 35 – Solar Energy Decisions within MZ III

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

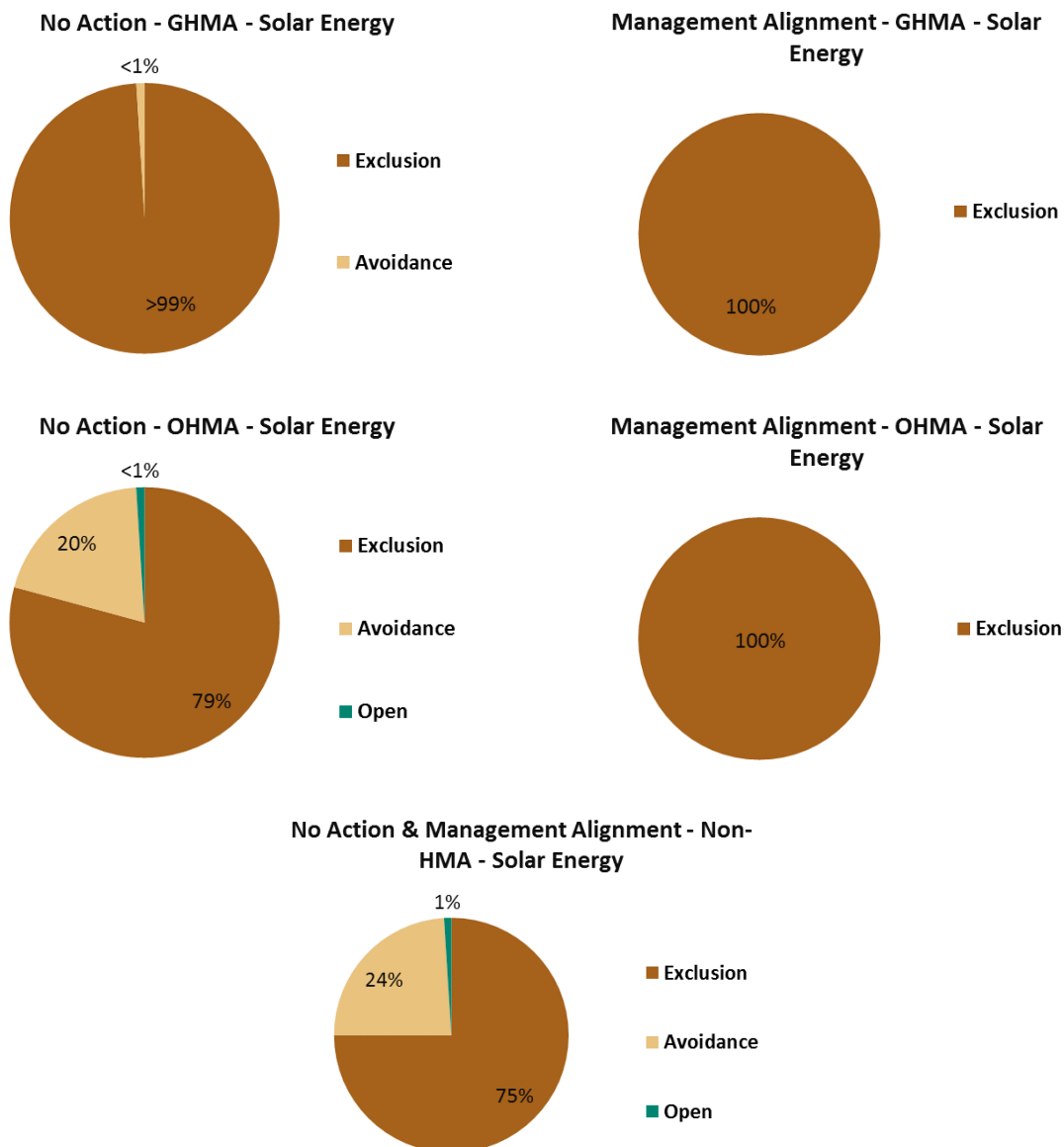


Figure 35 (cont'd) – Solar Energy Decisions within MZ III

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

XI. Trails and Travel Management**Table 37 – Trails and Travel Management Decisions within MZ III**

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Trails and Travel Management Decisions in MZ III by Habitat Management Area Type						
Trails and Travel Management Decisions	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Closed	16,000	84,000	52,000	NA	2,517,000	2,669,000
Limited	4,702,000	3,791,000	1,000	NA	5,791,000	14,285,000
Open	0	0	4,219,000	NA	24,153,000	28,372,000
Total	4,718,000	3,875,000	4,273,000	NA	32,461,000	45,326,000

Trails and Travel Management Decisions	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Closed	21,000	100,000	42,000	NA	2,505,000	2,668,000
Limited	4,821,000	3,642,000	14,000	NA	6,095,000	14,572,000
Open	0	0	3,637,000	NA	24,429,000	28,066,000
Total	4,842,000	3,741,000	3,693,000	NA	33,030,000	45,307,000

Approximate % of Habitat Management Area by Trails and Travel Management Decisions Decision in MZ III						
Trails and Travel Management Decisions	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Closed	<1%	2%	1%	NA	8%	6%
Limited	100%	98%	0%	NA	18%	32%
Open	0%	0%	99%	NA	74%	63%
Total	100%	100%	100%	NA	100%	100%

Trails and Travel Management Decisions	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Closed	<1%	3%	1%	NA	8%	6%
Limited	100%	97%	0%	NA	18%	32%
Open	0%	0%	98%	NA	74%	62%
Total	100%	100%	100%	NA	100%	100%

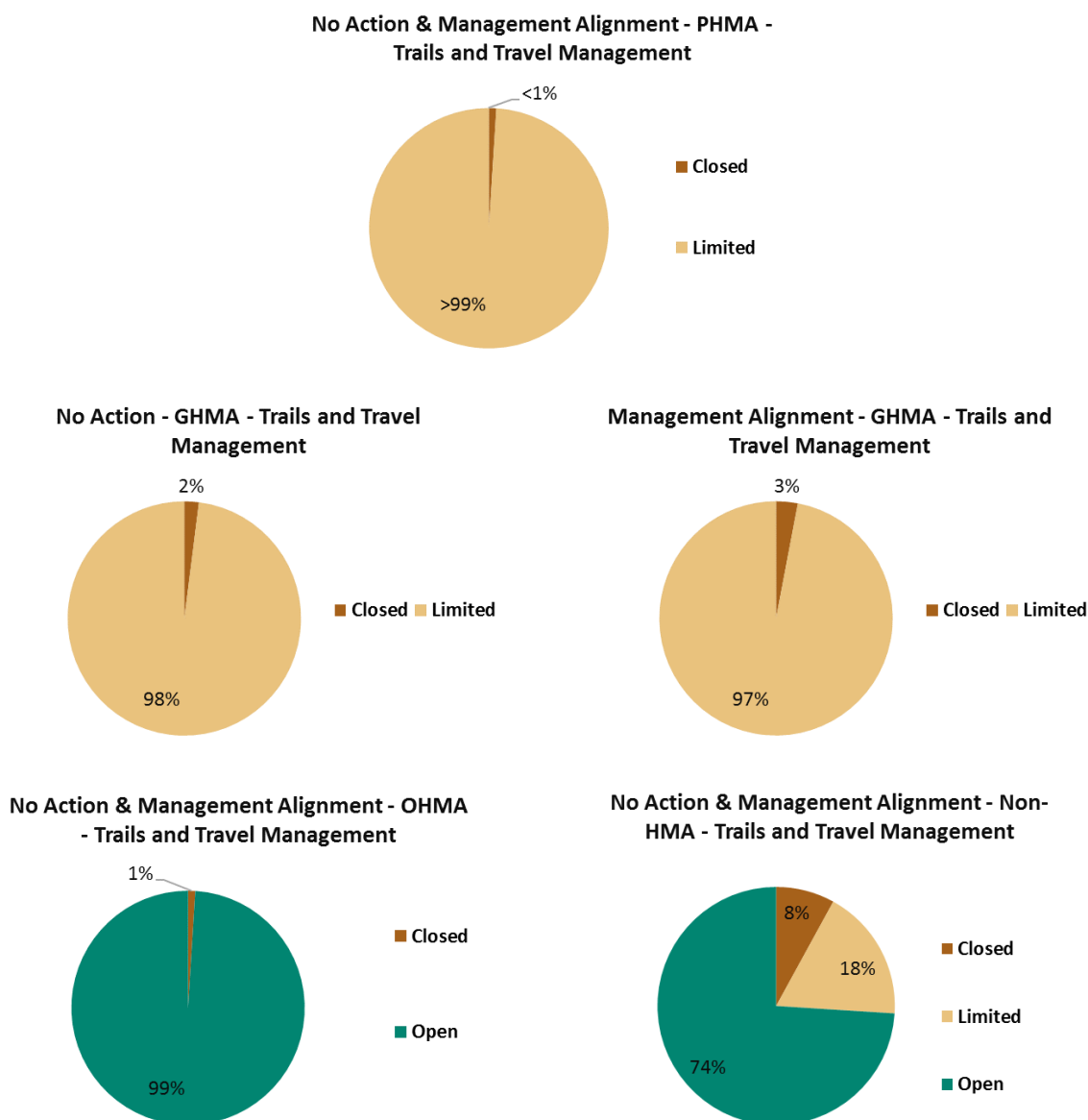


Figure 36 – Trails and Travel Management Decisions within MZ III

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

XII. Wind Energy**Table 38 – Wind Energy Decisions within MZ III**

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Wind Energy Decisions in MZ III by Habitat Management Area Type						
Wind Energy	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Exclusion	4,669,000	166,000	230,000	NA	3,939,000	9,004,000
Avoidance	0	3,572,000	0	NA	212,000	3,784,000
Open	54,000	137,000	4,042,000	NA	28,265,000	32,498,000
Total	4,723,000	3,876,000	4,272,000	NA	32,415,000	45,286,000

Wind Energy	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Exclusion	4,793,000	176,000	159,000	NA	3,982,000	9,110,000
Avoidance	0	3,565,000	0	NA	212,000	3,777,000
Open	54,000	0	3,534,000	NA	28,805,000	32,393,000
Total	4,847,000	3,741,000	3,693,000	NA	32,999,000	45,280,000

Approximate % of Habitat Management Area by Wind Energy Decision in MZ III						
Wind Energy	No Action					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Exclusion	0%	92%	0%	NA	1%	8%
Avoidance	99%	4%	5%	NA	12%	20%
Open	1%	4%	95%	NA	87%	72%
Total	100%	100%	100%	NA	100%	100%

Wind Energy	Management Alignment					
	PHMA	GHMA	OHMA	Anthro Mtn	Non-HMA	Total
Exclusion	0%	95%	0%	NA	1%	8%
Avoidance	99%	5%	4%	NA	12%	20%
Open	1%	0%	96%	NA	87%	72%
Total	100%	100%	100%	NA	100%	100%

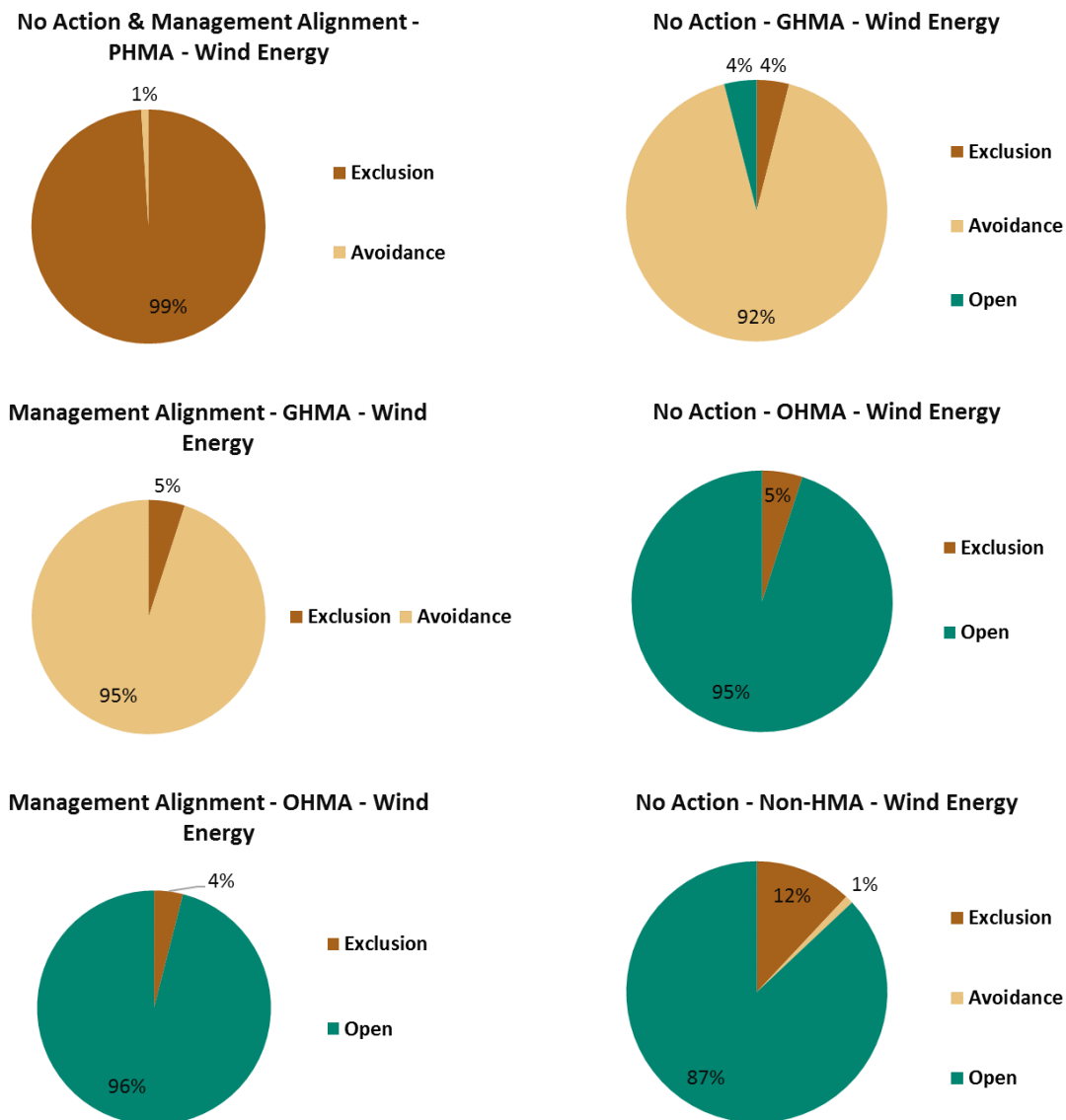


Figure 37 – Wind Energy Decisions within MZ III

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

S-2.2.4 Management Zone IV – ID, UT, NV, OR

I. Habitat Management

Table 39 – Habitat Management Areas within MZ IV

Acres and percentages reflect all lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of HMA in MZ IV									
No Action					Management Alignment				
PHMA	IHMA	GHMA	OHMA	Non-HMA	PHMA	IHMA	GHMA	OHMA	Non-HMA
17,170,000	4,449,000	11,447,00	1,261,000	41,395,000	16,147,000	4,519,000	11,297,000	990,000	42,769,022

Approximate Percent of MZ IV that is HMA									
No Action					Management Alignment				
PHMA	IHMA	GHMA	OHMA	Non-HMA	PHMA	IHMA	GHMA	OHMA	Non-HMA
23%	6%	15%	2%	55%	21%	6%	15%	1%	56%

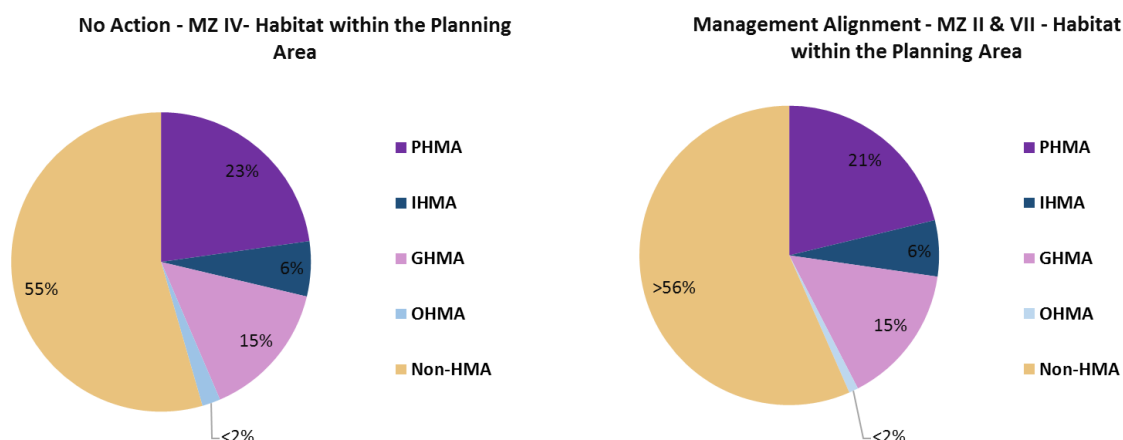


Figure 38 – Habitat Management Areas within MZ IV

Percentages reflect all lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

II. Geothermal Energy

Table 40 – Geothermal Energy Decisions within MZ IV

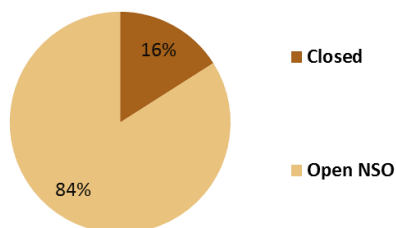
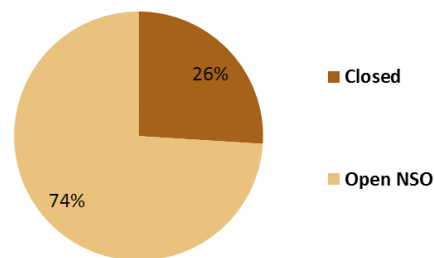
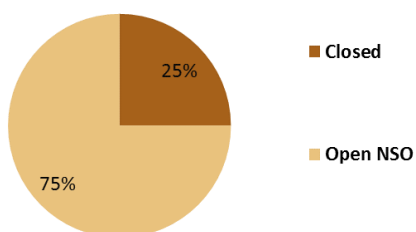
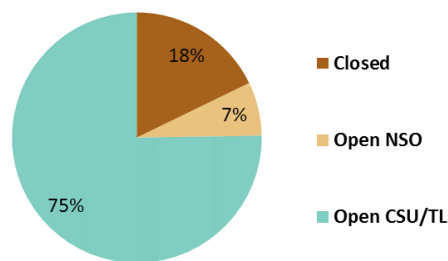
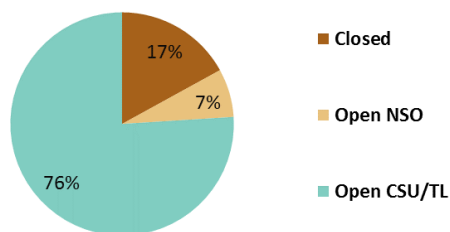
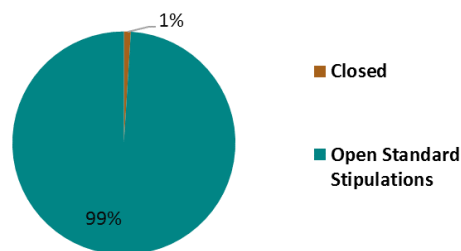
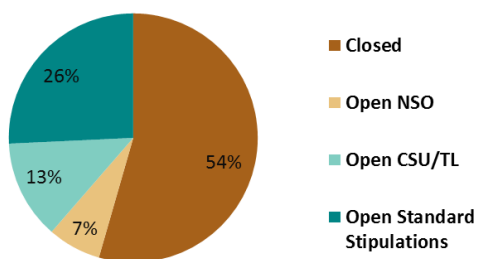
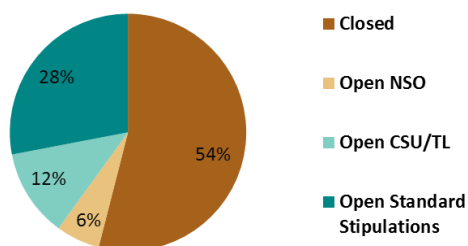
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Geothermal Energy Decisions in MZ IV by Habitat Management Area Type						
Geothermal Energy	No Action					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Closed	1,923,000	918,000	1,130,000	4,000	9,440,000	13,415,000
Open NSO	10,256,000	2,638,000	424,000	0	1,125,000	14,443,000
Open CSU/TL	0	0	4,881,000	0	2,196,000	7,077,000
Open Standard Stipulations	0	3,000	20,000	704,000	4,529,000	5,257,000
Total	12,178,000	3,560,000	6,455,000	708,000	17,290,000	40,191,000

Geothermal Energy	Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Closed	1,913,000	918,000	1,133,000	6,000	9,439,000	13,410,000
Open NSO	9,848,000	2,702,000	424,000	0	1,125,000	14,099,000
Open CSU/TL	0	0	4,974,000	0	2,196,000	7,169,000
Open Standard Stipulations	0	3,000	20,000	616,000	4,855,000	5,494,000
Total	11,762,000	3,624,000	6,550,000	622,000	17,615,000	40,173,000

Approximate % of Habitat Management Area by Geothermal Energy Decision in MZ IV						
Geothermal Energy	No Action					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Closed	16%	26%	18%	1%	55%	33%
Open NSO	84%	74%	7%	0%	7%	36%
Open CSU/TL	0%	0%	76%	0%	13%	18%
Open Standard Stipulations	0%	0%	0%	99%	26%	13%
Total	100%	100%	100%	100%	100%	100%

Geothermal Energy	Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Closed	16%	25%	17%	1%	54%	33%
Open NSO	84%	75%	6%	0%	6%	35%
Open CSU/TL	0%	0%	76%	0%	12%	18%
Open Standard Stipulations	0%	0%	0%	99%	28%	14%
Total	100%	100%	100%	100%	100%	100%

No Action & Management Alignment - PHMA - Geothermal Energy**No Action - IHMA - Geothermal Energy****Management Alignment - IHMA - Geothermal Energy****No Action - GHMA - Geothermal Energy****Management Alignment - GHMA - Geothermal Energy****No Action & Management Alignment - OHMA - Geothermal Energy****No Action - Non-HMA - Geothermal Energy****Management Alignment - Non-HMA - Geothermal Energy****Figure 39 – Geothermal Energy Decisions within MZ IV**

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

III. Land Tenure

Table 4I – Land Tenure Decisions within MZ IV

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Land Tenure Decisions in MZ IV by Habitat Management Area Type						
Land Tenure	No Action					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Disposal	0	0	1,000	146,000	659,000	805,000
Retention	10,726,000	2,719,000	4,948,000	562,000	4,277,000	23,232,000
Total	10,727,000	2,719,000	4,949,000	708,000	4,935,000	24,038,000

Land Tenure	Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Disposal	6,000	0	25,000	85,000	799,000	914,000
Retention	10,319,000	2,780,000	5,019,000	537,000	4,462,000	23,117,000
Total	10,325,000	2,780,000	5,043,000	622,000	5,261,000	24,032,000

Approximate % of Habitat Management Area by Land Tenure Decision in MZ III						
Land Tenure	No Action					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Disposal	0%	0%	<1%	21%	13%	3%
Retention	100%	100%	100%	79%	87%	97%
Total	100%	100%	100%	100%	100%	100%

Land Tenure	Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Disposal	<1%	0%	<1%	14%	15%	4%
Retention	100%	100%	100%	86%	85%	96%
Total	100%	100%	100%	100%	100%	100%

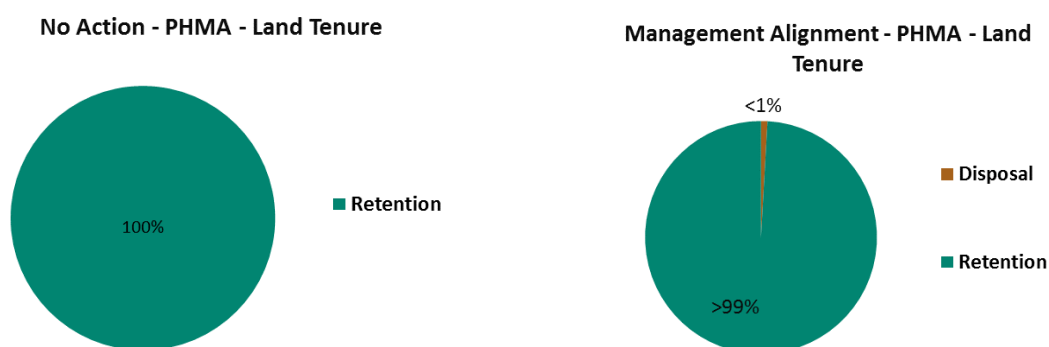
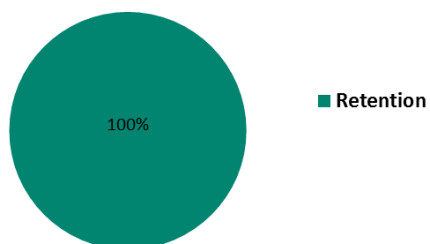
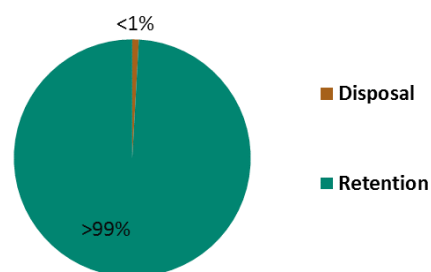


Figure 40 – Land Tenure Decisions within MZ IV

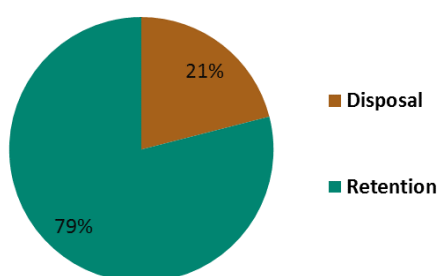
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

No Action & Management Alignment - IHMA
- Land Tenure

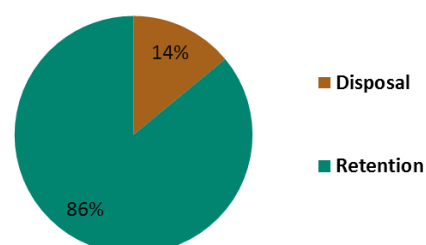
No Action & Management Alignment - GHMA - Land Tenure



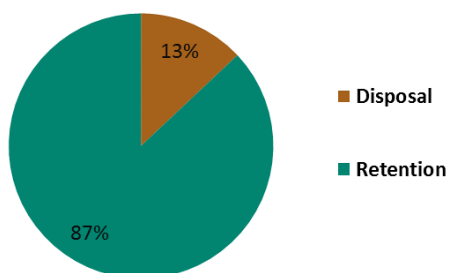
No Action - OHMA - Land Tenure



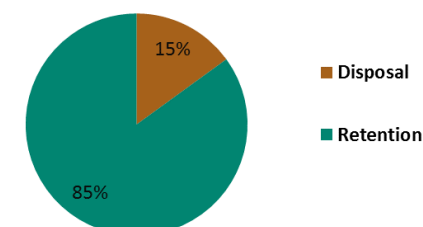
Management Alignment - OHMA - Land Tenure



No Action - Non-HMA - Land Tenure



Management Alignment - Non-HMA - Land Tenure

**Figure 40 (cont'd) – Land Tenure Decisions within MZ IV**

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

IV. Livestock Grazing**Table 42 – Livestock Grazing Decisions within MZ IV**

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Livestock Grazing Decisions in MZ IV by Habitat Management Area Type						
Livestock Grazing	No Action					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Unavailable	182,000	18,000	43,000	0	92,000	335,000
Available	10,515,000	2,701,000	4,923,000	709,000	4,562,000	23,411,000
Total	10,697,000	2,719,000	4,966,000	709,000	4,655,000	23,746,000

Livestock Grazing	Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Unavailable	182,000	18,000	43,000	0	92,000	335,000
Available	10,112,000	2,762,000	5,029,000	620,000	4,883,000	23,406,000
Total	10,294,000	2,780,000	5,072,000	620,000	4,975,000	23,740,000

Approximate % of Habitat Management Area by Livestock Grazing Decision in MZ IV						
Livestock Grazing	No Action & Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Unavailable	2%	1%	1%	0%	2%	1%
Available	98%	99%	99%	100%	98%	99%
Total	100%	100%	100%	100%	100%	100%

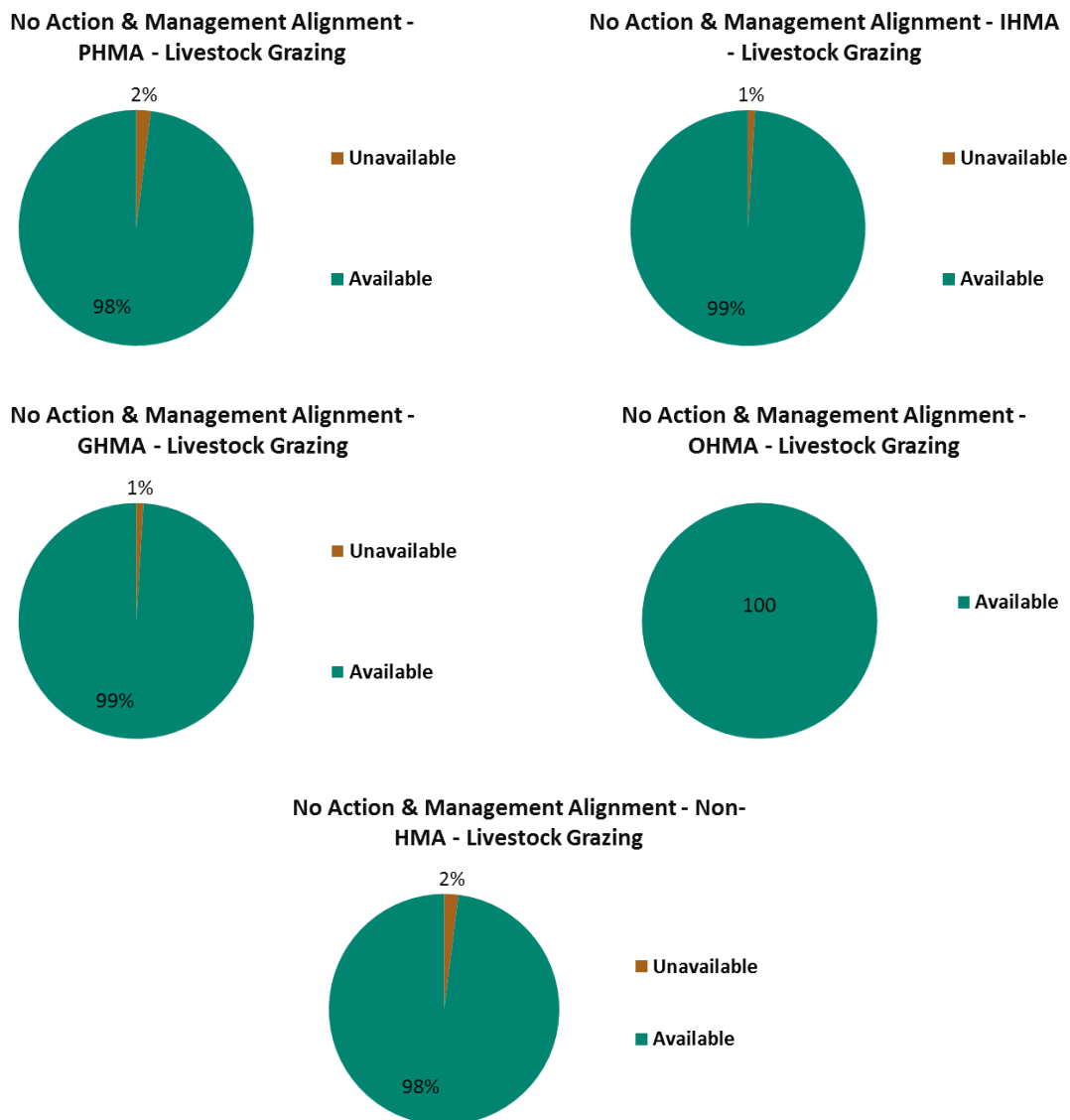


Figure 4I – Livestock Grazing Decisions within MZ IV

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

V. Locatable Minerals**Table 43 – Locatable Minerals Decisions within MZ IV**

Acres and Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Locatable Minerals Decisions in MZ IV by Habitat Management Area Type						
Locatable Minerals	No Action					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Existing Withdrawals	1,079,000	442,000	432,000	0	3,606,000	5,560,000
Recommended Withdrawals	4,836,000	0	2,000	0	0	4,838,000
Open	6,074,000	2,858,000	6,055,000	708,000	13,798,000	29,492,000
Total	11,990,000	3,300,000	6,489,000	708,000	17,404,000	39,891,000

Locatable Minerals	Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Existing Withdrawals	1,078,000	442,000	431,000	0	3,605,000	5,556,000
Recommended Withdrawals	0	0	2,000	0	0	2,000
Open	10,518,000	2,923,000	6,151,000	622,000	14,113,000	34,327,000
Total	11,597,000	3,364,000	6,584,000	622,000	17,718,000	39,885,000

Approximate % of Habitat Management Area by Geothermal Energy Decision in MZ IV						
Locatable Minerals	No Action					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Existing Withdrawals	9%	13%	7%	0%	21%	14%
Recommended Withdrawals	40%	0%	0%	0%	0%	12%
Open	51%	87%	93%	100%	79%	74%
Total	100%	100%	100%	100%	100%	100%

Locatable Minerals	Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Existing Withdrawals	9%	13%	9%	0%	20%	14%
Recommended Withdrawals	0%	0%	<1%	0%	0%	0%
Open	91%	87%	91%	100%	80%	86%
Total	100%	100%	100%	100%	100%	100%



Figure 42 – Locatable Minerals Decisions within MZ IV

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

VI. Non-Energy Leasable Minerals

Table 44 – Non-Energy Leasable Minerals Decisions within MZ IV

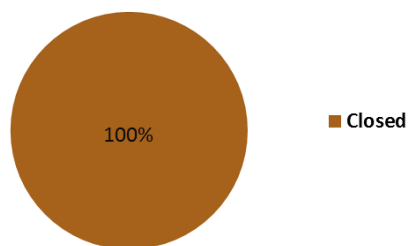
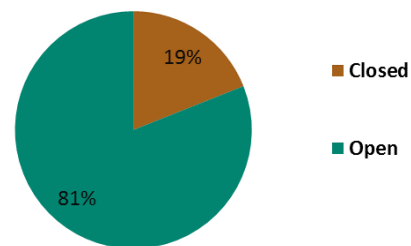
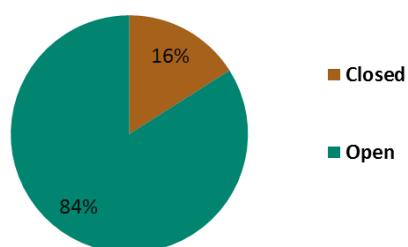
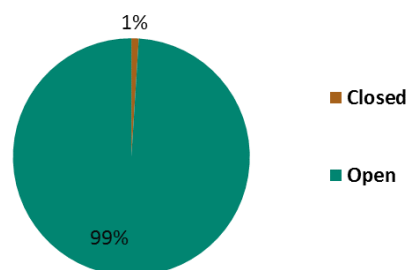
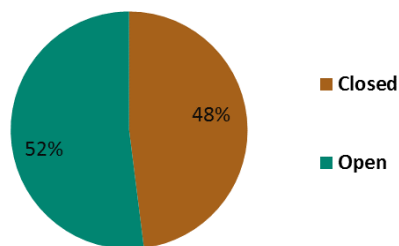
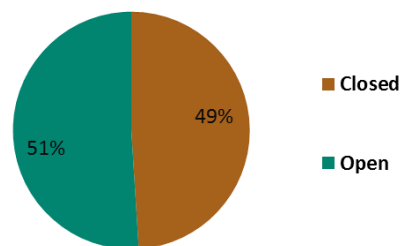
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Non-Energy Leasable Minerals Decisions in MZ IV by Habitat Management Area Type						
Non-Energy Leasable Minerals	No Action					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Closed	12,180,000	682,000	1,059,000	4,000	9,139,000	23,064,000
Open	0	2,877,000	5,413,000	704,000	8,375,000	17,369,000
Total	12,180,000	3,559,000	6,472,000	708,000	17,514,000	40,433,000

Non-Energy Leasable Minerals	Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Closed	11,775,000	682,000	1,062,000	6,000	9,138,000	22,663,000
Open	0	2,941,000	5,505,000	616,000	8,701,000	17,763,000
Total	11,775,000	3,624,000	6,567,000	622,000	17,839,000	40,426,000

Approximate % of Habitat Management Area by Non-Energy Leasable Minerals Decision in MZ IV						
Non-Energy Leasable Minerals	No Action					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Closed	100%	19%	16%	1%	52%	57%
Open	0%	81%	84%	99%	48%	43%
Total	100%	100%	100%	100%	100%	100%

Non-Energy Leasable Minerals	Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Closed	100%	19%	16%	1%	51%	56%
Open	0%	81%	84%	99%	49%	44%
Total	100%	100%	100%	100%	100%	100%

No Action & Management Alignment - PHMA - Non-Energy Leasable Minerals**Management Alignment - IHMA - Non-Energy Leasable Minerals****Management Alignment - GHMA - Non-Energy Leasable Minerals****Management Alignment - OHMA - Non-Energy Leasable Minerals****No Action - Non-HMA - Non-Energy Leasable Minerals****Management Alignment - Non-HMA - Non-Energy Leasable Minerals****Figure 43 – Non-Energy Leasable Minerals Decisions within MZ IV**

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

VII. Fluid Minerals (Oil & Gas)**Table 45 – Fluid Mineral (Oil & Gas) Decisions within MZ IV**

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Fluid Mineral (Oil & Gas) Decisions in MZ IV by Habitat Management Area Type						
Fluid Mineral (Oil & Gas) Decisions	No Action					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Closed	1,924,000	1,136,000	1,136,000	4,000	9,542,000	13,523,000
Open NSO	10,245,000	436,000	436,000	0	1,164,000	14,493,000
Open CSU/TL	18,000	4,947,000	4,947,000	0	2,266,000	7,230,000
Open Standard Stipulations	1,000	3,000	3,000	704,000	4,729,000	5,437,000
Total	12,187,000	6,522,000	6,522,000	708,000	17,701,000	40,683,000

Fluid Mineral (Oil & Gas) Decisions	Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Closed	1,917,000	917,000	1,138,000	6,000	9,541,000	13,520,000
Open NSO	9,846,000	2,712,000	436,000	0	1,176,000	14,171,000
Open CSU/TL	17,000	0	5,039,000	0	2,266,000	7,322,000
Open Standard Stipulations	1,000	0	3,000	616,000	5,043,000	5,663,000
Total	11,782,000	3,629,000	6,616,000	622,000	18,027,000	40,676,000

Approximate % of Habitat Management Area by Fluid Mineral (Oil & Gas) Decision in MZ IV						
Fluid Mineral (Oil & Gas) Decisions	No Action					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Closed	16%	26%	17%	1%	54%	33%
Open NSO	84%	74%	7%	0%	7%	36%
Open CSU/TL	<1%	0%	76%	0%	13%	18%
Open Standard Stipulations	<1%	0%	<1%	99%	27%	13%
Total	100%	100%	100%	100%	100%	100%

Fluid Mineral (Oil & Gas) Decisions	Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Closed	16%	25%	17%	1%	53%	33%
Open NSO	84%	75%	7%	0%	7%	35%
Open CSU/TL	<1%	0%	76%	0%	13%	18%
Open Standard Stipulations	<1%	0%	<1%	99%	28%	14%
Total	100%	100%	100%	100%	100%	100%

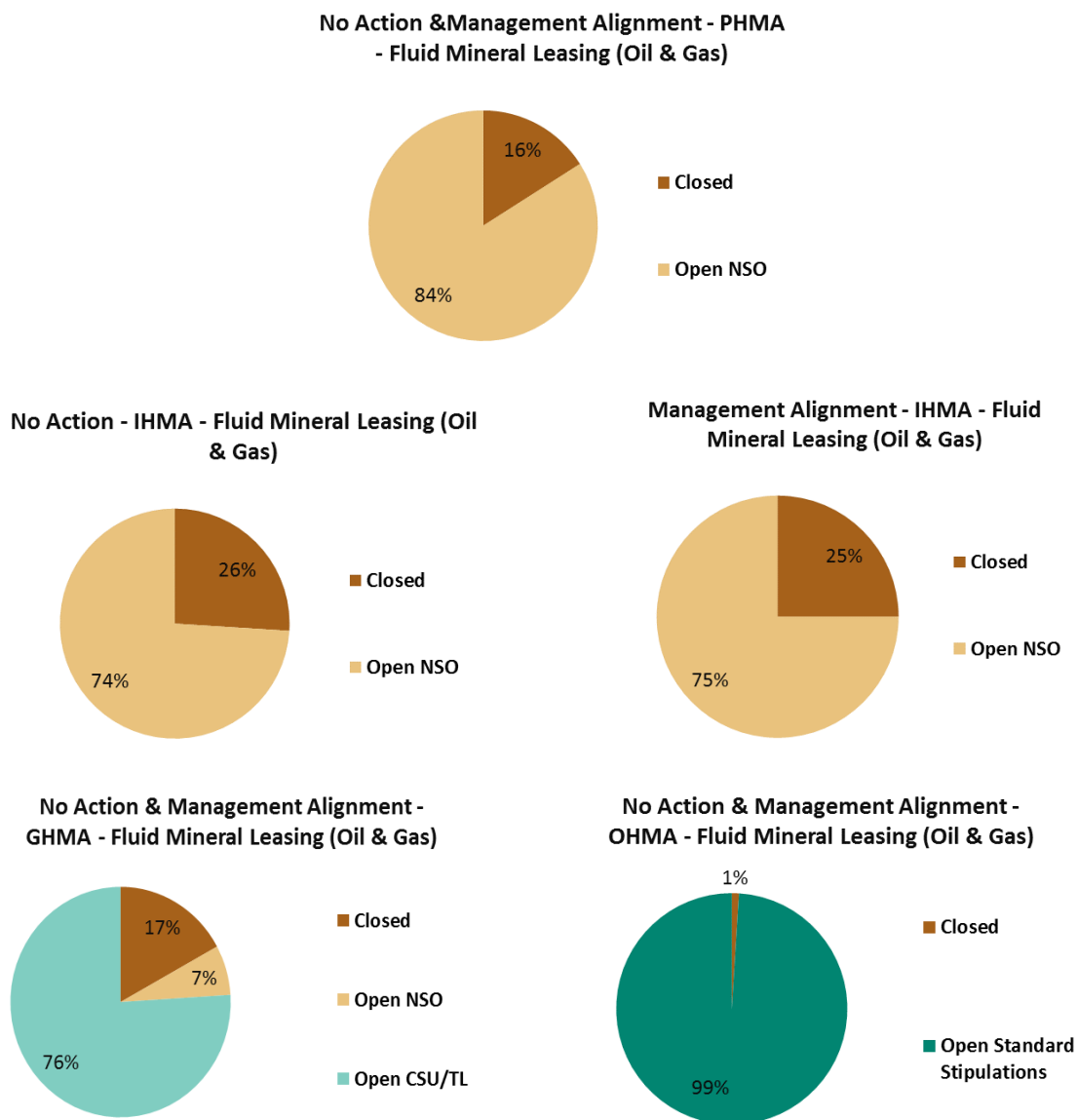


Figure 44 – Fluid Mineral (Oil & Gas) Decisions within MZ IV

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

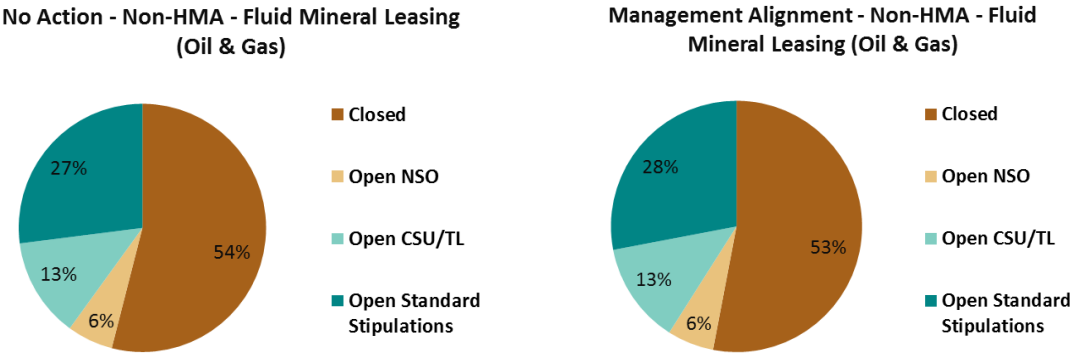


Figure 44 (cont'd) – Fluid Mineral (Oil & Gas) Decisions within MZ IV

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

VIII. Rights-of-Ways

Table 46 – Rights-of-Ways Decisions within MZ IV

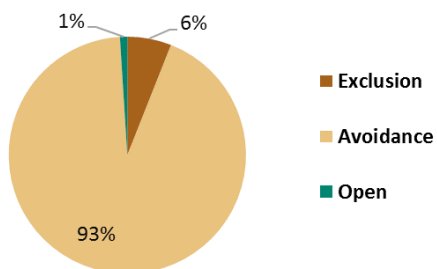
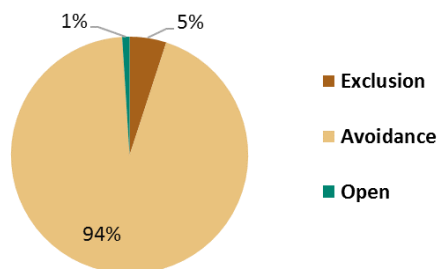
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Rights-of-Ways Decisions in MZ IV by Habitat Management Area Type						
Rights-of-Ways	No Action					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	637,000	131,000	269,000	3,000	244,000	1,283,000
Avoidance	9,993,000	2,565,000	3,095,000	0	463,000	16,117,000
Open	98,000	24,000	1,827,000	705,000	4,381,000	7,035,000
Total	10,728,000	2,719,000	5,192,000	708,000	5,088,000	24,435,000

Rights-of-Ways	Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	631,000	131,000	272,000	6,000	245,000	1,285,000
Avoidance	9,623,000	2,626,000	3,204,000	0	475,000	15,928,000
Open	68,000	24,000	1,810,000	615,000	4,700,000	7,217,000
Total	10,322,000	2,780,000	5,286,000	621,000	5,420,000	24,429,000

Approximate % of Habitat Management Area by Rights-of-Ways Decision in MZ IV						
Rights-of-Ways	No Action					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	6%	5%	5%	0%	5%	5%
Avoidance	93%	94%	60%	0%	9%	65%
Open	1%	1%	35%	100%	86%	29%
Total	100%	100%	100%	100%	100%	100%

Rights-of-Ways	Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	6%	5%	5%	1%	4%	5%
Avoidance	93%	94%	61%	0%	9%	65%
Open	1%	1%	34%	99%	87%	30%
Total	100%	100%	100%	100%	100%	100%

No Action & Management Alignment -
PHMA - Rights of WaysNo Action & Management Alignment - IHMA
- Rights of Ways**Figure 45 – Rights-of-Ways Decisions within MZ IV**

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

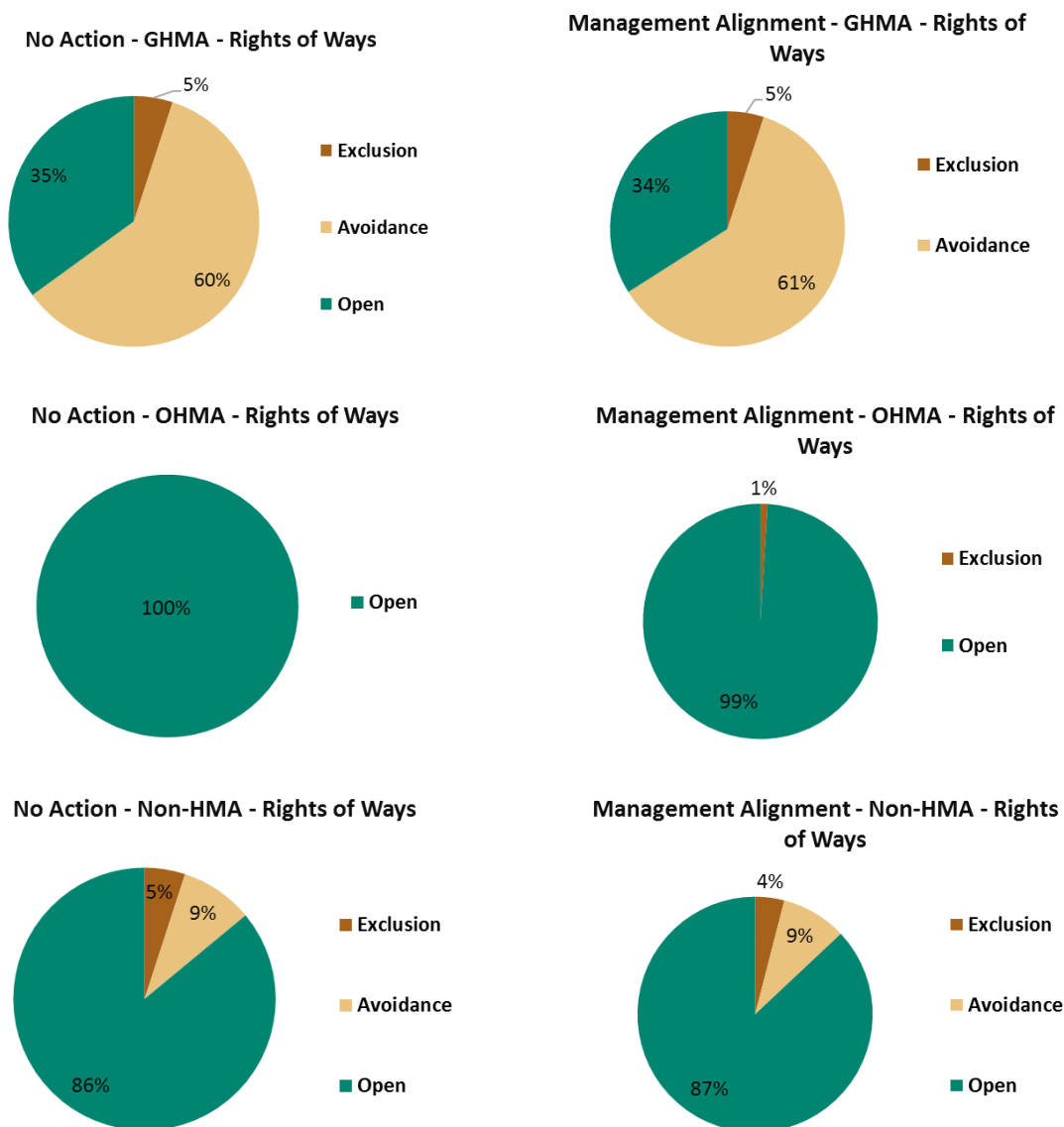


Figure 45 (cont'd) – Rights-of-Ways Decisions within MZ IV

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

IX. Salable Minerals Materials**Table 47 – Salable Minerals Materials Decisions within MZ IV**

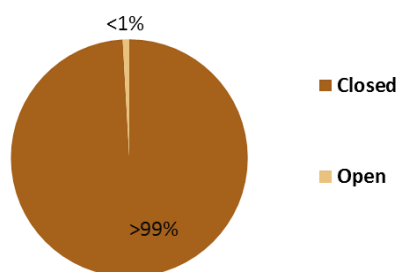
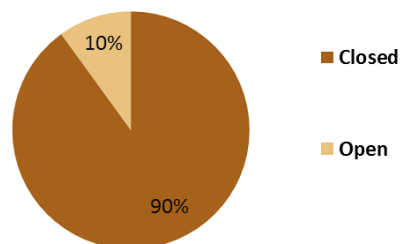
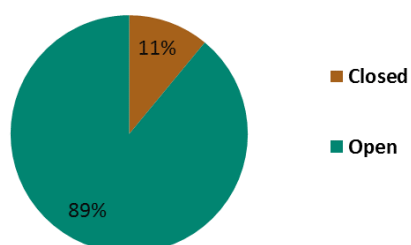
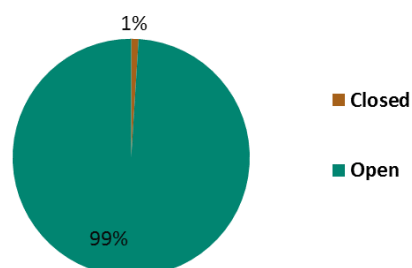
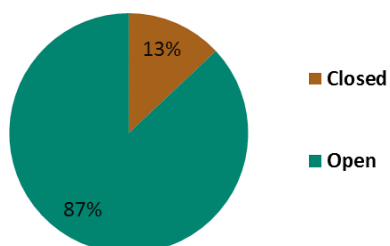
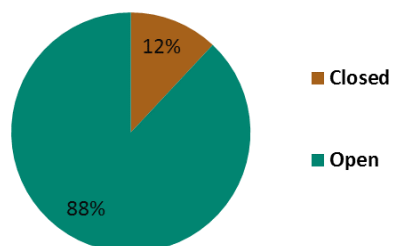
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Salable Minerals Materials Decisions in MZ IV by Habitat Management Area Type						
Salable Minerals Materials	No Action					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Closed	11,494,000	313,000	682,000	4,000	830,000	13,323,000
Open	4,000	2,878,000	5,250,000	704,000	5,504,000	14,339,000
Total	11,497,000	3,191,000	5,932,000	708,000	6,334,000	27,662,000

Salable Minerals Materials	Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Closed	11,089,000	313,000	684,000	6,000	829,000	12,922,000
Open	4,000	2,942,000	5,343,000	616,000	5,830,000	14,734,000
Total	11,093,000	3,255,000	6,027,000	622,000	6,659,000	27,656,000

Approximate % of Habitat Management Area by Non-Energy Leasable Minerals Decision in MZ IV						
Salable Minerals Materials	No Action					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Closed	100%	10%	11%	1%	13%	48%
Open	<1%	90%	89%	99%	87%	52%
Total	100%	100%	100%	100%	100%	100%

Salable Minerals Materials	Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Closed	100%	10%	11%	1%	12%	47%
Open	<1%	90%	89%	99%	88%	53%
Total	100%	100%	100%	100%	100%	100%

**No Action & Management Alignment -
PHMA - Salable Minerals Materials****No Action & Management Alignment - IHMA
- Salable Minerals Materials****No Action & Management Alignment -
GHMA - Salable Minerals Materials****No Action & Management Alignment -
OHMA - Salable Minerals Materials****No Action - Non-HMA - Salable Minerals
Materials****Management Alignment - Non-HMA -
Salable Minerals Materials****Figure 46 – Salable Minerals Materials Decisions within MZ IV**

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

X. Solar Energy

Table 48 – Solar Energy Decisions within MZ IV

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

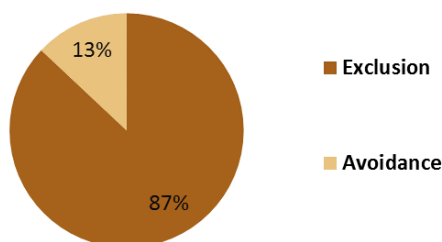
Approximate Acres of Solar Energy Decisions in MZ IV by Habitat Management Area Type						
Solar Energy	No Action					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	9,341,000	363,000	1,210,000	706,000	2,275,000	13,895,000
Avoidance	1,390,000	2,357,000	2,235,000	0	123,000	6,105,000
Open	0	0	1,500,000	1,000	2,521,000	4,022,000
Total	10,731,000	2,719,000	4,945,000	707,000	4,919,000	24,021,000

Solar Energy	Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	8,937,000	363,000	1,304,000	622,000	2,605,000	13,831,000
Avoidance	1,390,000	2,417,000	2,235,000	0	123,000	6,165,000
Open	0	0	1,500,000	0	2,520,000	4,020,000
Total	10,326,000	2,780,000	5,039,000	622,000	5,248,000	24,015,000

Approximate % of Habitat Management Area by Solar Energy Decision in MZ IV						
Solar Energy	No Action					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	87%	13%	24%	100%	46%	58%
Avoidance	13%	87%	45%	0%	3%	25%
Open	0%	0%	30%	0%	51%	17%
Total	100%	100%	100%	100%	100%	100%

Solar Energy	Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	87%	13%	26%	100%	50%	58%
Avoidance	13%	87%	44%	0%	2%	26%
Open	0%	0%	30%	0%	48%	17%
Total	100%	100%	100%	100%	100%	100%

No Action & Management Alignment -
PHMA - Solar Energy



No Action & Management Alignment -
IHMA - Solar Energy

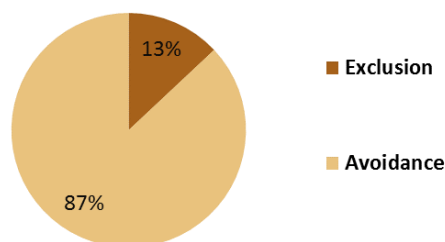


Figure 47 – Solar Energy Decisions within MZ IV

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

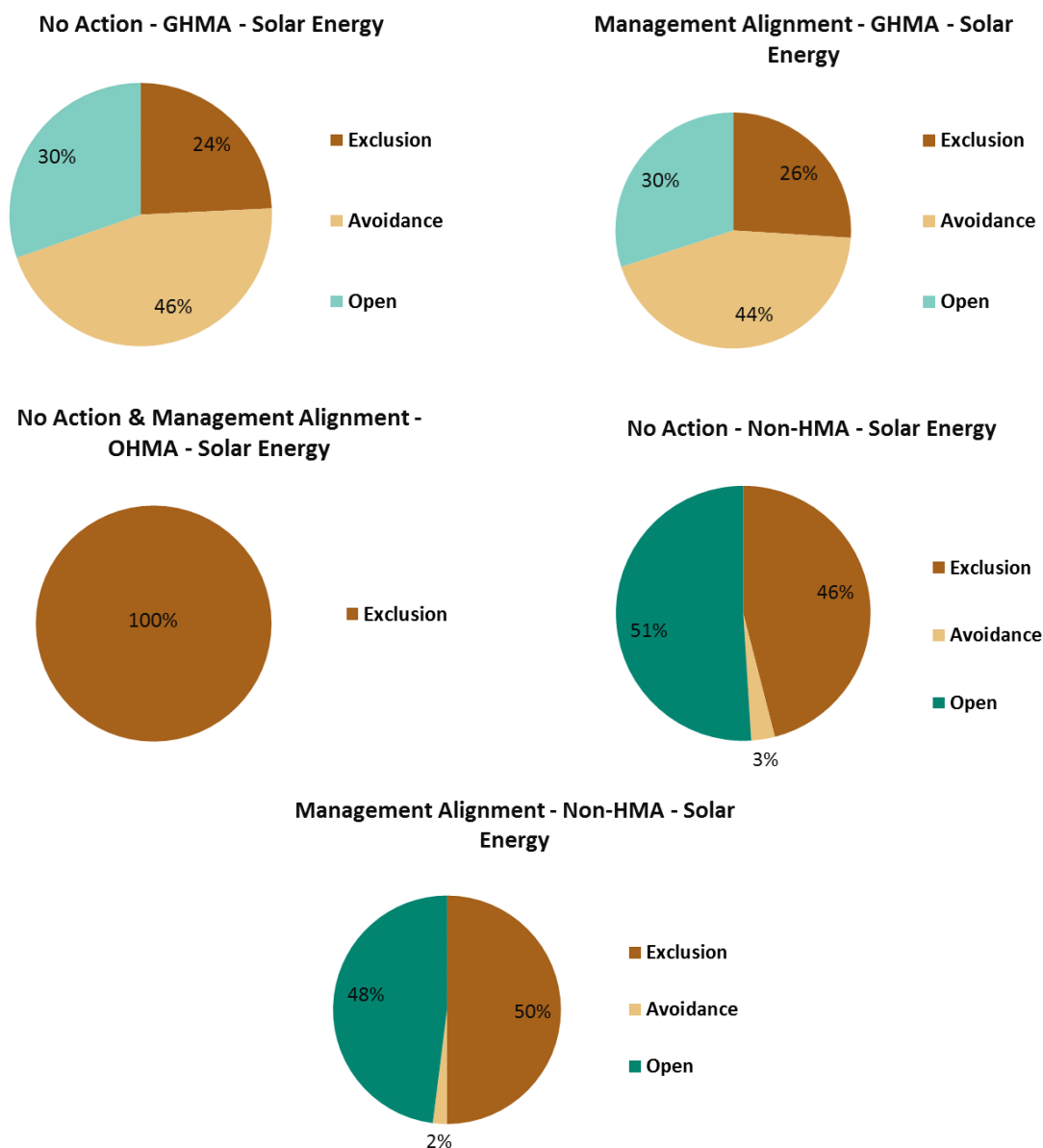


Figure 47 (cont'd) – Solar Energy Decisions within MZ IV

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

XI. Trails and Travel Management**Table 49 — Trails and Travel Management Decisions within MZ IV**

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

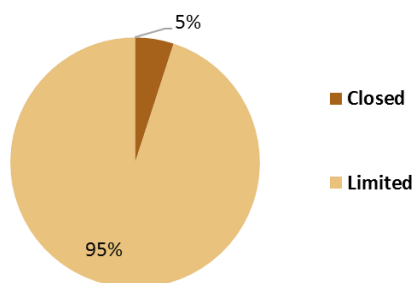
Approximate Acres of Trails and Travel Management Decisions in MZ IV by Habitat Management Area Type						
Trails and Travel Management Decisions	No Action					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Closed	560,000	83,000	85,000	1,000	215,000	943,000
Limited	10,169,000	2,633,000	4,866,000	1,000	3,101,000	20,770,000
Open	0	3,000	0	707,000	1,619,000	2,329,000
Total	10,729,000	2,719,000	4,951,000	708,000	4,935,000	24,042,000

Trails and Travel Management Decisions	Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Closed	559,000	83,000	84,000	0	214,000	940,000
Limited	9,768,000	2,694,000	4,961,000	5,000	3,188,000	20,617,000
Open	0	3,000	0	617,000	1,859,000	2,479,000
Total	10,327,000	2,780,000	5,046,000	622,000	5,261,000	24,036,000

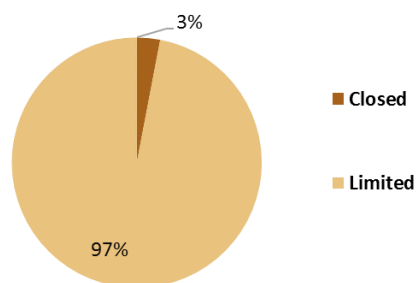
Approximate % of Habitat Management Area by Trails and Travel Management Decisions Decision in MZ IV						
Trails and Travel Management Decisions	No Action					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Closed	5%	3%	2%	<1%	4%	4%
Limited	95%	97%	98%	<1%	63%	86%
Open	0%	<1%	0%	100%	33%	10%
Total	100%	100%	100%	100%	100%	100%

Trails and Travel Management Decisions	Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Closed	5%	3%	2%	0%	4%	4%
Limited	95%	97%	98%	1%	61%	86%
Open	0%	0%	0%	99%	35%	10%
Total	100%	100%	100%	100%	100%	100%

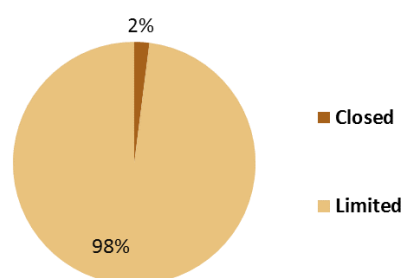
No Action & Management Alignment - PHMA - Trails and Travel Management



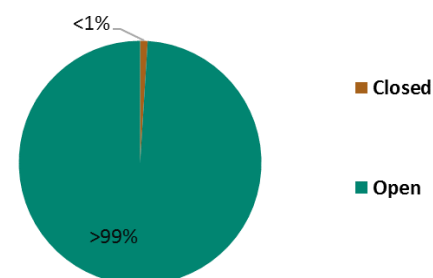
No Action & Management Alignment - IHMA - Trails and Travel Management



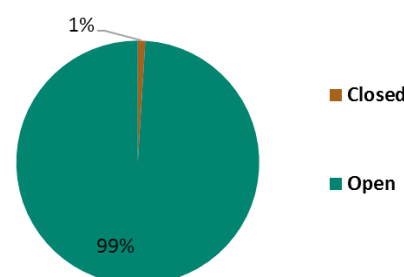
No Action & Management Alignment - GHMA - Trails and Travel Management



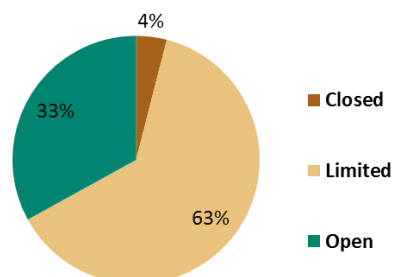
No Action - OHMA - Trails and Travel Management



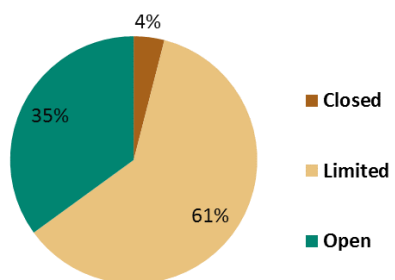
Management Alignment - OHMA - Trails and Travel Management



No Action - Non-HMA - Trails and Travel Management

**Figure 48 – Trails and Travel Management Decisions within MZ IV**

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Management Alignment- Non-HMA - Trails and Travel Management**Figure 48 (cont'd) – Trails and Travel Management Decisions within MZ IV**

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

XII. Wind Energy**Table 50 – Wind Energy Decisions within MZ IV**

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Wind Energy Decisions in MZ IV by Habitat Management Area Type						
Wind Energy	No Action					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	9,339,000	363,000	392,000	4,000	1,035,000	11,133,000
Avoidance	1,390,000	2,357,000	3,051,000	0	123,000	6,920,000
Open	0	0	1,501,000	704,000	3,769,000	5,973,000
Total	10,728,000	2,719,000	4,944,000	708,000	4,926,000	24,026,000

Wind Energy	Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	8,938,000	363,000	395,000	6,000	1,046,000	10,748,000
Avoidance	1,390,000	2,417,000	3,144,000	0	123,000	7,073,000
Open	0	0	1,501,000	616,000	4,083,000	6,199,000
Total	10,327,000	2,780,000	5,039,000	622,000	5,252,000	24,020,000

Approximate % of Habitat Management Area by Wind Energy Decision in MZ IV						
Wind Energy	No Action					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	87%	13%	8%	1%	21%	46%
Avoidance	13%	87%	62%	0%	2%	29%
Open	0%	0%	30%	99%	77%	25%
Total	100%	100%	100%	100%	100%	100%

Wind Energy	Management Alignment					
	PHMA	IHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	87%	13%	8%	1%	20%	45%
Avoidance	13%	87%	62%	0%	2%	29%
Open	0%	0%	30%	99%	78%	26%
Total	100%	100%	100%	100%	100%	100%

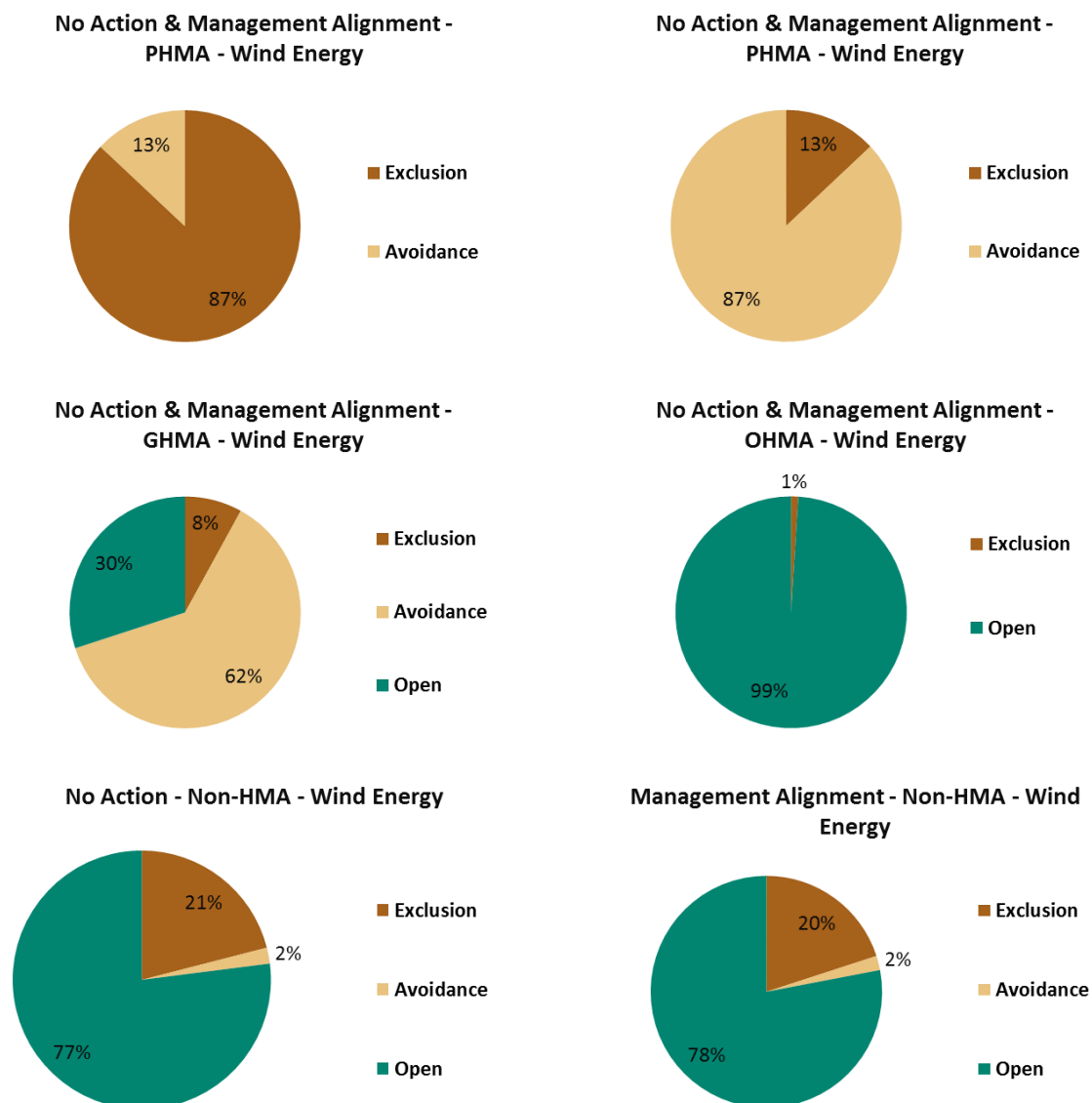


Figure 49 – Wind Energy Decisions within MZ IV

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

S-2.2.5 Management Zone V – OR, NV, CA

I. Habitat Management

Table 51 – Habitat Management Areas within MZ V

Acres and percentages reflect all lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of HMA in MZ V							
No Action				Management Alignment			
PHMA	GHMA	OHMA	Non-HMA	PHMA	GHMA	OHMA	Non-HMA
6,510,000	7,323,000	1,932,000	15,519,000	6,567,000	6,846,000	1,142,000	16,727,000

Approximate Percent of MZ I that is HMA							
No Action				Management Alignment			
PHMA	GHMA	OHMA	Non-HMA	PHMA	GHMA	OHMA	Non-HMA
21%	23%	6%	50%	21%	22%	4%	53%

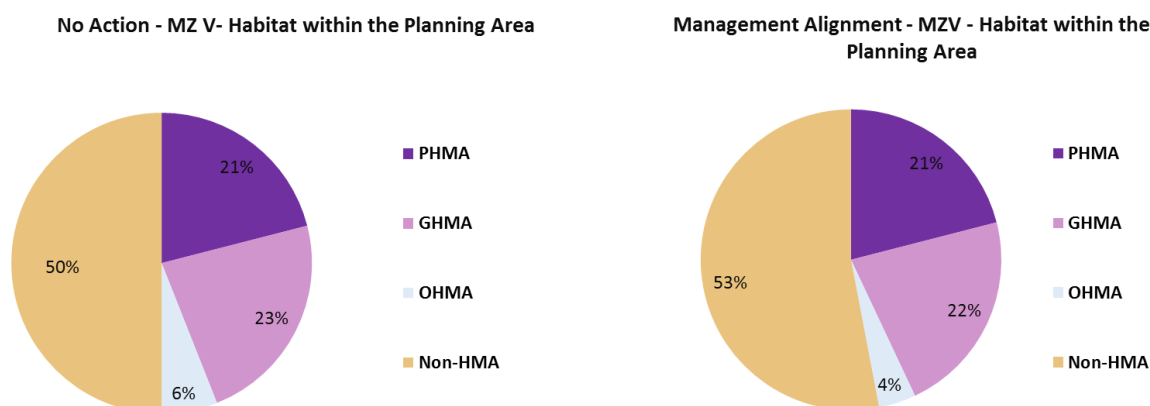


Figure 50 – Habitat Management Areas within MZ V

Percentages reflect all lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

II. Geothermal Energy

Table 52 – Geothermal Energy Decisions within MZ V

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Geothermal Energy Decisions in MZ V by Habitat Management Area Type					
Geothermal Energy	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	1,626,000	1,359,000	158,000	898,000	4,042,000
Open NSO	3,350,000	379,000	0	164,000	3,893,000
Open CSU/TL	0	3,287,000	0	335,000	3,622,000
Open Standard Stipulations	5,000	0	744,000	2,367,000	3,117,000
Total	4,982,000	5,026,000	903,000	3,764,000	14,674,000

Geothermal Energy	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	1,569,000	1,373,000	141,000	935,000	4,018,000
Open NSO	3,566,000	379,000	0	164,000	4,110,000
Open CSU/TL	0	3,185,000	0	335,000	3,520,000
Open Standard Stipulations	0	0	423,000	2,598,000	3,021,000
Total	5,136,000	4,937,000	564,000	4,032,000	14,668,000

Approximate % of Habitat Management Area by Geothermal Energy Decision in MZ V					
Geothermal Energy	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	33%	27%	17%	24%	28%
Open NSO	67%	8%	0%	4%	27%
Open CSU/TL	0%	65%	0%	9%	25%
Open Standard Stipulations	<1%	0%	82%	63%	21%
Total	100%	100%	100%	100%	100%

Geothermal Energy	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	31%	28%	25%	23%	27%
Open NSO	69%	8%	0%	4%	28%
Open CSU/TL	0%	65%	0%	8%	24%
Open Standard Stipulations	0%	0%	75%	64%	21%
Total	100%	100%	100%	100%	100%

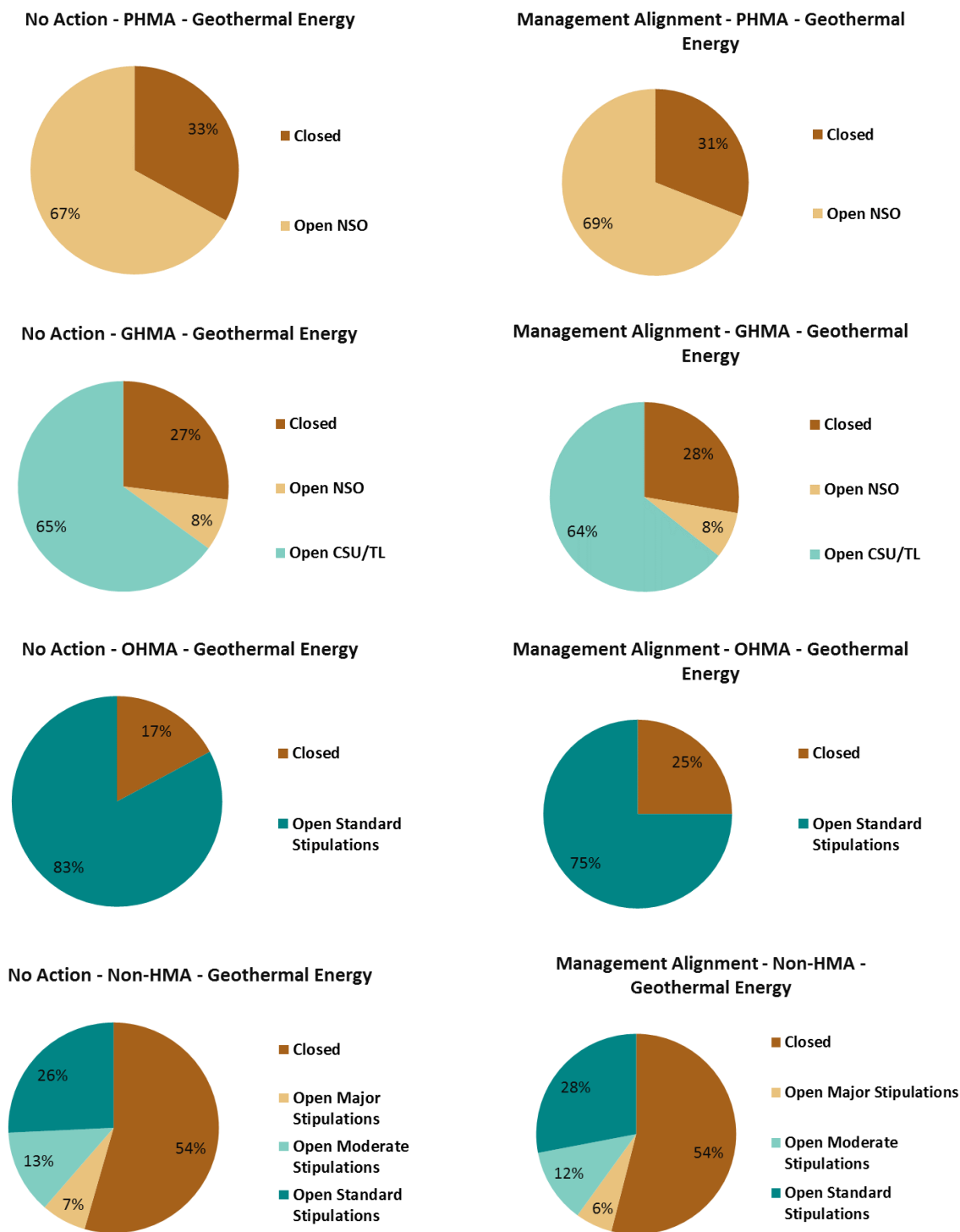


Figure 51 – Geothermal Energy Decisions within MZ V

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

III. Land Tenure

Table 53 – Land Tenure Decisions within MZ V

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Land Tenure Decisions in MZ V by Habitat Management Area Type					
Land Tenure	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Disposal	0	0	79,000	521,000	600,000
Retention	4,649,000	4,896,000	822,000	3,044,000	13,410,000
Total	4,649,000	4,896,000	901,000	3,565,000	14,011,000

Land Tenure	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Disposal	2,000	19,000	32,000	592,000	644,000
Retention	4,802,000	4,787,000	530,000	3,241,000	13,360,000
Total	4,804,000	4,806,000	562,000	3,833,000	14,005,000

Approximate % of Habitat Management Area by Land Tenure Decision in MZ III					
Land Tenure	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Disposal	0%	0%	9%	15%	4%
Retention	100%	100%	91%	85%	96%
Total	100%	100%	100%	100%	100%

Land Tenure	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Disposal	<1%	<1%	6%	15%	5%
Retention	100%	100%	94%	85%	95%
Total	100%	100%	100%	100%	100%

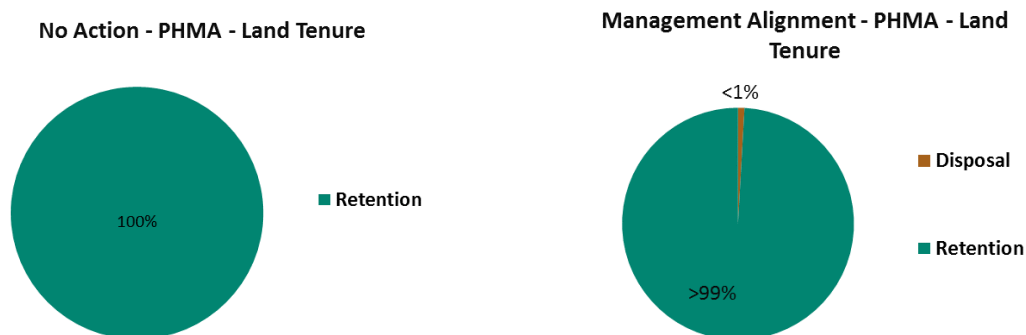


Figure 52 – Land Tenure Decisions within MZ V

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

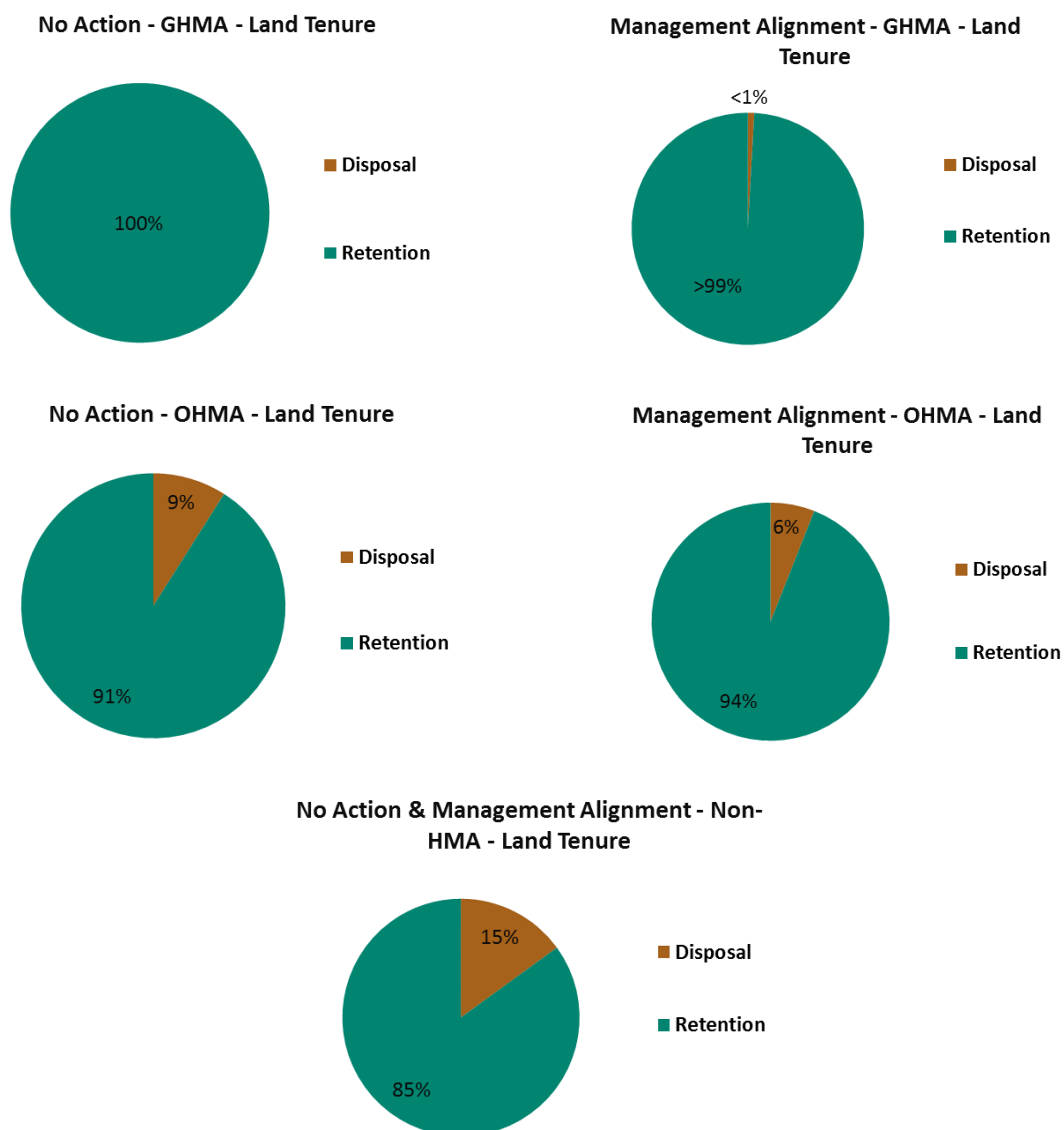


Figure 52 (cont'd) – Land Tenure Decisions within MZ V

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

IV. Livestock Grazing**Table 54 – Livestock Grazing Decisions within MZ V**

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Livestock Grazing Decisions in MZ V by Habitat Management Area Type					
Livestock Grazing	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Unavailable	47,000	102,000	0	84,000	232,000
Available	4,582,000	4,762,000	883,000	3,233,000	13,461,000
Total	4,629,000	4,864,000	883,000	3,317,000	13,694,000

Livestock Grazing	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Unavailable	47,000	102,000	0	84,000	232,000
Available	4,736,000	4,671,000	550,000	3,493,000	13,450,000
Total	4,783,000	4,772,000	550,000	3,577,000	13,682,000

Approximate % of Habitat Management Area by Livestock Grazing Decision in MZ V					
Livestock Grazing	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Unavailable	1%	2%	0%	3%	2%
Available	99%	98%	100%	97%	98%
Total	100%	100%	100%	100%	100%

Livestock Grazing	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Unavailable	1%	2%	0%	2%	2%
Available	99%	98%	100%	98%	98%
Total	100%	100%	100%	100%	100%



Figure 53 – Livestock Grazing Decisions within MZ V

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

V. Locatable Minerals

Table 55 – Locatable Minerals Decisions within MZ V

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

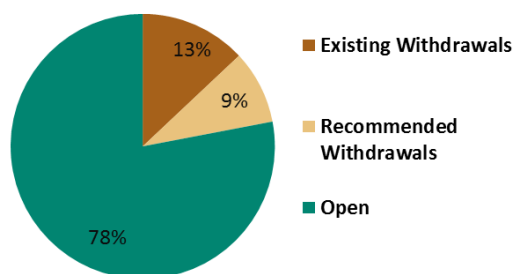
Approximate Acres of Locatable Minerals Decisions in MZ V by Habitat Management Area Type					
Locatable Minerals	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Existing Withdrawals	631,000	687,000	59,000	486,000	1,864,000
Recommended Withdrawals	435,000	5,000	0	0	440,000
Open	3,885,000	4,329,000	842,000	3,048,000	12,104,000
Total	4,951,000	5,022,000	901,000	3,534,000	14,408,000

Locatable Minerals	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Existing Withdrawals	626,000	687,000	64,000	487,000	1,864,000
Recommended Withdrawals	12,000	5,000	0	0	17,000
Open	4,469,000	4,240,000	499,000	3,314,000	12,522,000
Total	5,106,000	4,932,000	562,000	3,801,000	14,403,000

Approximate % of Habitat Management Area by Geothermal Energy Decision in MZ V					
Locatable Minerals	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Existing Withdrawals	13%	14%	7%	14%	13%
Recommended Withdrawals	9%	0%	0%	0%	3%
Open	78%	86%	93%	86%	84%
Total	100%	100%	100%	100%	100%

Locatable Minerals	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Existing Withdrawals	12%	14%	11%	13%	13%
Recommended Withdrawals	0%	0%	0%	0%	0%
Open	88%	86%	89%	87%	87%
Total	100%	100%	100%	100%	100%

No Action - PHMA - Locatable Minerals



Management Alignment - PHMA - Locatable Minerals

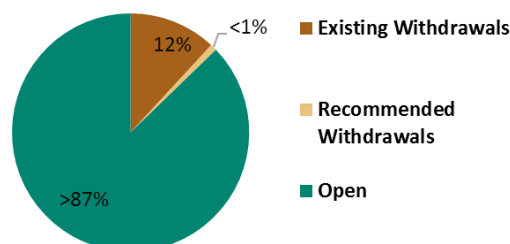


Figure 54 – Locatable Minerals Decisions within MZ V

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.



Figure 54 (cont'd) – Locatable Minerals Decisions within MZ V

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

VI. Non-Energy Leasable Minerals**Table 56 – Non-Energy Leasable Minerals Decisions within MZ V**

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Non-Energy Leasable Minerals Decisions in MZ V by Habitat Management Area Type					
Non-Energy Leasable Minerals	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	4,980,000	1,388,000	158,000	898,000	7,423,000
Open	0	3,635,000	744,000	2,866,000	7,247,000
Total	4,980,000	5,024,000	903,000	3,764,000	14,671,000

Non-Energy Leasable Minerals	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	5,135,000	1,402,000	141,000	935,000	7,613,000
Open	0	3,532,000	423,000	3,097,000	7,052,000
Total	5,135,000	4,934,000	564,000	4,032,000	14,665,000

Approximate % of Habitat Management Area by Non-Energy Leasable Minerals Decision in MZ V					
Non-Energy Leasable Minerals	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	100%	28%	17%	24%	51%
Open	0%	72%	82%	76%	49%
Total	100%	100%	100%	100%	100%

Non-Energy Leasable Minerals	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	100%	28%	25%	23%	52%
Open	0%	72%	75%	77%	48%
Total	100%	100%	100%	100%	100%

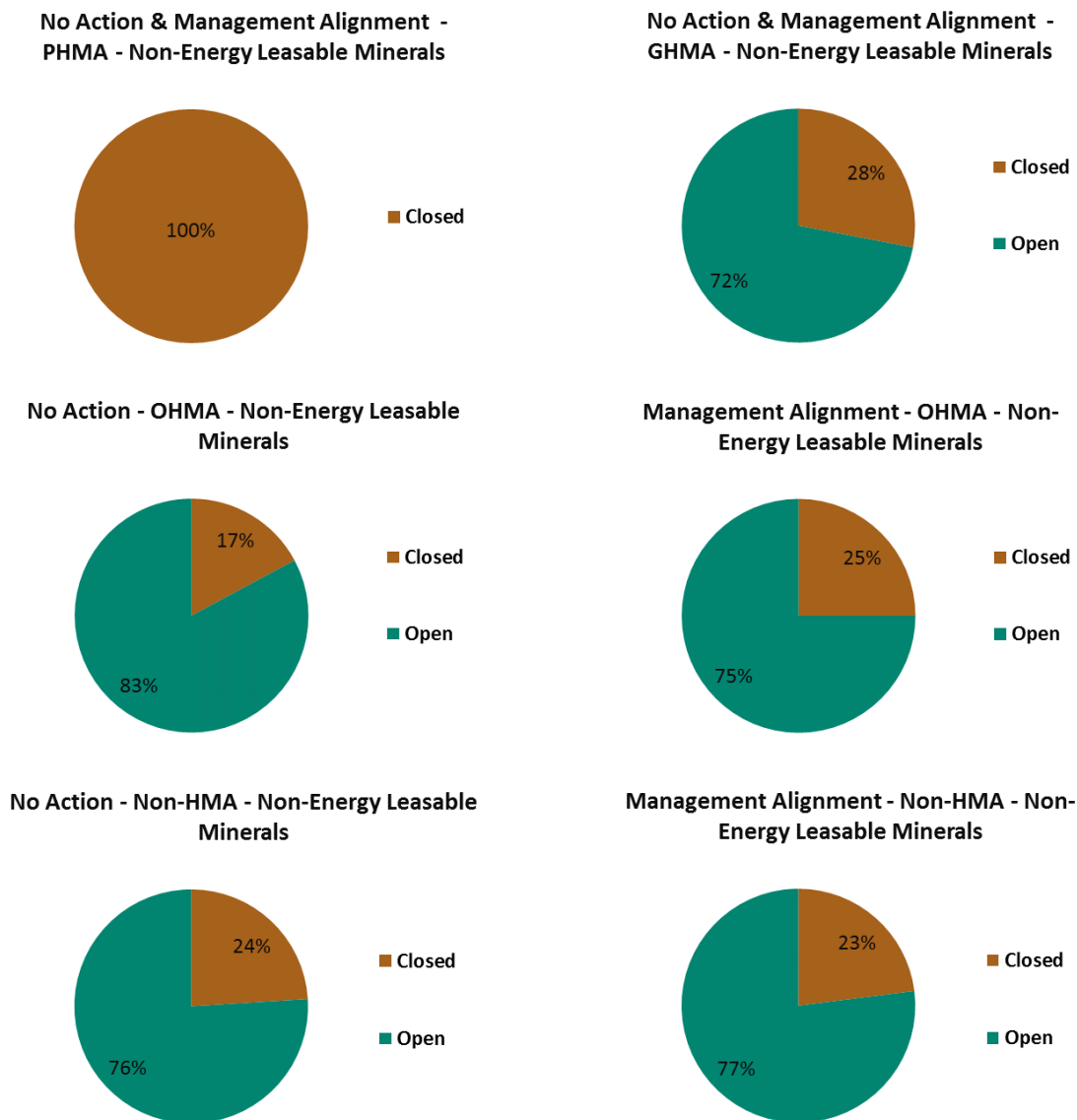


Figure 55 – Non-Energy Leasable Minerals Decisions within MZ V

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

VII. Fluid Minerals (Oil & Gas)**Table 57 – Fluid Mineral (Oil & Gas) Decisions within MZ V**

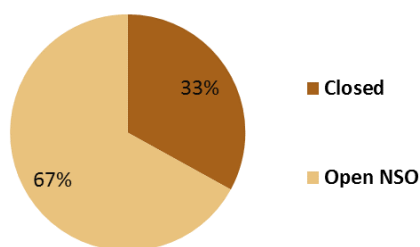
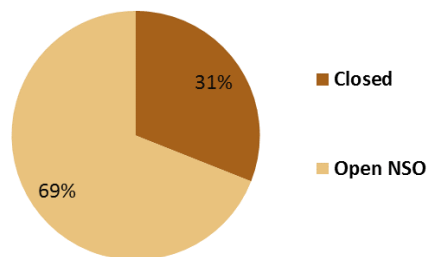
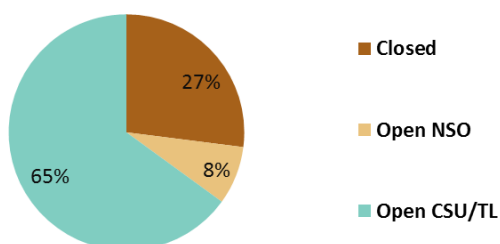
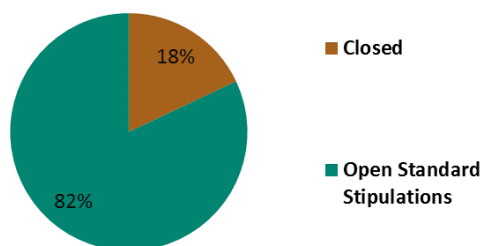
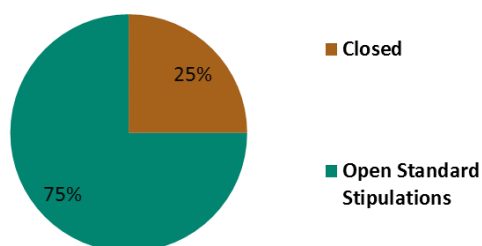
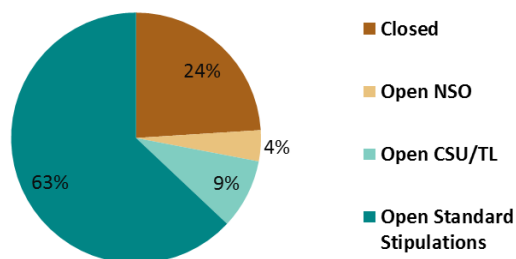
Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Fluid Mineral (Oil & Gas) Decisions in MZ V by Habitat Management Area Type					
Fluid Mineral (Oil & Gas) Decisions	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	1,590,000	1,373,000	141,000	935,000	4,039,000
Open NSO	3,542,000	379,000	0	164,000	4,085,000
Open CSU/TL	0	3,184,000	0	335,000	3,519,000
Open Standard Stipulations	0	0	423,000	2,598,000	3,021,000
Total	5,133,000	4,936,000	564,000	4,032,000	14,664,000

Fluid Mineral (Oil & Gas) Decisions	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	1,626,000	1,359,000	158,000	898,000	4,042,000
Open NSO	3,354,000	379,000	0	164,000	3,898,000
Open CSU/TL	0	3,287,000	0	335,000	3,622,000
Open Standard Stipulations	0	0	743,000	2,365,000	3,108,000
Total	4,981,000	5,026,000	902,000	3,762,000	14,670,000

Approximate % of Habitat Management Area by Fluid Mineral (Oil & Gas) Decision in MZ V					
Fluid Mineral (Oil & Gas) Decisions	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	33%	27%	18%	24%	28%
Open NSO	67%	8%	0%	4%	27%
Open CSU/TL	0%	65%	0%	9%	25%
Open Standard Stipulations	0%	0%	82%	63%	21%
Total	100%	100%	100%	100%	100%

Fluid Mineral (Oil & Gas) Decisions	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	31%	28%	25%	23%	28%
Open NSO	69%	8%	0%	4%	28%
Open CSU/TL	0%	65%	0%	8%	24%
Open Standard Stipulations	0%	0%	75%	64%	21%
Total	100%	100%	100%	100%	100%

**No Action - PHMA - Fluid Mineral Leasing
(Oil & Gas)****Management Alignment - PHMA - Fluid Mineral Leasing (Oil & Gas)****No Action & Management Alignment -
GHMA - Fluid Mineral Leasing (Oil & Gas)****No Action - OHMA - Fluid Mineral Leasing
(Oil & Gas)****Management Alignment - OHMA - Fluid Mineral Leasing (Oil & Gas)****No Action - Non-HMA - Fluid Mineral Leasing
(Oil & Gas)****Figure 56 – Fluid Mineral (Oil & Gas) Decisions within MZ V**

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

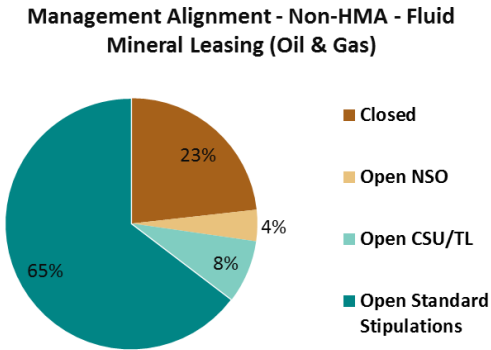


Figure 56 (cont'd) – Fluid Mineral (Oil & Gas) Decisions within MZ V

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

VIII. Rights-of-Ways

Table 58 – Rights-of-Ways Decisions within MZ V

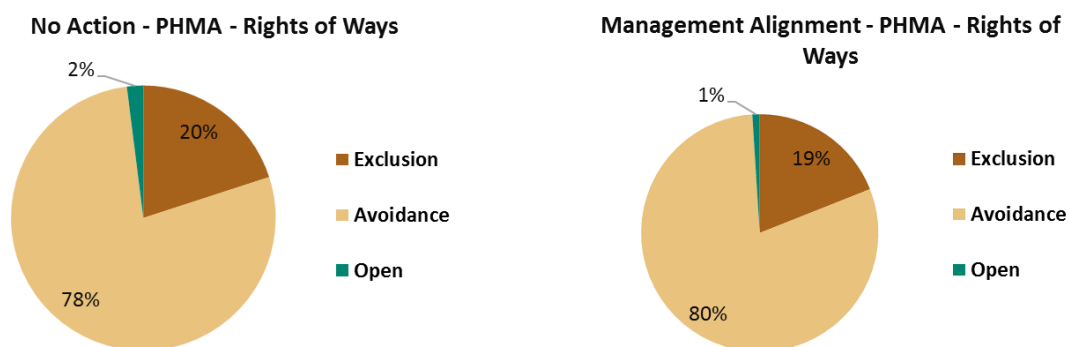
Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Rights-of-Ways Decisions in MZ V by Habitat Management Area Type					
Rights-of-Ways	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	956,000	445,000	158,000	787,000	2,347,000
Avoidance	3,634,000	4,349,000	0	325,000	8,307,000
Open	87,000	106,000	744,000	2,449,000	3,386,000
Total	4,677,000	4,900,000	902,000	3,561,000	14,040,000

Rights-of-Ways	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	922,000	459,000	141,000	824,000	2,346,000
Avoidance	3,854,000	4,281,000	0	325,000	8,460,000
Open	51,000	69,000	423,000	2,685,000	3,228,000
Total	4,827,000	4,809,000	564,000	3,834,000	14,034,000

Approximate % of Habitat Management Area by Rights-of-Ways Decision in MZ V					
Rights-of-Ways	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	78%	89%	0%	9%	59%
Avoidance	20%	9%	18%	22%	17%
Open	2%	2%	82%	69%	24%
Total	100%	100%	100%	100%	100%

Rights-of-Ways	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	80%	89%	0%	8%	60%
Avoidance	19%	10%	25%	21%	17%
Open	1%	1%	75%	70%	23%
Total	100%	100%	100%	100%	100%

**Figure 57 – Rights-of-Ways Decisions within MZ V**

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

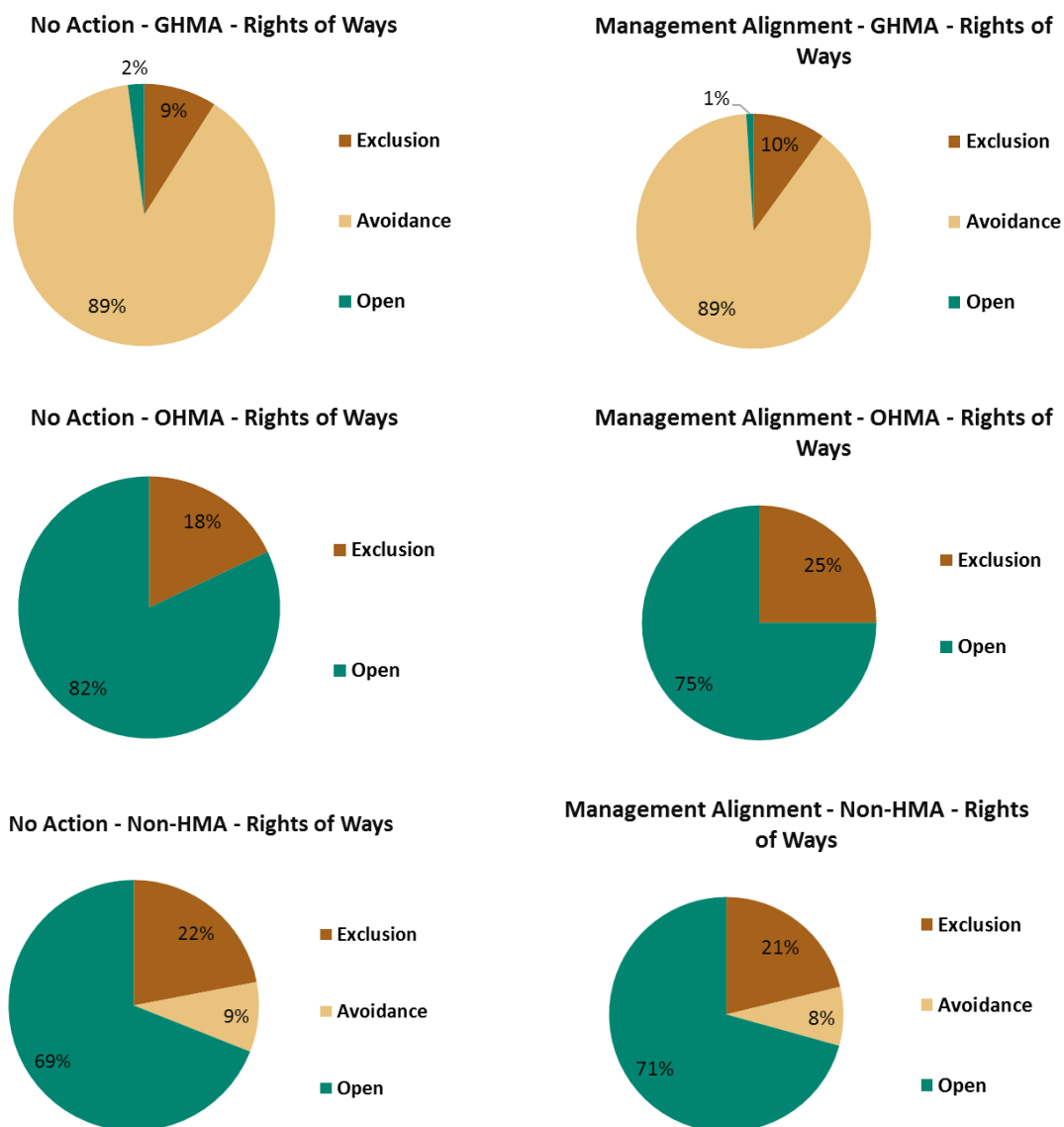


Figure 57 (cont'd) – Rights-of-Ways Decisions within MZ V

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

IX. Salable Minerals Materials**Table 59 – Salable Minerals Materials Decisions within MZ V**

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

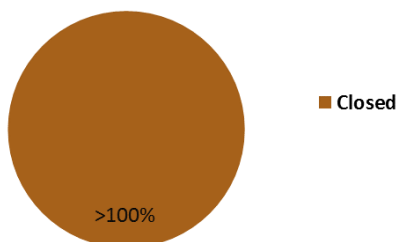
Approximate Acres of Salable Minerals Materials Decisions in MZ V by Habitat Management Area Type					
Salable Minerals Materials	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	4,980,000	1,402,000	158,000	935,000	7,475,000
Open	1,000	3,621,000	744,000	2,827,000	7,194,000
Total	4,980,000	5,024,000	903,000	3,762,000	14,669,000

Salable Minerals Materials	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	5,135,000	1,416,000	141,000	972,000	7,664,000
Open	0	3,518,000	423,000	3,057,000	6,998,000
Total	5,135,000	4,934,000	564,000	4,030,000	14,663,000

Approximate % of Habitat Management Area by Non-Energy Leasable Minerals Decision in MZ V					
Salable Minerals Materials	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	100%	28%	17%	25%	51%
Open	<1%	72%	83%	75%	49%
Total	100%	100%	100%	100%	100%

Salable Minerals Materials	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	100%	29%	25%	24%	52%
Open	0%	71%	75%	76%	48%
Total	100%	100%	100%	100%	100%

No Action & Management Alignment -
PHMA - Salable Minerals Materials

**Figure 58 – Salable Minerals Materials Decisions within MZ V**

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.



Figure 58 (cont'd) – Salable Minerals Materials Decisions within MZ V

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

X. Solar Energy

Table 60 – Solar Energy Decisions within MZ V

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Solar Energy Decisions in MZ V by Habitat Management Area Type					
Solar Energy	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	3,932,000	1,466,000	897,000	2,191,000	8,487,000
Avoidance	750,000	3,438,000	1,000	348,000	4,537,000
Open	0	0	4,000	1,032,000	1,036,000
Total	4,683,000	4,904,000	903,000	3,571,000	14,060,000

Solar Energy	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	4,088,000	1,373,000	564,000	2,457,000	8,483,000
Avoidance	750,000	3,438,000	0	349,000	4,537,000
Open	0	0	0	1,034,000	1,035,000
Total	4,838,000	4,810,000	564,000	3,841,000	14,054,000

Approximate % of Habitat Management Area by Solar Energy Decision in MZ V					
Solar Energy	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	84%	30%	99%	61%	60%
Avoidance	16%	70%	<1%	10%	32%
Open	0%	0%	<1%	29%	7%
Total	100%	100%	100%	100%	100%

Solar Energy	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	84%	29%	100%	64%	60%
Avoidance	16%	71%	0%	9%	32%
Open	0%	0%	0%	27%	7%
Total	100%	100%	100%	100%	100%

No Action & Management Alignment -
PHMA - Solar Energy

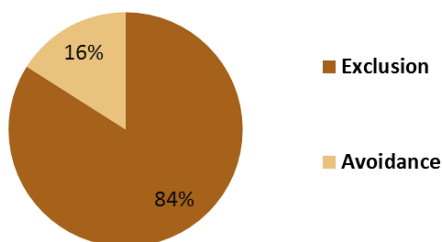


Figure 59 – Solar Energy Decisions within MZ V

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

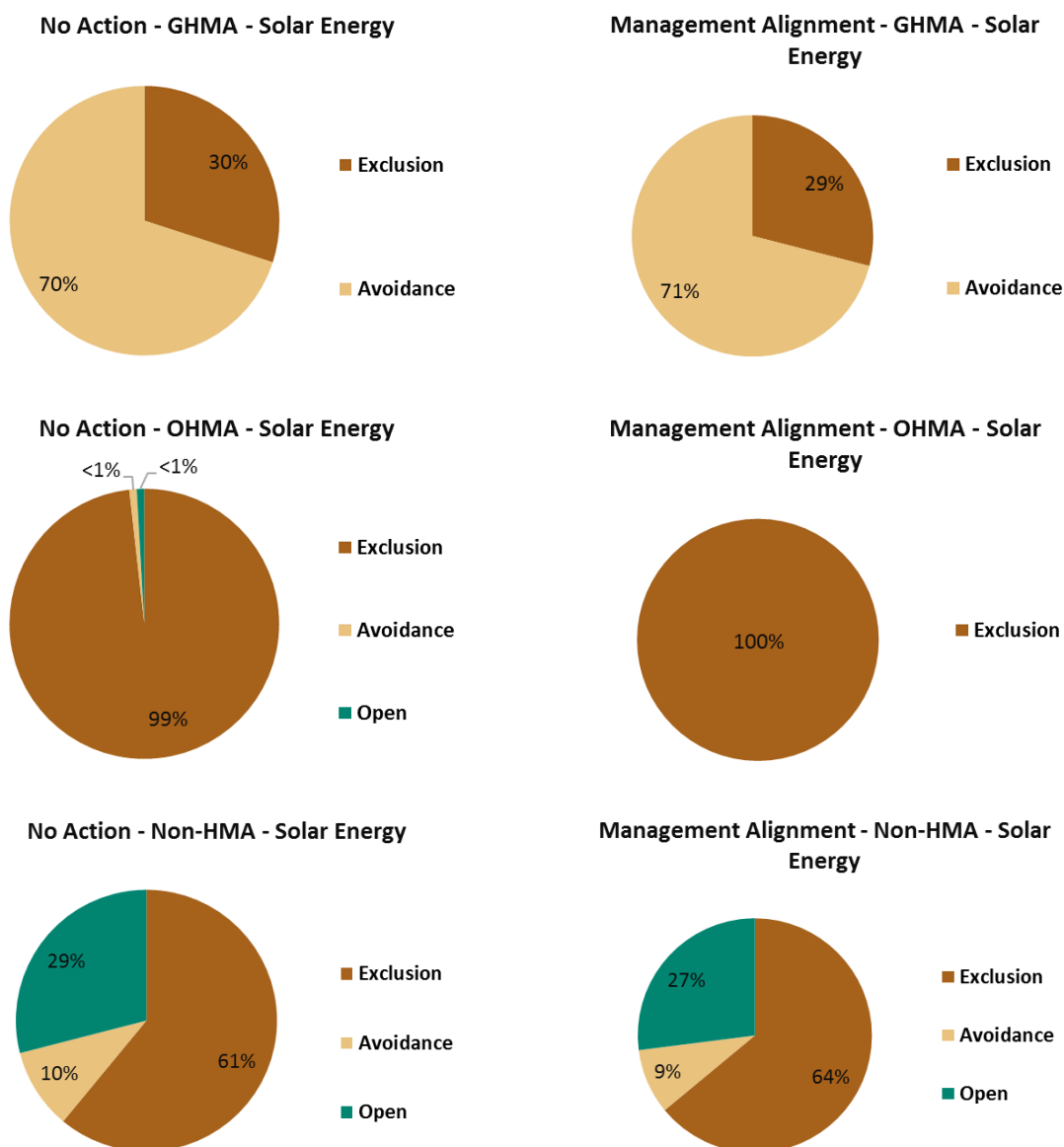


Figure 59 (cont'd) – Solar Energy Decisions within MZ V

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

XI. Trails and Travel Management**Table 61 – Trails and Travel Management Decisions within MZ V**

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Trails and Travel Management Decisions in MZ V by Habitat Management Area Type					
Trails and Travel Management Decisions	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	220,000	215,000	59,000	423,000	917,000
Limited	4,452,000	4,681,000	428,000	1,257,000	10,818,000
Open	0	2,000	414,000	1,888,000	2,304,000
Total	4,672,000	4,897,000	901,000	3,568,000	14,038,000

Trails and Travel Management Decisions	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	215,000	214,000	64,000	424,000	917,000
Limited	4,613,000	4,591,000	290,000	1,280,000	10,774,000
Open	0	2,000	209,000	2,131,000	2,342,000
Total	4,828,000	4,807,000	562,000	3,836,000	14,032,000

Approximate % of Habitat Management Area by Trails and Travel Management Decisions Decision in MZ V					
Trails and Travel Management Decisions	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	5%	4%	7%	12%	7%
Limited	95%	96%	48%	35%	77%
Open	0%	<1%	46%	53%	16%
Total	100%	100%	100%	100%	100%

Trails and Travel Management Decisions	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Closed	4%	4%	11%	11%	7%
Limited	96%	96%	52%	33%	77%
Open	0%	<1%	37%	56%	17%
Total	100%	100%	100%	100%	100%

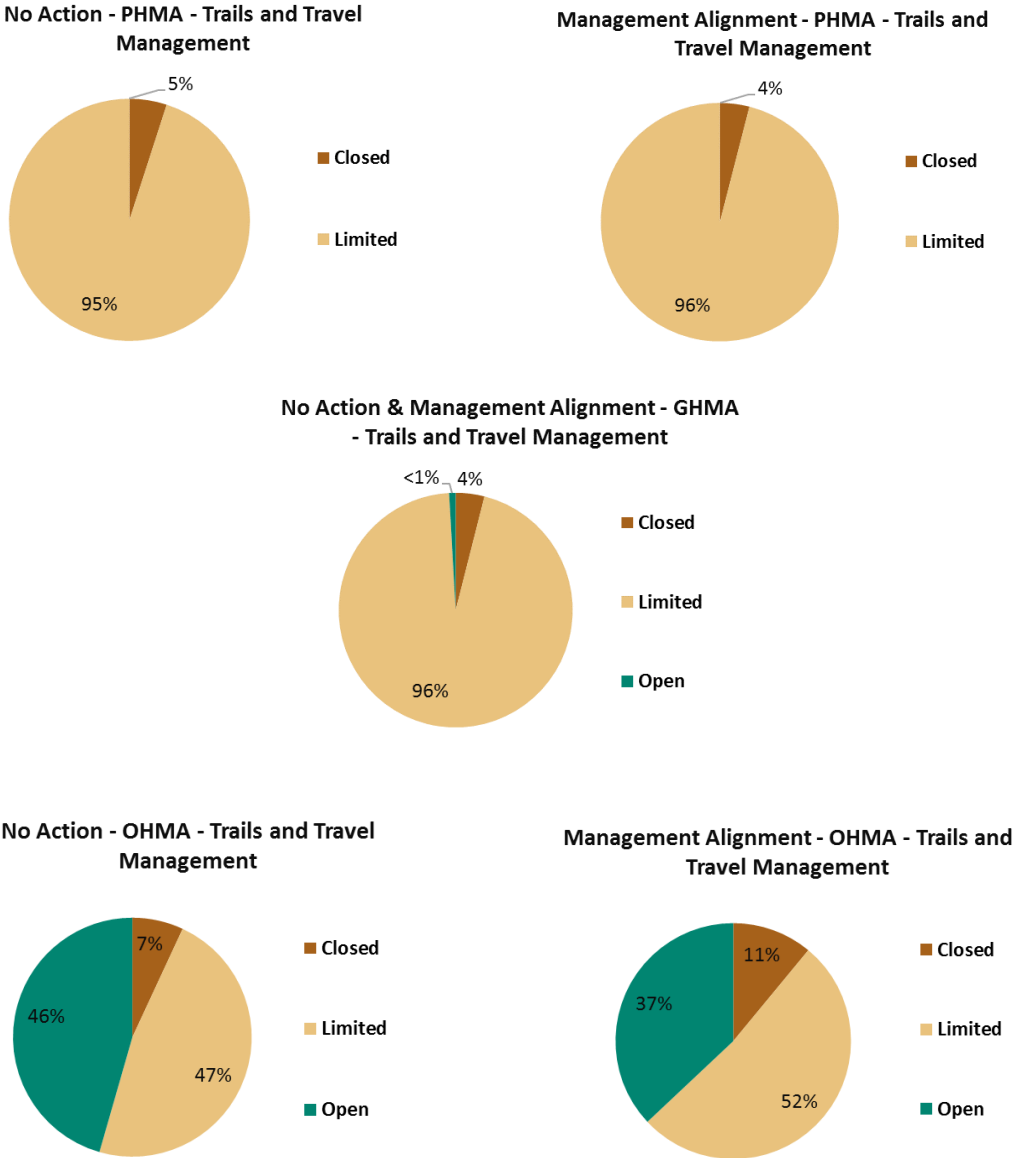


Figure 60 – Trails and Travel Management Decisions within MZ V

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

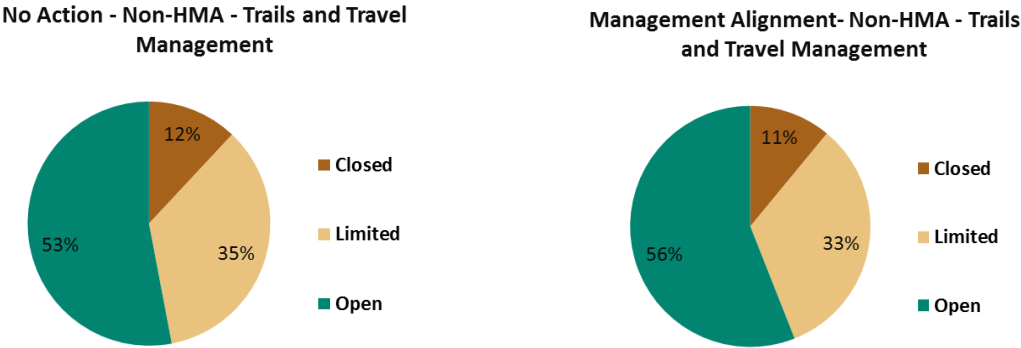


Figure 60 (cont'd) – Trails and Travel Management Decisions within MZ V

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

XII. Wind Energy

Table 62 – Wind Energy Decisions within MZ V

Acres and percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Approximate Acres of Wind Energy Decisions in MZ V by Habitat Management Area Type					
Wind Energy	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	3,927,000	454,000	158,000	792,000	5,330,000
Avoidance	750,000	4,445,000	0	321,000	5,516,000
Open	1,000	0	744,000	2,456,000	3,201,000
Total	4,678,000	4,900,000	903,000	3,568,000	14,048,000

Wind Energy	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	4,083,000	467,000	141,000	829,000	5,520,000
Avoidance	750,000	4,341,000	0	321,000	5,412,000
Open	0	0	423,000	2,686,000	3,110,000
Total	4,833,000	4,809,000	564,000	3,836,000	14,042,000

Approximate % of Habitat Management Area by Wind Energy Decision in MZ V					
Wind Energy	No Action				
	PHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	84%	9%	17%	22%	38%
Avoidance	16%	91%	0%	9%	39%
Open	<1%	0%	82%	69%	23%
Total	100%	100%	100%	100%	100%

Wind Energy	Management Alignment				
	PHMA	GHMA	OHMA	Non-HMA	Total
Exclusion	84%	10%	25%	22%	39%
Avoidance	16%	90%	0%	8%	39%
Open	0%	0%	75%	70%	22%
Total	100%	100%	100%	100%	100%

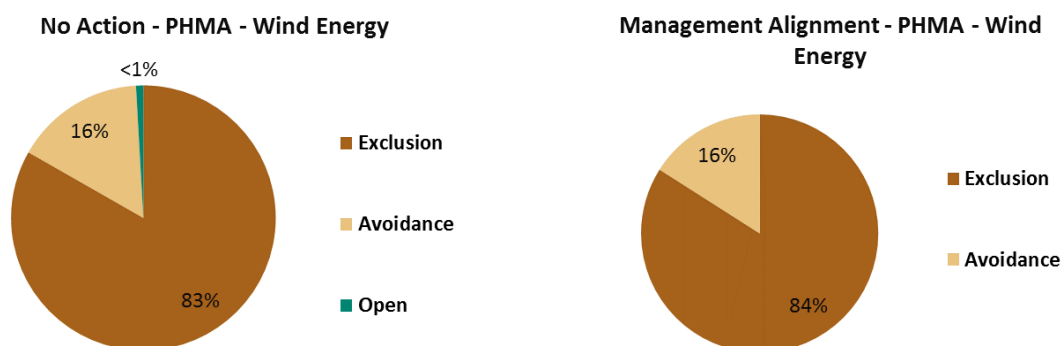


Figure 61 – Wind Energy Decisions within MZ V

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

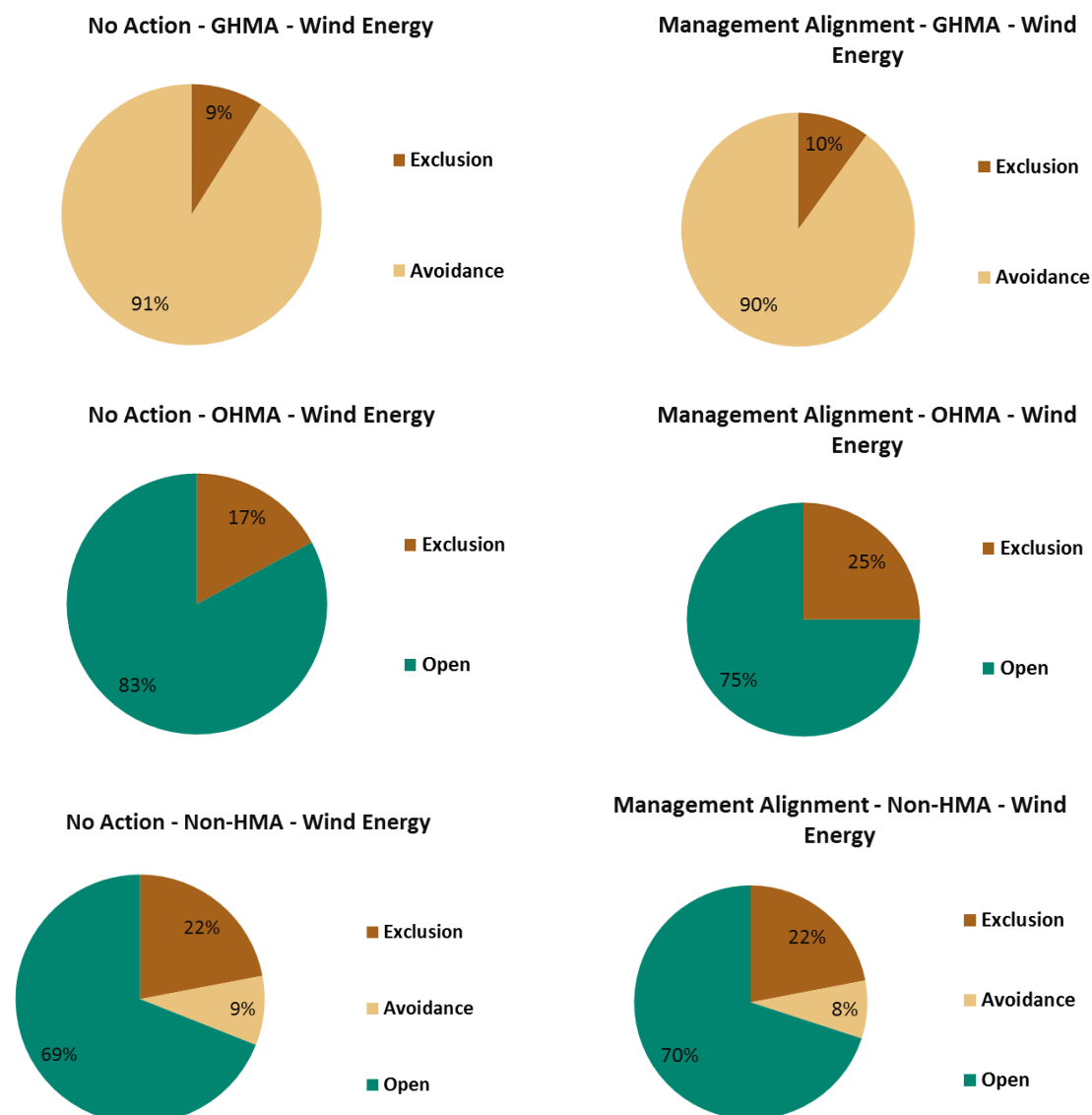


Figure 6I (cont'd) – Wind Energy Decisions within MZ V

Percentages reflect BLM managed lands. Percentages may not total to 100% due to rounding. All figures and tables are intended for Management Zone summary purposes only. They represent data available at the time of consolidation and may be revised as Plans are finalized. Consult each individual EIS for final/official acreages.

Triggers Tripped by State:

Plan	2015	2016	2017	2018	2019
NWCO	-	None	None	None	-
ID	West Owyhee IHMA - Hard Habitat	West Owyhee IHMA - Hard Habitat REMAINS	West Owyhee IHMA - Hard Habitat REMAINS	West Owyhee IHMA - Hard Habitat REMAINS	West Owyhee IHMA - Hard Habitat REMAINS
	-	-	Mountain Valley PHMA - Hard Population	Mountain Valley PHMA - Hard Population REMAINS	Mountain Valley PHMA - Hard Population REMAINS
	-	-	-	Desert PHMA - Soft Population	Desert PHMA - Soft Population
	-	-	Desert IHMA - Hard Population	Desert IHMA - Hard Population REMAINS	Desert IHMA - Hard Population REMAINS
	-	-	Mountain Valleys IHMA - Soft Habitat	Mountain Valleys IHMA - Soft Habitat REMAINS	Mountain Valleys IHMA - Soft Habitat REMAINS
	-	-	-	-	Desert PHMA - Hard Population
	-	-	-	-	Southern PHMA - Hard Population
MT /DKs	None	None		None	-
NV/NECA	N/A	N/A	N/A	N/A	-
OR - Updated 4/28/19	Baker - Hard Population	Baker - Hard Population REMAINS	Baker - Hard Population REMAINS	Baker - Hard Population REMAINS	-
	Cow Valley - Soft Population	Cow Valley - Not enough data, removed from analysis	-	-	-
	Bully Creek - Hard Habitat	Bully Creek - Hard Habitat reanalyzed - NOT TRIPPED	-	-	-
	-	Crowley - Soft Population	Crowley - Soft Population REMAINS	Crowley - Soft Population REMAINS	-
	Cow Lakes - Soft Habitat & Population = Hard Trigger Tripped	Cow Lakes - Soft Habitat & Population = Hard Trigger Tripped	Cow Lakes - Soft Habitat & Population = Hard Trigger Tripped	Cow Lakes - Soft Habitat & Population = Hard Trigger Tripped REMAINS	-
	Louse - Soft Population	Louse - Not enough data, removed from analysis	-	-	-
	Trout Creeks - Soft Habitat	Trout Creeks - Soft Habitat REMAINS	Trout Creeks - Soft Habitat REMAINS	Trout Creeks - Soft Habitat REMAINS	-

Plan	2015	2016	2017	2018	2019
OR - Updated 4/28/19 (continued)	Pueblo / S. Steens - Soft Population	Pueblo / S. Steens - Change in threshold per ODFW recommendation. NOT TRIPPED. Calculation method revised in 2016 using ODFW method resulted in PAC not being tripped.	-	-	-
	Steens - Soft Habitat (w/o treatments included)	Steens - Soft Habitat REMAINS (w/o treatments included)	Steens - Soft Habitat reanalyzed - NOT TRIPPED (treatments included)	-	-
	Dry Valley / Jack Mountain - Soft Population	Dry Valley / Jack Mountain - Soft Population REMAINS	Dry Valley / Jack Mountain - Hard Population	Dry Valley / Jack Mountain - Hard Population REMAINS	-
	Picture Rock - Soft Population	Picture Rock - Soft Population REMAINS	Picture Rock - Hard Population	Picture Rock - Hard Population REMAINS	-
	-	Warners - Soft Population	Warners - Soft Population	Warners - Soft Population	-
	-	Brothers / N. Wagontire - Soft Population	Brothers / N. Wagontire - Soft Population REMAINS	Brothers / N. Wagontire - Hard Population	-
	12-Mile / Paulina / Misery Flat - Soft Population	12-Mile / Paulina / Misery Flat - Soft Population REMAINS	12-Mile / Paulina / Misery Flat - Soft Population UNTRIPPED	-	-
UT	-	Sheeprocks - Soft & Hard Population	Sheeprocks - Soft & Hard Population REMAINS	Sheeprocks - Soft & Hard Population REMAINS	-
WY	-	None	Buffalo Connectivity - Soft Habitat	Buffalo Connectivity - Soft Habitat Remains	Jackson Hole PHMA - Soft PHMA
	-	-	-	Bear River - Soft Habitat	-

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